



PWRX

Powered Electric Chain Hoist

User Manual/ Manual de usuario

Safety Warnings/ Advertencias de Seguridad



Table of Contents

ProWinch® Disclaimers	3
PWRX Configuration	4
Safety Bulletin	7
Safety Precautions	11
Specifications	18
Main Specification.....	19
Safety Features.....	20
Pendant control operation instructions.....	22
Load Level And Service Life.....	27
Oil & Lubricant Recommendations.....	37
Inspections.....	33
Installation	50
Installation Procedures.....	51
Prowinch® Warranty.....	85
Troubleshooting	96
Technical Specs	88
Specification and dimension electric chain hoist (PWRXF).....	89
Specification and dimension of electric chain hoist with trolley (PWRXT).....	90
Inspection List	105

ProWinch® Disclaimers

Prowinch® LLC declares that it has made all safety recommendations related to the purchased product to the customer. As a result, it does not assume any responsibility for any damages or losses that the client or third parties may sue. These can be caused by or as a direct or indirect result of a breach or omission of instructions or safety warnings in the User Manual and Security Warnings provided with the unit purchased. Prowinch® LLC will not be liable for accidents and/or damages to persons and/or property resulting from the negligent use of the product. In no case does Prowinch® LLC assume any liability arising from using these voluntary recommendations and does not offer any guarantee concerning them. These recommendations do not take precedence over the current safety regulations of the plant and local regulations. For purposes of enforcing the warranty of the product purchased, Prowinch® LLC, will only be liable for damage when proven the user has followed each one of the warnings contained in the User Manual and Safety

1. It is the sole responsibility of the Client / User to verify that the acquired equipment, products, and accessories comply with the characteristics, capacities, requirements, components, accessories, and other conditions for the use that the Client/user intends to give it.
2. It is also the sole responsibility of the Client / User to ensure that the equipment and products purchased are operated and maintained with adequate safety standards and by personnel properly trained in their use. The Client / User is also responsible for implementing all security measures necessary to prevent accidents or damages to people or property and for following the indications and warnings of the corresponding manual, standards and local regulations.
3. Any assistance provided by Prowinch® LLC in selecting the equipment, capacities, and characteristics required by the client is delivered free of charge and based on the information about the application, use, and requirements provided by the client. It is not the responsibility of Prowinch® LLC to verify the accuracy of the given information. It is the sole and exclusive responsibility of the client -or who will use the equipment and products acquired- to ensure that the specifications comply with the capabilities, characteristics, up-to-date maintenance, and everything necessary for a correct and safe operation about the intended use.
4. Prowinch® LLC recommends using winches with four brakes for personnel lifting. The use of winches with three brakes or less, or operating with safety standards less than required for personnel lifting is not recommended.
5. To guarantee the safety of the equipment's operators, it is necessary to conduct inspections and maintenance of the equipment according to the recommended frequency of its work cycle. It is mandatory to keep records and evidence, including written and photographic reports of: Maintenance, Start-up, Load Tests, Training, Certifications, Inspections, and Reports of failures and accidents.
6. The reports mentioned above must be emailed to registros@prowinch.com within the first seven calendar days after an event.
7. Compliance with timely implementation of mandatory activities described in points 5 and 6, in addition to all the activities mentioned in the corresponding guidelines, are the user's sole responsibility. Failure to comply with the preceding conditions releases Prowinch® LLC from any liability. The information contained in this manual may contain technical errors or inaccuracies. Prowinch® LLC is not responsible for errors, omissions, or incorrect information. This manual is subject to change without prior notice. Download the latest version available at www.prowinch.com. Always check www.prowinch.com for the latest information regarding this product. Please check our warranty policies on our website www.prowinch.com/warranty

PWRX Configuration

Fixed Units



PWRXF0.25
0.25 ton Electric Hoist



PWRXF0.5
0.5 ton Electric Hoist



PWRXF1
1 ton Electric Hoist



PWRXF2
2 ton Electric Hoist



PWRXF3
3 ton Electric Hoist



PWRXF5
5 ton Electric Hoist



PWRXF7
7.5 ton Electric Hoist



PWRXF10
10 ton Electric Hoist



PWRXF20
20 ton Electric Hoist

Units with trolley



PWRXT0.25

0.25 ton Electric hoist with trolley



PWRXT0.5

0.5 ton Electric hoist with trolley



PWRXT1

1 ton Electric hoist with trolley



PWRXT2

2 ton Electric hoist with trolley



PWRXT3

3 ton Electric hoist with trolley



PWRXT5

5 ton Electric hoist with trolley



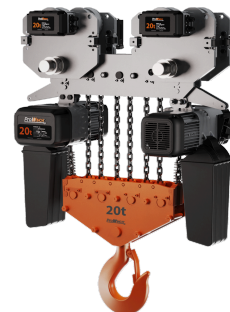
PWRXT7

7.5 ton Electric hoist with trolley



PWRXT10

10 ton Electric hoist with trolley



PWRXT20

20 ton Electric hoist with trolley

Safety Bulletin



Hoists, Cranes and other Lifting and material-movement related equipment USERS, must be knowledgeable about the safe and proper use of this equipment and be aware of their responsibilities as outlined in all applicable standards and regulations.

The ASME/ANSI B30 Standard contains provisions that apply to the construction, installation, operation, inspection, testing, maintenance, and use of cranes and other lifting and material-movement related equipment.

As OSHA's, ASME and ANSI standards state, the installation, setup and operation of these units and equipment shall be performed by a qualified person.

Load test is required before use

OSHA requires rated load tests for new and altered cranes, OSHA's standard at 29 CFR 1910.179(k) states:

1. Operational tests.
2. **Prior to initial use all new** and altered cranes shall be tested to insure compliance with this section including the following functions:
 - a. Hoisting and lowering.
 - b. Trolley travel.
 - c. Bridge travel.
 - d. Limit switches, locking and safety devices.
 - e. The trip setting of hoist limit switches shall be determined by testing with an empty hook, traveling at increasing speeds until reaching maximum speed. The actuating mechanism of the limit switch must be located so it trips the switch, under all conditions, in sufficient time to prevent any part of the trolley from contacting the hook or hook block.
3. Rated load test. Test loads shall not be more than 125 percent of the rated load unless otherwise recommended by the manufacturer.

Once a rated load test is performed, paragraph 1910.179(k)(2) requires that **test reports be placed on file where readily available** to appropriate personnel.

To ensure safety and installation requirements, **Prowinch requires load tests before using all hoists, winches, cranes, and other components. Not fulfilling this requirement can be hazardous, lead to equipment failure, and automatically void the warranty.**

Be sure to follow the safety standards (B30)

The B30 Standard is intended to:

1. Prevent or minimize injury to workers, and otherwise provide for the protection of life, limb, and property by prescribing safety requirements.
2. Provide direction to manufacturers, owners, employers, users, and others concerned with, or responsible for, its application.
3. Guide governments and other regulatory bodies in the development, promulgation, and enforcement of appropriate safety directives.

The equipment covered by B30 Standards is subject to hazards that cannot be avoided by mechanical means, but only by exercising best practices, care, and common sense.

It is imperative that competent, careful, physically and mentally qualified, and fully trained personnel operate any equipment and handle loads properly with safety in mind.

Serious hazards include:

1. Improper or inadequate maintenance.
2. Overloading.
3. Dropping or slipping of loads.
4. Obstructing the free passage of the load.
5. Using equipment for a purpose for which it was not intended or designed.



SHOCK LOADING IS PROHIBITED. Your Winch/Hoist Wire Rope/Cable/Chain is **NOT** designed for dynamic, or “shock” loading. Shock loading may tension a Winch/Hoist Wire Rope/Cable/Chain beyond its strength and cause the cable to break. The end of a broken Winch/Hoist Wire Rope, Rope, Cable or Chain under such high loading can cause **SEVERE INJURY** or **DEATH** to you and other bystanders.



Failure to read, understand and follow the information in the corresponding ASME B30 Standard for your hoist and lifting equipment may result in severe **INJURY** or **DEATH**. It is **YOUR RESPONSIBILITY** to consider all risk factors and follow all the equipment related ASME B30 standards, which comprise the following:

ASME B30 standards include:

- B30.1 Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries.
- B30.2 Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist).
- B30.3 Tower Cranes.
- B30.4 Portal and Pedestal Cranes.
- B30.5 Mobile and Locomotive Cranes.
- B30.6 Derricks.
- B30.7 Winches.
- B30.8 Floating Cranes and Floating Derricks.
- B30.9 Slings.
- B30.10 Hooks.
- B30.11 Monorails and Underhung Cranes.
- B30.12 Handling Loads Suspended from Rotorcraft.
- B30.13 Storage/Retrieval (S/R) Machines and Associated Equipment.
- B30.14 Side Boom Tractors.
- B30.15 Mobile Hydraulic Cranes.
- B30.16 Overhead Hoists (Underhung).
- B30.17 Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist).
- B30.18 Stacker Cranes (Top or Under Running Bridge, Multiple Girder with Top or Under Running Trolley Hoist).
- B30.19 Cableways.
- B30.20 Below-the-Hook Lifting Devices.
- B30.21 Lever Hoists.
- B30.22 Articulating Boom Cranes.
- B30.23 Personnel Lifting Systems.
- B30.24 Container Cranes.
- B30.25 Scrap and Material Handlers.
- B30.26 Rigging Hardware.
- B30.27 Material Placement Systems.
- B30.28 Balance Lifting Units.
- B30.29 Self-Erecting Tower Cranes.
- B30.30 Ropes.

Do Not

*Please read the items below to protect you and others around you.

1. **DO NOT** Operate, install, or repair the hoist unless you are trained and authorized.
2. **DO NOT** Operate the hoist unless you have first read the operator's manual.
3. **DO NOT** Operate the hoist without appropriate PPE and without performing a pre-shift inspection.
4. **DO NOT** Operate the hoist if it does not comply with all required OSHA regulations.
5. **DO NOT** Lift more than the rated load.
6. **DO NOT** Lift people or lift loads over people.
7. **DO NOT** Wrap the hoisting rope or chain around the load.
8. **DO NOT** Operate with the chain/rope not seated correctly in the sprockets, drum, or sheave.
9. **DO NOT** Operate hoist unless the direction of the hook travel agrees with the direction shown on the control.
10. **DO NOT** Operate the hoist unless the hook travel limit devices function correctly. (Test without a load PRE-SHIFT)
11. **DO NOT** Operate the hoist with twisted, kinked, damaged, dirty, or unlubricated chains or rope.
12. **DO NOT** Operate a damaged or malfunctioning hoist.
13. **DO NOT** Operate the hoist when the hook is not centered under the hoist
14. **DO NOT** Remove or hide any WARNING & SAFETY LABELS

Daily Checklist **WARNING**

Tagged hoist: Ensure the crane or hoist is not tagged out of order.

Control Devices: Conduct a test run. Ensure all motions agree with control device markings.

Brakes: Check all motions for excessive drift and abnormal stopping distances.

Hook: Check for damage, cracks, nicks, gouges, deformations on throat opening, wear on saddle or load-bearing point, and twisting.

Hook latch: Check for proper operations.

Wire rope: Check for broken wires, strands, kinks, and deformation or damage to the rope structure.

Chain: Check chains for corrosion, wear, elongation, twist, nicks, or gouges. Keep chain/wire rope clean and lubricated.

Reeving: Check the rope for proper reeving and that rope parts are not twisted.

Limit switches: Ensure that all limit devices can stop lifting motion before the load block or chain/rope stop strikes the hoist.

Oil leakage: Check for any oil leakage on the crane/hoist and the surrounding floor.

Unusual sounds: Check for unusual sounds from the hoist while operating.

Warning & safety labels: Ensure that labels are not missing and are legible.

Safety Precautions

Thank you for purchasing our Prowinch® Electric Chain Hoist!

This User Manual provides important information for personnel involved with installation, operation, and maintenance of this product. Read this User Manual before installing, operating, or maintaining the product.

All types of Prowinch® Wire Rope Hoists, Chain Hoists and Winches are designed for safe and reliable service when operated according to this User Manual. Please respect and follow all warnings for the safety of personnel and others. Improper operation may cause severe injuries to personnel or damage equipment. Read and understand this User Manual carefully before installing and operating any Prowinch equipment. Always keep this User Manual in an accessible location for quick reference.

Mandatory use of:



Hard Hat



Safety Glasses



Safety Gloves



Safety Shoes



WARNING:

This symbol indicates a dangerous situation which if not avoided may cause minor or moderate wounds. It is also used for indicating unsafe practices.



DANGER:

This symbol indicates a dangerous situation which if not avoided may cause severe injuries or death.

	WARNING
	<p>Verify torque of Screws periodically Tighten base screws To 120 lb Use always red Threadlocker</p> <p style="text-align: right;"><small>ProWINCH</small></p>

DANGER	
	<p>Hazardous voltage inside.</p>
	<p>Disconnect power before opening.</p>
	<p>Maintenance and repair to be performed by authorized personnel only.</p>
	<p>Lockout/tagout power before servicing, repairing, cleaning or retooling equipment</p>
<p>Do not operate without cover in place.</p> <p style="text-align: right;"><small>ProWINCH</small></p>	

Read and understand the contents of this User Manual thoroughly before handling the product. Practicing correct and safe operating procedures and carrying out the recommended preventative maintenance will ensure a long, reliable, and safe service. After carefully reading and understanding the User Manual, store it for future reference.



DANGER

All operators and other users who are near the wire rope, chain or its load must wear required safety equipment: gloves, safety helmet / hard hat, safety shoes and eye protection.



WARNING

All operators and other users who are near the steel chain or its load must wear required safety equipment: gloves, safety helmet / hard hat, safety shoes and eye protection

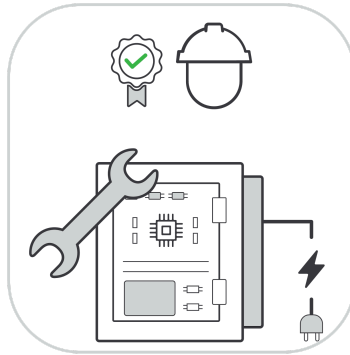


Before using equipment:

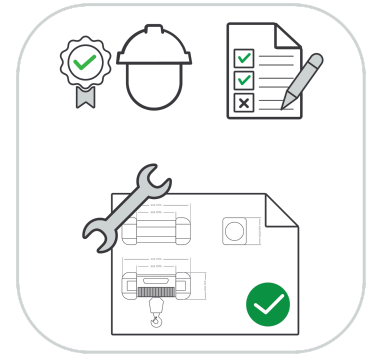
- Read and understand instructions in this User Manual and all the labels associated with the hoist before operating equipment.
- Wear appropriate clothing: Do not wear jewelry or loose-fitting clothing as they can get caught by the wire rope or hook.
- Wear leather gloves.
- Wear non-slip safety shoes, a helmet, and eye protection.
- Always perform a complete check of the hoist. Check for damaged parts or unusual conditions.
- Keep a safe distance: the suggested space is at least 1.5 times the hoist or winch wire rope or chain length. A broken or loose wire rope may cause injuries or death.
- Check that the hoist, chain and wire rope are appropriately lubricated.
- Secure a suitable support and check anchor points.
- Visually inspect all chain hoists and winch before each use, in addition to regular inspections and maintenance.
- Read the safety bulletin and follow all the safety instructions.



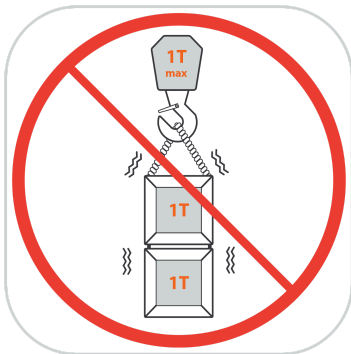
1. Have a Qualified Person to install the structure and anchoring points.



2. Have Qualified Person to connect the electrical and commissioning.



3. Have a Qualified Person to certify the commissioning and load test.



4. Do not overload.



5. Do not transport humans or animals.



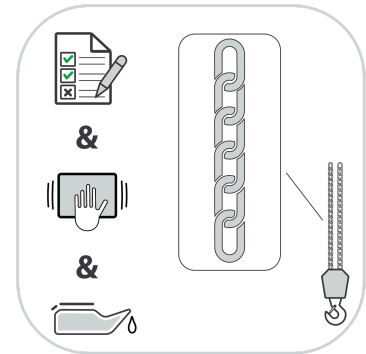
6. Do not stand under load.



7. Do not use a unit if exposed to rain, snow or lightning.



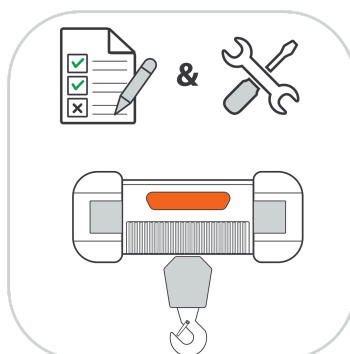
8. Do not leave the load unattended.



9. Inspect the chain regularly and keep it clean and lubricated.



10. Operator needs to follow the instruction tags and get certified periodically

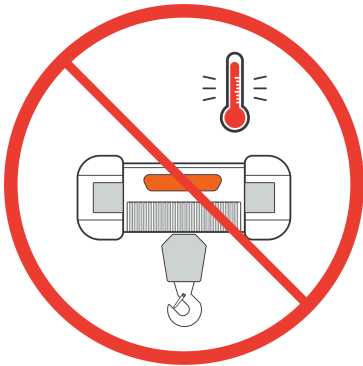


11. Regularly inspect and maintain the unit.



12. Follow the correct maintenance schedule based on the service and keep maintenance records.

General Environmental Precautions



Do not exceed the operating temperatures for which the hoist is designed for. This is stated in this manual and may vary depending on the model.

Avoid contact with gasses or explosive materials. Exposure to water, sand, corrosive environment and other harmful substances may damage the unit.

Warnings



Understand your unit's Ingress Protection(IP) rating

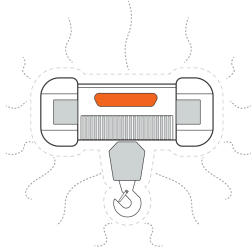
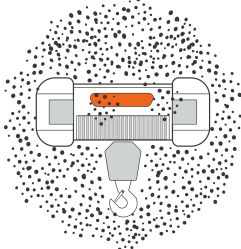
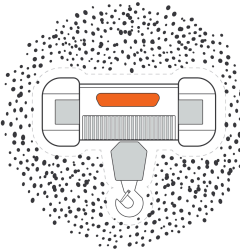
Below is a sample Ingress Protection (IP) index. Please refer to your plate for the rating of your unit.

IP00

The first number means your ingress protection against solids.

Prowinch units have the following ingress protection against solids.


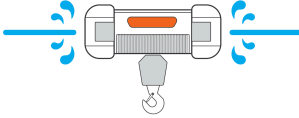
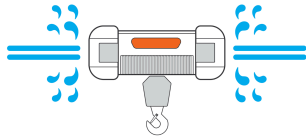
Protection against solids

	4	5	6
			
	Protected against solid objects greater than 1mm. Such as a wire.	Protected against dust limited ingress, no harmful deposits.	Protected against dust limited ingress, no harmful deposits.

The second number means your ingress protection against liquids.

Prowinch units have the following ingress protection against solids.

Protection against liquid

	0	4	5
			
	Not protected against moisture.	Protected against water splashed from all directions, limited ingress permitted.	Protected against low pressure water jets, limited ingress permitted.

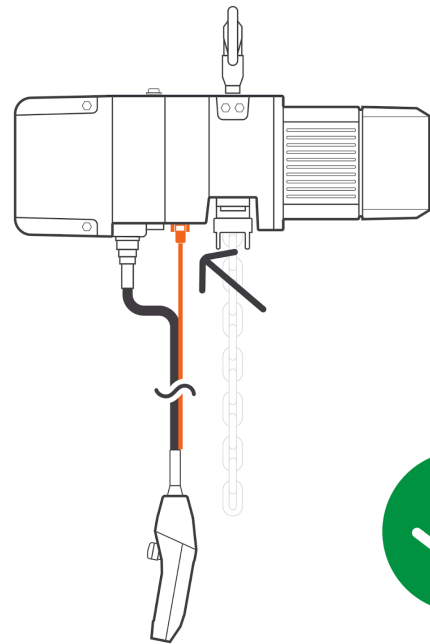
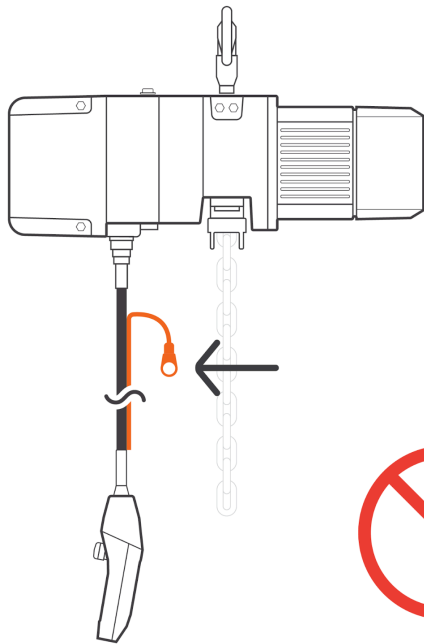
Hanging Pendant Control

Properly attach the provided strain relief cable. Installing the strain relief cable will protect the main pendant cable from unnecessary strain, pulling, tugging, or the cable sheathing itself.



