# CB

## Up-feed Belt Conveyor

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SHINI

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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.

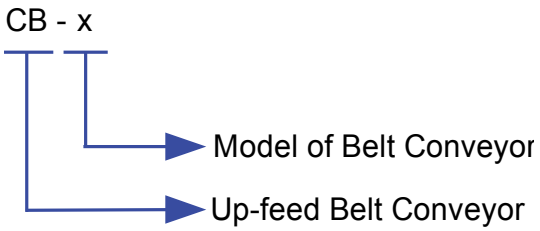
Forbidden to process flammable or toxic material!

Shini manufactures five model of belt conveyor as follows under technical license from a leading european manufacturer:

CB series conveyor feature reliable performance and ease of operation and are suitable for conveying sprues or finished products to a higher level beside the moulding machine.

Model: CB-6

## 1.1 Coding Principle




## 1.2 Feature

- The patent bracket "future".
- PVC belt is adopted for smooth and efficient conveying.
- Height adjustable floor stand.
- CB series has material fence to facilitate regrind conveying.
- Sidewalls for CB series are 95 mm respectively.
- CB series are equipped with speed regulators as standard. The safe regulating range for normal use is 3~6m/min.
- Power supply for CB 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.

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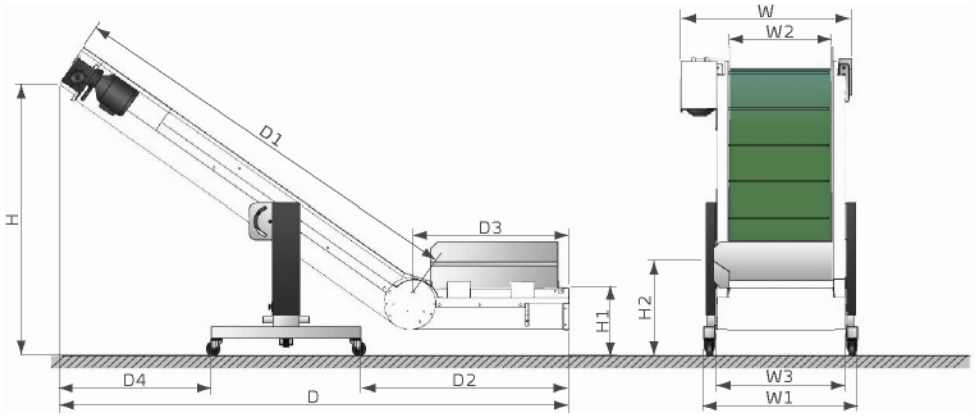
# 1.3 Technical Specifications

## 1.3.1 Out Dimensions




Picture 1-1: Out Dimensions

Chart 1-1: Out Dimensions List

| Model | CB-1 | CB-2 | CB-3 | CB-4 | CB-5 | CB-6 |
|---|---|---|---|---|---|---|
| H (mm) | 940+65 | 940+65 | 940+65 | 1168+145 | 1168+145 | 1168+145 |
| H1 (mm) | 262+65 | 262+65 | 262+65 | 200+145 | 200+145 | 200+145 |
| H2 (mm) | 405+65 | 405+65 | 405+65 | 343+145 | 343+145 | 343+145 |
| W (mm) | 533 | 603 | 733 | 533 | 603 | 733 |
| W1 (mm) | 483 | 553 | 683 | 483 | 553 | 683 |
| W2 (mm) | 250 | 320 | 450 | 250 | 320 | 450 |
| W3 (mm) | 359 | 429 | 559 | 359 | 429 | 559 |
| D (mm) | 1815 | 1815 | 1815 | 2225 | 2225 | 2225 |
| D1 (mm) | 1300 | 1300 | 1300 | 1800 | 1800 | 1800 |
| D2 (mm) | 845 | 845 | 845 | 909 | 909 | 909 |
| D3 (mm) | 690 | 690 | 690 | 690 | 690 | 690 |
| D4 (mm) | 520 | 520 | 520 | 665 | 665 | 665 |
| Weight (kg) | 92 | 102 | 112 | 100 | 100 | 120 |

