

# **SCT**

## **Twin-belt Conveyor**

### **User Manual**

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Vision: V1.0 (English)





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## 1. Safety



Please read this manual carefully before using this machine in order to operate correctly against any damage caused due to improper operation.



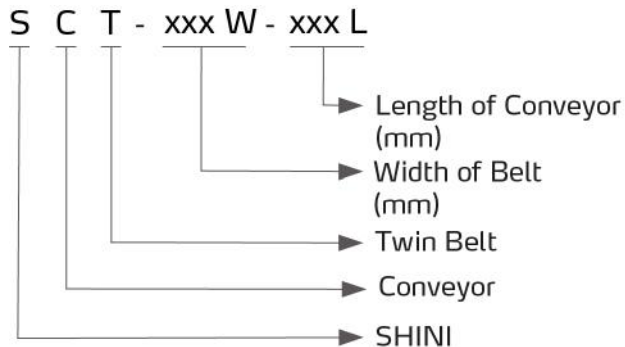
Forbidden to process flammable or toxic material!

The SCT series conveyor is designed for conveyor products removed by robot from injection molding machine. Particularly for large automobile accessories and products. Can effectively improve work efficiency, and protect the appearance of the products. Also can provide full automation when working with robots.



Model: SCT

## 1.1 Coding Principle



### 1.1.1 Features

- 1) High precision aluminum alloy profiles, anodization of sand blast, elegant appearance.
- 2) PVC material belt, wearable and protect appearance of products.
- 3) Height and width are adjustable.
- 4) Designed with universal and brake casters, fixed and freely movable.
- 5) With automatic and manual functions, working independently or working with robot.
- 6) Use connector to attach to robot easily and convenience.

All service work should be carried out by a person with technical training or corresponding professional experience. The manual contains instructions for both handling and servicing. Chapter 6, which contains service instructions intended for service engineers. Other chapters contain instructions for the daily operator.

Any modifications of the machine must be approved by SHINI in order to avoid personal injury and damage to machine. We shall not be liable for any damage caused by unauthorized change of the machine.

Our company provides excellent after-sales service. Should you have any problem during using the machine, please contact the company or the local vendor.

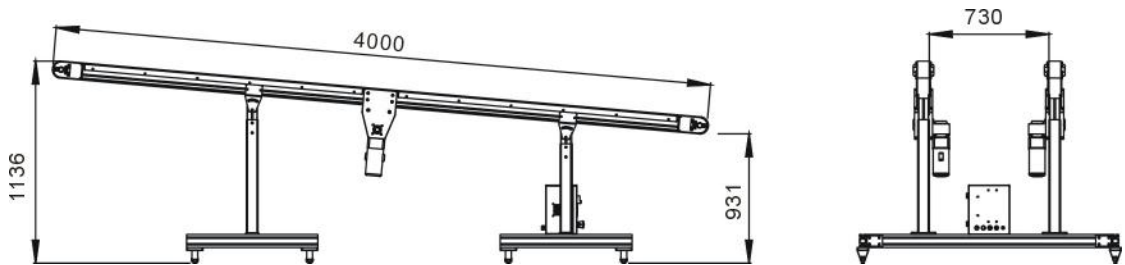
Headquarter and Taipei factory:

Tel: (886) 2 2680 9119

Tel: 800 999 3222

## 1.2 Technical Specifications

### 1.2.1 Outline Drawings (Unit: mm)



Picture 1-1: SCT Outline Drawings

Chart 1-1: SCT Specifications

Model	SCT-80W-4000L	SCT-80W-5000L	SCT-80W-6000L
Length of Conveyor (mm)	4000	5000	6000
Width of Belt (mm)	80		
Width between Belts (mm)	400-1300		
Total Width of Conveyor (mm)	1600		
Height of High End (mm)	1000-1600		
Height of Low End (mm)	850-1300		
Max Load (kg)	50 (Uniform)		
Max Speed (m/min)	12		
Belt	Material: PVB/Thickness: 10mm/Color: Red /Rating of Temperature: -10℃ ~+80℃/Static-free, and Wearing, Oil Proof		
Power Supply	AC220±10v 50/60HZ		
Motor Rated Power (W)	200		

We reserve the right to change specifications without prior notice.

