

# **SV**

## **Down-feed Belt Conveyor**

Date: Nov, 2013

Version: Ver.B (English)





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# 1. General Description



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!

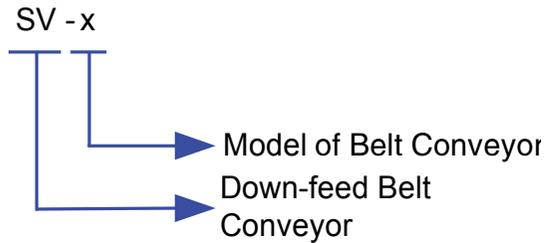
Shini manufactures four types of belt conveyor under technical license from a leading European manufacturer.

SV series conveyor feature reliable performance and ease of operation and are suitable for conveying finished products fed from robots to a lower level.



Model: SV-2

## 1.1 Coding Principle



## 1.2 Feature

- Mounted on patented "FUTURE" floor stand.
- PVC belt is adopted for smooth and efficient conveying.
- Height adjustable floor stand.
- Sidewalls for SV series are 34 mm respectively.
- SV series are equipped with speed regulators as standard. The safe regulating range for normal use is 3~6m/min.
- Release signal socket for sprue picker is an option for SV series.
- Power supply for SV series are 1Φ, 230VAC, 50/60Hz.

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:

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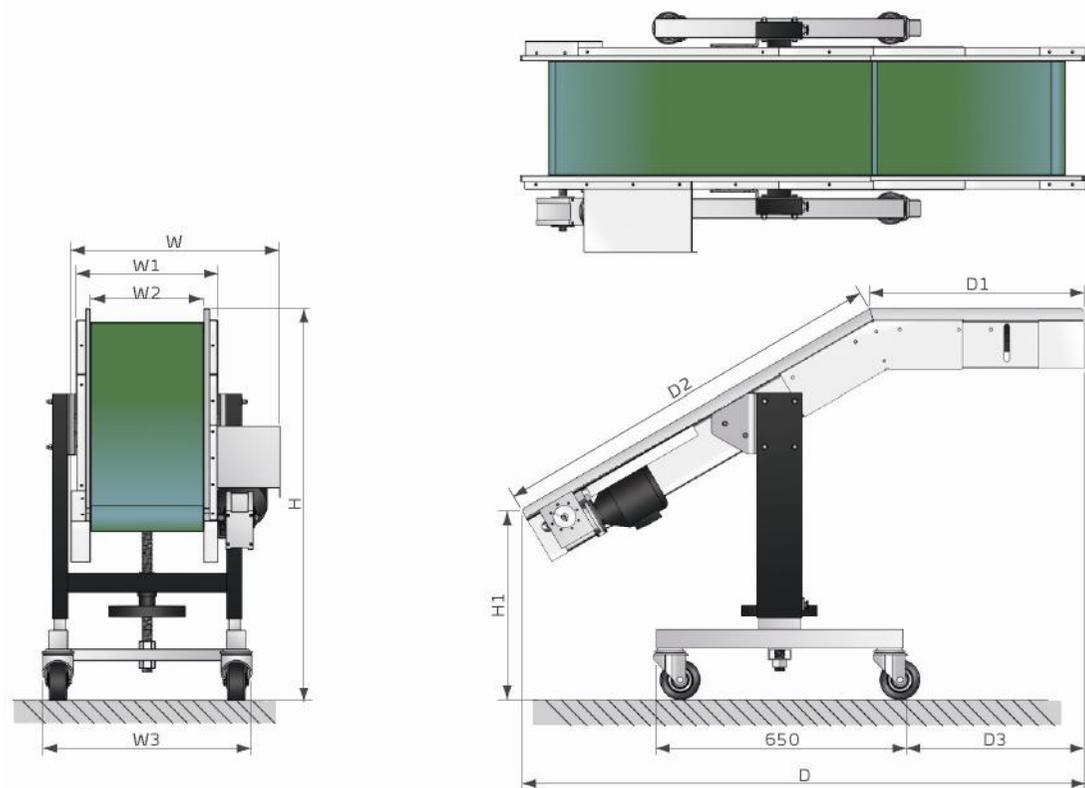
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Shini Plastics Technologies India Pvt.Ltd.:

Tel: (91) 250 3021 166

## 1.3 Technical Specifications

### 1.3.1 Out Dimensions



Picture 1-1: Out Dimensions

Chart 1-1: Out Dimensions List

Model	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6
H (mm)	1000~1400	1000~1400	1000~1400	1250~1650	1250~1650	1250~1650
H1 (mm)	525~925	525~925	525~925	525~925	525~925	525~925
W (mm)	550	620	750	620	750	850
W1 (mm)	371	441	571	441	571	671
W2 (mm)	300	370	500	370	500	600
W3 (mm)	490	560	690	560	690	790
D (mm)	1480	1480	1480	1910	1910	1910
D1 (mm)	564	564	564	564	564	564
D2 (mm)	1062	1062	1062	1562	1562	1562
D3 (mm)	410	410	410	480	480	480
Weight (kg)	83	88	93	110	120	130

We reserve the right to change specifications without prior notice.

## 1.4 Safety Regulations

To avoid any body injures and damages of the machine, please obey the regulations in this manual. When operating this machine, please obey the regulations as follows.

### 1.4.1 Safety Signs and Labels



Electrical installation should be done by qualified electricians. Turn off the main switch and control switch before servicing and maintenance.



Warning!

The sound level produced by the machine is < 70dB (max) at the position of the operator.



Notice:

Noise level test refers to the following conditons: 1m around the machine, 1.6m above the machine.



Warning!

- 1) Don't use the machine and don't try to repair it before carefully read this manual and understood all its parts completely.
- 2) In particular, it is important to adopt the precaution listed in section a:'safety instruction'.
- 3) It is forbidden to use the machine in any condition or for any use different from what is indicated in the manual. SHINI has no responsibility for breakdowns, trouble, or injuries caused by improper operation.