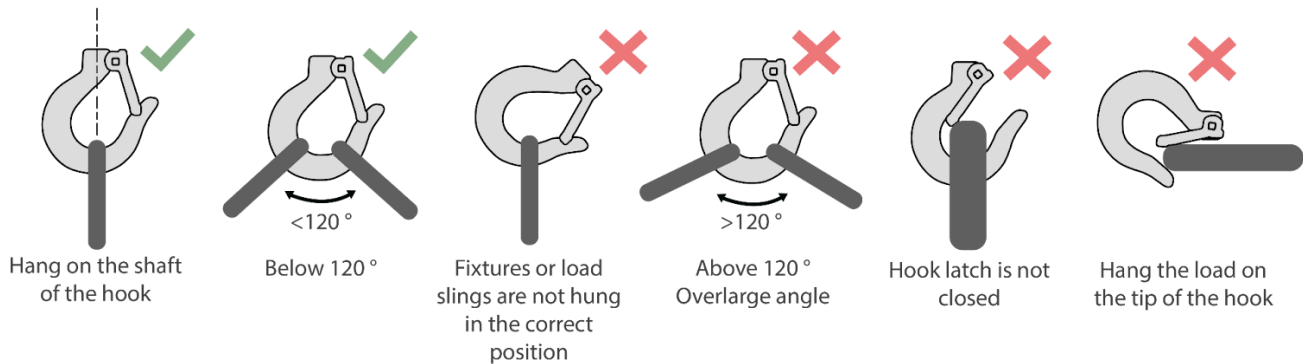
Danger:

Do not install the pendant control cable without the strain relief cable (steel cord).



Correct method of hoisting load

As the hook hanging method shown in the figure below is very dangerous, **DO NOT** operate like that.



How to control load shaking

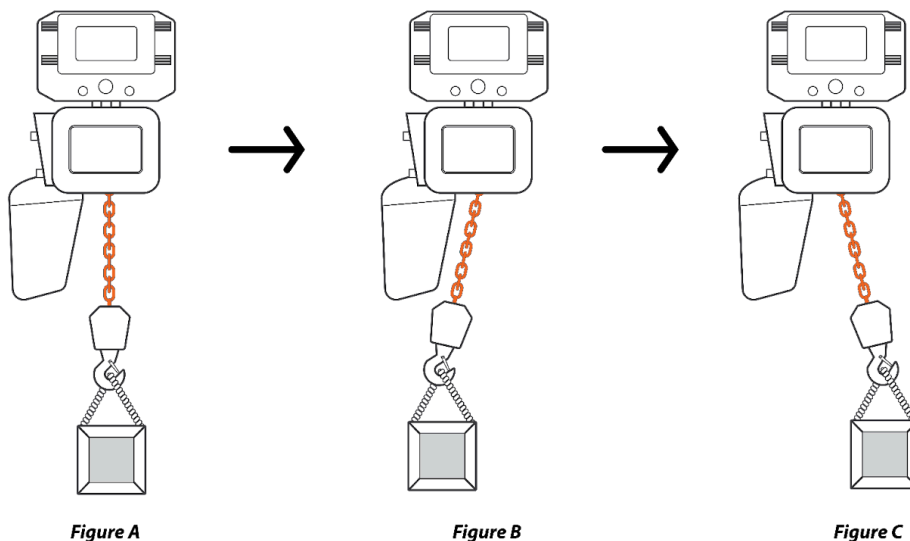
If the load shakes, it becomes increasingly challenging for the trolley to move, posing potential dangers. As a principle, **DO NOT** shake the load laterally and follow the operational guidelines below.

- Inclined pulling is not allowed
- Start slowly during lateral moving
- Sharp hoisting load is not allowed

During the beginning and end of lateral movement with the electric chain hoist, slight shaking of the hoisted load may occur, despite proper procedures being followed. Operational adjustments below can help reduce the shaking of the load.

Operation method

1. Press the button of lateral movement **Figure A**
2. When the trolley starts to move, the load will be slightly delayed **Figure B**
3. Before the load swings to the central position, release the button once.
4. When the load returns directly below the electric chain hoist, press the button again **Figure C**, to make it move laterally.



Specifications



Overload Protection
Built-in and accessible for the ease of adjustments by 1.2-1-4 times



Quick Connector
Easy configuration and maintenance



New Upper Hook
Heavy duty and with low headroom (for fixed units)



4-14 Stage Motor
Available in One-Speed Two-Speed, Variable-Speed



Electromagnetic Brake
Reliable and efficient



SCHNEIDER
UL listed contactor for greater quality



TEF
Totally Enclosed Fan - cooled Motor



Load Bearing Plate
Greater safety and liability



Double Limit Switch
Better safety and peace of mind



Cycloidal Gearbox
Softer and more powerful transmission



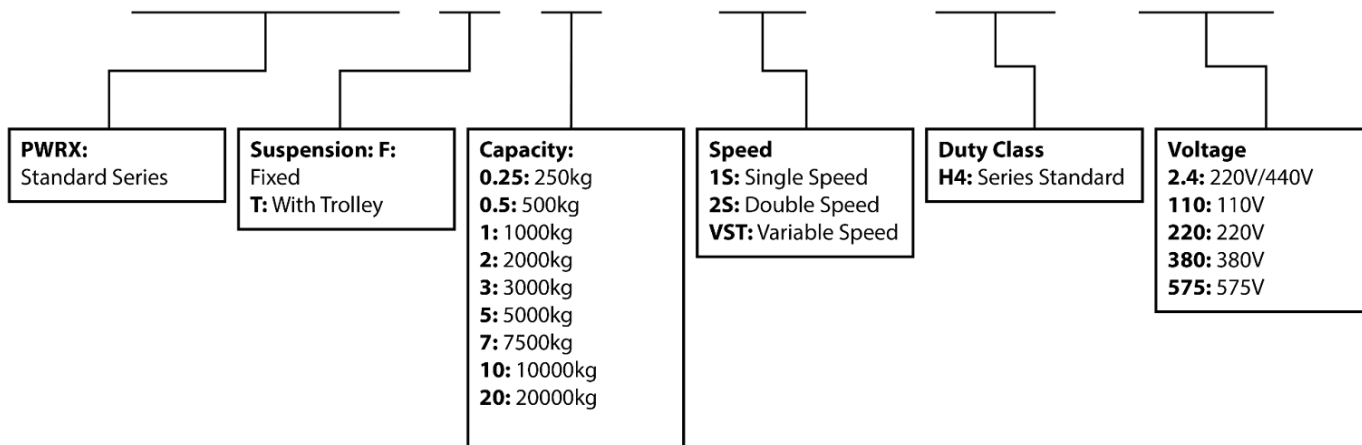
Chain Guide
Smooth and sloping chain guide opening design



Pendant Control
High environmental rating IP66 controller with many speed configurations

Product code

PWRX F 5 - 1S - H4 - 2.4



Main Specification

The specifications in the following table are applicable to all electric chain hoists.

Item		Specification	
Duty Class		M5	
Operating temperature range		-20°C to 40°C	
Protection grade	Hoist	IP54	
	Pendant control	IP55	
Power supply (standard specification)		Three-phase, 380V, 50HZ	
Noise level	Single-speed hoist	≤65db	
	Double-speed hoist	≤65db	
Chain specification	Hoist specification (tons - chain quantity)	Chain diameter (mm)	Chain pitch (mm)
	0.125-1, 0.25-2	4	12
	0.25-1, 0.5-2	5	15
	0.5-01, 01-02	6.3	19
	01-01, 02-02, 03-03	7.1	21
	02-01, 03-02	10	30
	03-01 a 50-20	11.2	34

Notes

1. When your required working voltage, temperature and humidity range exceed the above table, request relevant information from authorized Prowinch® LLC personnel.
2. Expected form of use: This hoist is designed for vertical hoisting and falling under normal atmospheric conditions and working environment.
3. The standard of noise level is the value measure data distance of one meter from the level of the machine under normal operation.

Safety Features

- **Motor Brake**
“Electromagnetic de-energized brake” is a unique brake design. It is featured by the immediate brake even at the sametime of powering off under full load.
- **Hook and safety plate**
The hook is forged from high tensile steel, and has been heat-treated to meet the requirements of strength and hardness. The lower hook can rotate 360 horizontally, and it is equipped with a hook safety plate to ensure the safety during hoisting and lowering.
- **Phase protective relay**
The circuit design of the phase protective relay can protect and avoid the invalidation of the limit protection switch caused by the inconsistency between the positive and negative movements of the motor and the up and down movements when the phase of the motor power supply is wrong.
- **Limit switch**
The upper and lower limit switches can automatically cut off the power during hoisting and lowering, so as to prevent the chain from exceeding and ensure safety.
- **Emergency stop switch (optional)**
This button is used to stop the electric hoist in an emergency. It is a red, mushroom-shaped button at the top of the pendant control. When pressing down the button, the power of the equipment will be cut off, and the button will be blocked automatically. Clockwise rotation can release the button and restart the electric hoist.

Specifications of electric chain hoist

Type		0.125T	0.25T	0.5T		0.75T	1T			2T	3T			
Load		0.125T	0.25T	0.5T	1T	0.75T	1T	2T	3T	2T	3T	3T	5T	7.5T
Model		0.125-1	0.25-01	0.5-01	01-02	0.75-1	01-01	02-02	03-03	02-01	03-02	03-01	05-02	7.5-03
Chain diameter (mm)		4	5	6.3	6.3	6.3	7.1	7.1	7.1	10	10	11.2	11.2	11.2
Hoisting speed m/min	Single speed	10.6	9.6	8	4	4.8D	6.7C	3.3	2.2	6.6	3.3	5.5	2.7	1.8
	Double speed	3.2/10.6	3.1/9.6	2.5/8	1.25/4	1.4/4.8	2.2/6.7	1/3.3	0.7/2.2	2.2/6.7	1/3.3	1.8/5.5	0.9/2.7	0.5/1.8
Motor power (kw)	Single speed	0.4	0.5b5	0.75	0.75	0.75	1.5	1.5	1.5	3	3	3	3	3
	Double speed	0.15/0.4	0.2/0.5	0.3/0.75	0.3/0.75	0.3/0.75	0.6/1.5	0.6/1.5	0.6/1.5	1.1/3	1.1/3	1.1/3	1.1/3	1.1/3
Frequency Hz		50Hz (60Hz speed x 1.2)												
Power supply Ac		380V (220V) L1 L L3												
Chain quantity		1	1	1	2	1	1	2	2	1	2	1	2	3

Type		10T	15T	20T	25T	32T	50T
Load		10-04	15-06	20-08	25-10	32-12	50-20
Chain diameter (mm)		11.2	11.2	11.2	11.2	11.2	11.2
Hoisting speed m/min	Single speed	2.7	1.8	1.4	1.1	0.9	0.5
	Double speed	0.8/2.7	0.5/1.8	0.4/1.4	0.3/1.1	0.25/0.9	0.15/0.5
Motor power (kW)	Single speed	3.0x2	3.0x2	3.0x2	3.0x2	3.0x2	3.0x2
	Double speed	1.1/3x2	1.1/3x2	1.1/3x2	1.1/3x2	1.1/3x2	1.1/3x2
Frequency Hz		50Hz (60Hz speed x 1.2)					
Power supply Ac		380V (220V) L1 L L3					
Chain quantify		4	1	1	1	1	1

Pendant control operation instructions



Prohibition

- **DO NOT** hang the controller cable on other objects or forcibly pull the cable.
- **DO NOT** use the pendant controller if it does not function smoothly.
- In order to adjust the length of the button cable, **DO NOT** twist or bundle.
- Personal injury or equipment damage may occur, if correct safety procedures were not followed.



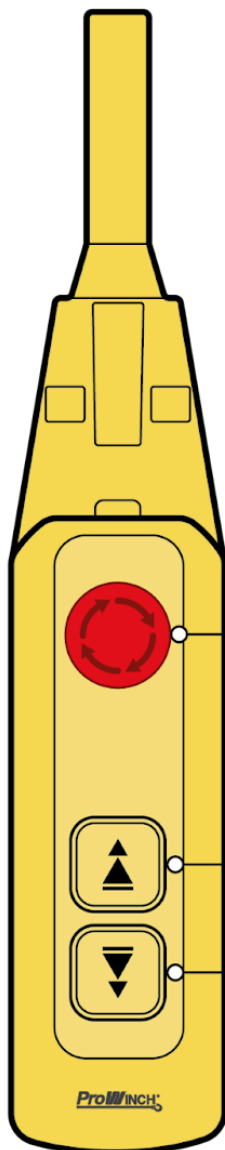
- When releasing the pendant control after operation, **DO NOT** toss it out to prevent potential collisions with physical equipment or other operators. Failure to do so may result in personal injury or equipment damage.







When power is disrupted due to failures or other reasons, the no-voltage protection circuit will activate. In such instances, when power is restored and the switch is pressed, the electric chain hoist will not function. Please press (release) the emergency stop button to reset to release the stop state.

3-point pendant control

The 3-point pendant control features locking emergency stop buttons, as well as hoisting and lowering buttons. Additionally, the hoisting and lowering buttons are equipped with double-speed configuration, providing two-stage pendant controls.






Emergency stop button

1. Press button  for emergency stop
 - When the button  is pressed, the brake will be locked mechanically.
2. Rotate the button  clockwise to release the emergency stop.
 - The pressed button  will return to the original position.




Before supplying power, press the emergency stop button  to brake for safety reasons. After the power is supplied rotate the button  clockwise to release the brake.



Operation buttons

Hoisting/lowering button - Single speed / Double speed

-  1. Press button  lightly for slow speed load hoisting.
2. Press further the button  for fast speed load hoisting.
 - To stop the movement, release the button.

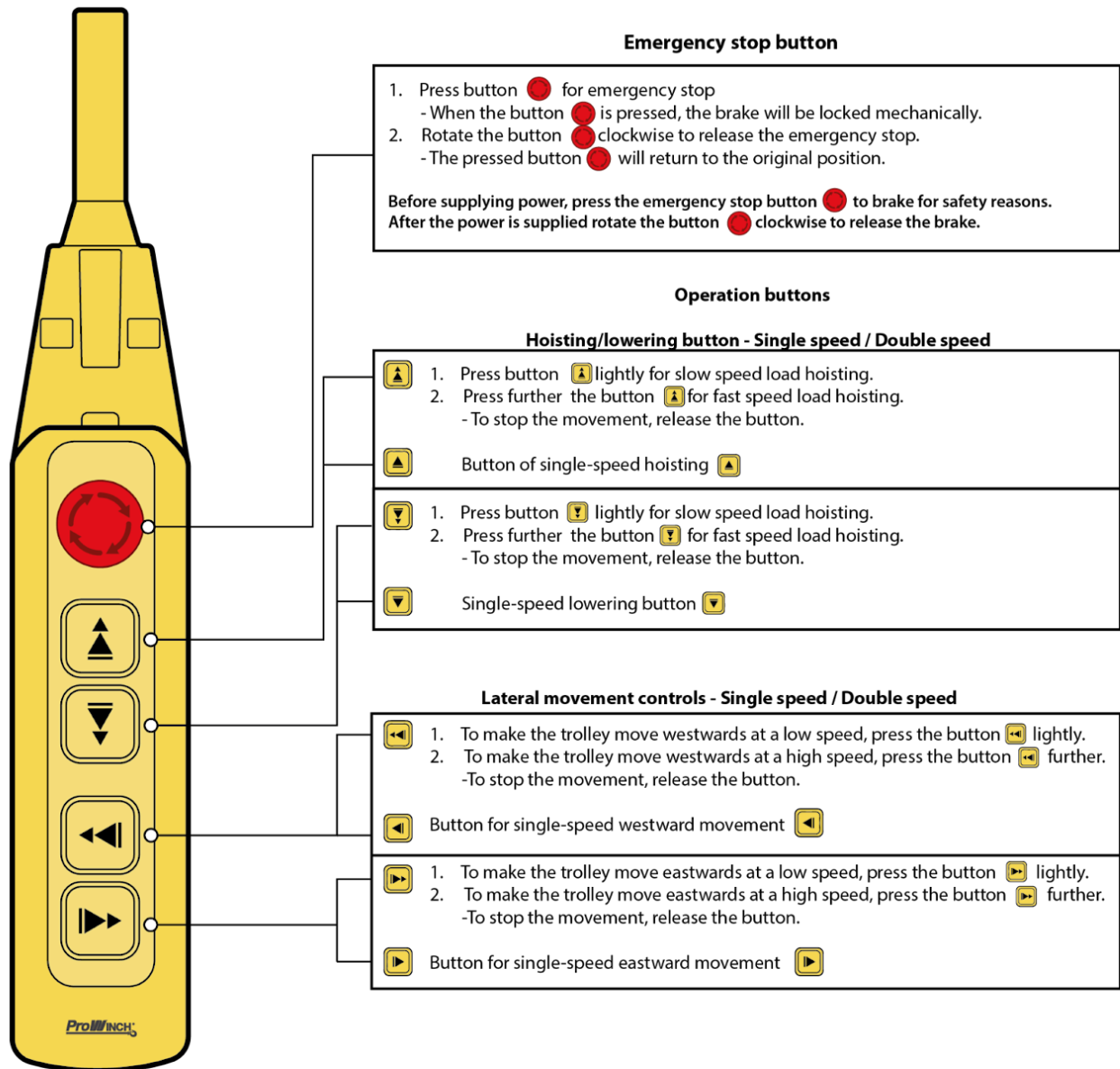
 Button of single-speed hoisting 

-  1. Press button  lightly for slow speed load hoisting.
2. Press further the button  for fast speed load hoisting.
 - To stop the movement, release the button.

 Single-speed lowering button 

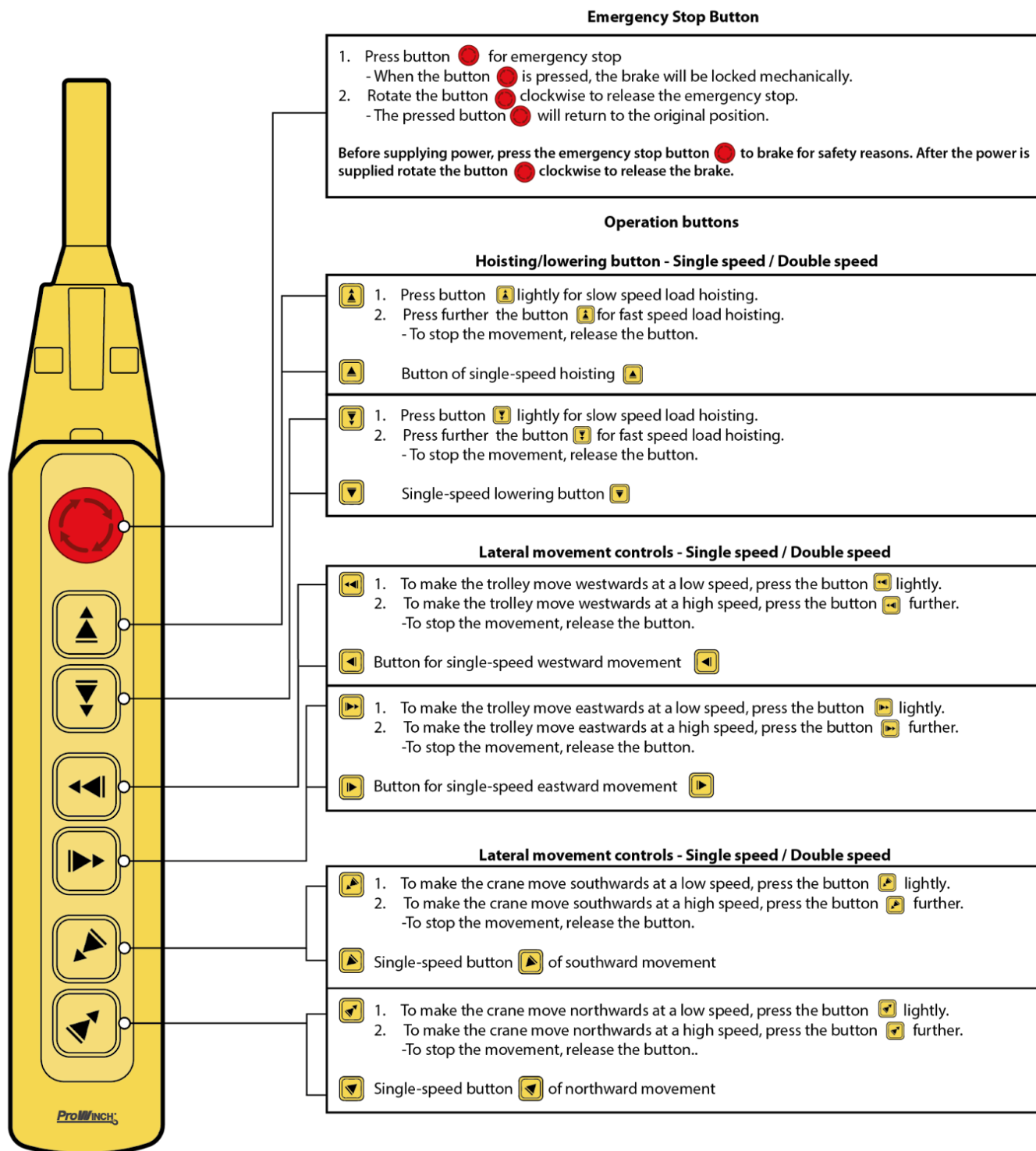
5-point pendant control

The 5-point pendant control is equipped with a locking emergency stop button and an operation button. The operation button is a 2-stage key switch. Please refer to the corresponding specifications for the operating method. The operating instructions of the pendant control designate the lateral moving direction as the east-west direction.