## 1.3 Safety

Pay attention to this Safety Recommendations to prevent personnel injuries and machine damages.

When operating conveyor, please follow the safety guide in below.

### 1.3.1 Security Recommendations

- 1) Ensure the operator, maintenance, and other relate staff read this manual

thoroughly.

- 2) Our SCT series conveyor used in conveying withdraws of robot.
- 3) Any modification or change to the original design of conveyor is forbidden.
- 4) Improper operation may result in personnel injuries or equipment damages.
- 5) Any question during using the conveyor, please contact with the manufacturer or local agent.
- 6) Ensure the Installation meets all safety requirements before using.
- 7) Without written consent of the manufacturer, any improper use or modification that is beyond the description of the user manual, the manufacturer will not have any responsibility for consequent damage.

### 1.3.2 Safety Concerns

- 1) The operation, maintenance, inspection, etc., must be executed by professionally trained personnel.
- 2) The unrelated personnel should keep away from conveyor working area when it is in operation. All electrical wiring must be completed by licensed person according to instructions and country standard.
- 3) Ensure equipments are tightened before installation.
- 4) Press EMERGENCY STOP button immediately when accident occurs.
- 5) Do not modify the conveyor body and control box. Please contact with the manufacturer if any change is required.
- 6) Before maintenance and adjustment, turn off electrical power. Also set up warning plate and safety guarding.
- 7) Please use SHINI parts if any replacement is requires.
- 8) Shini conveyor meets all corresponds safety standards.
- 9) Please read the user manual carefully as safety guideline.
- 10) Unauthorized personnel must inform the relative supervisor, and understand all safety rules before entering conveyor working area.
- 11) All maintenance, operation, and repair must be done by professionals.
- 12) Please order a new user manual from the manufacturer if it is damaged.



The owner has the responsibility to ensure the operators, maintenance and relative staffs have read this user manual thoroughly.








Any modifications or other applications to conveyor should obtain the written consent from the manufacturer for safety purpose.



The safe guarding required for operation of the conveyor is not including in our standard scope of supply (except special equipment), since adaptation to specific site conditions is required. If such safeguarding is provided by you, please note that it must be installed prior to startup of the equipment in order to be included in the safety circuit of the system upon startup.

No.	Marks	Meaning
1		Do not touch.
2		Caution! Danger!
3		Caution! Electric shock.

4		<p>Caution! Mechanical injury.</p>
5		<p>Caution! High temperature.</p>
6		<p>No flame.</p>

### 1.3.3 Transportation and Storage



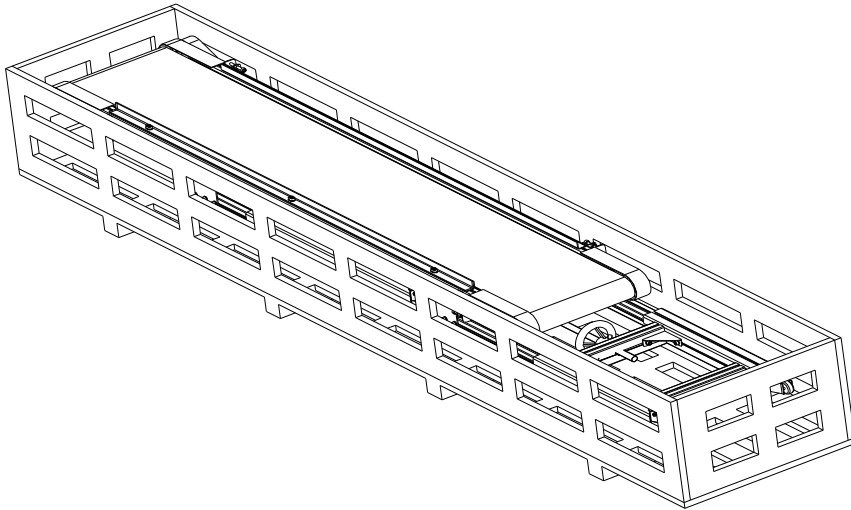
Forbidden person working under the machine during conveying.