Attention!

No need for regular inspection because all the electrical parts in the control unit are fixed tightly!



Attention!

The maximum weight of the pieces to be carried on the conveyor belt must not be over 56kg in total (Conveying capacity is less than 56kg as the set value of the regulator is smaller than 4.5m/min).

The conveyor belts are not suitable to transport loose material.



Attention!

These conveyor belts can be easily used by all of the personnel of the plant they are installed in, and they do not present any risk for the operator, if used properly.

Therefore, it is recommended to read the manual carefully before using the machine.



Attention!

SHINI claims no responsibility when:

- 1) Use of the conveyor belt is in any way openly opposed to what is indicated in the present instruction manual.
- 2) There are feeding defects.
- 3) There is a serious deficiency of the foreseen maintenance.
- 4) Non-authorized changes are adopted.
- 5) Spare parts that are non-authorized or not suitable for the actual model are used.
- 6) There are exceptional events. Please don't disassemble the protector sponge and quick tube & nip in the outlet of collecting material box.



Danger!

Risk of fire: Risk of fire is present whenever the conditions of the conveyor belts are not suitable for the operation they are used for (in particular: temperature of the pieces carried). Adjust the condition of the conveyor belt according to the table shown here below.



Risks of high temperature: These conveyor belts are designed for transporting molded parts, i.e. hot pieces. If you need to operate on the

conveyor belt, use safety gloves ( in particular where the parts fall on the belt).

Type of belt	Max. temp. of parts
PVC	60°C



#### Attention!

The packing material must not be left around, and it must be disposed of according to the regulations in force. It is possible to lift the conveyor with a fork lift.



#### Danger!

To protect the operator's safety, and the integrity of the machine, assure the stable lifting of the conveyor. Once the conveyor belt is running, it is necessary to fix the machine by locking the castors. Moreover, suitable slings or fixtures must be attached, to keep it steady during transportation.

## 1.5 Exemption Clause

The following statements clarify the responsibilities and regulations born by any buyer or user who purchases products and accessories from Shini (including employees and agents).

Shini is exempted from liability for any costs, fees, claims and losses caused by reasons below:

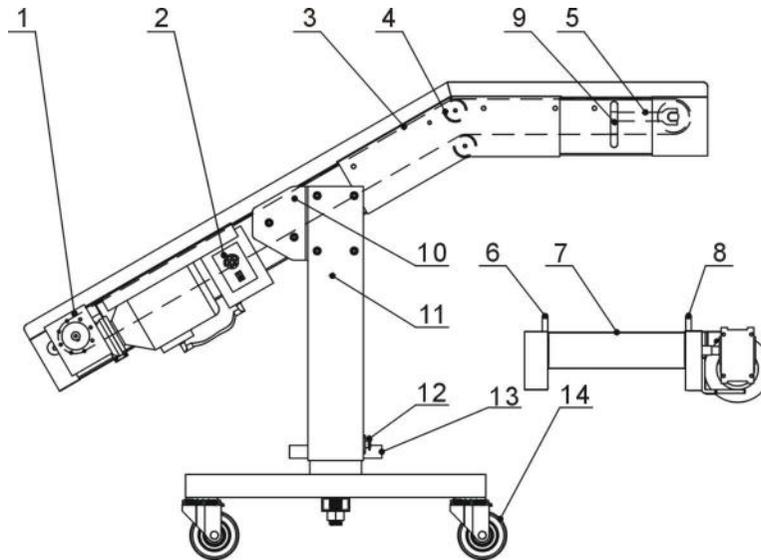
1. Any careless or man-made installations, operation and maintenances upon machines without referring to the Manual prior to machine using.
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon machine, including adding or replacing accessories, dismantling, delivering or repairing.
4. Employing consumables or oil media that are not appointed by Shini.

## 2. Structural Features and Working Principle

### 2.1 Function Description

SV series conveyor feature reliable performance and ease of operation and are suitable for conveying finished products fed from robots to a lower level.

#### 2.1.1 Working Principle



Parts name:

- |                     |                             |                           |
|---------------------|-----------------------------|---------------------------|
| 1. Gearmotor        | 2. Speed governor/regulator | 3. PVC belt               |
| 4. Iron stick       | 5. Plug in screw            | 6. Left down baffle plate |
| 7. Conveying wheel  | 8. Right down baffle plate  | 9. Adjusting screw nut    |
| 10. Adjusting board | 11. Base                    | 12. Star knob             |
| 13. Driving wheel   | 14. Castor with brake       |                           |

Picture 2-1: Working Principle

The conveyor belts of this series are made up of:

Equipped with a 3 brake castors (14) base (11), the conveyor belt can be easily moved to the working area. On the conveying belt, there are two material fenders (6, 8) separately installed on the sidewall of the belt and the collection area. The conveying rotor (7) located on the top end is directly connect to the gear motor (1).