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 conditon 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℃ |

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:

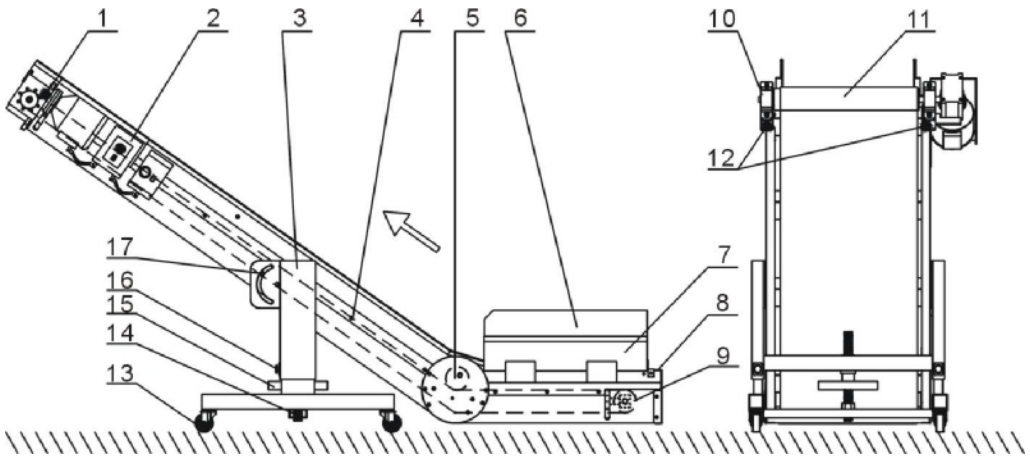
1. Any careless or man-made installations, operation and maintenances upon machines without referring to the Manual prior to machine using.
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible 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

CB series Up-feed Belt Conveyor use the gear motor to drive the conveyer Belt to transport the materials, It is used around the moulding machine to bring the waste materials or finished products from the bottom to the top. Adjustable gradient for your requirements, easily operation and stable performance.

### 2.1.1 Working Principle




Parts name:

1. Gear motor 2. Speed governor/regulator 3.Base 4. PVC belt 5. Pinch roller 6. Mterial block

7. Feed-in board 8. Front board 9. Conveying rotor (motor less) 10. Bearing block 11. Conveying rotor 12. End cap 13. Brake rotor 14. Screw 15. Driving wheel 16. Butterfly hand shaft 17. Adjustable bolt