If there is compelling reason for moving or reinstalling the conveyor, please inquire for assistance from the manufacturers or agents. If you do not comply with this mandatory requirement, result in any personnel injuries and equipment damages, the manufacturers will not have any responsibility.

## Transportation

1. When packaging, the bottom-bar is disassembled and legs are parallel with the belt in order to fit in wooden crate.



2. During the transporting, please avoid any possible colliding to the product.
3. Use more packing bags for long-distance transport. Vacuum the bag or apply desiccant if necessary.
4. Keep temperature between  $-25^{\circ}\text{C}$  to  $55^{\circ}\text{C}$  during the transportation. For short transportation (in 24 hours), the temperature cannot exceed  $70^{\circ}\text{C}$ .

The product you order is certified in good condition before delivery. Please check whether there is any damage caused during transportation. Please carefully unpack the product as the packaging can be reused if the product is damaged during transportation.

Any damage caused during transportation, please:

- 1) Report immediately to the transportation companies and our company.
- 2) Claim to the transporting company, fill the files for compensation.
- 3) Keep damaged items and wait for inspection. Do not return the product before the inspection is finished.

## Unpacking Transport

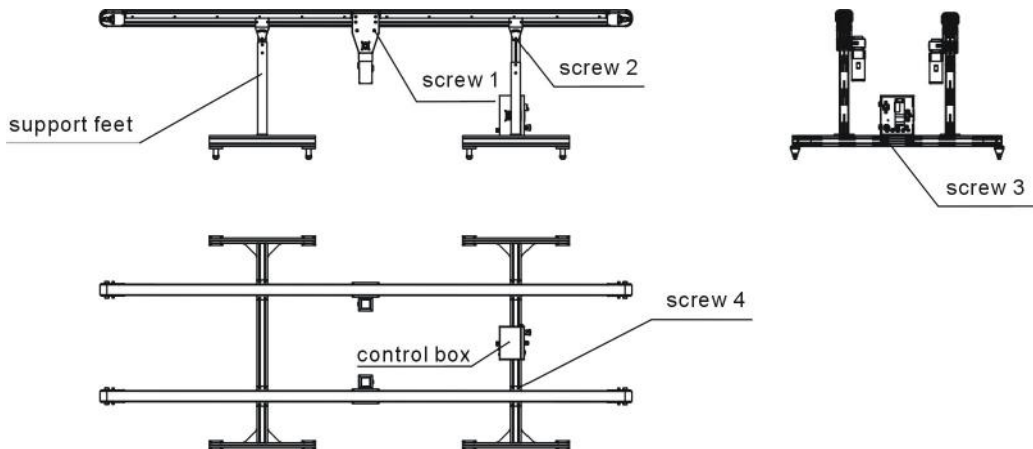
1. Adjust height, width and angle as requirements.
2. Loose screw which connected between top beam fixed plate and support

feet.

3. Adjust screw on belt end, tighten belt.

After unpacking, keep support feet vertical to top beam, use bottom bar to connect support foot and tighten the screws. The following are the steps:

- 1) Rotate support feet slowly till vertical to top beam.
- 2) Use bottom bar to connect support feet and tighten screw 2 and screw 1.



Picture 1-2: Unpacking Transport

### Storage

1. Cut off the main power, if not use for a long time.
2. The machine should be stored in ventilative and drying room to prevent machine rusty or electrical components damage.
3. Apply anticorrosive oil to the product and cover it thoroughly to prevent rust during storage.