Matched with the motor, there is a speed regulator (2) which has the function to

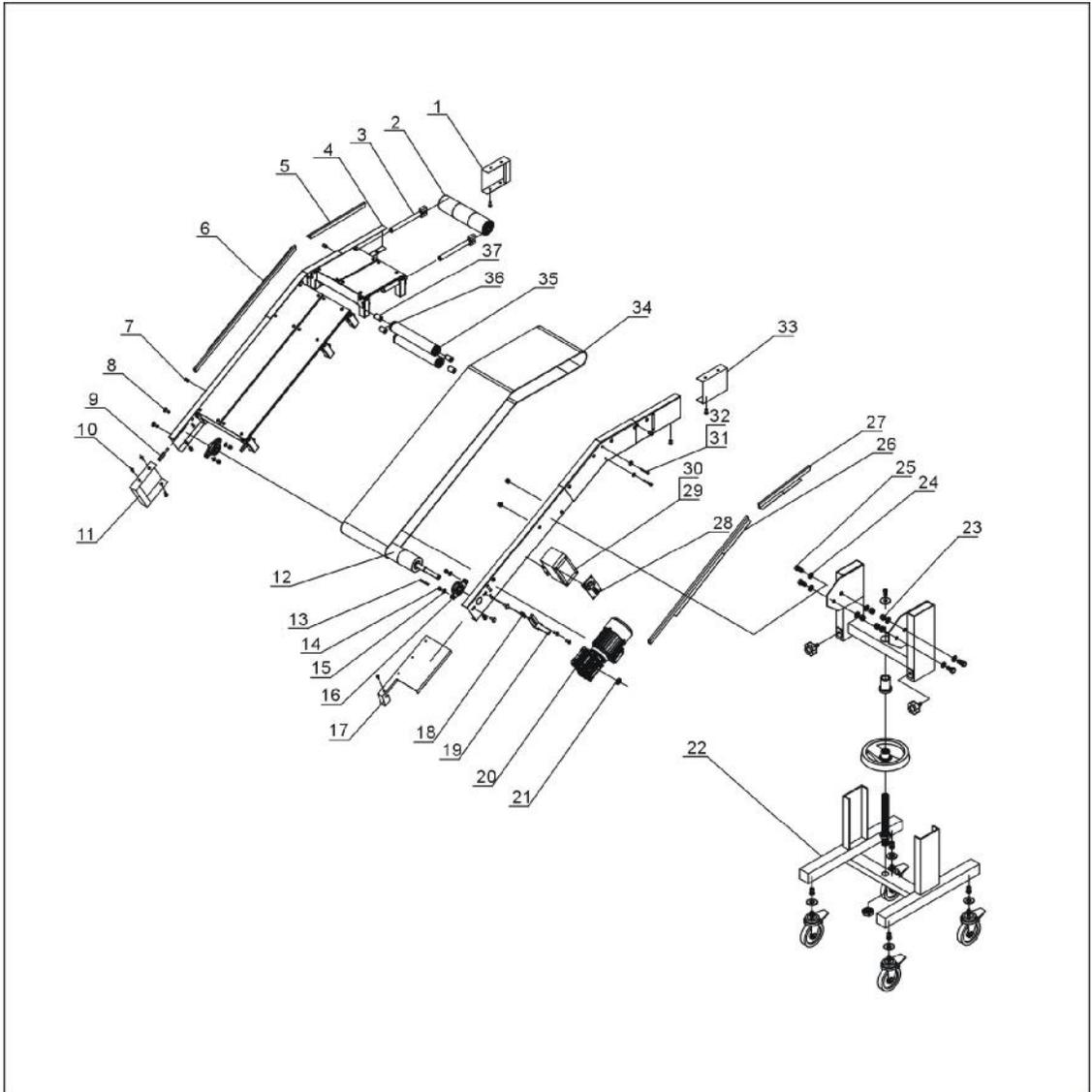
start, stop and adjust the belt speed. The screw mechanism control by the hand wheel (13), control the height of the conveying belt. Two wheel gears with knob (12) perfectly lock the conveyor at the desired position.

Moreover, the belt is connected to the support frame, so it is possible to change its inclination by adjusting the two bolts (10).

Generally, the operator stands at the conveyor top end (discharging area). The controlling parts are located here as well.

## 2.2 Assembly Drawing

### 2.2.1 Assembly Drawing



Note: Please refer to 2.2.2 material list about the parts code.

Picture 2-3: Assembly Drawing

## 2.2.2 Parts List

Chart 2-1: Parts List (SV-1)

No.	Name	Part No.	No.	Name	Part No.
1	Top side plate cover	-	20	Gear motor	YM50102500000
2	Iron stick $\Phi 76$	YW08013103100	21	Flexible block ring for holes	YW69002200100
3	Butterfly screw	BH10000103040	22	Pedestal	-
4	Conveyor assembly map	-	23	Screw nut	-
5	Upper left baffle	-	24	Washer	-
6	Lower left baffle	-	25	Adjusting bolt	YW69122500000
7	Smooth screw nut	-	26	Lower right baffle	-
8	External hexagon bolt	YW60082500300	27	Upper right baffle	-
9	Hexagon screw	-	28	Speed governor	YE80200000100
10	External hexagon bolt	YW60082000300	29	Speed governor cover	-
11	Lower left cover	-	30	Speed governor shell	-
12	Rubber roller	YW08012602600	31	External hexagon bolt	-
13	Common flat key	BH10668000010	32	Flat washer	YW66061800000
14	Star screw nut	YW61000800200	33	Upper side plate cover	-
15	Flat gasket	YW66081600000	34	Conveying belt	YR00010100100
16	Bearing pedestal	YW11205100100	35	Iron stick $\Phi 50$	YW08013203200
17	Gear motor shield	-	36	Iron stick pad $\Phi 22 \times 22$	BH10000222210
18	Rivet nut	YW64080200000	37	Iron stick pad $\Phi 22 \times 24$	BL56000222440
19	Motor holder	-			

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

Chart 2-2: Parts List (SV-2)

No.	Name	Part No.	No.	Name	Part No.
1	Top side plate cover	-	20	Gear motor	YM50102500000
2	Iron stick $\Phi 76$	YW08021001000	21	Flexible block ring for holes	YW69002200100
3	Butterfly screw	BH10000103040	22	Pedestal	-
4	Conveyor assembly map	-	23	Screw nut	-
5	Upper left baffle	-	24	Washer	-
6	Lower left baffle	-	25	Adjusting bolt	YW69122500000
7	Smooth screw nut	-	26	Lower right baffle	-
8	External hexagon bolt	YW60082500300	27	Upper right baffle	-
9	Hexagon screw	-	28	Speed governor	YE80200000100
10	External hexagon bolt	YW60082000300	29	Speed governor cover	-
11	Lower left cover	-	30	Speed governor shell	-
12	Rubber roller	YW08020900900	31	External hexagon bolt	-
13	Common flat key	BH10668000010	32	Flat washer	YW66061800000
14	Star screw nut	YW61000800200	33	Upper side plate cover	-
15	Flat gasket	YW66081600000	34	Conveying belt	YR00020100100
16	Bearing pedestal	YW11205100100	35	Iron stick $\Phi 50$	YW08021101100
17	Gear motor shield	-	36	Iron stick pad $\Phi 22 \times 22$	BH10000222210
18	Rivet nut	YW64080200000	37	Iron stick pad $\Phi 22 \times 24$	BL56000222440
19	Motor holder	-			