7-point pendant control

The 7-point pendant control is equipped with a locking emergency stop button and an operation button, which is a 2-stage key switch. Please refer to the corresponding specifications for the operation method. The operating instructions of the pendant control are recorded with the lateral moving direction as the east-west direction and the crane (longitudinal) moving direction as the south-north direction.




Selection of engines for lifting equipment

Group				Operational Time Ratings at K-0.65			
				Uniformly Distributed Work Periods		Infrequent Work Periods	
CMAA	F.E.M	HMI	ISO	Max. On Time min/hr	Max. N° Starts /hr	Max. On Time from Cold Start min/hr	Max. N° Starts /hr
	1 Cm	H1	M2	7.5 min(12.5%)	75	15 min	100
A	1Bm	H2	M3	7.5 min(12.5%)	75	15 min	100
B	1Am	H3	M4	15 min (25%)	150	30 min	200
C	2m	H4	M5	30 min (50%)	300	30 min	300
D	3m	H4	M6	30 min (50%)	300	30 min	300
E	4m	H4/H5	M7	60 min (100%)	600	N/A	N/A
F	5m	H5	M8	60 min (100%)	N/A	N/A	N/A

Group				Typical Areas of Application
CMAA	F.E.M	HMI	ISO	
	1 Cm	H1	M2	Powerhouse and utilities, infrequent handling. Hoists are used primarily to install and service heavy equipment, where loads frequently approach rated load, and where the hoist is idle for 1- to 6-month periods between periods of operation.
A	1Bm	H2	M3	Light machine shop, fabricating service, and maintenance. Loads and utilization randomly distributed. Rated loads infrequently handled. Total running time not more than 12.5% of the work period.
B	1Am	H3	M4	General machine shop, fabricating, assembly, storage, and warehousing. Loads and utilization randomly distributed. Total running time not more than 25% of the work period.
C	2m	H4	M5	High-volume handling of heavy loads, frequently near rated load in steel warehousing, machine and fabricating shops, mills, and foundries, with total running time not more than 50% of the work period. Manual or automatic cycling operations of lighter loads with rated loads infrequently handled such as in heat treating and plating operations, with total running time frequently 50% of the work period.
D	3m	H4	M6	Manual or automatic cycle operations of lighter loads with nominal loads manipulated infrequently, as in heat treatment operations, with the total execution time often amounting to 50% of the working period.
E	4m	H4/H5	M7	Bulk material handling in combination with buckets, magnets, or other heavy attached accessories. Equipment typically operated from a cab. Work cycles approaching continuous operation. The user must specify the exact operation details, including the weight of the attached accessories.
F	5m	H5	M8	Severe continuous service at 100% of the rated load.

Load Level And Service Life

Service	Load	Time	Maintenance
Normal	<65%	<25%	6~12 (months)
Heavy	>65%	>25%	3~6 (months)
Severe	 Abnormal Conditions Environmental, Geographical & Risky		1~3 (months)
	<100%	< Duty cycle limit	

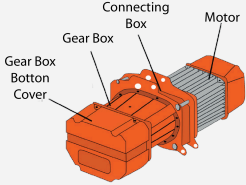

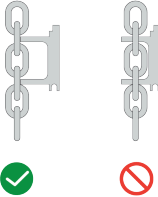
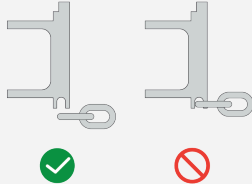
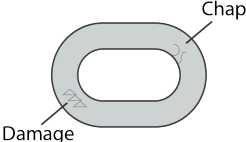
Oil & Lubricant Recommendations

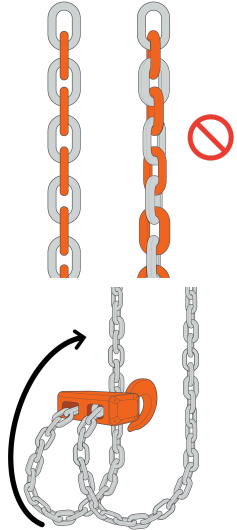
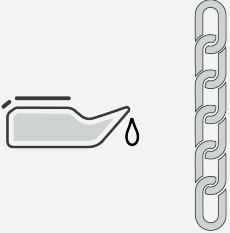
Lubricant greatly increases the life of the load chain. Weekly lubrication and cleaning is satisfactory, but under hot, dirty, and extreme conditions it may be necessary to clean the chain at least once a day and lubricate it several times between cleaning.

Apply sufficient lubricant to obtain natural runoff and full coverage, especially in interlink areas. Check the lubrication condition of the load chain(the load chain has been lubricated before delivery but could have dried during transit). You may use a chain lubricator to lubricate the chain. We suggest that a small quantity of lubricant be deposited in the chain to protect the load chain. And we also recommend using grease for gear box lubrication.

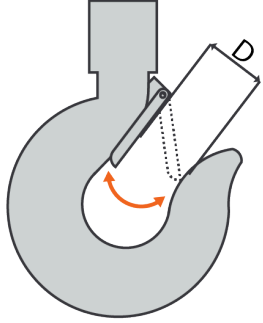
Inspections & Maintenance

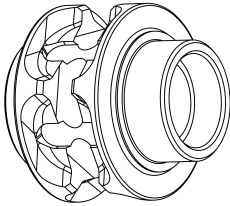
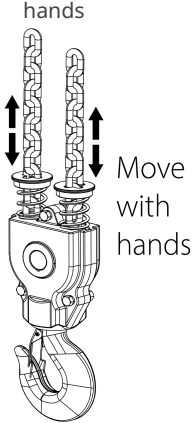
Refer to ASME B30.16 and B30.17 standards for frequency and the types of inspections.

Items	Inspection Method	Standards	Resolution to Deviation
Marks such as nameplates, labels etc.		 <p>No peeling and clear marks</p>	Proceed with cleaning, repairing and replacing. Record serial number for replacing
Deformation or damage of body parts	Visual check	No remarkable deformation, damage, or defect	Replace parts which are deformed, damaged, and defective
Bolts, nuts, and cutters loose or falling off	Visual and tool check	<ul style="list-style-type: none"> • Correct installation • A loose bolt will cause equipment failure • Ensure proper installation to avoid death or serious injury 	Precise installation
Extent of pitch	Check by chain measurement tool		
Attrition of chain diameters	Check by chain measurement tool		
Deformation, damage, wind	<p>Visual check. Confirm chain is not stuck to welding spatters.</p> 	<ul style="list-style-type: none"> • No deep cut • No deformation • No welding spatters • No wind • No chap 	

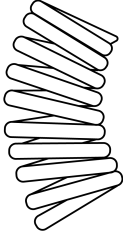
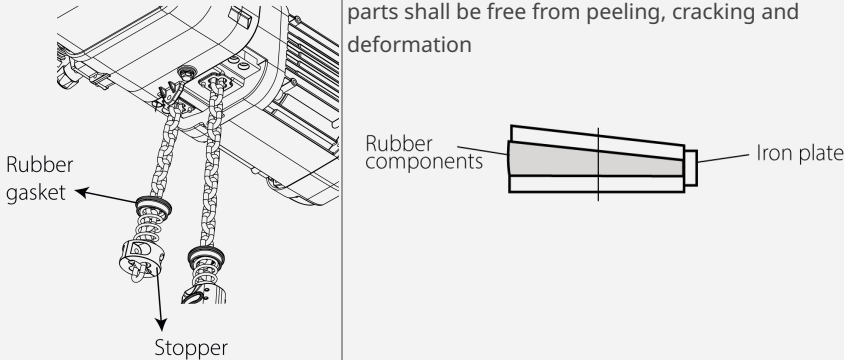
Items	Inspection Method	Standards	Resolution to Deviation
Rust and corrosion	Visual check	No remarkable rust and corrosion	Replace load chains
Distortion	Visual check	 <p>No distortion due the bottom block roll over of double chain models.</p>	Correct distortion
Oil supply	Visual check	<p>Adequate supply of oil</p> 	Oiling
Limit switch	Check by pushing button	Operate until upper and lower limit cause automatic motor shutdown	Replace limit switch, disassemble and clean limit lever
Movement confirmation	Check by pushing button	<ul style="list-style-type: none"> • Load chain can roll up easily • Motor shutdown immediately when operation stops • All movements shutdown when E-stop button pushed • Other buttons cannot cause movement when pushing the E-stop button • All movements return to normal operation when E-STOP button relieved 	

Specifications

Items	Inspection Method	Standards	Resolution to Deviation								
Brake	Check the brake by lifting a small load with a couple of links										
Chain spring	Visual inspection and measure dimensions	<table border="1"> <thead> <tr> <th rowspan="2">Chain</th> <th colspan="2">Length of spring</th> </tr> <tr> <th>Standard</th> <th>Limits</th> </tr> </thead> <tbody> <tr> <td>∅7.1</td> <td>145</td> <td>140</td> </tr> </tbody> </table>	Chain	Length of spring		Standard	Limits	∅7.1	145	140	Replace chain spring
Chain	Length of spring										
	Standard	Limits									
∅7.1	145	140									
Load hook	Check by visual and vernier caliper	500kg models: 34mm 1000kg models : 37mm	Replace hook safety block 								
Deformation, damage and corrosion	Visual check	No remarkable deformation, harmful damage and corrosion	Replace hook								
Hook safety block	Visual inspection, fold and unfold actions	<ul style="list-style-type: none"> • Can exactly fold inside the hook • No dangerous deformation • Do not use hook if the safety block is loosening. • Improper use will lead to death or serious injury. 	Precise installation								
Hook movements (rotate)	Visual inspection and manual rotation	<ul style="list-style-type: none"> • No remarkable space between bottom supporting and top • Equal at right and left • Easy to rotate 360° 	Replace hook								

Item	Inspection method	Criteria	During deviation from criteria
Action of idle pulley	<p>Inspection of active idle pulley</p> 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Caution</p> <ul style="list-style-type: none"> - During checking, please use gloves and be careful not to squeeze fingers. - Personal injury may be caused </div> <p>- Flexible rotation x If the bearing is damaged or the pulley shaft deforms, the rotation is not flexible. The chain hoist is flexible. Move with</p> 	<p>Replace the bearing of the idle pulley</p>
Bottom supporting	Visual inspection	Bolts or nuts are not loose	Stable installation

Peripheral component of the machine

Item	Inspection method	Criteria	During deviation from criteria
Chain spring	Visual inspection 	No obvious shrinkage or compression	Inspection item of "chain spring" for annual inspection (P57)
Rubber gasket	Visual inspection 	-No obvious shrinkage or compression - Rubber parts shall be free from peeling, cracking and deformation	Replace rubber gasket

Daily inspection of motor-driven carrier

- Appearance

Item	Inspection method	Criteria	During deviation from criteria
Confirm whether there is unauthorized transformation	Visual inspection	There is no obvious unauthorized transformation	Return to original state
Marking of nameplates and labels	Visual inspection	No peeling, and clear label	Implement cleaning, maintenance and replacement
Deformation and damage of each part	Visual inspection	No obvious deformation, damage or corrosion	Replace the deformed and damaged components
Damaged cable	Visual inspection	There is no deterioration or breakage to the external face	Replacement
Loose and drop-out bolts, nuts and split pin	Visual inspection and tool inspection	Reliable installation <div style="border: 1px solid orange; padding: 5px; text-align: center;"> <p style="color: orange; margin: 0;">Danger</p> <p style="margin: 0;">The body may fall even if a split pin falls off. Please be sure to confirm carefully. Serious accidents of death or serious injury, etc. may be caused</p> </div>	Stable installation
Cleaning	Visual inspection	No excessive dust and dust accumulated	Cleaning and removal

Specifications

- **Function and performance**

Please check the following items under no load.

Item	Inspection method	Criteria	During deviation from criteria
Action confirmation	Press the button to check the action	- Flexible lateral movement, no bending and vibration. - Move in the same direction as the button operation. - After the operation stops, the motor will stop immediately. - After the emergency stop button is pressed, all actions stop. - When the emergency stop button is pressed, the machine will not operate even if other buttons are pressed. - After the emergency stop button is released, the machine acts normally.	Inspect in accordance with the inspection items (P52)
Actuator	Press the button to check the action	After the operation stops, the brake works quickly and the motor stops immediately	Check the "electromagnetic brake" / Ponzi brake according to the annual inspection. Inspect in accordance with the items of annual inspection of "electromagnetic brake" / by-pass brake (P39)

Monthly inspection of electric chain hoist (PWRX type)

- **Load chain**

Please check the load chain after the dirt is cleaned.

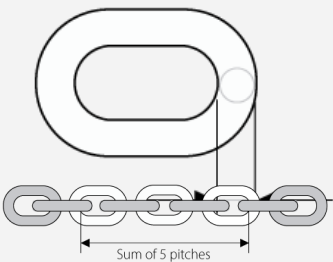
During measurement of the sum and the diameter of pitch, please use a cuspidal vernier caliper (measuring point vernier caliper).

Please grease the load chain after inspection.

The wear (life) of the load chain is greatly affected by whether there is lubricating oil or not. Please use regular DC lubricating oil or equivalent product (general lithium grease for industrial use, viscosity No.0).

Please make the load chain in a no-load state, and apply lubricating oil to the link part of the occlusion between the load pulley and the idle pulley and the link part of the chain hoist.

After the lubricating oil is applied, please carryout hoisting and lowering operations under no load, so that the lubricating oil is evenly distributed on the chain hoist.

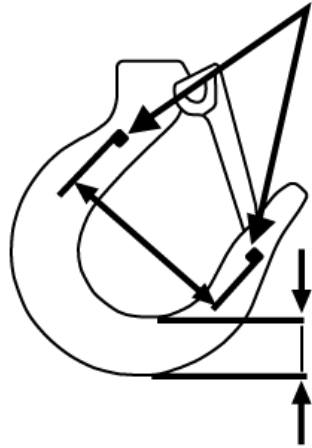
Item	Inspection method	Criteria	During deviation from criteria
Pitch expansion	Measure the extension of pitch with vernier caliper. (Measure the sum of 5 pitches)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Precautions</p> <p style="text-align: center;">Please check the occluding parts between the load pulley and the idle pulley especially carefully</p> </div> <p>Do not exceed the limit value of "Sum of 5 Pitches" on the next page.</p>	Replace load chain
Wear of diameter	Measure the diameter (d) with a vernier caliper 	<p>Do not exceed the following threshold value of "Load Chain Diameter"</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">Precautions</p> <p style="text-align: center;">After the wear of the load chain is confirmed, be sure to check the wear of the load pulley and the idle pulley. (Please refer to "Monthly Inspection" and "Load Pulley" (P55))</p> </div>	Replace load chain

Type	Rated load	Load chain diameter	Sum of 5 pitches (mm)		Load chain diameter D (mm)	
			Not exceed the threshold value		Not exceed the threshold value	
			Criteria		criteria	
PWRX-010SD	1t	φ7.1x1	105	109.2	7.1	6.8
PWRX-015SD	1.5t	φ10.0x1	150	153.2	10	9.6
PWRX-020LD	2t					
PWRX-020SD						
PWRX-030SD	3t	φ10.0x2	170	173.7	11.2	10.6
PWRX-025SD	2.5t	φ11.2x1				
PWRX-050SD	5t	φ11.2x2				

● Top/bottom hook

Item	Inspection method	Criteria	During deviation from criteria
Opening and wear of hook	Visual inspection and measurement by vernier caliper Stamping and marking	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Caution</p> </div>	Replace load chain

Specifications



Check that whether the dimension scale of A, B and C at the time of purchase deviates from the management criteria. Personal injury or equipment damage maybe caused

Measured value (mm)	Threshold value
a Dimension	Not exceed the threshold value at the time of purchase
b Dimension	The wear loss does not exceed 5%
Dimension	

Although the nominal standard values are attached in the table below, as the hook is forged and heat-treated, there will be dimensional errors. Please forgive me. PWRX hook use limit and criteria (Not exceed the threshold value)

Type	Rated Load	a Dimension (mm)	b Dimension (mm)		c Dimension (mm)	
		Criteria	Criteria		Criteria	
PWRX-010SD	1t	50	22.5	21.4	31	29.5
PWRX-015SD	1.5t	60	26.5	25.2	36.5	34.7
PWRX-020LD	2t	69	31.5	29.9	43.5	41.3
PWRX-020SD						
PWRX-025SD	2.5t					
PWRX-030SD	3t	73	34.5	32.8	47.5	45.1
PWRX-050SD	5t	83	42.5	40.4	56	53.2

Deformation, damage and corrosion



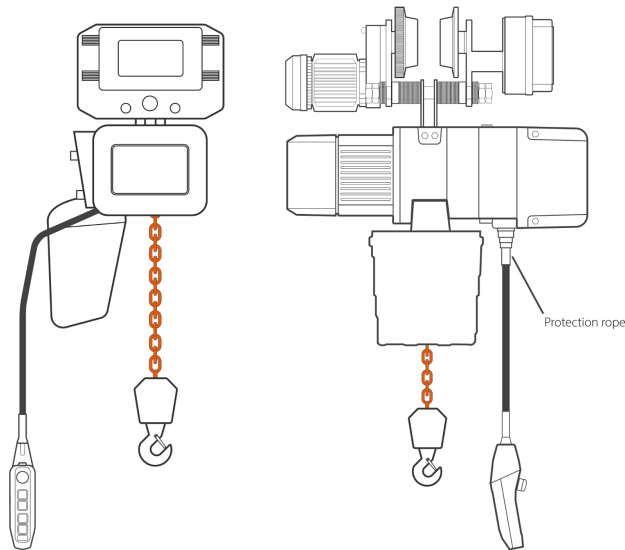
Visual inspection

- No deformation of bending or distortion, etc.
- No deep cut wound
- Bolts and nuts are free from loosening and falling off
- No sufficient corrosion
- No foreign matters of attachments due to welding, etc.