### Working Environment

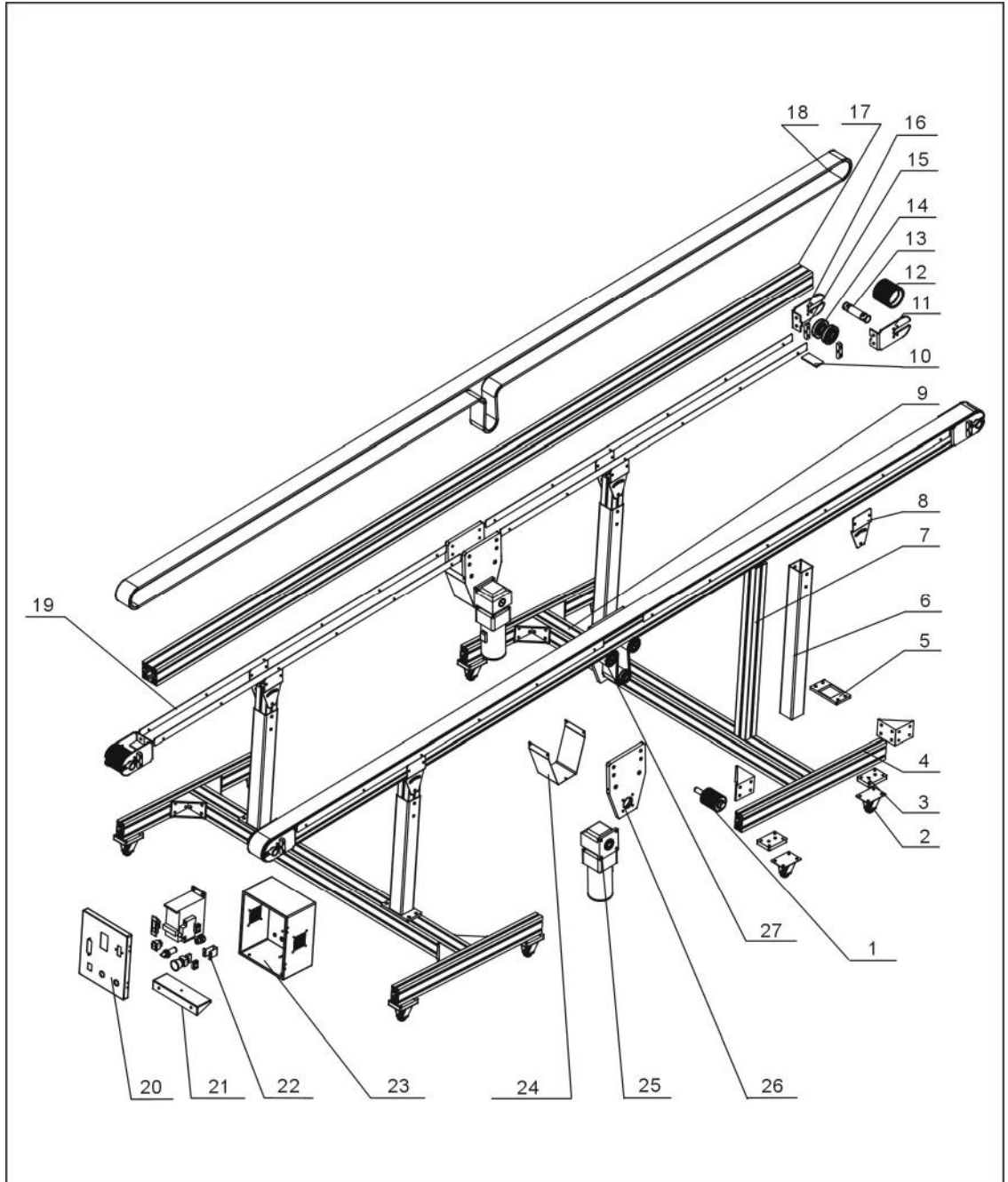
1. Temperature: between +5°C to +40°C.
2. Humidity: Temperature +40°C, relative humidity less than 50%.
3. Elevation: Under 1000 meters above sea level.
4. Do not use it, if the power cable is damage.
5. Do not use it, if the product breaks down or disassembled/inspected by unlicensed person.

## Retirement

Recycle the product when it reaches service life. Please disassemble the product and separate the parts according to the material types (metal, plastics, rubber grease etc.). Recycle the product according to the local laws or contact local recycle organization for help.