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

Chart 2-3: Parts List (SV-3)

No.	Name	Part No.	No.	Name	Part No.
1	Top side plate cover	-	20	Gear motor	YM50102500000
2	Iron stick $\Phi 76$	YW08031001000	21	Flexible block ring for holes	YW69002200100
3	Butterfly screw	BH10000103040	22	Pedestal	-
4	Conveyor assembly map	-	23	Screw nut	-
5	Upper left baffle	-	24	Washer	-
6	Lower left baffle	-	25	Adjusting bolt	YW69122500000
7	Smooth screw nut	-	26	Lower right baffle	-
8	External hexagon bolt	YW60082500300	27	Upper right baffle	-
9	Hexagon screw	-	28	Speed governor	YE80200000100
10	External hexagon bolt	YW60082000300	29	Speed governor cover	-
11	Lower left cover	-	30	Speed governor shell	-
12	Rubber roller	YW08012602600	31	External hexagon bolt	-
13	Common flat key	YW08030900900	32	Flat washer	YW66061800000
14	Star screw nut	YW61000800200	33	Upper side plate cover	-
15	Flat gasket	YW66081600000	34	Conveying belt	YR00030100100
16	Bearing pedestal	YW11205100100	35	Iron stick $\Phi 50$	YW08031101100
17	Gear motor shield	-	36	Iron stick pad $\Phi 22 \times 22$	BH10000222210
18	Rivet nut	YW64080200000	37	Iron stick pad $\Phi 22 \times 24$	BL56000222440
19	Motor holder	-			

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

Chart 2-4: Parts List (SV-4)

No.	Name	Part No.	No.	Name	Part No.
1	Top side plate cover	-	20	Gear motor	YM50102500000
2	Iron stick $\Phi 76$	YW08021001000	21	Flexible block ring for holes	YW69002200100
3	Butterfly screw	BH10000103040	22	Pedestal	-
4	Conveyor assembly map	-	23	Screw nut	-
5	Upper left baffle	-	24	Washer	-
6	Lower left baffle	-	25	Adjusting bolt	YW69122500000
7	Smooth screw nut	-	26	Lower right baffle	-
8	External hexagon bolt	YW60082500300	27	Upper right baffle	-
9	Hexagon screw	-	28	Speed governor	YE80200000100
10	External hexagon bolt	YW60082000300	29	Speed governor cover	-
11	Lower left cover	-	30	Speed governor shell	-
12	Rubber roller	YW08020900900	31	External hexagon bolt	-
13	Common flat key	BH10668000010	32	Flat washer	YW66061800000
14	Star screw nut	YW61000800200	33	Upper side plate cover	-
15	Flat gasket	YW66081600000	34	Conveying belt	YR00040100100
16	Bearing pedestal	YW11205100100	35	Iron stick $\Phi 50$	YW08021101100
17	Gear motor shield	-	36	Iron stick pad $\Phi 22 \times 22$	BH10000222210
18	Rivet nut	YW64080200000	37	Iron stick pad $\Phi 22 \times 24$	BL56000222440
19	Motor holder	-			

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

Chart 2-5: Parts List (SV-5)

No.	Name	Part No.	No.	Name	Part No.
1	Top side plate cover	-	20	Gear motor	YM50102500000
2	Iron stick $\Phi 76$	YW08031001000	21	Flexible block ring for holes	YW69002200100
3	Butterfly screw	BH10000103040	22	Pedestal	-
4	Conveyor assembly map	-	23	Screw nut	-
5	Upper left baffle	-	24	Washer	-
6	Lower left baffle	-	25	Adjusting bolt	YW69122500000
7	Smooth screw nut	-	26	Lower right baffle	-
8	External hexagon bolt	YW60082500300	27	Upper right baffle	-
9	Hexagon screw	-	28	Speed governor	YE80200000100
10	External hexagon bolt	YW60082000300	29	Speed governor cover	-
11	Lower left cover	-	30	Speed governor shell	-
12	Rubber roller	YW08030900900	31	External hexagon bolt	-
13	Common flat key	BH10668000010	32	Flat washer	YW66061800000
14	Star screw nut	YW61000800200	33	Upper side plate cover	-
15	Flat gasket	YW66081600000	34	Conveying belt	YR00050100100
16	Bearing pedestal	YW11205100100	35	Iron stick $\Phi 50$	YW08031101100
17	Gear motor shield	-	36	Iron stick pad $\Phi 22 \times 22$	BH10000222210
18	Rivet nut	YW64080200000	37	Iron stick pad $\Phi 22 \times 24$	BL56000222440
19	Motor holder	-			

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

Chart 2-6: Parts List (SV-6)