Replace the hooks

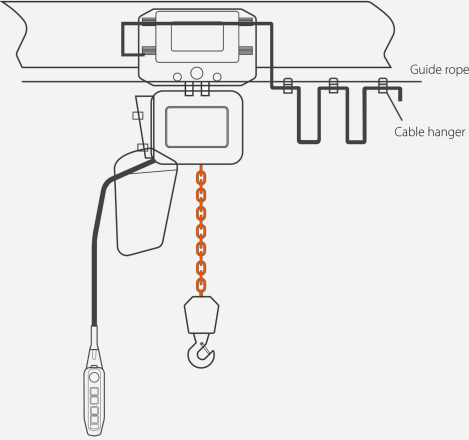
• **Button switch**

Item	Inspection method	Criteria	During deviation from criteria
Button switch	Visual inspection and inspection by operation	<ul style="list-style-type: none"> - No breakage, deformation or screw loosening, etc. - Switch can be operated smoothly - Operation and releasing of the emergency stop button can be conducted 	Replace button switch
Button cable	Visual inspection	<ul style="list-style-type: none"> -The button cable is stably installed - The protective rope is installed on the body, and even if the button switch is pulled, the button switch cable will not be directly stressed 	Install the button cable and protective rope correctly
		<ul style="list-style-type: none"> - No damage 	Replace button cable



Specifications

- **Power supply**

Item	Inspection method	Criteria	During deviation from criteria
Power cable	Visual inspection	<ul style="list-style-type: none"> - There is affluence in length - No damage - Stably installed 	Replace the power cable
Cable hanger	Visual inspection and inspection by hand movement 	<ul style="list-style-type: none"> - No damage - Easy to move - Installed with the same intervals ... The appropriate interval is 1.2m 	Reinstall, so that it will not obstruct movement
Guide rope	Visual inspection	No relaxation	Eliminate relaxation

- **Function and performance**

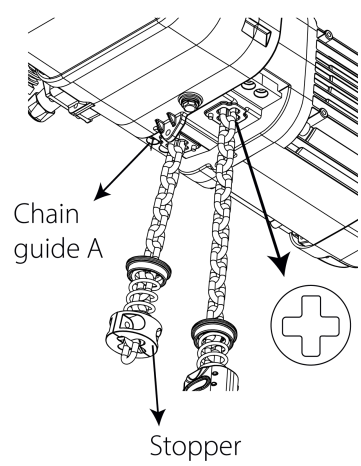
Please check the following items under no load.

Item	Inspection method	Criteria	During deviation from criteria
Abnormal sounds	Check the gear sound, motor sound and load chain sound in action under no load condition <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Precautions</p> <p>After the wear of the load chain is confirmed, be sure to check the wear of the load pulley and the idle pulley. (Please refer to " Monthly Inspection" and "Load Pulley" (P55))</p> </div>	<ul style="list-style-type: none"> - No irregular rotating sound, etc. - No roar of motor and grating of brake - No irregular abnormal sound - There is no crackling pop-up sound from the load chain 	Replace the abnormal components

Monthly inspection of motor-driven carrier (PWRX type)

• Appearance

Item	Inspection method	Criteria	During deviation from criteria
Rail of lateral movement	Visual inspection	No obvious deformation or damage	Inspect in accordance with the items of "Rail of lateral Movement" (P72) in "Chapter 2 Annual inspection"
Oil applying (The parts of wheel gear, etc.)	Visual inspection	Sufficient oil applying	Apply in the gear

Item	Inspection method	Criteria	During deviation from criteria
Chain guide A	Visual inspection 	- No obvious wear, deformation or breakage - No bumper injury, etc. caused by chain hoist <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Precautions</p> <p>Cause collision caused by misuse of inclined pulling, etc. Please operate correctly. If the chain guide is found to be worn, the load chain may also be forcibly worn.</p> <p>Please check the wear loss in accordance with the items of load chain wear.</p> <p>Personal injury or equipment damage may be caused.</p> </div>	Replace chain guide A

! DANGER

- **DO NOT** disassemble and assemble in an explosive environment.
- Please be careful not to leave scars on the joint surface.
- **DO NOT** overtighten the nuts and screws.

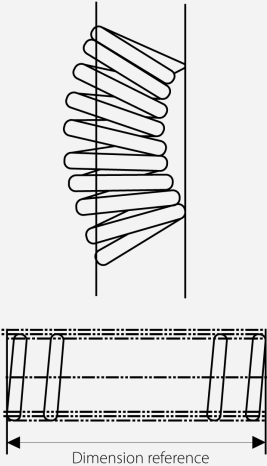
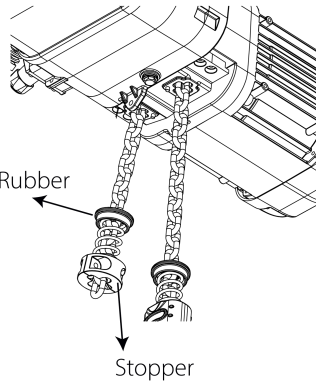
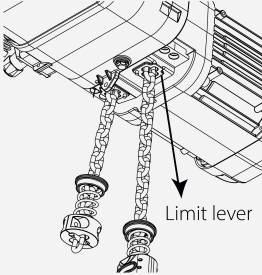
Specifications

Item	Inspection method	Criteria	During deviation from criteria
Confirm whether there is unauthorized transformation	Visual inspection	No unauthorized transformation	Return to original state
State of planet joint surface	- Uncover for visual inspection - Measure the gap with a caliper	- No rust - Cleanup - No breakage - Liquid encapsulating and pasting are in good condition	Remove the rust and clean Replace pressure container Re-apply liquid encapsulating between the fan and fan shroud
	Hoist and lower	No grating of fan and fan shroud	Replace the fan shroud
Cable entry	Disassembly for inspection	The encapsulating does not degrade	Replace the encapsulating



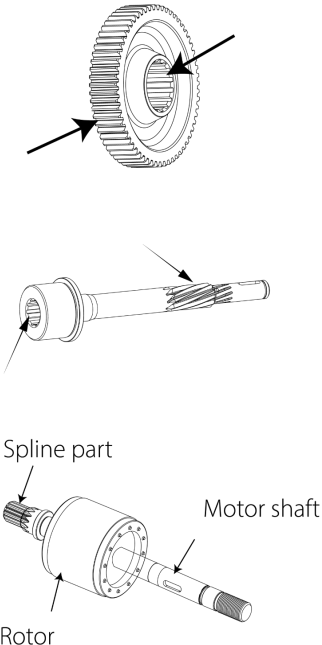
During reassembly of the lead-in part of the cable, please select the encapsulating, washer and cable clamp suitable for the cable.

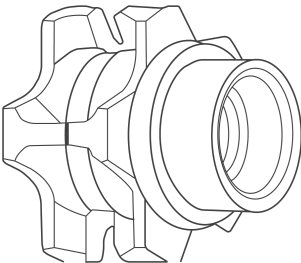
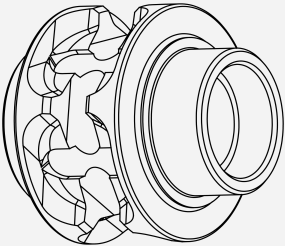
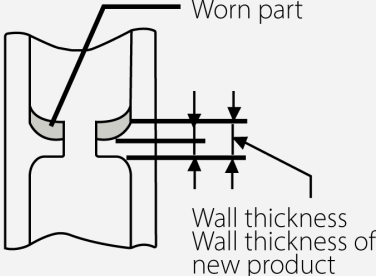
(Refer to attachment Disassembly and Assembly Manual)

Item	Inspection method	Criteria	During deviation from criteria
Moving part of the limit shaft	Disassembly for inspection	The shaft diameter of the lever pin of the limit lever shall not be smaller than 15.95mm The inner diameter of the sleeve is not larger than 16.07mm	Replace limit lever pin and sleeve (Both shall be replaced if anyone of them fails to meet the specification)
Chain spring	Visual inspection and inspection by measurement 	No obvious settlement (deformation) by visual inspection <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Caution</p> <p>Excessive use of friction clutch and limit switch, leading to deformation of rubber gasket and chain spring. Please operate correctly</p> <p>Personal injury or equipment damage may be caused.</p> </div>	Replace the chain spring
Stopper	Visual inspection 	Stably installed on the third link from the end of the load chain on the no-load end	Installed on the third link
Limit lever	Visual inspection and inspection by hand movement	<ul style="list-style-type: none"> - No deformation, breakage or wear - Act flexibly - Clean 	Replace the limit lever Disassemble and clean the limit lever

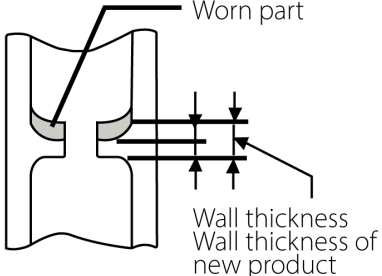
Specifications

• Drive Part

Item	Inspection method	Criteria	During deviation from criteria
Hub joint part	Visual inspection	<ul style="list-style-type: none"> - No obvious deformation or wear - Hub spring does not fall off 	Replace hub and electromagnetic brake
Bearing	Visual inspection and manual rotation inspection	<ul style="list-style-type: none"> - No obvious wear, damage, breakage and other harmful defects, rotate flexibly - Flexible rotation 	Replace the bearing
Load gear, gear B, pinion	Conduct visual inspection to the arrow in the figure below after disassembly <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> - No obvious wear - No breakage 	Replace gear and replace pinion Replace the gear oil at the sametime
Friction clutch	Visual inspection	<ul style="list-style-type: none"> - No significant wear, deformation, damage or breakage - The pawl has no obvious deformation or wear <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p style="text-align: center;">Danger</p> <ul style="list-style-type: none"> - Do not adjust or disassemble the friction clutch - Serious accidents of death or serious injury, etc. may be caused. </div>	Replace the friction clutch

Item	Inspection method	Criteria	During deviation from criteria																										
<p>Friction clutch with mechanical brake</p> 	<p>Visual inspection</p>	<ul style="list-style-type: none"> - No significant wear, deformation, damage or breakage - The pawl has no obvious deformation or wear <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center;">Danger</p> <p style="text-align: center;">- Do not adjust or disassemble the friction clutch with a mechanical brake.</p> <p style="text-align: center;">Serious accidents of death or serious accidents of death or serious injury, etc. may be caused</p> </div>	<p>Replace pawl and friction clutch with mechanical brake</p>																										
<p>Wear and damage of load pulley</p> 	<ul style="list-style-type: none"> - Conduct visual inspection after disassembly - Measure the wall thickness with a vernier caliper  <p style="text-align: right;">Worn part</p> <p style="text-align: right;">Wall thickness Wall thickness of new product</p>	<ul style="list-style-type: none"> - No obvious wear, deformation or breakage - The pulley chain is free from abrasion and the spine is free from touch injury <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center;">Caution</p> <p style="text-align: center;">When the load pulley is worn, the load chain may also be worn. Please check the wear loss in accordance with the items of load chain wear.</p> </div> <p>Use limit of load pulley and idle pulley (No smaller than the threshold value)</p>	<p>Replace load pulley</p>																										
<p>Wear and damage of idle pulley</p>	<ul style="list-style-type: none"> - Conduct visual inspection after disassembly - Measure the wall thickness with a vernier caliper 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Type</th> <th rowspan="2">Rated load (t)</th> <th colspan="2">Wall thickness (mm)</th> </tr> <tr> <th>Criteria</th> <th></th> </tr> </thead> <tbody> <tr> <td>PWRX-010SD</td> <td>1</td> <td>4.5</td> <td>3</td> </tr> <tr> <td>PWRX-015SD</td> <td>1.5</td> <td rowspan="3">6.5</td> <td rowspan="3">4.3</td> </tr> <tr> <td>PWRX-020LD</td> <td>2</td> </tr> <tr> <td>PWRX-020SD</td> <td>2</td> </tr> <tr> <td>PWRX-030SD</td> <td>3</td> <td rowspan="3">7.3</td> <td rowspan="3">4.9</td> </tr> <tr> <td>PWRX-025SD</td> <td>2.5</td> </tr> <tr> <td>PWRX-050SD</td> <td>5</td> </tr> </tbody> </table>	Type	Rated load (t)	Wall thickness (mm)		Criteria		PWRX-010SD	1	4.5	3	PWRX-015SD	1.5	6.5	4.3	PWRX-020LD	2	PWRX-020SD	2	PWRX-030SD	3	7.3	4.9	PWRX-025SD	2.5	PWRX-050SD	5	<p>Replace the idle pulley</p>
Type	Rated load (t)	Wall thickness (mm)																											
		Criteria																											
PWRX-010SD	1	4.5	3																										
PWRX-015SD	1.5	6.5	4.3																										
PWRX-020LD	2																												
PWRX-020SD	2																												
PWRX-030SD	3	7.3	4.9																										
PWRX-025SD	2.5																												
PWRX-050SD	5																												

Specifications

	 <p>Worn part</p> <p>Wall thickness Wall thickness of new product</p>		
Oil seal and encapsulating	Visual inspection	<ul style="list-style-type: none"> - No deformation or cracks, etc. - No oil leakage 	Replace oil seal and encapsulating

- **Electrical mounting subassembly**

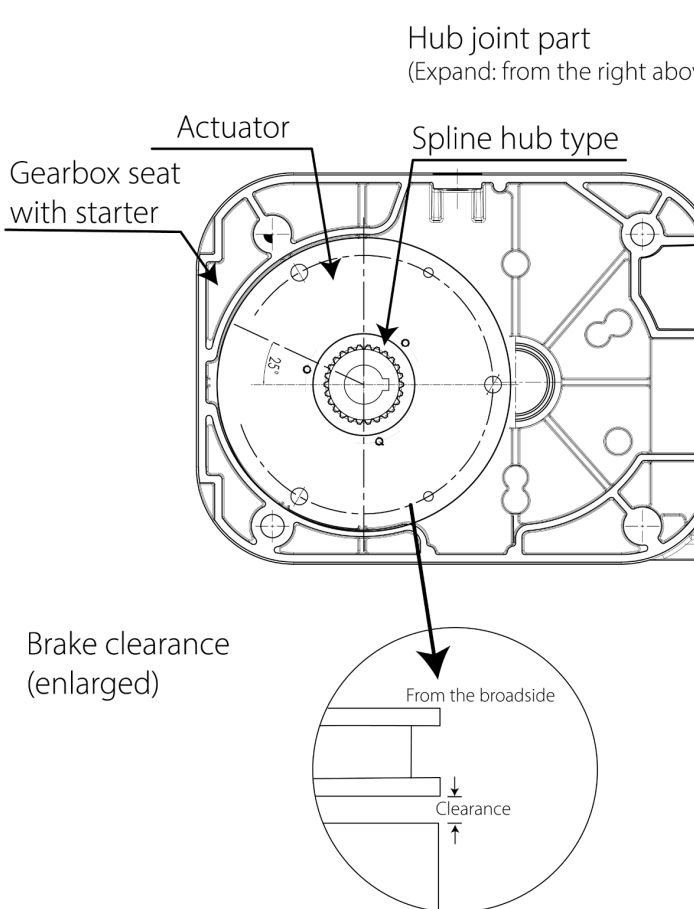
Item	Inspection method	Criteria	During deviation from criteria
Electrical mounting subassembly	Remove the controller cover for visual inspection	<ul style="list-style-type: none"> - No breakage or burning loss, etc. - The crews are not loose and installed firmly <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Caution</p> <p>Be sure to use the specified contactor.</p> </div> <p>Even if the above standards are met, replacement shall be conducted at least every 5 years</p>	Replace damaged and burned parts and install stably
Wiring		<ul style="list-style-type: none"> - Stably fixed on the electrical mounting subassembly - The joint is stably plugged - No broken line or burning loss, etc. 	Stable installation Replace the cable, refer to "Chapter 3 Causes of failure and countermeasures Guide" (P78) for disposal
Interfusing and adhesion of foreign matter		<ul style="list-style-type: none"> - No foreign matters, such as water drops and dust are interfused. 	Remove foreign matter

• Electrical characteristics test

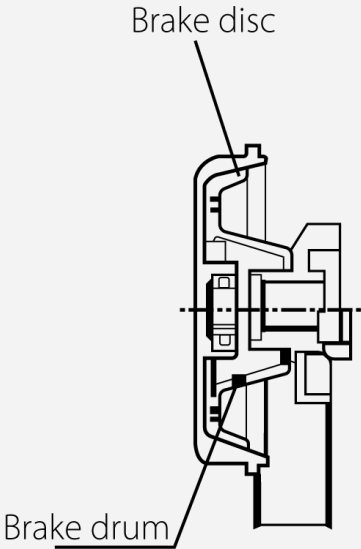
Item	Inspection method	Criteria	During deviation from criteria
Power voltage	- Measure with multimeter	<p>- During operation under the rated load, the power receiving part of the main body is supplied with a voltage within 10% of the rated voltage</p> <div data-bbox="875 485 1265 747" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">Caution</p> <p style="text-align: center;">Please pay attention to prevent electric shock during measuring</p> <p style="text-align: center;">Serious accidents of death or serious injury, etc. may be caused due to electric shock.</p> </div>	Supply appropriate power
Insulation resistance	<p>- Measure with an insulation resistance meter</p> <p>(Measure the charging part and no-charging part between RST and ground wire)</p>	<p>The insulation resistance is above 5MΩ</p> <div data-bbox="875 873 1265 1056" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">Danger</p> <p style="text-align: center;">Please measure after powering off.</p> <p style="text-align: center;">Serious accidents of death or serious injury, etc. may be caused</p> </div>	Replace

Specifications

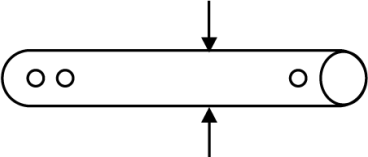
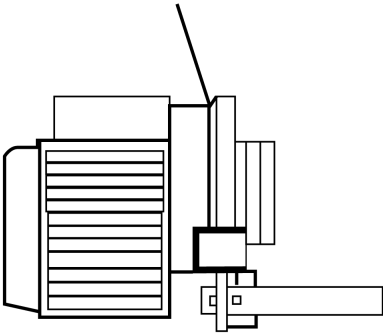
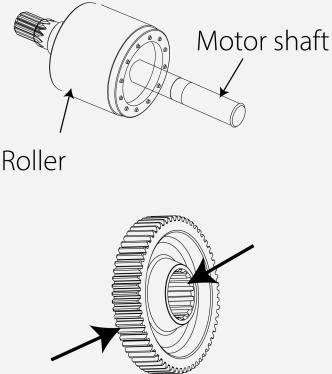
- Power-off brake

Item	Inspection method	Criteria	During deviation from criteria												
Appearance	- Remove the brake cover for visual inspection	- The bolt or screw is not loose - No damage or breakage	Fasten bolt and screw Replace electromagnetic brake												
Clearance	- Measure with a clearance gauge	Threshold value of electromagnetic brake (Not exceed the threshold value)	Replace electromagnetic brake												
		<table border="1" data-bbox="909 598 1258 1060"> <thead> <tr> <th colspan="2">ER Type</th> </tr> <tr> <th>Type</th> <th>Threshold value (mm)</th> </tr> </thead> <tbody> <tr> <td>PWRX-010SD</td> <td rowspan="7">0.70</td> </tr> <tr> <td>PWRX-015SD</td> </tr> <tr> <td>PWRX-020LD</td> </tr> <tr> <td>PWRX-020SD</td> </tr> <tr> <td>PWRX-030SD</td> </tr> <tr> <td>PWRX-025SD</td> </tr> <tr> <td>PWRX-050SD</td> </tr> </tbody> </table> <div data-bbox="909 1102 1258 1564" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">Danger</p> <p style="text-align: center;">- Do not adjust or disassemble the friction clutch</p> <p style="text-align: center;">Serious accidents of death or serious injury, etc. may be caused</p> </div>	ER Type		Type	Threshold value (mm)	PWRX-010SD	0.70	PWRX-015SD	PWRX-020LD	PWRX-020SD	PWRX-030SD	PWRX-025SD	PWRX-050SD	
ER Type															
Type	Threshold value (mm)														
PWRX-010SD	0.70														
PWRX-015SD															
PWRX-020LD															
PWRX-020SD															
PWRX-030SD															
PWRX-025SD															
PWRX-050SD															

- By-pass magnet brake

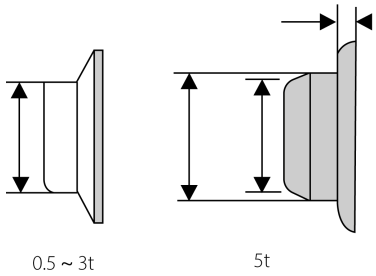
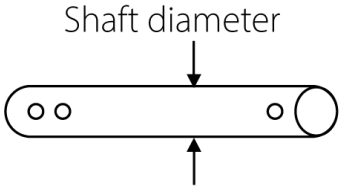
Item	Inspection method	Criteria	During deviation from criteria						
Appearance	- Conduct visual inspection after disassembly	- Brake drum and motor cover are free from deformation and breakage, etc.	Replace parts						
		- The brake spring is free from deformation and breakage	Replace the brake spring						
Brake disc wear loss	- Measure after disassembly 	Brake use limit (Not smaller than the threshold value) (Not exceed the threshold value) <table border="1" data-bbox="912 646 1260 800"> <thead> <tr> <th colspan="2">B Dimension (mm)</th> </tr> <tr> <th>Criteria</th> <th></th> </tr> </thead> <tbody> <tr> <td>36.8</td> <td>36.3</td> </tr> </tbody> </table>	B Dimension (mm)		Criteria		36.8	36.3	Replace the motor cover Brake drum
B Dimension (mm)									
Criteria									
36.8	36.3								