## 2. Working Feature and Operation

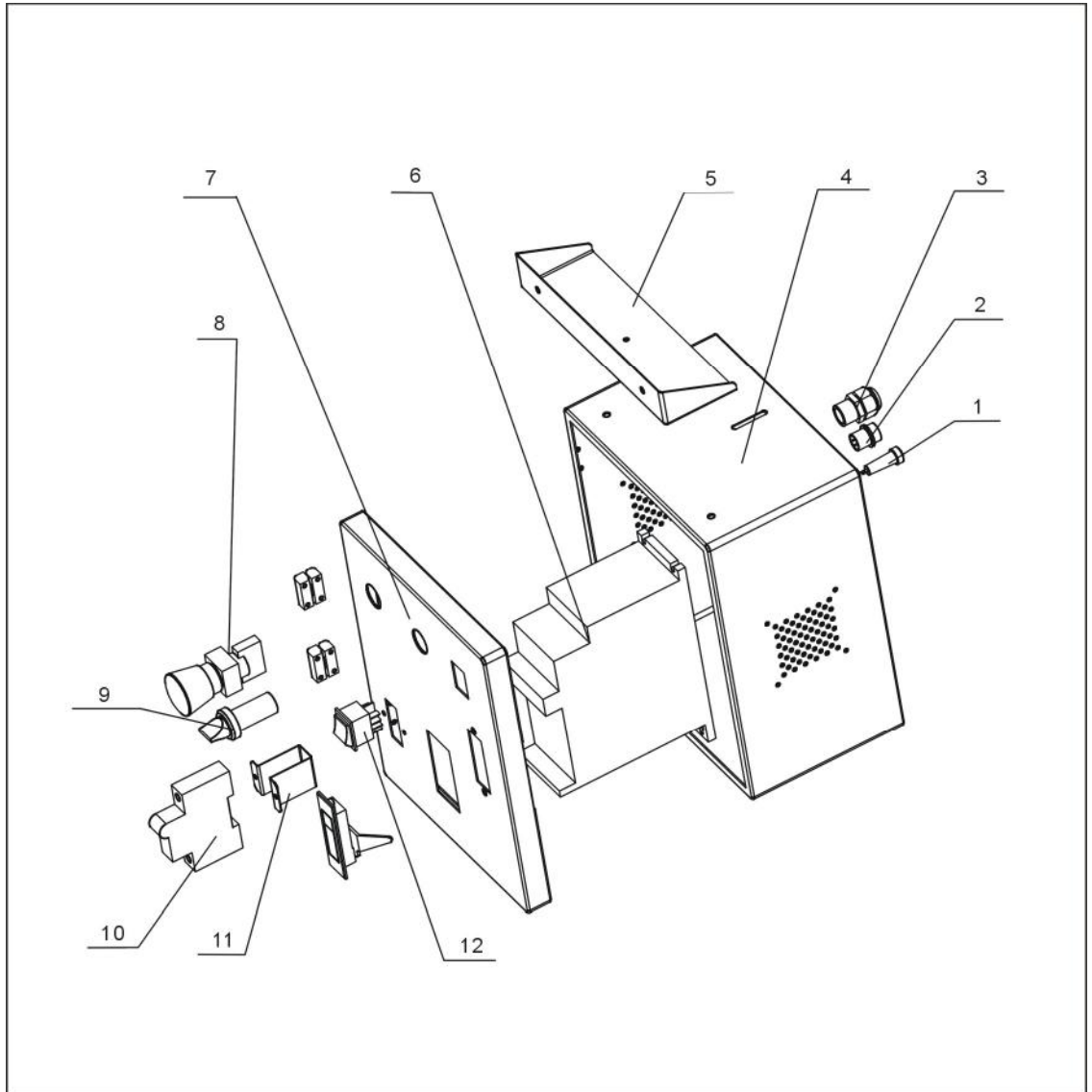
### 2.1 SCT Assembly Diagram



Picture 2-1: SCT Assembly Diagram

1. Synchronous wheel 1
2. Brake wheel (3 inches)
3. Mounting plate for brake wheel
4. Aluminum profile for bottom frame 2
5. Bottom fixed plate for support feet
6. Support feet 1 (down)
7. Support feet 1 (up)
8. Connection plate for traverse beam
9. Aluminum profile for bottom frame 1
10. Supporting frame for synchronous wheel 3
11. Supporting frame for synchronous wheel 2
12. Synchronous wheel 1
13. Connection shaft for synchronous wheel 1
14. Mounting unit for bearing
15. Adjustment plate
16. Supporting frame for synchronous wheel 1
17. Top traverse beam
18. Synchronous belt
19. Belt stopper
20. Cover for control box
21. Fixed plate for control box
22. Mounting plate for breaker
23. Control box
24. Cover
25. Motor
26. Mounting plate for motor
27. Pulley