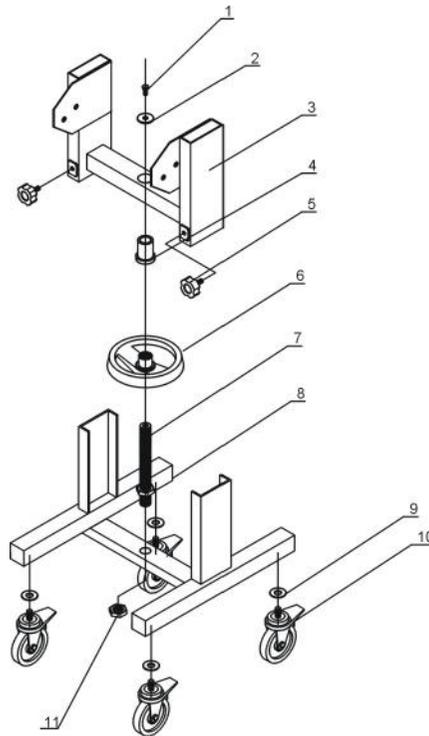
No.	Name	Part No.	No.	Name	Part No.
1	Top side plate cover	-	20	Gear motor	YM50102500000
2	Iron stick $\Phi 76$	YW09061000300	21	Flexible block ring for holes	YW69002200100
3	Butterfly screw	BH10000103040	22	Pedestal	-
4	Conveyor assembly map	-	23	Screw nut	-
5	Upper left baffle	-	24	Washer	-
6	Lower left baffle	-	25	Adjusting bolt	YW69122500000
7	Smooth screw nut	-	26	Lower right baffle	-
8	External hexagon bolt	YW60082500300	27	Upper right baffle	-
9	Hexagon screw	-	28	Speed governor	YE80200000100
10	External hexagon bolt	YW60082000300	29	Speed governor cover	-
11	Lower left cover	-	30	Speed governor shell	-
12	Rubber roller	YW08060900300	31	External hexagon bolt	-
13	Common flat key	BH10668000010	32	Flat washer	YW66061800000
14	Star screw nut	YW61000800200	33	Upper side plate cover	-
15	Flat gasket	YW66081600000	34	Conveying belt	YR00060100100
16	Bearing pedestal	YW11205100100	35	Iron stick $\Phi 50$	YW09061100300
17	Gear motor shield	-	36	Iron stick pad $\Phi 22 \times 22$	BH10000222210
18	Rivet nut	YW64080200000	37	Iron stick pad $\Phi 22 \times 24$	BL56000222440
19	Motor holder	-			

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

### 2.2.3 Pedestal Parts

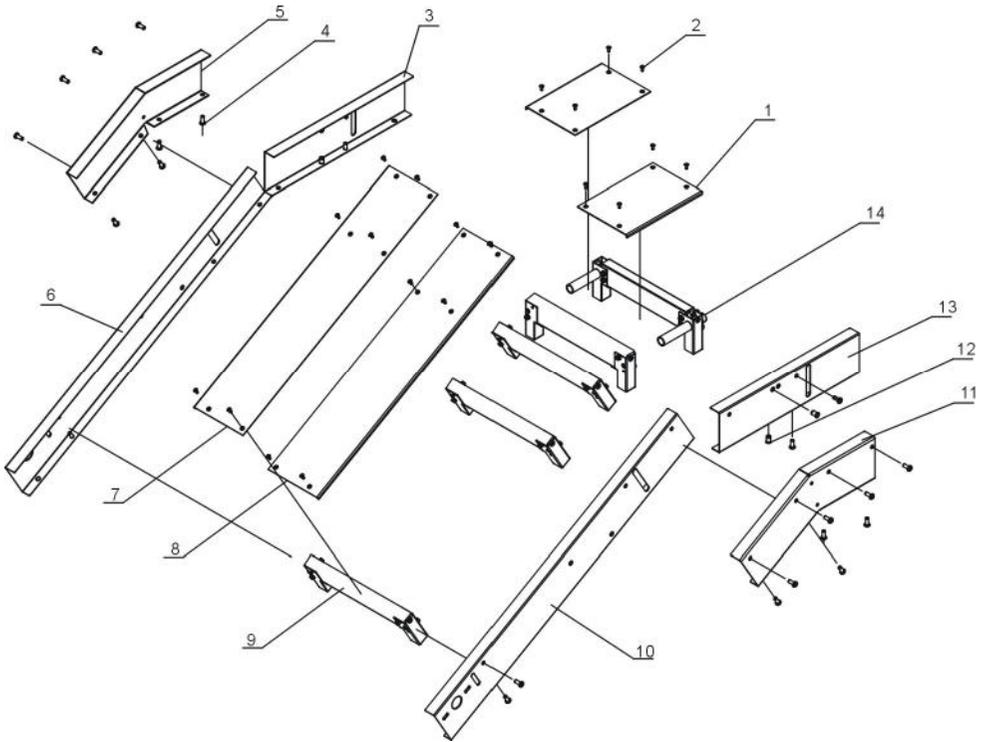


Parts name:

- |                   |                  |               |                            |
|-------------------|------------------|---------------|----------------------------|
| 1. Adjusting bolt | 2. Flat washer   | 3. Lifter     | 4. Adjusting rubber sleeve |
| 5. Star screw     | 6. Driving wheel | 7. Screw      | 8. Pedestal                |
| 9. Flat washer    | 10. Castor       | 11. Screw nut |                            |