Annual inspection of motor-driven carrier

Item	Inspection method	Criteria	During deviation from criteria
Suspension shaft	<ul style="list-style-type: none"> - Visual inspection - Measure shaft diameter and pore diameter with a vernier caliper <p style="text-align: center;">Shaft diameter</p> 	<ul style="list-style-type: none"> - No obvious deformation or wear - Obvious visible deformation is regarded as reaching the use limit - Wear limit is 5% of shaft diameter and pore diameter 	<p>Replace suspension Shaft</p>
Suspension shaft, connecting support	<ul style="list-style-type: none"> - Visual inspection - Measure the pore diameter (d) with a vernier caliper 	<ul style="list-style-type: none"> - Stably connect with connecting bolts - Wear limit is 5% of the pore diameter 	<p>Replace worn parts</p>
Gear rack encapsulating	<ul style="list-style-type: none"> - Visual inspection <p style="text-align: center;">Gear rack encapsulating</p> 	<p>No breakage and no oil leakage during assembly</p>	<p>Replace gear rack encapsulating</p>
Gear type and motor shaft	<p>Visual inspection</p> 	<p>No obvious wear, deformation or breakage</p>	<p>Replace parts</p>

Annual inspection of handcart

- Component part

Item	Inspection method	Criteria	During deviation from criteria																													
Wheel	<ul style="list-style-type: none"> - Visual inspection - Measure D and t dimensions with a vernier caliper  <ul style="list-style-type: none"> - Measure boundary dimensions with a vernier caliper 	<ul style="list-style-type: none"> - No obvious deformation or damage - Wear limit of wheels (No smaller than the threshold value) <table border="1" data-bbox="813 653 1302 1003"> <thead> <tr> <th rowspan="2">Rated load EN</th> <th colspan="2">D (mm)</th> <th colspan="2">Flange thickness t (mm)</th> </tr> <tr> <th>Criteria</th> <th></th> <th>Criteria</th> <th></th> </tr> </thead> <tbody> <tr> <td>1 t</td> <td>71</td> <td>69.5</td> <td>4</td> <td>3.3</td> </tr> <tr> <td>1.5t - 2t</td> <td>85</td> <td>83.5</td> <td>4.5</td> <td>3.8</td> </tr> <tr> <td>2.5t - 3t</td> <td>100</td> <td>98.5</td> <td>5</td> <td>4.3</td> </tr> <tr> <td>5t</td> <td>118</td> <td>112</td> <td>9.6</td> <td>6.7</td> </tr> </tbody> </table>	Rated load EN	D (mm)		Flange thickness t (mm)		Criteria		Criteria		1 t	71	69.5	4	3.3	1.5t - 2t	85	83.5	4.5	3.8	2.5t - 3t	100	98.5	5	4.3	5t	118	112	9.6	6.7	Replace tire
Rated load EN	D (mm)			Flange thickness t (mm)																												
	Criteria		Criteria																													
1 t	71	69.5	4	3.3																												
1.5t - 2t	85	83.5	4.5	3.8																												
2.5t - 3t	100	98.5	5	4.3																												
5t	118	112	9.6	6.7																												
Suspension shaft	<ul style="list-style-type: none"> - Visual inspection - Measure the shaft diameter, pore diameter and shaft diameter with a vernier caliper 	<ul style="list-style-type: none"> - No obvious deformation or wear - Obvious visible deformation is regarded as reaching the use limit - Wear limit is 5% of the shaft diameter 	Replace suspension shaft																													
Hanger	<ul style="list-style-type: none"> - Visual inspection - Measure the pore diameter (d) with a vernier caliper 	<ul style="list-style-type: none"> - Stably combine with connecting shaft and connecting bolt - Wear limit is 5% of the pore diameter 	Replace hanger																													

Installation

Before Installation Procedure



Before installing, removing, inspecting or performing any maintenance on the hoist, the main switch shall be de-energized and locked out and tagged out. Do not use this equipment in hazardous locations.



Before installing, make sure your electrical supply meets the minimal requirements for the unit and check the gauge wire calculator using the QR code below.



Scan using your camera

Electrical connections



Make sure that fuses and other current overload devices are in place to protect the power supply.

An improper or insufficient ground connection creates an electrical shock hazard when touching any part of the hoist or trolley.

Unpacking

You should carefully inspect hoist upon delivery for any damage which may have occurred during shipment or handling. Check hoist frame for: dents or cracks, external cords for damaged or cut insulation, control station for cut or damaged enclosure, and. load chain for nicks and gouges.

Hoist unit	Chain bag with mounting pieces	Pendant control unit	Wireless control unit (Optional)
1 Pc	1 Pc	1 Pc	1 Pc

Check and document hoist characteristics:

- Model number
- Rated capacity (tonnage)
- Lifting length of load chain (meter)
- Power supply
- Push button pendant assembly (2 button, 4 button or 6 button)
- Specially ordered optional items
- Beam width for trolley installation



- Electric chain hoists must be grounded properly.
- Lock-out and tag-out the main disconnect switch in ed-energized position before performing any service on the hoist.
- Customers must provide power supply cable, fuses, and main disconnect switch.
- Check supply voltage is the same as nameplate voltage on hoist.
- Check voltage does not vary by more than $\pm 10\%$ from nominal value.
- Do not use conductors smaller than those listed in this User Manual to supply power to hoist.
- Never bypass limit switches, remove limit switch stops, or alter limit switch devices.
- Check the electric installation and wire gauge selection at www.prowinch.com and follow these simple steps).
- If the unit has three phase, do not alter or bypass the phase (shifter, need to confirm the term).

Supply Voltage

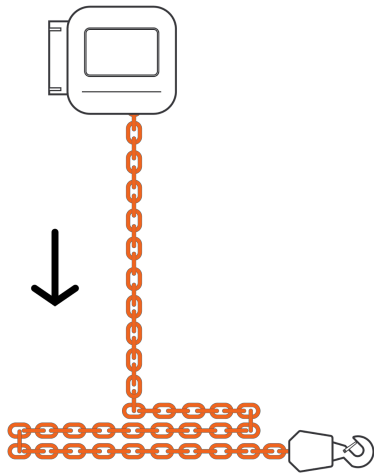


Check supply voltage before everyday use. If the voltage carries more than 10% of the rated value, electrical devices may not function normally or/ and cause damages to the equipment.

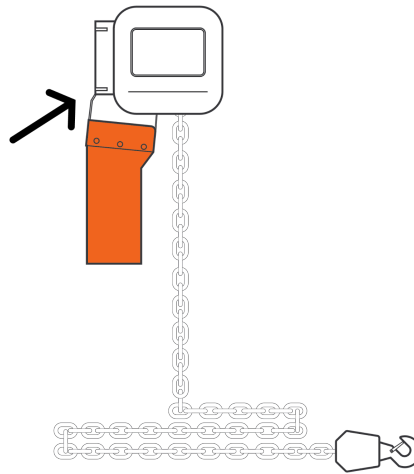
Do not connect the equipment to the power supply before completing the installation process.

Chain Bag Assembly

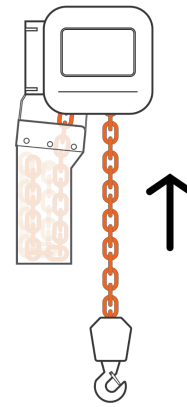
To make sure the chains form a natural pattern and avoid distortion of the chains, you must follow the steps below for the chain bag assembly.



1. Lower all the chains

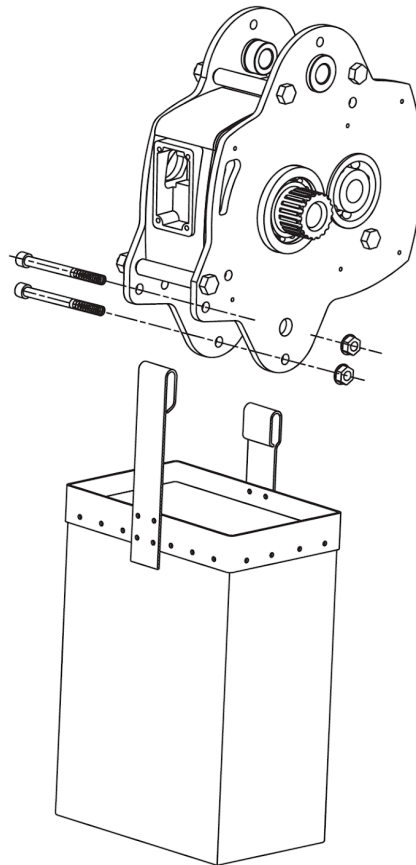


2. Then install the chain bag



3. Feed all the chains up

Switch on power supply to hoist and have a professional operate push button.



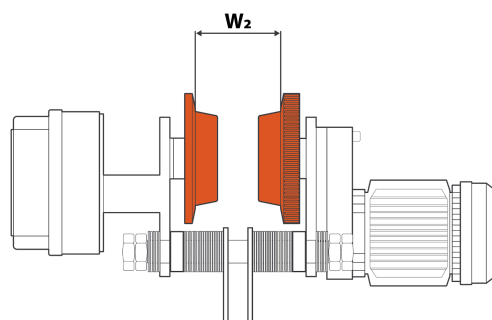
Trolley installation into the beam

Always have the qualified person to perform the installation.

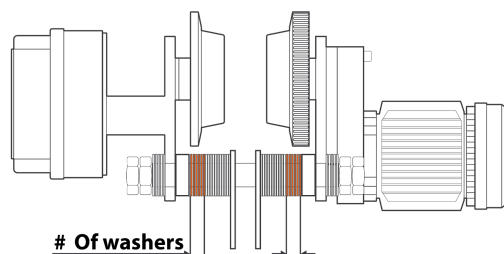
Step 1: Measure the beam width W_1



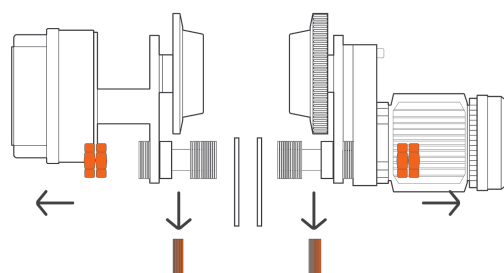
Step 2: Measure the width between the trolley wheels W_2 . The max width for the trolley wheels is 6 inches. Contact ProWinch if you have a wider beam.



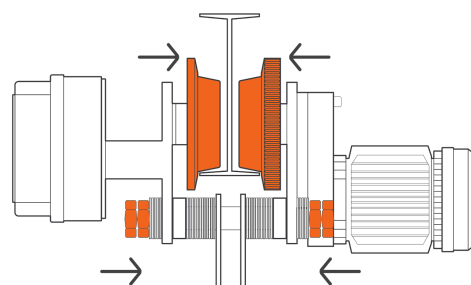
Step 3: Calculate the difference between W_2 and W_1 . Then estimate the numbers of washers will make up the width difference. Always subtract 1 to your estimated washer number for the beam and wheel width clearance.



Step 4: Unscrew the nuts and take out the numbers of washers from both sides. Take one washer or two more from the driving wheel (the wheel with gears) side.



Step 5: Raise the trolley and the unit to the beam for assembly.



Qualified Operator



Hoist operators are required to read and fully understand the operation section of this manual, all warnings contained in the manual, and labels attached to the equipment. Operator training must be provided to ensure proper operation of equipment in compliance with instructions provided by the equipment manufacturer and the provisions of ASME B30, and proper rigging procedures for the attachment of loads to the hoist. Safe and efficient operation of the hoist requires an operator who exercises caution, common sense, and good judgment in anticipating the effects of operating the hoist. The operator must be fully alert, focused, and aware of the surroundings at all times. The job must be strictly carried out under the good practices defined by the applicable international and national safety standards, such as ANSI, OSHA and ASME.

This hoist must not be operated by individuals who:

- Cannot read, understand and speak the language in which the security labels, ID Plate and User Manual of equipment is written.
- Does not meet the legal age requirements.
- Is under the influence of alcohol, drugs, or medication.
- Has visual or hearing impediments, or below normal reaction times.
- Has a history of or experiences seizures, mental, heart, or other illnesses that could interfere with safe operation of the equipment.
- Has not been trained for the proper use of the hoist.
- Has not received and read the User Manual for the exact equipment.
- Has not demonstrated qualifications through practical operation of hoist.



Operational Testing

1. Press the  button to lower the unloaded hook down. Carefully press the limit switch with a tool before the last chain link touches the limit switch. Check if the chain movement is stopped when the limited switch is pressed and the chain movement resumes when the limit switch is released.
2. Press the  button to hoist the unloaded hook up. Carefully press the limit switch with a tool before the last chain link touches the limit switch. Check if the chain movement is stopped when the limited switch is pressed and the chain movement resumes when the limit switch is released.
3. Test the function of the emergency stop switch. Check if the elevator stops running immediately after pressing the emergency stop switch, and make sure that the hoist will not start again after pressing the emergency stop switch. Rotate the emergency stop switch clockwise, back to the original position. When it bounces back, the hoist can be started again. If any of the above tests fail, please check the circuit layout and automatic locking emergency switch.
4. Check the lubrication condition of the load chain(the load chain has been lubricated before delivery but could have dried during transit). You may use a chain lubricator to lubricate the chain. We suggest that a small quantity of lubricant be deposited in the chain to protect the load chain.
5. Check direction of chain eyes. All welding points should be in the same direction. Hoist cannot be operated properly unless all welding chain eyes are in the same line.
6. For units with trolley
 - a. Position hoist in vertical position to loading trolley, make sure the path of the hook is free from any obstacle.
 - b. Lower hook near master link to hoist load and make final adjustments to secure a 90° vertical lift operation without any lateral deviation. Improper life angle may cause swinging of load.
 - c. Attach hook to load the link and make sure there are no people in the working area. Check that no loose items can fall from load.
 - d. Begin by hoisting load two inches and stop. Check brakes are fully operational and load doesn't lower while stopped. Also check load is balanced and secured. Load may have changed shape or center of gravity when suspended.
 - e. To reach a desired position, movements must be smooth and continuous. Repeatedly pressing buttons may heat up the motor and damage equipment.
 - f. Avoid sudden directions changes. These movements may damage equipment, prematurely wear down brakes and cause accidents.
7. Avoid any obstacle when hoisting or traveling load.
8. Start movement of the trolley and check there is no swinging of load and no obstacles in the path. Stop movement and make necessary adjustments if one of these conditions is present.
9. Once the desired position is reached, stop the trolley. Position load completely vertical to desired spot where load will be lowered.
10. Gradually lower the load until it is secured on the resting surface. Avoid hitting the surface at high speed. If necessary, stop movement

Prowinch® Warranty

LIMITED WARRANTY COVERAGE

PROWINCH products are warranted to the original purchaser for three (3) years after the date of purchase to be free from defects in material and workmanship when subjected to normal, proper, and intended use. Within the 3 years, and after examination, PROWINCH will only repair or replace free of charge any part on a product PROWINCH determines to be defective and not caused by other factors or circumstances beyond PROWINCH's control. That includes (but is not limited to) faulty installation, improper maintenance or repair, product modification or alteration, any neglect, misuse or excessive use, mishandling, product exposure to extreme or unsuitable conditions, normal wear and tear or failure to follow manufacturer's instructions. This warranty does not apply to damage PROWINCH determines to be from repairs made or attempted by anyone other than PROWINCH authorized personnel. Return of the product with a copy of proof of purchase to PROWINCH, freight prepaid, and insured, is required for this warranty to be effective. For this warranty to be effective after one year, the purchaser must provide proof of periodic and regular maintenance by an authorized service provider. PROWINCH does not cover freight or labor charges associated with the inspection and testing of products which PROWINCH finds not to be a valid warranty claim.

Disclaimer

In no event shall PROWINCH be liable for any labor, removal and installation expenses, loss of time, manufacturing costs, transportation, materials, loss of parts, incidental, special, consequential, or punitive damages, or for any costs, attorney fees, expenses, losses or delays, direct or indirect, alleged to be as a consequence of any damage to, failure of, or defect in any product including, but not limited to, any claims for loss of parts. PROWINCH disclaims any implied warranties, including, without limitation, any implied warranty of merchantability or fitness for a particular use or purpose.

Acceptance of the exclusive repair and replacement remedies described herein is a condition of the contract for purchasing every PROWINCH product. You should not purchase the product if you do not agree to this condition.

Troubleshooting

Abnormality or troubles	Possible reasons	Counter-measures
The motor does not work	Improper connection of power supply line	Properly make connection of R-S-T lines of power source.
	Master switch on the switch cabinet is turned off. Fuses are burnt out. Breker is actuated.	Check the switch cabinet and turn on the master switch.
	Power source is connected to the reverse phase.	Make changes to the R-T lines of the power source.
The unit does not work after the power source connected and have buzzer sound in the brake	<ol style="list-style-type: none"> 1. The voltage is too low and the electromagnetic waves can not open. 2. Bad connection of master switch. 	<ol style="list-style-type: none"> 1. Secure voltage as specified. 2. Check for continuity and replace damaged parts with new ones. Secure connection.
The 11nit exhibits other movements than those directed by the push-buttons.	<ol style="list-style-type: none"> 1. Inside wiring like push-buttons and electromagnetic relay, are not correct. 2. Malfunction of directional switches 3. Incorrect connection of motor starting coils 	<ol style="list-style-type: none"> 1. Make proper connection as per connecting diagram. 2. Check for connection. 3. Make change of starting coil terminals.
Brake does not function	<ol style="list-style-type: none"> 1. Big voltage drop of power source 2. Brake gap exceeds the limit 3. Terminals are disconnected. Solenoid coil burnt out. 4. Damaged rectifier 5. Incorrect connection of printed boards. 	<ol style="list-style-type: none"> 1. Secure voltage as specified. 2. Replace worn parts with new one. 3. Replace the brake coil with a new one. 4. Replace the printed board with a new one. 5. Make the correct connection according to marking of the boards.
Abnormal sound	<ol style="list-style-type: none"> 1. Extremely worn gears 2. Extremely worn chains, sprockets and guides. 	<ol style="list-style-type: none"> 1. Replacement of parts 2. Replacement of parts
When contacting the electric chain hoist, a shock is given.	<ol style="list-style-type: none"> 1. Wrong grounding 2. Electrical components like push-buttons are not properly insulated. 	<ol style="list-style-type: none"> 1. Firmly connect the earth line to the earth. Firmly connect the travel rail to the earth. Keep the rail face contacting the wheels free from paint,etc 2. Make repair of disordered points and replace damaged parts with new ones.