Picture 2-1: Working Principle

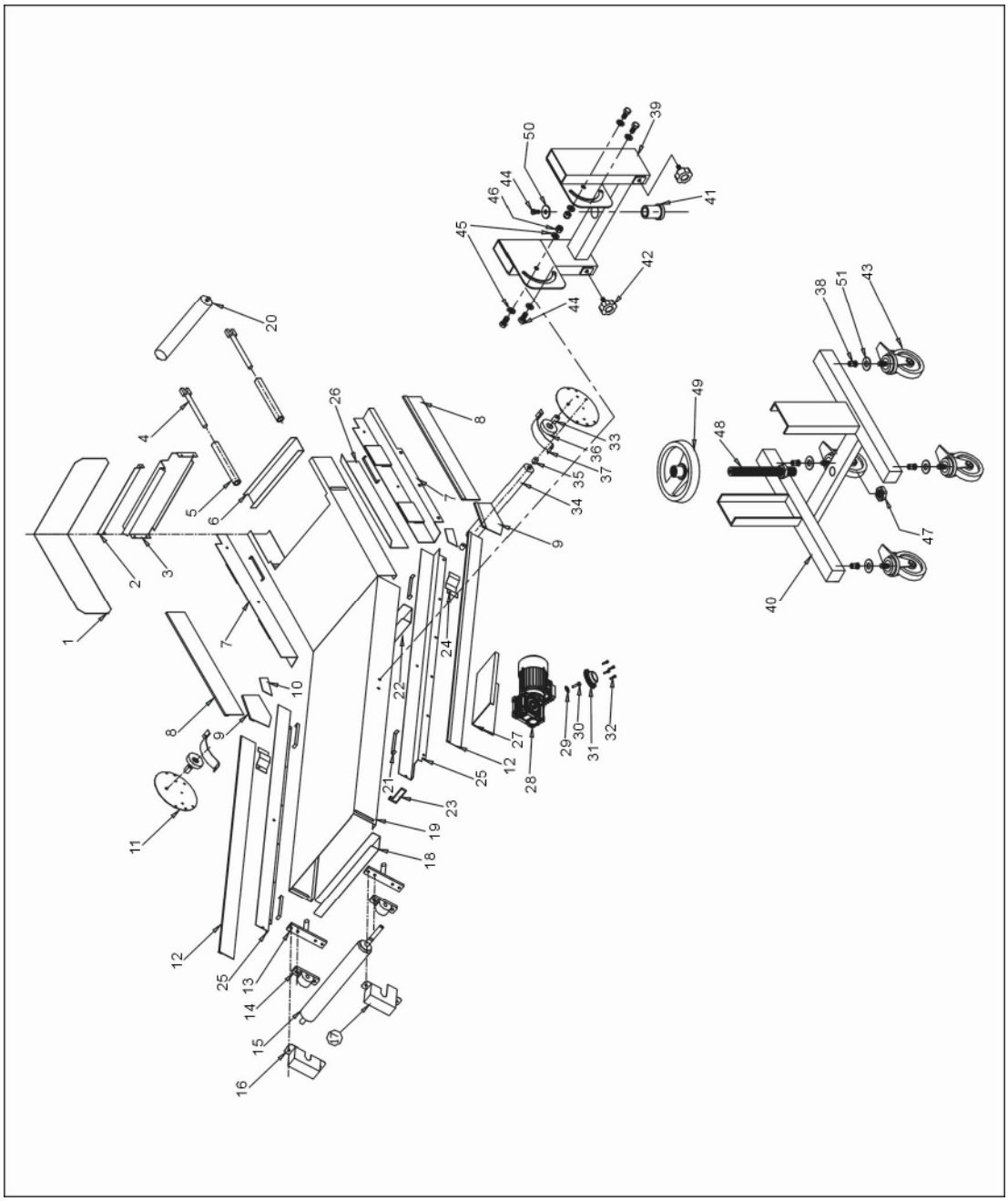
The conveyor belts of this series are made up of:

Equipped with a 4 swivel castors and locking facility (13) base (3), the conveyor belt can be easily moved to the working area. On the conveying belt, there are two material fenders (6, 7) separately installed on the sidewall of the belt and

the collection area. The conveying rotor (11) 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 and stop the belt. The screw mechanism (14) control by the hand wheel (15), control the height of the conveying belt. Two wheel gears with knob (16) 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 (17).
Generally, the operator stands at the conveyor top end (discharging area). The controlling parts are located here as well.
The sprue separator, for those machines so equipped, has an adjustable height, and it can also be orientated on the horizontal plane. It is also equipped with an adjustable clutch device, which stops the rotation of the separator, in case of interference with the carried objects and/or with the operator's limbs.