Picture 2-3: Pedestal Parts

## 2.2.4 Main Frame Components



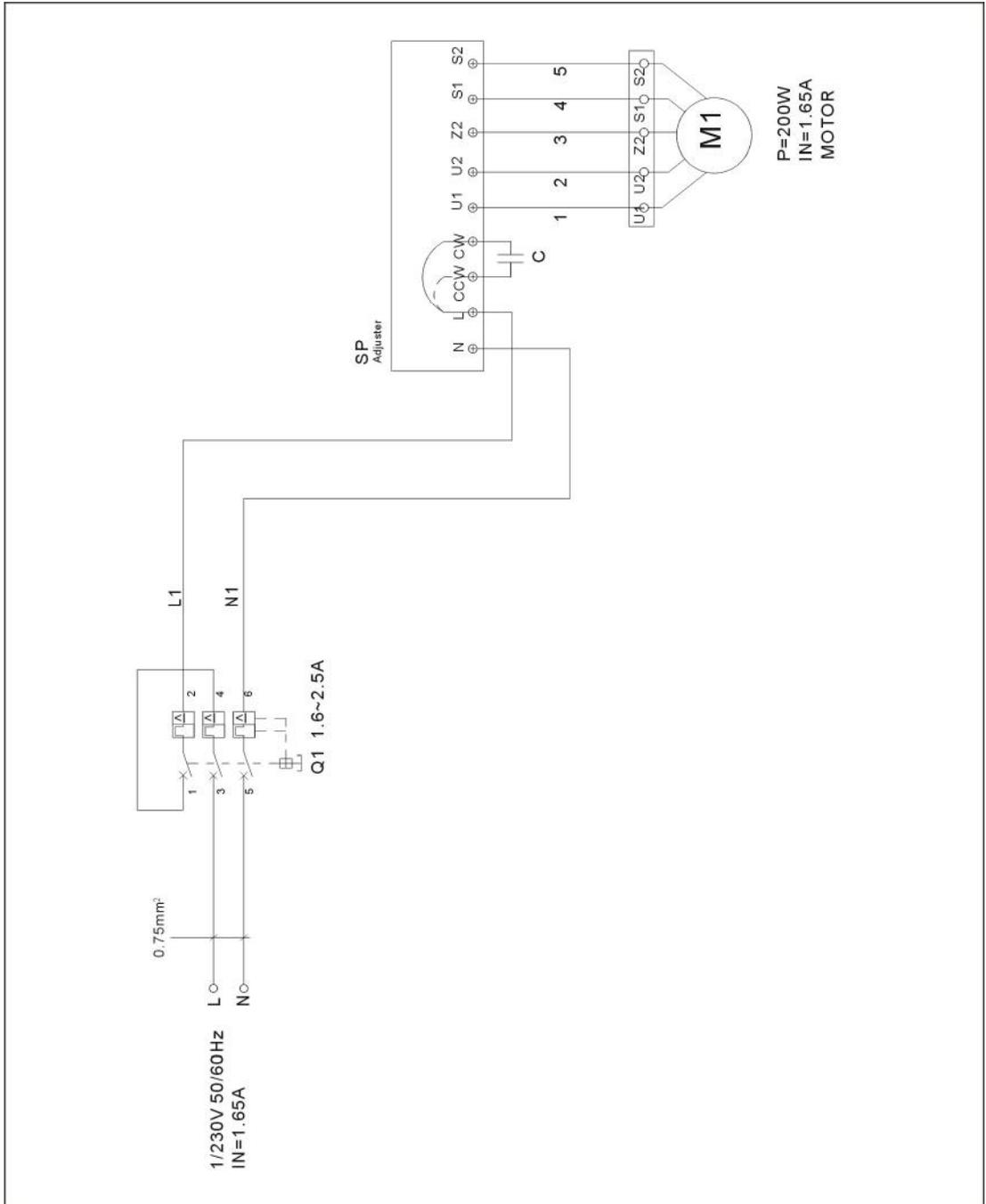
Parts name:

- |                             |                             |                          |
|-----------------------------|-----------------------------|--------------------------|
| 1. Top plate                | 2. Cross self-tapping screw | 3. Upper left side plate |
| 4. Screw with flat gasket   | 5. Left connecting plate    | 6. Lower left side plate |
| 7. Bottom left side plate   | 8. Bottom right plate       | 9. Beam 1 assembly map   |
| 10. Bottom right side plate | 11. Right connecting plate  | 12. Rivet nut            |
| 13. Upper right side plate  | 14. Beam 2 assembly map     |                          |

Picture 2-3: Main Frame Components

## 2.3 Electrical Circuit Diagram

### 2.3.1 Main Electrical Circuit



Picture 2-2: Main Electrical Circuit

## 2.3.2 Electrical Components list

Chart 2-7: Electrical Components List

NO.	Symbol	Name	Specification	Part NO.
1	Q1	Circuit breaker	1.6~2.5A	YE40162500000
2		Waterproof box	-	YR40012000000
3	SP	Adjuster	230V 50/60Hz 200W	YE80200000100
4	M1	Motor*	230V 200W 50/60Hz	YM50102000000

\* means possible broken parts.

\*\* means easy broken part. and spare backup is suggested.

Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

### 3. Installation Testing

Read this chapter carefully before installation, Must observe the installation steps as follows!

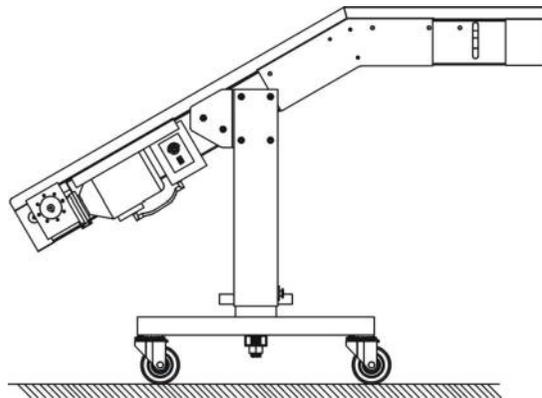


The connection of the power supply should be done by qualified electricians only!

#### 3.1 Attention

- 1) Verify that the power supply corresponds to the specifications of the plate near the controls of the conveyor.
- 2) Connect the power cable and the PE wire according to the local regulations.
- 3) Use independent power cable and switch, Make sure that the diameter of the cable is not smaller than the cable used in the control box.
- 4) The connection end of the power cable should be safely and tightly.
- 5) This series use the power with single phase and 3 wires, (L) connect to the live wire of the power, and the PE should be connected.
- 6) Power supply requirement:  
Main power voltage:  $\pm 10\%$   
Main power frequency:  $\pm 2\%$

#### 3.2 Horizontal Installation



Picture 3-1: Horizontal Installation

Conveyor don't require any particular preliminary operation before starting-up. With reference to the layout of the cables, make sure that they are protected against damage and that they don't hamper the operators.

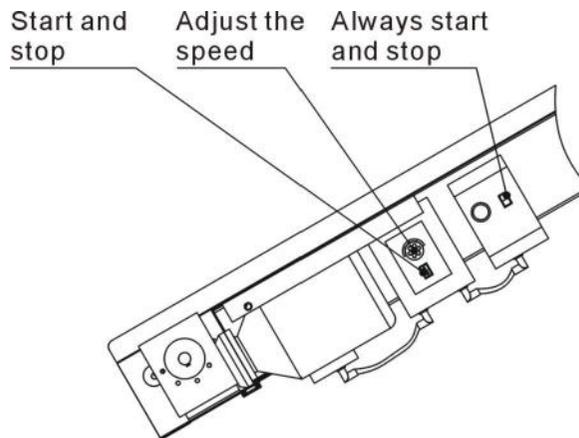


Attention!