## 2.2 Control Box

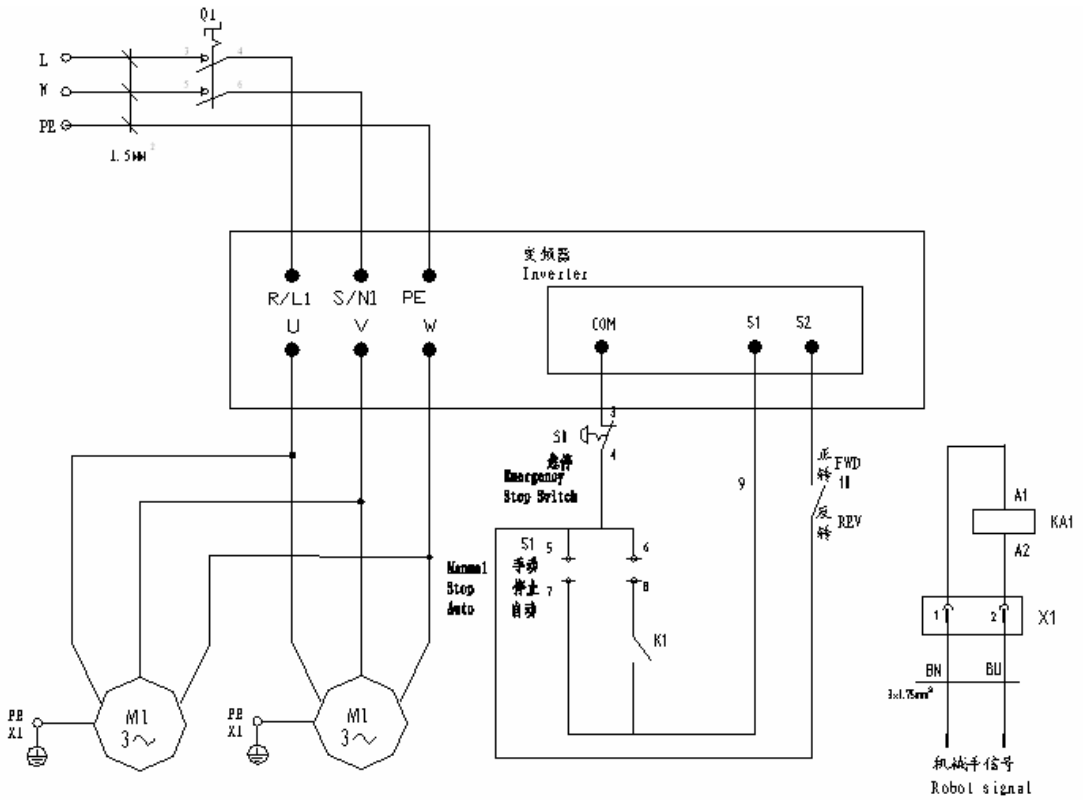


Picture 2-2: Control Box

- |                          |                                |                      |
|--------------------------|--------------------------------|----------------------|
| 1. bottom seat for fuse  | 2. Water-proof fitting         | 3. Cable lock PG13.5 |
| 4. Control box case      | 5. Fixed plate for control box | 6. Inverter          |
| 7. Cover for control box | 8. Emergency stop button       | 9. Knob switch       |
| 10. Breaker              | 11. Mounting plate for breaker | 12. Switch           |