Abnormality or troubles	Possible reasons	Counter-measures
The motor of the hoist can't rotate.	<ol style="list-style-type: none"> 1. The power has shortage phase 2. Wrong-phase power supply 3. Too lower voltage and contactor does not work 4. The rectifier bums out, the brake doesn't work 5. Transformer damages 6. Motor bums out 	<ol style="list-style-type: none"> 1. Check the power supply and circuit. 2. Exchange the power phase. 3. Work after voltage stable. 4. Replace the rectifier. 5. Replace the transformer. 6. Replace the motor.
The trolley motor can't rotate.	<ol style="list-style-type: none"> 1. The power has shortage phase 2. Too lower voltage and contactor does not work 3. The rectifier bums out, the brake doesn't work 4. Transformer damages 5. Motor burns out 	<ol style="list-style-type: none"> 1. Check the power supply and circuit. 2. Work after voltage supply stable 3. Replace the rectifier 4. Replace the transformer 5. Replace the motor
The machine still works after releasing the keys.	Contactor damages	Replace the contactor
Temperature of motor goes too high	Work too frequently	Work according to the working rate
Slide too much after power cut off	<ol style="list-style-type: none"> 1. The friction disc of brake oil spilled 2. Friction disc is severely wearing 3. The friction spring of the brake damages 4. Overload 	<ol style="list-style-type: none"> 1. Clear the oil 2. Replace the friction disc 3. Replace the friction spring 4. Lower load
There is unusual noise when loading.	<ol style="list-style-type: none"> 1. The lubrication of chain is not enough 2. The chain wheel wear badly 	<ol style="list-style-type: none"> 1. Lubricate the chain completely 2. Replace the chain wheel
The upper and lower limit switch can't work.	<ol style="list-style-type: none"> 1. The connections of limit switch is not good 2. Limit switch damages 	<ol style="list-style-type: none"> 1. Check the connection 2. Replace limit switch
Electric leakage	<ol style="list-style-type: none"> 1. Bad earthing or no earthing 2. Interior connection touches the shell 3. Higher humidity in the air 4. Electrical components conduct electricity caused excessive dust 	<ol style="list-style-type: none"> 1. Check earthing and connect the earthing 2. Check or remove the interior connection 3. Avoid working under high humidity conditions 4. Keep components clean

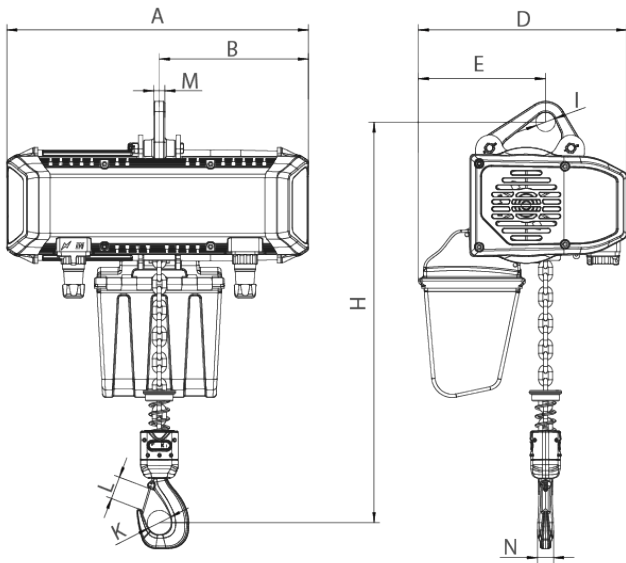
Technical Specs

Specification and dimension electric chain hoist (PWRXF)

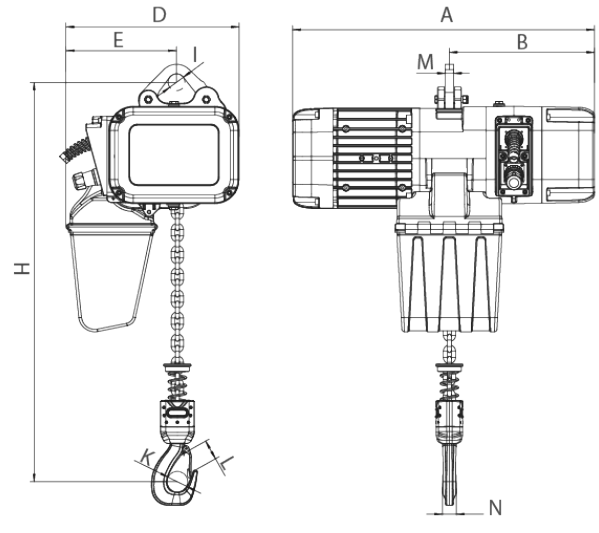
Rated load (t)	Type	Standard lift (m)	Length L of button cable (m)	3-phase lifting motor 380V (220V)		Repeated rating (%ED)	Hoisting speed (m/min)		Diameter of load chain (mm) x quantity	Grade	Test load (t)	Net weight (kg)	Weight with each extra 1m lift (kg)
				Output power (kW)			50Hz						
				Single-speed power	Double-speed power		High speed	Low speed					
0.25	PWRXF0.25-01	4/6	3.5/5.5	0.6	0.25/0.6	80/50	9.6	3.1	Φ5x1	M5	0.3	40	0.9
0.5	PWRXF0.5-01			0.75	0.3/0.75		8	2.5	Φ6.3x1		0.6	45	1.05
1	PWRXF1-01			1.5	0.6/1.5		6.7	2.2	Φ7.1x1		1.25	120	1.33
2	PWRXF2-01			3	1.1/3		6.7	2.2	Φ10.0x1		2.5	137	2.3
3	PWRXF3-01						5.5	1.8	Φ11.2x1		3.5	144	2.8
5	PWRXF5-02			3	1.1/3		2.7	0.8	Φ11.2x2		6.25	175	5.6
7	PWRXF7-03						1.8	0.5	Φ11.2x3		8.87	345	8.4
10	PWRXF10-04			3x2	1.1/3x2		2.7	0.8	Φ11.2x4		12.5	638	11.2
20	PWRXF20-08						1.3	0.4	Φ11.2x6		25	1430	16.8

[Size list: mm]

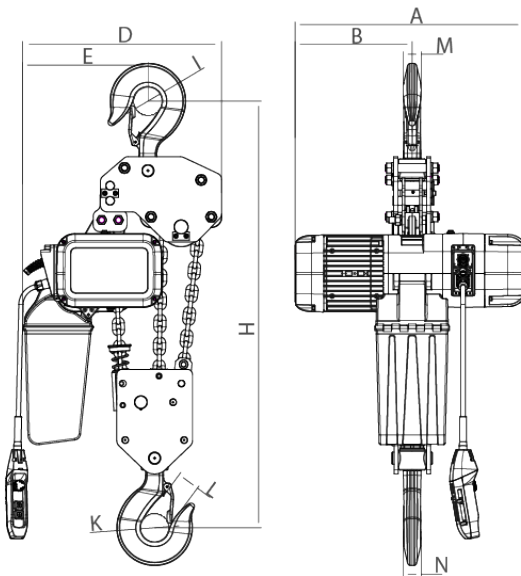
Rated load (t)	Type	Minimum distance between hooks: H	A	B	D	E	I	M	N	K	L
0.25-0.5	PWRXF0.25-0.5	385	440	218	305	186	28	16	20	35	31
0.25-0.5	PWRXF0.25-0.5-VS	399	447	217	337	179	31	16	20	35	31
1	PWRXF1-01	455	590	276	330	210	32	16	25	42	32
1	PWRXF1-VS-110V	499	704.5	298	410	209	31	24	25	42	32
2	PWRXF2	550	695	350	420	210	38	20	35	52	42
3	PWRXF3	560	695	350	420	265	45	20	34	59	48
2-3	PWRXF2-3-VS-110V	540	780	348	463	263	45	20	35	52	42
5	PWRXF5	675	695	350	420	307	55	28	44	60	48
7	PWRXF7	1170	695	350	420	265	45	20	34	59	48
10	PWRXF10	1200	700	350	920	460	85	48	48	85	80
20	PWRXF20	1270	700	350	1250	720	71	92	80	120	96



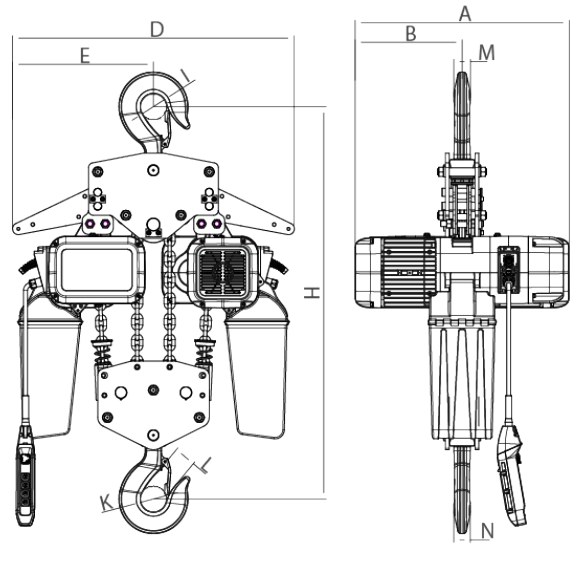
PWRXF0.25-0.5



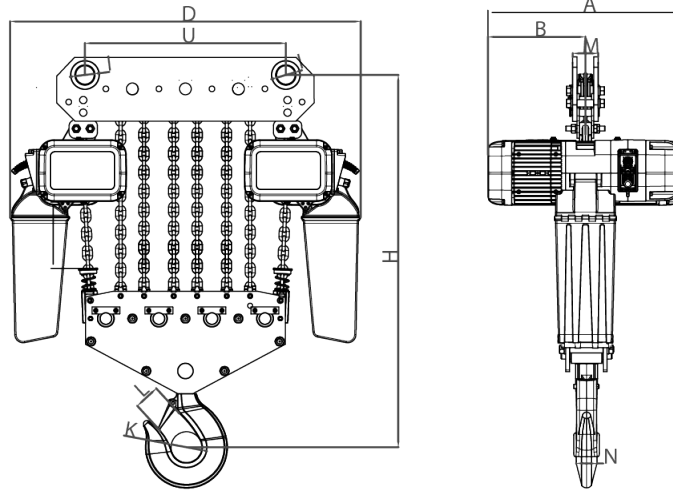
PWRXF1-5



PWRXF7



PWRXF10



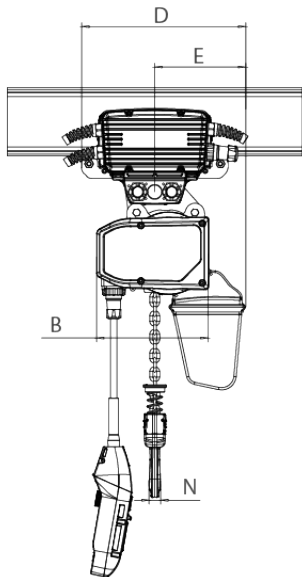
PWRXF20

Specification and dimension of electric chain hoist with trolley (PWRXT)

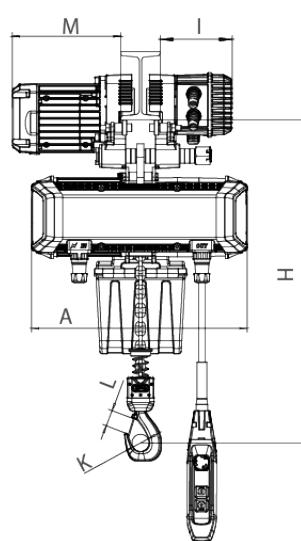
Rated load (t)	Type	Standard lift (m)	3-phase lifting motor 380V (220V)		Repeated rating (%ED)	Hoisting speed (m/min)		Applicable track width B (mm)	Minimum rotating radius (mm)
			Output power (kW)			50Hz			
			Single-speed power	Double-speed power		High speed	Low speed		
0.25	PWRXT0.25-01	4/6	0.25	0.25/0.1	50/30	16	3.6	[75]·100-125	800 [3500]
0.5	PWRXT0.5-01								
1	PWRXT1-01		0.4	0.4/0.15		11	3.6	[100]·125-150	800 [1000]
2	PWRXT2-01								
3	PWRXT3-01								
5	PWRXT5-02		0.75	0.75/0.3		150-220	2000		
7	PWRXT7-03		0.75	0.75/0.3					
10	PWRXT10-04		0.75	0.75/0.3					
20	PWRXT20-08		1.1×2	0.4/1.1×2				150-220	2200

[Size list: mm]

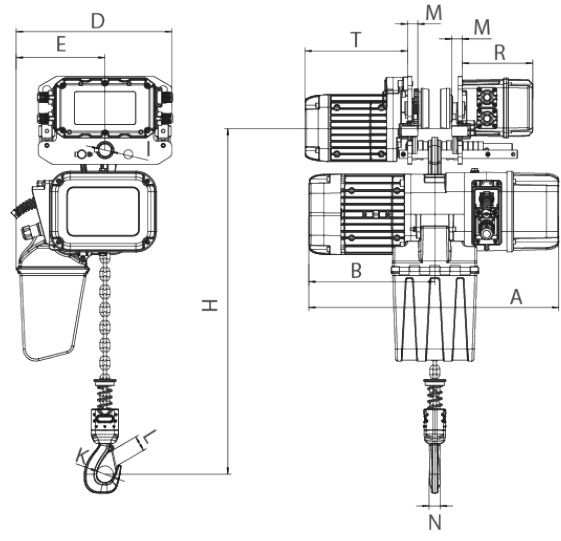
Rated load (t)	Type	Dimension (mm)													
		Minimum distance from the bottom of the track to the bottom hook: H	A	L	B	D	E	I	M	N	K	L	T	R	
0.25-0.5	PWRXT0.25-0.5	473	440	3500-5500	285	210	20	105	140						
0.25-0.5	PWRXT0.25-0.5-VS	473	447		217	334	152	147	220	20	35				
1	PWRXT1	473	440		276	368	210	31	24	25	42	32	242	167	
1	PWRXT1-VS-110V	516	704.5		406.5	368	210	31	24	25	42	32	242	167	
2	PWRXT2	600	681		350	368	210	31	24	25	42	32	242	167	
3	PWRXT3	600	681		350	422	264	36	28	35	52	42	242	167	
2-3	PWRXT2-3-VS-110V	640	780		348	463	263	45	20	35	52	42	242	167	
5	PWRXT5	645	681		350	478	307	43	30	34	59	48	242	167	
7	PWRXT7	1020	681		350	579	375	54	35	48	85	80	242	167	
10	PWRXT10	1045	700		350	920	460	70	39	48	85	80	242	167	
20	PWRXT20	1300	700		350	1246	623	71	40	80	120	96	242	167	

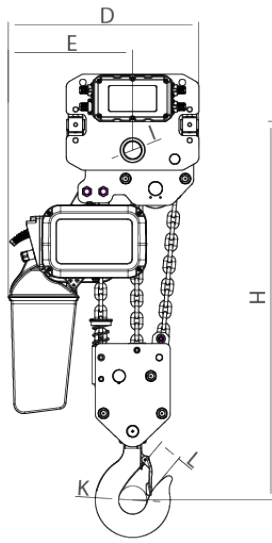


PWRXT0.25-0.5

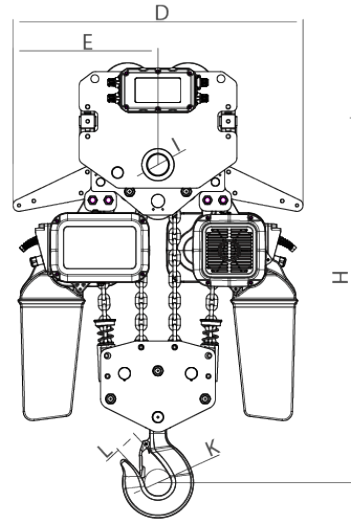
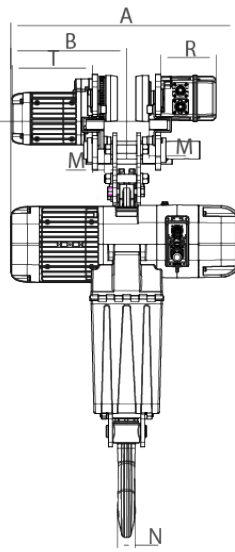


PWRXT1-5

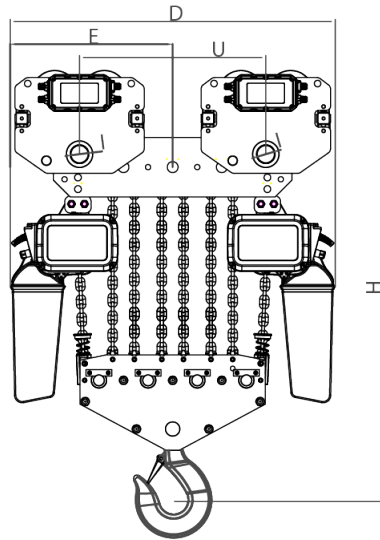
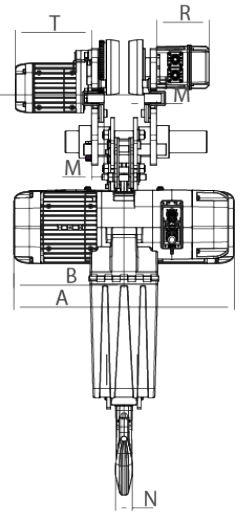




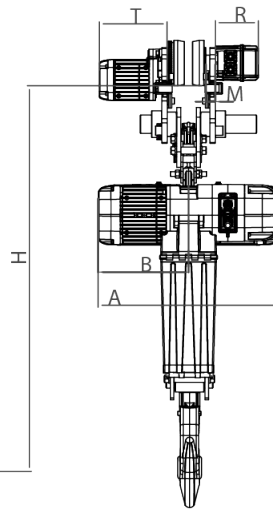
PWRXT7



PWRXT10

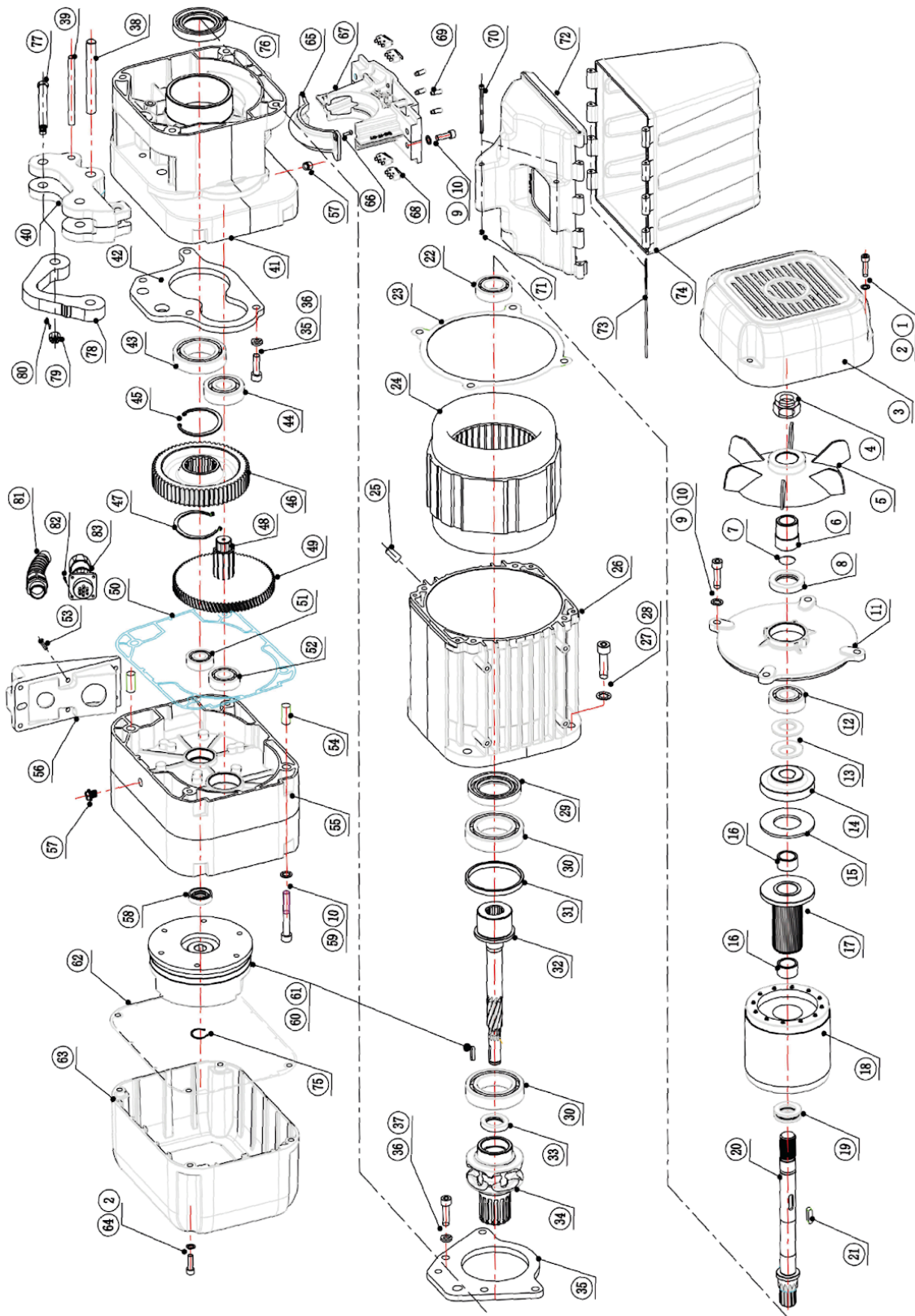


PWRXT20



Product structure and the name of the parts (de-energized brake)