## 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 (CB-1)

| No. | Name | Part No. | No. | Name | Part No. |
|---|---|---|---|---|---|
| 1 | Material block | - | 27 | Protection board for the motor | - |
| 2 | Front top board | - | 28 | Gear motor | YM50102000000 |
| 3 | Front board | - | 29 | Flat washer (Φ10x30) | YW66103200000 |
| 4 | Fork head screw shaft | BH10000603840 | 30 | Six-corner head screw (M8x30) | YW60083000100 |
| 5 | Adjustable sleeve | BH10060400010 | 31 | The cover for the gearmotor | BL56000032320 |
| 6 | Front beam | - | 32 | Hexagram inside screw (M6x12) | YW61061200000 |
| 7 | Front side board | - | 33 | The sleeve for the press out wheel | BH10062500010 |
| 8 | Front encircle board | - | 34 | Iron stick (Φ50x490) | YW08041300000 |
| 9 | Middle encircle board | - | 35 | The small sleeve | BH10062600010 |
| 10 | Middle side board | - | 36 | Combination of the press out wheel | BH10062700010 |
| 11 | Middle protection board | - | 37 | Cover for the press out wheel | - |
| 12 | Back encircle board | - | 38 | Undraw cat M12 | YW64101600000 |
| 13 | Combination of the fixed board | BH10061300010 | 39 | Lifter | BL56000210121 |
| 14 | The base of the bearing | YW11020500200 | 40 | Base | BL56000600940 |
| 15 | Feeding rotor (Φ73x490) | YW08041100000 | 41 | Adjustable glue sleeve | BH10060400010 |
| 16 | Right below cover | - | 42 | Butterfly screw shaft (Φ50 4L M10x15) | YR40104500000 |
| 17 | Left below cover | - | 43 | Castor | YW03010000000 |
| 18 | Back beam | - | 44 | Adjustable bolt (M12x25) | YW60122500100 |
| 19 | Horizontal support shelf | - | 45 | Shim (D12) | YW66061200000 |
| 20 | Feeding rotor | YW08041200000 | 46 | Nut (M12) | YW64101600000 |
| 21 | The inner line bar | - | 47 | Nut (M27) | YW64002700000 |
| 22 | Middle beam | - | 48 | Screw shaft (M27) | BH10061100010 |
| 23 | The motor confine board | - | 49 | Driving wheel (M27) | YR40061300000 |
| 24 | Side belt block | - | 50 | Main screw shim (12x48) | - |
| 25 | Back side board | - | 51 | Shim (18x48x3) | - |
| 26 | Feed-in board | - | | | |

* 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 (CB-2)

| No. | Name | Part No. | No. | Name | Part No. |
|---|---|---|---|---|---|
| 1 | Material block | - | 27 | Protection board for the motor | - |
| 2 | Front top board | - | 28 | Gear motor | YM50102000000 |
| 3 | Front board | - | 29 | Flat washer (Φ10x30) | YW66103200000 |
| 4 | Fork head screw shaft | BH10000603840 | 30 | Six-corner head screw (M8x30) | YW60083000100 |
| 5 | Adjustable sleeve | BH10060400010 | 31 | The cover for the gearmotor | BL56000032320 |
| 6 | Front beam | - | 32 | Hexagram inside screw (M6x12) | YW61061200000 |
| 7 | Front side board | - | 33 | The sleeve for the press out wheel | BH10062500010 |
| 8 | Front encircle board | - | 34 | Iron stick (Φ50x490) | YW08041300000 |
| 9 | Middle encircle board | - | 35 | The small sleeve | BH10062600010 |
| 10 | Middle side board | - | 36 | Combination of the press out wheel | BH10062700010 |
| 11 | Middle protection board | - | 37 | Cover for the press out wheel | - |
| 12 | Back encircle board | - | 38 | Undraw cat M12 | YW64101600000 |
| 13 | Combination of the fixed board | BH10061300010 | 39 | Lifter | BL56000210121 |
| 14 | The base of the bearing | YW11020500200 | 40 | Base | BL56000600940 |
| 15 | Feeding rotor (Φ73x490) | YW08041100000 | 41 | Adjustable glue sleeve | BH10060400010 |
| 16 | Right below cover | - | 42 | Butterfly screw shaft (Φ50 4L M10x15) | YR40104500000 |
| 17 | Left below cover | - | 43 | Castor | YW03010000000 |
| 18 | Back beam | - | 44 | Adjustable bolt (M12x25) | YW60122500100 |
| 19 | Horizontal support shelf | - | 45 | Shim (D12) | YW66061200000 |
| 20 | Feeding rotor | YW08041200000 | 46 | Nut (M12) | YW64101600000 |
| 21 | The inner line bar | - | 47 | Nut (M27) | YW64002700000 |
| 22 | Middle beam | - | 48 | Screw shaft (M27) | BH10061100010 |
| 23 | The motor confine board | - | 49 | Driving wheel (M27) | YR40061300000 |
| 24 | Side belt block | - | 50 | Main screw shim (12x48) | - |
| 25 | Back side board | - | 51 | Shim (18x48x3) | - |
| 26 | Feed-in board | - | | | |