The conveyor often used around or under the moulding machine to bring the waste materials or finished products to the bottom, so that the higher flat surface (collection area) of the conveyor must be inserted into the special space, which is located around the moulding machine.

### 3.3 Power Connections

The wire of the horizontal belt conveyor, speed regulator and motor protector should be connected strictly comply with the wiring diagram.



Picture 3-2: Power Connections



Attention!

After the power connected, check the direction of the motor rotation, if the motor reverses, please turn off the power, change over the connecting wires of the L terminal and the CW or the CCW terminals of the speed regulator.



Picture 3-3: Machine Installation Drawing



Warning!

Maintain 1m distance from the inflammable matter.

## 4. Operation

### 4.1 Start/Stop the Machine

- 1) Rotate the motor protector knob, and connect to power.
- 2) Turn on the RUN / STOP switch of the speed regulator, the belt conveyor starts running.
- 3) Adjust the knob of the speed regulator to change the rotating speed of the belt conveyor.



The safe range of speed regulation for normal use is 3~6m/min (the scale on control panel is 4.5~10).



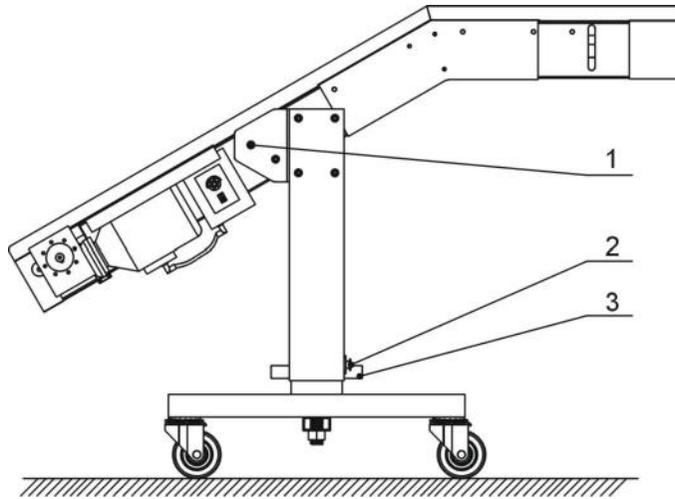
Picture 4-1: Control Panel

### 4.2 Adjustment of the Height of the Conveyor

Loosen the locking butterfly knob (2), rotate the driving wheel (3), adjust the height, and then tighten the butterfly knob (2).



When adjusting the belt height, please hold up the conveyor safely to avoid any body injuries and machine damage caused by falling.



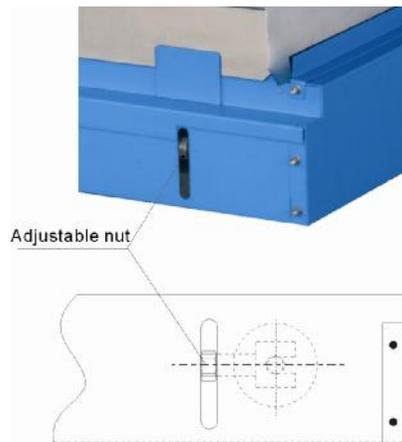
Picture 4-2: Conveyor Belt Adjusting Drawing



The conveyor belt will lose balance if the star screws are not locked tight after adjusting the height of the conveyor belt.

### 4.3 Adjusting the Position of the PVC Belt

Turn this nut to adjust the PVC Belt to the central position



Picture 4-3: PVC Belt Adjusting Drawing



**Danger!**

To check the proper centering it is necessary to make the machine run. However, the adjustment must be done when the machine is stopped,

and then the belt must be made to run only for the time necessary to verify its proper centering.



Attention!

On a monthly basis verify that the external temperature of the motor and gearbox is not too high (it should be between 60 and 20°C). In case it is different, contact the technicians at SHINI directly.



Attention!

- 1) The maximum weight of the pieces to be carried on the conveyor belt must not be over 56kg in total (Conveying capacity is less than 56kg as the set value of the regulator is smaller than 4.5m/min).
- 2) Not suitable to transport loose material.
- 3) The maximum resistant temperature of PU belt is 60°C.



The operator, or the maintenance technician, must wear suitable work clothes, without free parts. They must not wear chains, bracelets, or other objects which may be caught by mechanical parts in movement. In case of long hair, special hairnets must be used, to avoid the risk of being caught.