## 2.3 Electric Control Schematic



Picture 2-3: Power Wiring Diagram

### 3. Installation and Adjustment

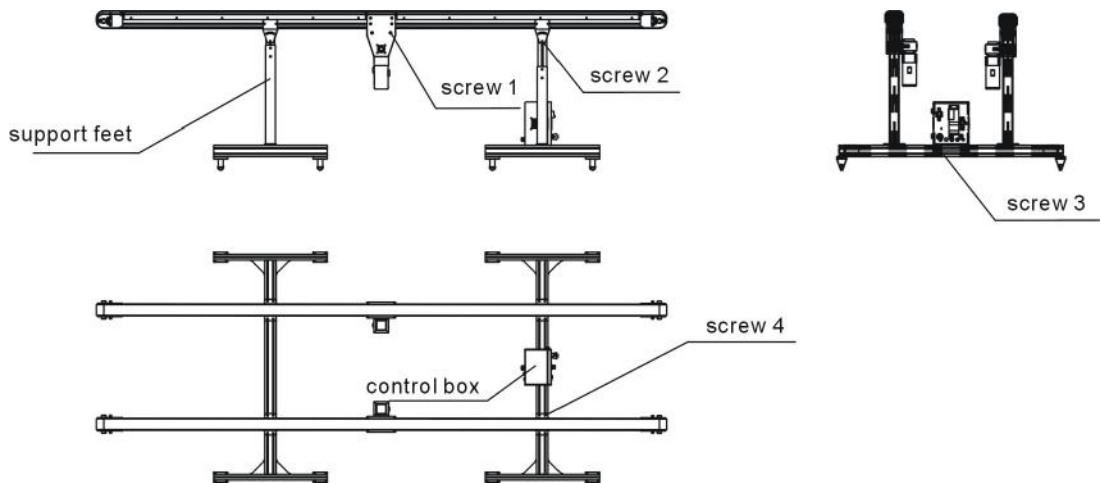
Before installation, please read this chapter completely.



The power connection only can be completed by licensed electrician.

#### 3.1 Adjustment

- 1) Adjust height, width and angle as requirements.
- 2) Loosen screw which connected between top beam fixed plate and support feet.
- 3) Loosen screw which connected between bottom fixed plate and support feet.
- 4) Fix the screw on belt adjustment block to make belt tightened and on its position.



Picture 3-1 : Power Wiring Diagram

## 4. Operating

### 4.1 Instruction

- 1) Plug on the power and connect the cable (X1) to SHINI robot (D2).
- 2) Switch on the conveyor. The conveyor will start operating.
- 3) Change the speed by adjusting the rotary switch.
- 4) Select manual or automate as required.
- 5) Automate mode: robot will activate the conveyor each cycle.

## 5. Error Elimination

Error	Caused	Correction
Turn on the current, press the button on speed controller, the motor cannot operate.	<ol style="list-style-type: none"><li>1. The speed controller rotary switch is point on 0.</li><li>2. No power.</li><li>3. Current connection errors.</li><li>4. Motor errors.</li></ol>	<ol style="list-style-type: none"><li>1. Adjust the speed rotary switch.</li><li>2. Reconnect the current.</li><li>3. Examine the circuit according to the electric control chart.</li><li>4. Change another motor.</li></ol>
Motor is on operating but belt not.	The belt is loosening.	Adjust the adjustment plate and tuning plate. Tighten the belt proper.
Belt is not on its position.	Two ends of belt are not on horizontal.	Loose screw on the belt adjustment block and adjust the belt tuning block.

## 6. Maintenance

The conveyor does not require particularly maintenance.

### 6.1 Repair

Repair should be performed by qualified personnel only, in order to prevent personal injuries or equipment damages.

Clean the dirt, oil stain, etc from conveyor.

Clean the conveyor after every working.

In order to prevent personal injuries and keep operating smoothly, do not clean the machine if it is in operation.

### 6.2 Maintenance

Clean the dust and dirt promptly, to keep motor clean and abstract heat.

Remove dirt and oil stain everyday to keep machine in good condition.

Use of flammable liquid cleaner to the machine is forbidden.

Add lubricating grease on link chains every month in regurgitation.



Turn off the main switch before maintenance.