PWRXF/PWRXT 1 - 20t Hoist Exploded View



PWRXF/PWRXT 1 - 20 t Hoist Part List

SN	Parts code	Part name	Qty	Materials	Remarks	SN	Parts code	Part name	Qty	Materials	Remarks
1	GB/T 6170	Bolt M6x35	4			28	GB/T 7244	Spring gasket	4		d=10
2	GB/T 861-2	Flat gasket			d=6	29	GB/T 9877.1	Oil seal 45x68x10	1	NBR	
3	DCTP-1.02-08	Motor rear cover	1	HPA-66		30	GB/T 276	Bearing 6009	2		
4	GB/T 6186	Locknut	1		M20x1.5	31	DCT-1.01-12	Washer	1	Q235	
5		Y-112 fan blade	1			32	DCT-1.01-03	Long helical tooth shaft	1	20CrMnTi	
6	DCT-1.02-05	Sealing iron ring	1	20CrMnTi		33	GB/T 9877.1	Oil seal 22x35x7	1	NBR	
7		O-ring	1			34	DCT-1.01-02	Chain wheel	1	QT600-3	
8	GB/T 9877.1	Oil seal 30x45x8	1	NBR		35	DCT-1.01-09	Bearing plate D	1	Q235	
9	GB/T 6170	Bolt M8x22	8			36	GB/T 6170	Bolt M8x25	8		
10	GB/T 861-2	Flat gasket			d=8	37	GB/T 7244	Spring gasket	8		d=8
11	DCT-1.02-06	Motor rear cover	1	ADC12		38	DCT-1.01-13	12 pin shaft	1	40Cr	
12	GB/T 276	Bearing 6204	1			39	DCT-1.01-14	8 pin shaft	1	40Cr	
13		Small butterfly gasket	2	50CrVA		40	DCT-1.01-15	Upper hook support	1	Q235	
14	DCT-1.02-04	Clutch disc	1	20CrMnTi		41	DCT-1.01-01	Chain wheel case	1	ADC12	
15	DCT-1.02-13	Friction plate	1			42	DCT-1.01-08	Bearing plate C	1	Q235	
16	DCT-1.02-09	Graphite copper sleeve	2			43	GB/T 276	Bearing 6008	1		
17	DCT-1.02-03	Rotor sleeve	1	40Cr		44	GB/T 276	Bearing 6304	1		
18	DCT-1.02-12	Rotor	1			45	GB893.1-86	Pore retainer ring (pore ø68)			
19		Plane bearing 51104	1			46	DCT-1.01-06	Output tooth	1		
20	DCT-1.02-02	Motor shaft	1	20CrMnTi		47	GB_894.1-1986	Shaft retainer ring (shaft ø40)	1		
21		Type A key 6x6x18	1			48	DCT-1.01-05	output shaft gear	1	20CrMnTi	
22	GB/T 276	Bearing 6005	1			49	DCT-1.01-04	Large helical tooth	1	20CrMnTi	
23	DCT-1.02-14	head cover sealing pap	1			50	DCT-1.01-16	Sealing paper pad of gear box	1		
24	DCT-1.02-11	Stator	1			51	GB/T 276	Bearing 6202	1		
25		Split pin	1	65Mn	d=8X12	52	GB/T 276	Bearing 6203	1		
26	DCT-1.02-01	Motor shell	1	ADC12		53		Cross recessed countersunk head screw	1		M5x16
27	GB/T 6170	Bolt M10x30	4			54		Locating pin	1		D11x12

SN	Parts code	Part name	Qty	Materials	Remarks	SN	Parts code	Part name	Qty	Materials	Remarks
55	DCT-1.01-07	Gear box	1	ADC12		70	GB/T 6170	Bolt M6x100	2		
56	DCT-1.01-17	Socket	1	HPA-66		71	GB/T 6186	Locknut	2	M6	
57		Screw plug assembly	1			72	DCT-1.01-20	Chain bag upper	1	HPA-66	
58	GB/T 9877.1	Oil seal 15x30x7	1	NBR		73		Hard lead wire	2	D=2.5	
59	GB/T 6170	Bolt M8x60	4			74	DCT-1.01-21	Chain bag lower	1	HPA-66	
60		Brake assembly	1	Outsourcing		75	GB_894.1-1986	Shaft retainer ring (shaft ø15)	1		
61		Type a key 5x5x18	1			76	GB/T 9877.1	Oil seal 50x68x10	1	NBR	
62	DCT-1.01-18	Sealing paper pad of electrical box	1			77		Bearing bolt	2	45	
63	DCT-1.01-19	Electrical device cover	1	HPA-66		78		Hoisting ring	1		
64	GB/T 6170	Bolt M6x20	4			79		Slotted nut	2		
65	DCT-1.01-11	Guide ring	1	HPA-66		80		Split pin	2		
66		Cross recessed countersunk head screw	2	M6x10		81		Water-proofing grammar connector	1		
67	DCT-1.01-10	Chain guide exit	1	HPA-66		82		Self-tapping screw	4		
68		Limit switch	4			83		Aviation plug	1		
69		Top rob for limit	4								

PWRXF/PWRXT 1 - 20t Part List

1-20t Electric Moving Trolley Part List

SN	Parts code	Part name	Qty	Material s	Remark s	SN	Parts code	Part name	Qty	Material s	Remark s	
1	GB/T 6170	Bolt M6x35	4		M5x20	27	DCPC-1.01-14	Moving trolley shaft washer	1			
2	DCPC-1.04-01	Electrical box cover	1			28	GB6178	Locknut	1		M10	
3	DCPC-1.04-03	Electrical box paper pad	1			29	DCPC-1.01-15	Motherboard brushing	1			
4	DCPC-1.04-02	Electrical Box	1			30	GB/T 6170	Hexagon socket head cap screw	1		M10x60	
5		Wire seat assembly	5			31	DCPC-1.01-16	Mainboard	1			
6		Cross tapping screws	16			32	DCPC-1.02-01	Gear box	1			
7	DCPC-1.01-01	Fixing column	1			33	GB/T 6170	Hexagon socket head cap screw	1		M8x25	
8	DCPC-1.01-02	Subplate	1			34	GB/T 6170	Hexagon socket head cap screw	4		M10x25	
9	DCPC-1.01-03	Subplate brushing	1			35		Spring gasket	4		d=10	
10	DCPC-1.01-04	Pan heads	4			36	GB/T 276	Bearing 6006	4			
11	DCPC-1.01-05	Cincture	4			37	DCPC-1.02-02	Output tooth	1			
12	DCPC-1.01-06	Cincture washer	8			38		Type A key	1		8x7x15	
13	DCPC-1.01-07	Clamp plate of pan heads	4			39	DCPC-1.02-03	Large helical tooth	4			
14	GB/T 6170	Hexagon socket head cap screw	4		M8x20	40	DCPC-1.02-04	Gear box paper pad	1			
15		Spring gasket	1		d=8	41		Elastic cylindrical pin	1			
16	DCPC-1.01-08	Cincture pin shaft	4			42		Elastic cylindrical pin	1			
17	GB893.1-86	Pore retainer ring (pore ø42)	1	40Cr		43		Cross recessed round cylinder head screw	4		M4x12	
18	GB/T 276	Bearing 6302	4			44	GB/T 6170	Hexagon socket head cap Hexagon socket head cap screw	4		M5x10	
19	DCPC-1.01-09	Driven wheel	2			45	DCPC-1.02-05	Cover plate	1			
20		Gasket	4			46	DCPC-1.02-06	Cover plate paper pad	1			
21	GB_894.1-86	Shaft retainer ring d=15	4			47	DCPC-1.02-07	Motor shell	1			
22	DCPC-1.01-10	Driving wheel	2			48	DCPC-1.02-08	Stator	1			
23	DCPC-1.01-11	Moving trolley shaft pin	1			49		Frame oil seal	1		25x47x7	
24		Split pin	1			50	GB/T 276	Bearing 6204	1			
25	DCPC-1.01-12	Moving trolley shaft	1			51	DCPC-1.02-09	Rotor	1			
26	DCPC-1.01-13	Moving trolley shaft gasket	1			52	DCPC-1.02-10	Motor shaft	1			

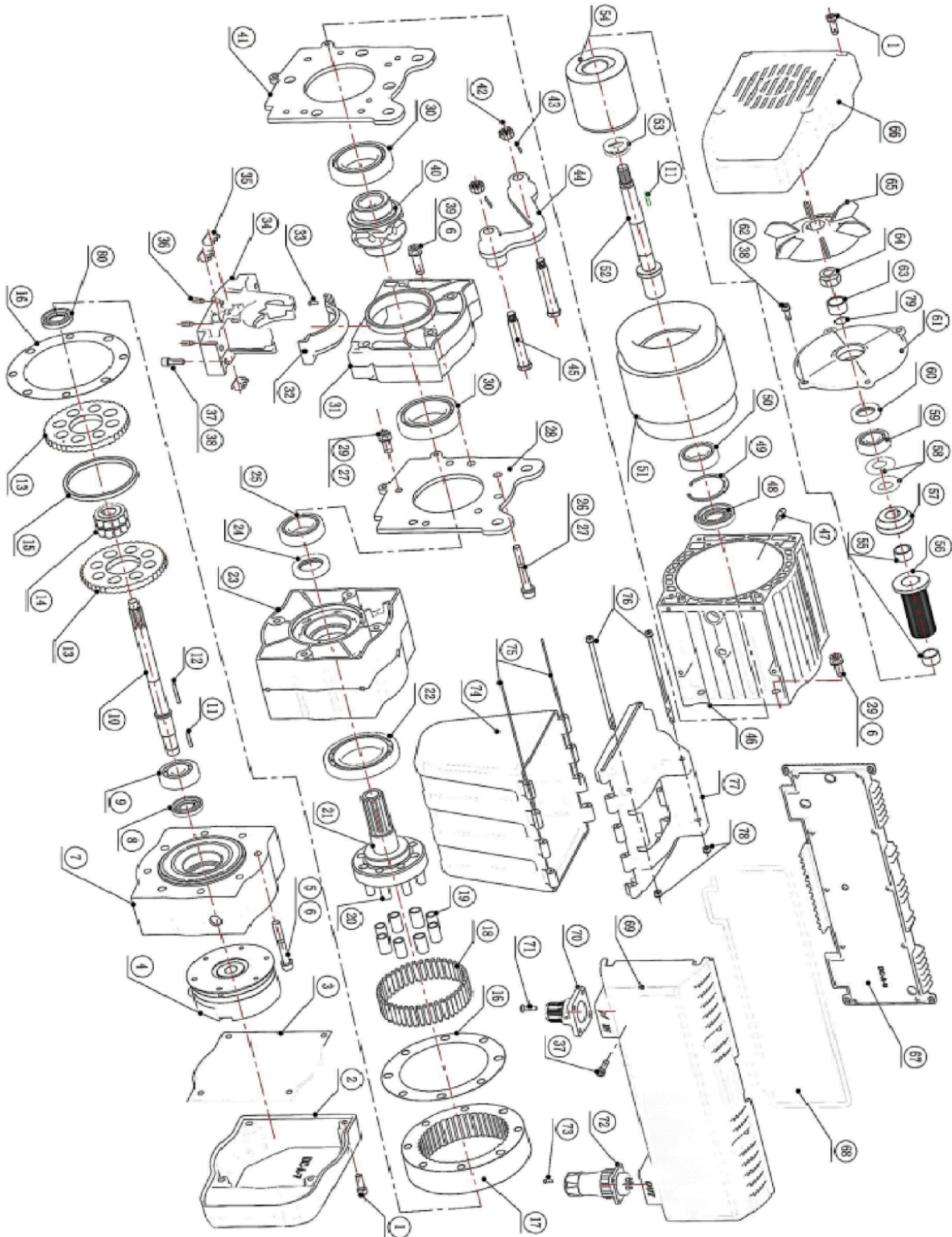
Technical Specs

SN	Parts code	Part name	Qty	Material s	Remark s	SN	Parts code	Part name	Qty	Materi als	Remark s	
53		Type A key	1		5x5x15	57		Brake components	1			
54	GB/T 276	Bearing 6203	1			58		O-ring	1			
55	DCPC-1.02-1 1	Motor cover	1			59	DCPC-1.02-12	Motor rear cover	1			
56	GB/T 6170	Hexagon socket head cap screw	4			60	GB/T 6170	Hexagon socket head cap screw	4			

1-20t Electric Moving Trolley Part List

Product structure and the name of the parts (de-energized brake)

PWRXF/PWRXT 0.25 - 0.50t Hoist Exploded View



PWRXF/PWRXT 0.25 - 0.50t Hoist Part List

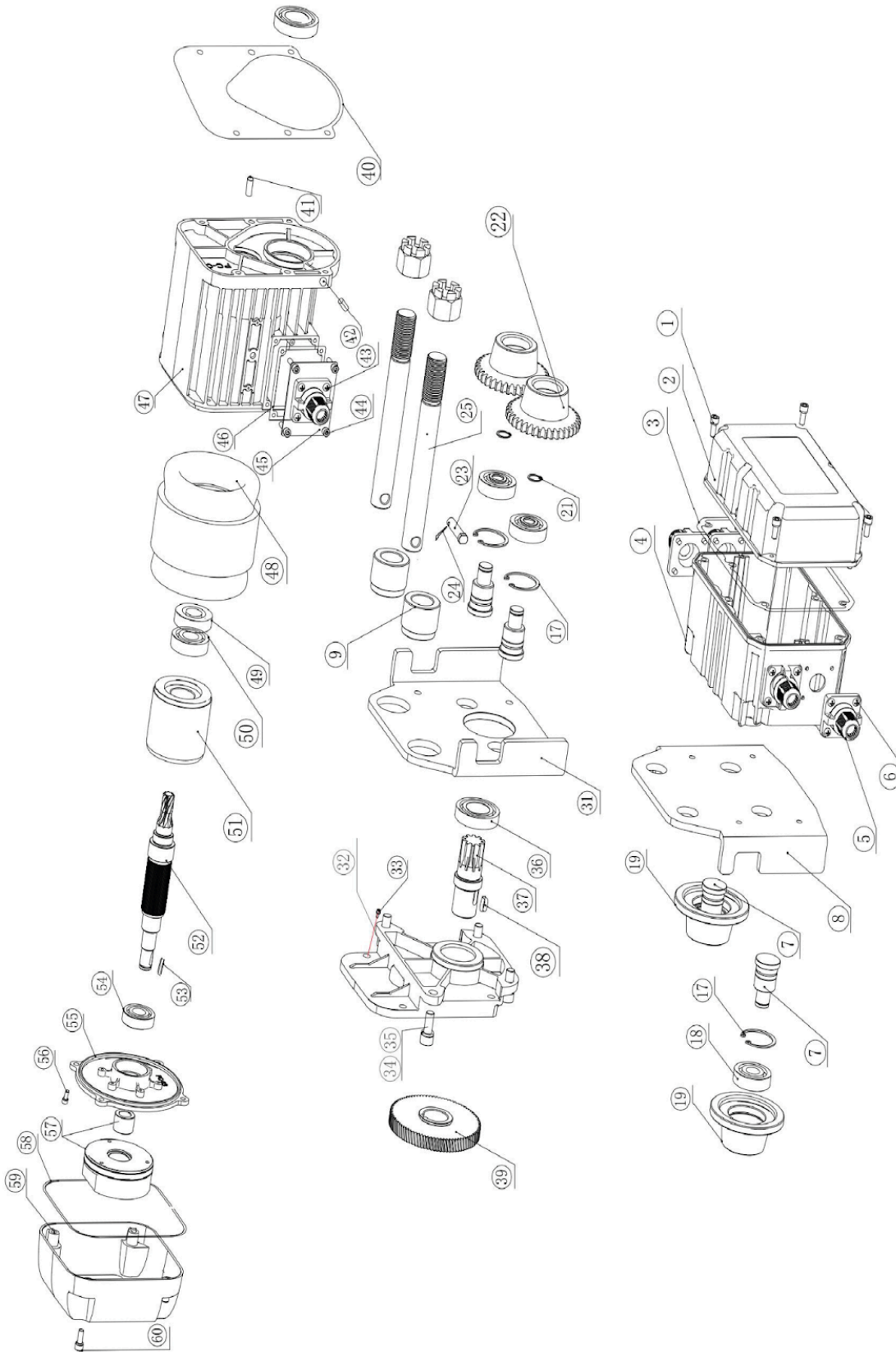
SN	Parts code	Part name	Qty	Materials	Remarks	SN	Parts code	Part name	Qty	Materials	Remarks
1	GB/T 6170	Bolt M6x35	8			27	GB/T 7244	Spring gasket	1		
2	DCK-05.02-07	Cycloid case rear cover	1			28	DCK-05.01-04	Bearing plate C	1		
3	DCK-05.02-13	Rear cover sealing paper pad	1	HPA-66		29	GB/T 6170	Bolt M8x20	1	Q235	
4		Brake assembly	1			30	GB/T 276	Bearing 6009	2		
5	GB/T 6170	Bolt M8x60	1	Outsourcing		31	DCK-05.01-01	Chain wheel case	1	ADC12	
6	GB/T 861-2	Flat gasket	1			32	DCK-05.01-06	Guide ring	1	HPA-66	
7	DCK-05.02-06	DCK-05.02-06	1	ADC12		33		Cross recessed countersunk head screw	2		
8	GB/T 9877.1	Oil seal 30x45x8	1	NBR		34	DCK-05.01-05	Chain guide exit	1	HPA-66	
9	GB/T 276	Bearing 6303	1			35		Limit switch	3		
10	DCK-05.02-05	Drive shaft	1	40Cr		36		Top rob for limit	3		
11		Type A key 5x5x18	1			37	GB/T 6170	Bolt M6x20			
12		Type A key 5x5x22	1			38	GB/T 861-2	Flat gasket			
13	DCK-05.02-03	Cycloidal gear	2	GCr15		39	GB/T 6170	Bolt M8x30	3		
14		Eccentric bearing	1		Procurement	40	DCK-05.01-02	Chain wheel	1		
15	DCK-05.02-11	Spacer ring	1	HPA-66		41	DCK-05.01-03	Bearing plate D	1		
16	DCK-05.02-12	Pinwheel case sealing paper pad	1			42		Slit nut	2		
17	DCK-05.02-02	Pinwheel case	1	HT200		43		Card Slot	2		
18	DCK-05.02-02	Needle gear	3	GCr15		44	DCK-05.01-07	Hoisting ring	1		
19	DCK-05.02-10	Roller	8	GCr15		45	DCK-05.01-08	Eyebolt	2		
20	DCK-05.02-09	Pin	8	40Cr		46	DCK-05.03-01	Hoisting ring	1		
21	DCK-05.02-04	Output shaft	1			47		Split pin	1		
22	GB/T 276	Bearing 16011	1	ADC12		48	GB/T 9877.1	Oil seal 25x47x8	1		
23	DCK-05.02-01	Cycloid case	1	NBR		49	GB892.1-86	Pore retainer ring (pore ø47)	1		
24	GB/T 9877.1	Oil seal 30x45x8	1			50	GB/T 276	Bearing 6005	1		
25	GB/T 276	Bearing 6006	4			51	DCK-05.03-11	Stator	1		
26	GB/T 6170	Bolt M8x65	1			52	DCK-05.03-02	Motor shaft	1		

SN	Parts code	Part name	Qty	Materials	Remarks	SN	Parts code	Part name	Qty	Materials	Remarks
53		Bearing	1			69	DCK-05.04-03	Front cover	2		
54	DCK-05.03-12	Plane bearing 51103	1			70		Socket assembly	1		
55	DCK-05.03-09	Rotor	2			71		Cross recessed round head screw	4		
56	DCK-05.03-03	Graphite copper sleeve rotor sleeve	1			72		Aviation plug assembly	1		
57	DCK-05.03-04	Clutch disc	1			73		Cross recessed round head screw	1		
58	DCK-05.03-10	Small butterfly gasket	2			74	DCK-05.04-05	Chain bag lower	4		
59	GB/T 276	Bearing 6203	1			75		Pin rod	1		
60	GB/T 9877.1	Oil seal 22x35x7	1			76		Bolt	1		
61	DCK-05.03-06	Motor rear cover	1			77	K-05.04-04	Chain bag upper	1		
62	GB/T 6170	Bolt M6x16	4			78		Nut	2		M5
63	DCK-05.03-05	Sealing iron ring	1			79		O-ring	1		13.3x2
64	GB/T 6186	Locknut	1			80	GB/T 9877.1	Oil seal	2		17x35x8
65	DCK-05.03-07	Fan blade	1								
66	DCK-05.03-08	Motor rear cover	1								
67	DCK-05.04-01	Electrical apparatus heating panel	1								
68	DCK-05.04-02	Sealing ring	1								

PWRXF/PWRXT 0.25 - 0.50t Hoist Part List

Product structure and the name of the parts (de-energized brake)

0.25-0.5t Electric Moving Trolley Exploded View



0.25-0.5t Electric Moving Trolley Part List

SN	Parts code	Part name	Qty	Materials	Remarks	SN	Parts code	Part name	Qty	Materials	Remarks
1	GB/T 6170	Hexagon socket head cap screw	4		M5x20	28					
2	DCPC-1.04-01	Radiator cover	1			29					
3	DCPC-1.04-03	Paper pads for electrical boxes	1			30					
4	DCPC-1.04-02	Wire holder Assemblies	1			31					
5		Cross tapping screws	4			32					
6		Retainig column	1			33					
7	DCPC-1.01-01	motherboard	1			34	GB/T 6170	Hexagon socket cheese head screws	4		M10x25
8	DCPC-1.01-03	Sub plate inlay	1			35	GB/T 6170	Hexagon socket cheese head screws	4		M10x25
9						36	GB/T 276	Bearing 6006	1		
10						37	DCPC-1.02-02	output tooth	1		
11						38		A-key	1		8x7x15
12						39	DCPC-1.02-03	Large oblique teeth	1		
13						40	DCPC-1.02-04	Gear box gasket	1		
14						41		Cylindrical pins with elasticity	1		
15						42		Cylindrical pins with elasticity	1		
16						43		Crossed cheese head screws	4		M4x12
17	GB893.1-86	Retaining ring for hole (hole ø42)	1			44		Hexagon socket cheese head screws	4		M5x10
18	GB/T 276	Bearing 6302	1			45		covers	1		
19	DCPC-1.01-09	Runner Wheel	1			46		Cover paper pad	1		
20						47		motor housting	1		
21	GB_894.1-1986	Shaft retaining ring	1		d=15	48		rotor	1		
22	DCPC-1.01-10	Main runner	1			49		Simerring Oil Seal	1		25x47x7
23	DCPC-1.01-11	Sports car axle pins	1			50		Bearing 6204	1		
24		cotter pin	1			51		Rotors	1		
25	DCPC-1.01-12	runner's axle	1			52		Motor shaft	1		
26	DCPC-1.01-16	motherboard (computer) (lit. lord board)	1			53		A-key	1		5x5x15
27	DCPC-1.02-01	Gearboxes	1			54		Bearing 6203	1		

Technical Specs

SN	Parts code	Part name	Qty	Materials	Remarks	SN	Parts code	Part name	Qty	Materials	Remarks
55		Motor cover	1			58		O-ring	1		
56		Hexagon socket cheese head screws	4		M6X20	59		Motor back cover	1		
57		Brake assembly	1			60		Hexagon socket cheese head screws	4		M6x35

0.25-0.5t Electric Moving Trolley Part List

Inspection List

Daily inspection and checklist of electric chain hoist

Model		Rated load	Lot No.	Your management No.	Setting of month and year	Setting of site	Check card No. and effective duration
Electric chain hoist	PWRXF/PWRXT						MM/DD/YY
	PWRXF/PWRXT						MM/DD/YY
Motor Trolley	PWRXT						MM/DD/YY



- If any abnormality is found during daily inspection or regular inspection, please immediately stop using and mark it as "failure", and ask the maintenance manager for repair or consult ProWinch.
- Use of abnormal products may lead to serious accidents of death or serious injury, etc.