## 5. Trouble Shooting

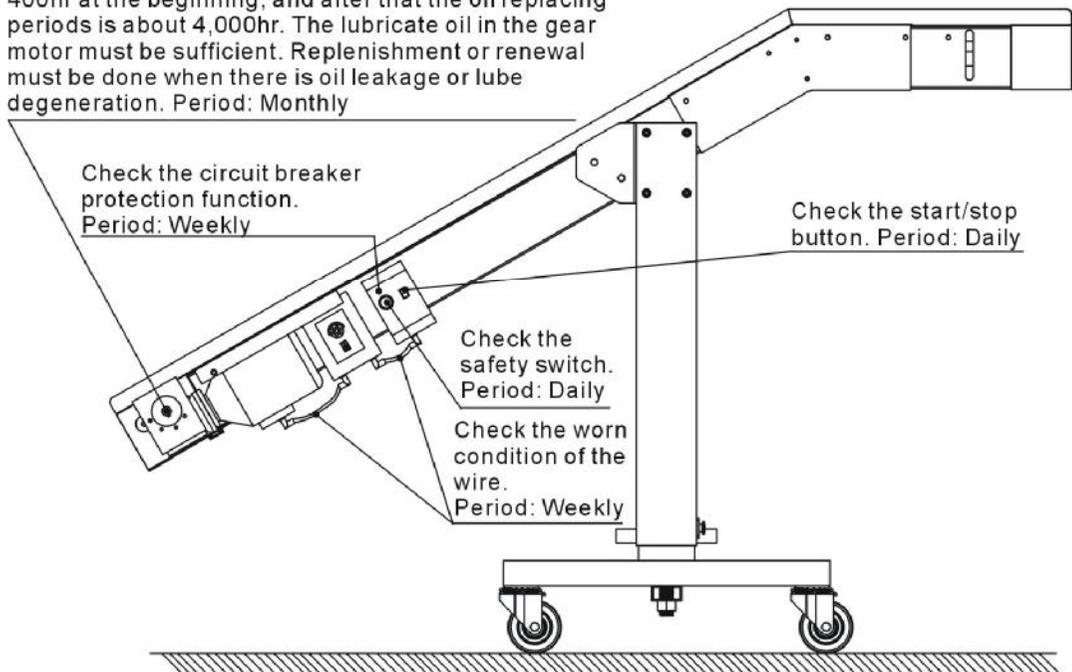
Failures	Solutions
Connect the power, rotate the motor protector knob and turn on the RUN / STOP switch of the speed regulator, the motor doesn't run.	<ol style="list-style-type: none"><li>1. Check the speed regulator to see if the knob is pointing to 0, if so, adjust the speed knob.</li><li>2. Check the circuit according to wiring diagram, the possible reasons can be as follows:<ol style="list-style-type: none"><li>a: The power is failure.</li><li>b: The circuit is disconnected.</li><li>c: The motor protector is damaged.</li><li>d: The motor is failure.</li></ol></li></ol>
The circuit breaker often trips off.	Check the circuit according to wiring diagram, the possible reasons can be as follows: <ol style="list-style-type: none"><li>a: the setting value of the breaker was too low, adjust the value to 1.1 times of the current one.</li><li>b: short circuit may exist.</li><li>c: The motor protector is damaged.</li><li>d: The motor is failure.</li></ol>

## 6. Service and Maintenance

Check whether there is oil leakage of the gear motor.

Period: Daily

Regularly check the gears box. The lubricate oil in the gears box should be replaced after it has been run 400hr at the beginning, and after that the oil replacing periods is about 4,000hr. The lubricate oil in the gear motor must be sufficient. Replenishment or renewal must be done when there is oil leakage or lube degeneration. Period: Monthly



### 6.1 Repair

To avoid any body injury and damage of the machine, all of the repair work should be done by professional person only.

It is the duty of the operator to keep the machine clean from foreign matter, such as deposits, oil, or other materials. So it is necessary to clean the machine at the end of every working shift. This must be performed when the machine is stopped, in stable starting of the machine.

### 6.2 Maintenance

#### 6.2.1 Maintenance of the Gear Motor

Regularly check the gears box. The lubricate oil in the gears box should be replaced after it has been run 400hr at the beginning, and after that the oil replacing periods is about 4,000hr. The lubricate oil in the gear motor must be sufficient. Replenishment or renewal must be done when there is oil leakage or lube degeneration. Please keep the surface of the gear motor clean. Any dust

and contamination are bad for heat dissipation.



Picture 6-1: Gear motor



Danger!

Operating temperature range of gear motor is: 20°C-60°C.

### 6.2.2 Clearance of the Machine

Please keep the machine clean from foreign matter, such as deposits, oil, or other materials. Do the cleanly work everyday.



It is forbidden to use flammable liquids during the cleaning operation. Periodically check the status of the PU belt, and replace it, if necessary. Once the machine has been cleaned, the operator must check for worn out or damaged parts (in which case, he must replace it immediately), or for parts which are not firmly fixed (in which case, he should fix them, if this is possible).



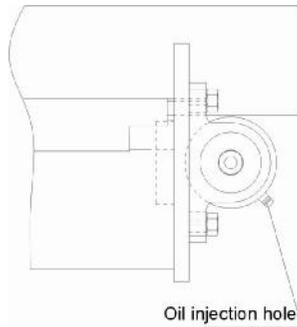
The machine protection and safety devices must not be removed, unless a specific repair and/or maintenance action is required. These protections must be put back as soon as the reason for their removal has disappeared, in any case, they must be installed before starting the machine.



If using compressed air, the operator must wear safety glasses, and make sure that nobody is near the machine, because they may be hit by materials and dust.

### 6.2.3 Lubricate the Bearing

On a monthly basis lubricate the two supporters near the unloading area of the conveyor, below the protection cover, as indicated by the drawing.



Picture 6-2: Bearing Lubricate Drawing



Stop the machine and unplug the power supply before doing the repair or maintenance work.

## 6.3 Maintenance Schedule

### 6.3.1 About the Machine

Model \_\_\_\_\_ SN \_\_\_\_\_ Manufacture date \_\_\_\_\_

Voltage \_\_\_\_\_  $\Phi$  \_\_\_\_\_ V Frequency \_\_\_\_\_ Hz Power \_\_\_\_\_ kW

### 6.3.2 Check After Installation

- Check if the body of the machine installed horizontal
- Check for eventual leaks of lubricant from the reduction gear
- Check the status about the PU belt

#### Electrical installation

- Voltage \_\_\_\_\_ V \_\_\_\_\_ Hz
- Check if the power connection of the control box is correctly

### 6.3.3 Daily Checking

- Check the switches of the machine.
- Check if the reduction gears is oil leaking leaking.
- Check the function of the safety switch.

### 6.3.4 Weekly Checking

- Check all the electrical wires.
- Check the protection function of the breaker.

### 6.3.5 Mouthly Checking

The lubricate oil in the reduced gears of the motor should be replaced after it has been run 400hr at the beginning, sith, the oil replacing period is about 4,000hr, the oil in the reduced gears box should sufficiently, and need to check periodicity. When you find that the oil is reduced or the colour of it changed dark and black, you must complement it or replace it immed