* 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 (CB-3)

| No. | Name | Part No. | No. | Name | Part No. |
|---|---|---|---|---|---|
| 1 | Material block | - | 27 | Protection board for the motor | - |
| 2 | Front top board | - | 28 | Gear motor | YM50102000000 |
| 3 | Front board | - | 29 | Flat washer (Φ10x30) | YW66103200000 |
| 4 | Fork head screw shaft | BH10000603840 | 30 | Six-corner head screw (M8x30) | YW60083000100 |
| 5 | Adjustable sleeve | BH10060400010 | 31 | The cover for the gearmotor | BL56000032320 |
| 6 | Front beam | - | 32 | Hexagram inside screw (M6x12) | YW61061200000 |
| 7 | Front side board | - | 33 | The sleeve for the press out wheel | BH10062500010 |
| 8 | Front encircle board | - | 34 | Iron stick (Φ50x490) | YW08041300000 |
| 9 | Middle encircle board | - | 35 | The small sleeve | BH10062600010 |
| 10 | Middle side board | - | 36 | Combination of the press out wheel | BH10062700010 |
| 11 | Middle protection board | - | 37 | Cover for the press out wheel | - |
| 12 | Back encircle board | - | 38 | Undraw cat M12 | YW64101600000 |
| 13 | Combination of the fixed board | BH10061300010 | 39 | Lifter | BL56000210121 |
| 14 | The base of the bearing | YW11020500200 | 40 | Base | BL56000600940 |
| 15 | Feeding rotor (Φ73x490) | YW08041100000 | 41 | Adjustable glue sleeve | BH10060400010 |
| 16 | Right below cover | - | 42 | Butterfly screw shaft (Φ50 4L M10x15) | YR40104500000 |
| 17 | Left below cover | - | 43 | Castor | YW03010000000 |
| 18 | Back beam | - | 44 | Adjustable bolt (M12x25) | YW60122500100 |
| 19 | Horizontal support shelf | - | 45 | Shim (D12) | YW66061200000 |
| 20 | Feeding rotor | YW08041200000 | 46 | Nut (M12) | YW64101600000 |
| 21 | The inner line bar | - | 47 | Nut (M27) | YW64002700000 |
| 22 | Middle beam | - | 48 | Screw shaft (M27) | BH10061100010 |
| 23 | The motor confine board | - | 49 | Driving wheel (M27) | YR40061300000 |
| 24 | Side belt block | - | 50 | Main screw shim (12x48) | - |
| 25 | Back side board | - | 51 | Shim (18x48x3) | - |
| 26 | Feed-in board | - | | | |

* 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 (CB-4)