- Please determine the inspection items suitable for the use environment and conditions of the customers.

Daily inspection of electric chain hoist (PWRXF/PWRXT)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Appearance	Confirm whether there is unauthorized transformation	Visual inspection	There is no obvious unauthorized transformation.						
	Marking of nameplates and labels	Visual inspection	No falling, and clear label						
	Deformation and damage of various parts of the body	Visual inspection	No obvious deformation and corrosion						
	Damaged cable	Visual inspection	There is no deterioration or breakage to the external face						
	Bolt, nut and split pin	Visual inspection	It can be seen that the bolt, nut and split pin are free of loosening and falling						

Inspection List

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
	Cleaning	Visual inspection	No excessive dust and dust accumulated						
Load Chain	Pitch expansion	Visual inspection	No significant extension						
	Wear of chain link diameter	Visual inspection	No significant wear						
	Deformation and damage and entanglement	Visual inspection	No significant deformation, damage or entanglement						
	Rust and corrosion	Visual inspection	No obvious deformation and corrosion						
	Distortion	Visual inspection	There is no distortion caused by overturning at the bottom hook and other parts of the double hanging chain type						
	Oil supply	Visual inspection	Sufficient oil supply						
	Conformation of stamp	Visual inspection	There is no mistake on the mart or the stamp pitch						
Top/bottom hook	Opening	Visual inspection	The opening does not enlarge greatly						
	Wear	Visual inspection	No significant wear						
	Deformation, damage and corrosion	Visual inspection	No obvious deformation, harmful damage or corrosion						
	Action of hook latch device	Visual inspection/operation	Flexible opening and closing						
	Action of hook (rotation)	Visual inspection/operation	Flexible rotation and no significant gap between bottom supports						
	Action of idle pulley E	Visual inspection/operation	Load chain acts smoothly						
	Bottom supporting	Visual inspection	The bolt or nut is not loose						
Peripheral component of the machine	Chain spring	Visual inspection	No obvious settlement or compression						
	Rubber gasket	Visual inspection	· No obvious settlement or compression · The rubber part and the iron plate part are free from cracking or falling						
Pendant control	Main body of switch	Visual inspection	· No deformation or breakage, the screw does not get loose · Clear label						
Function and performance	Action confirmation	Press the pendant control to inspect the actions	· The load chain lifts flexibly. · Act in the same direction as the button operation. · After the operation stops, the motor will stop immediately · After the emergency stop button is pressed, all actions stop · When the emergency stop button is pressed, the machine will not operate even other buttons are pressed · After the emergency stop button is released, the machine acts normally						

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Function and performance	Actuator	Hoist/lower under no load	In case of braking, the bottom hook stops immediately (the amount of movement of the load chain shall be 1-3 segments)						
	Friction clutch with mechanical brake	Hoist/lower under no load	Pawl sound during hoisting (click and twee)						
	Limit switch	Hoist/lower under no load	When the motor is operated to the upper or lower limit, the motor will stop automatically						
	Abnormal sounds	Hoist/lower under no load	No abnormal sound or vibration						
Executed by	Examined by								
Examination	Head of maintenance manager								

Daily inspection of motor trolley (PWRXT)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality.

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Appearance	Confirm whether there is unauthorized transformation	Visual inspection	There is no obvious unauthorized transformation.						
	Marking of nameplates and labels	Visual inspection	No falling, and clear label						
	Deformation and damage of various parts of the body	Visual inspection	No obvious deformation and corrosion						
	Damaged cable	Visual inspection	There is no deterioration or breakage to the external face						
	Bolt, nut and split pin	Visual inspection	It can be seen that the bolt, nut and split pin are free of loosening and falling						
	Cleaning	Visual inspection	No excessive dust and dust accumulated						
Function and performance	Action confirmation	Lateral movement under no load	<ul style="list-style-type: none"> · Smooth lateral movement, no snacking or vibration · Act in the same direction as the button operation · After the operation stops, the motor will stop immediately · After the emergency stop button is pressed, all actions stop · When the emergency stop button is pressed, the machine will not operate even other buttons are pressed · After the emergency stop button is released, the machine acts normally 						
	Actuator	Lateral movement under no load	When the operation is stopped, the brake works stably and the motor stops immediately.						

Inspection List

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
Executed by	Examined by								
Examination	Head of maintenance manager								

Monthly inspection and checklist of electric chain hoist

Model	Rated load	Lot No.	Your management No.	Setting of month and year	Setting of site	Check card No. and effective duration
Electric chain hoist	PWRXF/PWRXT					MM/DD/YY
	PWRXF/PWRXT					MM/DD/YY
Motor Trolley	PWRXT					MM/DD/YY

Monthly inspection of electric chain hoist (PWRXF/ PWRXT)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality.

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Advanced inspection	Daily inspection	Implementation confirmation	Daily inspection shall also be conducted during monthly inspection						
Load chain	Pitch expansion	Pitch measuring	Sum of 5 pitches and not exceed threshold value						
	Wear of chain link diameter	Measure chain link diameter	No exceed threshold value						
Top/bottom hook	Opening	Measurement	Embossing interval does not exceed threshold value						
	Wear	Measurement	Wear loss does not exceed threshold value (5%)						
	Deformation, damage and corrosion	Visual inspection	· No bending or distortion, etc. · There is no welding spatter attached						
Peripheral component of the machine	Chain case	Visual inspection	· Stably installed. ·No breakage, deformation, and no entry of foreign matters. · The lift is shorter than the allowable storage length.						
Pressure container with an explosion-proof structure (controller, safety barrier, relay box and motor)	Clearance of plane joint surface	Visual inspection	The clearance is not enlarged						
	Bolt installation	Visual inspection	Suitable type and complete and solid	D	IN	GC			
	Cable entry	Visual inspection / tool	· Cable entry has no breakage. · There is no slack at the installation part of cable bracket						

Pendant control	Main body of switch	Visual inspection / Operation	· The operation buttons are flexible. · Operation and releasing of the emergency stop button can be conducted						
	Button cable	Visual inspection	· Stably installed. · Even if the body is pulled, the cable will not be stressed due to the protection of the protective rope · No damage						
Power supply	Power cable	Visual inspection	· There is affluence in length. · No damage. · Stably installed						
	Cable hanger	Visual inspection	· No damage. · Light activity. · Installed with same intervals						
	Guide rope	Visual inspection	· No looseness						
Function and performance	Abnormal sound	Hoist / lower under no load	· No irregular rotating sound. · No roar of motor and grating of brake. · There is a crackling load chain popping sound						
Executed by	Examined by								
Examination	Head of maintenance manager								

Monthly inspection of motor-driven carrier (PWRXT type)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality.

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Advanced inspection	Daily inspection	Implementation confirmation	Daily inspection shall also be conducted during monthly inspection						
Appearance	Junction state	Shake	Shake the electric chain hoist slightly leftwards and rightwards						
	Rail of lateral movement (cross beam)	Visual inspection	No obvious deformation or damage						
	Oil supply	Lateral movement under no load	Sufficient oil supply						
Refer to checklist of electric chain hoist (PWRX) for electrical mounting subassembly/Pendant control/power supply/electric characteristics/pressure container with an explosion-proof structure									
Executed by	Examined by								
Examination	Head of maintenance manager								

DANGER

- If any abnormality is found during monthly inspection or regular inspection, please immediately stop using and mark as "failure", and ask the maintenance manager for repair or consult ProWinch.
- Use of abnormal products may lead to serious accidents of death or serious injury, etc.



- Please determine the inspection items suitable for the use environment and conditions of the customers.

Annual inspection and checklist of electric chain hoist

Model		Rated load	Lot No.	Your management No.	Setting of month and year	Setting of site	Check card No. and effective duration
Electric chain hoist	PWRXF/PWRXT						MM/DD/YY
	PWRXF/PWRXT						MM/DD/YY
Motor Trolley	PWRXT						MM/DD/YY

Annual inspection of electric chain hoist (PWRXF/PWRXT) (1/2)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality.

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Advanced inspection	Daily inspection	Implementation confirmation	Daily inspection shall also be conducted during annual inspection						
	Monthly inspection	Implementation confirmation	Daily inspection the annual inspection, monthly inspection shall also be conducted						
Top/bottom hook	Starting up times	CH instrument (optional)	Starting up times						
Peripheral component of the machine	Chain guide a	Visual inspection	· No significant wear or breakage. · No collision injury caused by chain, etc.						
	Chain spring	Visual inspection/Measurement	· No obvious settlement (deformation). · The length does not exceed the threshold value.						
	Stopper	Visual inspection	Stably installed on the third link from the end of the load chain on the no-load end						
	Limit lever	Visual inspection / Operation	· No deformation, breakage or wear · Act flexibly. · Clean.						
	Hanging chain pin	Visual inspection/Measurement	· No obvious deformation or damage. · Not exceed the threshold value						
	Connecting support	Visual inspection/Measurement	No sufficient deformation, wear or damage. · the difference between the longitudinal and transverse dimensions of the pore is within 0.5mm						
	Shaft fixing clip	Visual inspection	· No deformation, breakage or wear · Stably installed						

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Pressure container with an explosion-proof structure (controller, safety barrier, relay box and motor)	Confirm whether there is unauthorized transformation	Visual inspection	no unauthorized transformation						
	State of plane joint surface	Uncover for visual inspection	· No rust. · Cleanup · No breakage. · Liquid encapsulating and pasting are in good condition						
	Between fan and fan shroud	Hoist and lower	· No grating of fan and fan shroud						
	Cable entry	Disassembly for inspection	The encapsulating does not degrade						
	moving part of the limit shaft	Disassembly for inspection	· The shaft diameter of the lever pin of the limit lever shall not be smaller than 15.95mm · The inner diameter of the sleeve is not larger than 16.07mm						
Oil	Oil leakage	Visual inspection	No oil leakage occurs from the encapsulating, oil seal and plug						
	Oil quantity and pollution	Visual inspection	· The oil level is near the oil inspection hole · Heave viscosity, not seriously polluted · Even if the above standards are met, replacement shall be conducted at least every 5 years						
Electromagnetic brake	Appearance	Visual inspection	· The bolt or crew is not loose · No damage or breakage, etc.						
	Clearance	Measurement	Not exceed the threshold value of electromagnetic brake						
	Hub joint part	Visual inspection	· No deformation or wear · Hub spring does not falloff						



- If any abnormality is found during annual inspection or regular inspection, please immediately stop using and mark as "failure", and ask the maintenance manager for repair or consult ProWinch.
- Use of abnormal products may lead to serious accidents of death or serious injury, etc.



- Please determine the inspection items suitable for the use environment and conditions of the customers.

Inspection List

Annual inspection of electric chain hoist (PWRXF/PWRXT) (2/2)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality.

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YYYY for inspection/results of inspection					
				/	/	/	/	/	/
Drive part	Bearing	Visual inspection	· No obvious wear, damage or breakage · Flexible rotation						
	Load gear, gear B, pinion	Visual inspection	· No obvious wear, deformation or damage						
	Friction clutch	Visual inspection	· No obvious wear, deformation or damage						
	Friction clutch with mechanical brake	Visual inspection	· No obvious wear, deformation or damage						
	Load pulley	Visual inspection/Measurement	· No obvious wear, deformation or breakage · Pulley chain bracket has no touch injury · Not exceed threshold value						
	Idle pulley	Visual inspection/Measurement	· No obvious wear, deformation or breakage · Pulley chain bracket has no touch injury · Not exceed threshold value						
	Oil seal and encapsulating	Visual inspection	· No deformation or cracks · No oil leakage						
Electrical mounting subassembly	Electrical mounting part	Visual inspection	· No breakage or burning loss, etc. · Stably installed · Even if the above standards are met, replacement shall be conducted at least every 5 years						
	Cable	Visual inspection	· Stably fixed on the electrical mounting subassembly · The joint is stably plugged · No broken line or burning loss						
	Interfusing and adhesion of foreign matter	Visual inspection	· No foreign matters of water drops and dust, etc.						
Electrical characteristics	Power voltage	Measurement	Supply voltage within 10% of rated voltage						
	Insulation resistance	Measurement	The insulation resistance is above 5MΩ						
	Grounding resistance	Measurement	Below 10%						
Function and performance	Action confirmation	Hoist/lower underrated	After checking the function and performance items of daily and monthly inspections under no load, check the same items underrated load						
	Actuator	Visual inspection/measurement of hoisting/lowering underrated load	The stopping distance of hoisting/lowering shall be within 1% of the hoisting distance in 1 minute.						
Executed by	Examined by								
Examination	Head of maintenance manager								

Annual inspection of motor- trolley (PWRXT)

Example of records of inspection result: O=good, Δ=replace (adjust) in the next time, ×=replace (adjust) due to abnormality.

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YY YY for inspection		/results of inspection			
				/	/	/	/	/	/
Advanced inspection	Daily inspection	Implementation on confirmation	Daily inspection shall also be conducted during annual inspection						
	Monthly inspection	Implementation on confirmation	During the annual inspection, monthly inspection shall also be conducted						
Actuator	Appearance	Visual inspection	· Brake drum and motor cover are free from deformation, damage and breakage · The brake spring is free from deformation, damage and breakage						
	Brake disc	Measurement	The wear loss does not exceed the threshold value						
Component part	Wheel	Visual inspection/Measurement	· No obvious deformation or damage · The wear loss of the outer diameter does not exceed the threshold value						
	Side wheel	Visual inspection/Measurement	· No obvious deformation or damage · The wear loss of the outer diameter does not exceed the threshold value						
	Suspension shaft	Visual inspection/Measurement	· No obvious deformation or damage · The wear loss of the outer diameter does not exceed the threshold value						
	Hanger, connecting support	Visual inspection/Measurement	· No obvious deformation or damage · The wear loss of the outer diameter does not exceed the threshold value						
	Gear rack encapsulating	Visual inspection	· No damage, breakage and no lubricating grease leakage during assembly						
	Gear type and motor shaft	Visual inspection	· No obvious wear, deformation or breakage						
Rail of lateral movement	Lateral movement pavement	Visual inspection	· No attached paint, oil or foreign matter, etc. · No dust or friction powder						
	Deformation and wear	Visual inspection/Measurement	· Flange is free from distortion and edge collapse, etc. · The wear of lateral movement pavement does not exceed the threshold value						
	Mounting bolts of tracks	Visual inspection	No loosening and falling, installed firmly						
	Stopper	Visual inspection	No loosening and falling, installed firmly on both sides of the track						
Junction cable	Appearance	Visual inspection	No deformation or damage, and stably installed						
Refer to checklist of electric chain hoist (PWRX) for electrical mounting subassembly/power supply/electric characteristics/pressure container with an explosion-proof structure									
Function and performance	Action confirmation	Visual inspection/Measurement of lateral movement	After checking the function and performance items of daily inspection under no load, check the same items under rated load, with flexible lateral movement and no hunting and vibration						

Inspection List

Distinction	Inspection item	Inspection method	Criteria	MM/DD/YY YY for inspection		/results of inspection				
				/	/	/	/	/	/	
		underrated load								
	Actuator	Visual inspection/Measurement of lateral movement underrated load	· The stopping distance of lateral movement is within 10% of the lateral movement distance in 1 minute, but only when the load is not shaking							
	Abnormal sounds	Visual inspection/Measurement of lateral movement underrated load	· No irregular rotating sound. · No roar of motor and grating of brake							
Executed by	Examined by									
Examination	Head of maintenance manager									



- If any abnormality is found during annual inspection or regular inspection, please immediately stop using and mark as "failure", and ask the maintenance manager for repair or consult ProWinch.
- Use of abnormal products may lead to serious accidents of death or serious injury, etc.



- Please determine the inspection items suitable for the use environment and conditions of the customers.

Prowinch Los Angeles
www.prowinch.com

709 E Gardena Blvd, Carson, CA 90746
+1 (800) 971-8061
info@prowinch.com

Cranex Services

4022 East Greenway Road, Suite 11-199,
Phoenix, AZ 85032
(602) 321 9751
cranex.services@outlook.com

Ayers USA Cranes
ayersusa.com

26111 US-90, Robertsdale, AL 36567
251-929-1773
service@ayersusa.com

Prowinch Miami
www.prowinch.com

2901 NW 21st Terrace, Miami, FL, 33142
+1 (800) 971-8061
info@prowinch.com

**CONSETI EIRL Consultoría,
Servicio Técnico e Ingeniería**

Avenida Aniana Vargas #5, Plaza Cinco K,
Local B-3, Bonaó, Monseñor Nouel 42000,
República Dominicana
+1 809-710-2529 / +1 809-765-6957

Fortis Alloy S.A. de C.V
www.prowinch.mx

Fortis Alloy Mexico, S.A. de
C.V. Vicente Guerrero No. 403 /
Col. San Miguel, Apodaca,
Nuevo Leon, Mexico C.P. 66649
+52 (81) 8244 1351
avf@prowinch.mx

Contec Industrial

7a Avenida 1-22 Zona 13, Pamplona,
Ciudad de Guatemala
+502 2381-8383
www.contecindustrial.com/

Prointe S.A DE CV.

Av. Alberto Masferrer Sur, Col. Campestre
No. 211, San Salvador, El Salvador
2264-1100, 2264-2200, 2557-5454
www.prointe.com.sv/home/

**HT Automotriz e industrial -
Fernández de Córdoba**

Vía Fernández de Córdoba, Panamá,
Provincia de Panamá, Panamá
+507 201-8570
www.ht.com.pa/

Prowinch Colombia Sas
www.prowinch.co

Calle 15 No 27-74 Local 8 Barrio
Paloquemao en Bogotá, 111411
Bogotá Colombia
+57 601 742 1374
info@prowinch.co

**PROVINTEC Soluciones de
Ingeniería y Seguridad**

Centro Comercial El Cruce,
Bodega # 7, Coronado,
San Jose, Costa Rica
+506 2229-8000
www.provinteccr.com/

DEZA JACOBS

Av Mansiche 1586, Trujillo
La libertad, Peru
ventas@dezajacobs.com
www.dezajacobs.com
+51 44 618700

**Equipos de Izaje
Prowinch Chile Spa**
www.prowinch.cl

Parque Riesco 3407, Recoleta
Región Metropolitana, Chile
+56-2-26218989