| No. | Name | Part No. | No. | Name | Part No. |
|---|---|---|---|---|---|
| 1 | Material block | - | 27 | Protection board for the motor | - |
| 2 | Front top board | - | 28 | Gear motor | YM50102000000 |
| 3 | Front board | - | 29 | Flat washer (Φ10x30) | YW66103200000 |
| 4 | Fork head screw shaft | BH10000603840 | 30 | Six-corner head screw (M8x30) | YW60083000100 |
| 5 | Adjustable sleeve | BH10060400010 | 31 | The cover for the gearmotor | BL56000032320 |
| 6 | Front beam | - | 32 | Hexagram inside screw (M6x12) | YW61061200000 |
| 7 | Front side board | - | 33 | The sleeve for the press out wheel | BH10062700010 |
| 8 | Front encircle board | - | 34 | Iron stick (Φ50x490) | YW08041300000 |
| 9 | Middle encircle board | - | 35 | The small sleeve | BH10062600010 |
| 10 | Middle side board | - | 36 | Combination of the press out wheel | BH10062700010 |
| 11 | Middle protection board | - | 37 | Cover for the press out wheel | - |
| 12 | Back encircle board | - | 38 | Undraw cat M12 | YW64101600000 |
| 13 | Combination of the fixed board | BH10061300010 | 39 | Lifter | - |
| 14 | The base of the bearing | YW11020500200 | 40 | Base | - |
| 15 | Feeding rotor (Φ73x490) | YW08041100000 | 41 | Adjustable glue sleeve | BH10060400010 |
| 16 | Right below cover | - | 42 | Butterfly screw shaft (Φ50 4L M10x15) | YR40104500000 |
| 17 | Left below cover | - | 43 | Castor | YW03010000000 |
| 18 | Back beam | - | 44 | Adjustable bolt (M12x25) | YW60122500100 |
| 19 | Horizontal support shelf | - | 45 | Shim (D12) | YW66061200000 |
| 20 | Feeding rotor | YW08041200000 | 46 | Nut (M12) | YW64101600000 |
| 21 | The inner line bar | - | 47 | Nut (M27) | YW64002700000 |
| 22 | Middle beam | - | 48 | Screw shaft (M27) | BH10061100010 |
| 23 | The motor confine board | - | 49 | Driving wheel (M27) | YW09002700000 |
| 24 | Side belt block | - | 50 | Main screw shim (12x48) | - |
| 25 | Back side board | - | 51 | Shim (18x48x3) | - |
| 26 | Feed-in board | - | | | |

* 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 (CB-5)

| No. | Name | Part No. | No. | Name | Part No. |
|---|---|---|---|---|---|
| 1 | Material block | - | 27 | Protection board for the motor | - |
| 2 | Front top board | - | 28 | Gear motor | YM50102000000 |
| 3 | Front board | - | 29 | Flat washer (Φ10x30) | YW66103200000 |
| 4 | Fork head screw shaft | BH10000603840 | 30 | Six-corner head screw (M8x30) | YW60083000100 |
| 5 | Adjustable sleeve | BH10060400010 | 31 | The cover for the gearmotor | BL56000032320 |
| 6 | Front beam | - | 32 | Hexagram inside screw (M6x12) | YW61061200000 |
| 7 | Front side board | - | 33 | The sleeve for the press out wheel | BH10062700010 |
| 8 | Front encircle board | - | 34 | Iron stick (Φ50x490) | YW08051300000 |
| 9 | Middle encircle board | - | 35 | The small sleeve | BH10062600010 |
| 10 | Middle side board | - | 36 | Combination of the press out wheel | BH10062700010 |
| 11 | Middle protection board | - | 37 | Cover for the press out wheel | - |
| 12 | Back encircle board | - | 38 | Undraw cat M12 | YW64101600000 |
| 13 | Combination of the fixed board | BH10061300010 | 39 | Lifter | - |
| 14 | The base of the bearing | YW11020500200 | 40 | Base | - |
| 15 | Feeding rotor (Φ73x490) | YW08051100000 | 41 | Adjustable glue sleeve | BH10060400010 |
| 16 | Right below cover | - | 42 | Butterfly screw shaft (Φ50 4L M10x15) | YR40104500000 |
| 17 | Left below cover | - | 43 | Castor | YW03010000000 |
| 18 | Back beam | - | 44 | Adjustable bolt (M12x25) | YW60122500100 |
| 19 | Horizontal support shelf | - | 45 | Shim (D12) | YW66061200000 |
| 20 | Feeding rotor | YW08051200000 | 46 | Nut (M12) | YW64101600000 |
| 21 | The inner line bar | - | 47 | Nut (M27) | YW64002700000 |
| 22 | Middle beam | - | 48 | Screw shaft (M27) | BH10061100010 |
| 23 | The motor confine board | - | 49 | Driving wheel (M27) | YW09002700000 |
| 24 | Side belt block | - | 50 | Main screw shim (12x48) | - |
| 25 | Back side board | - | 51 | Shim (18x48x3) | - |
| 26 | Feed-in board | - | | | |

* 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.

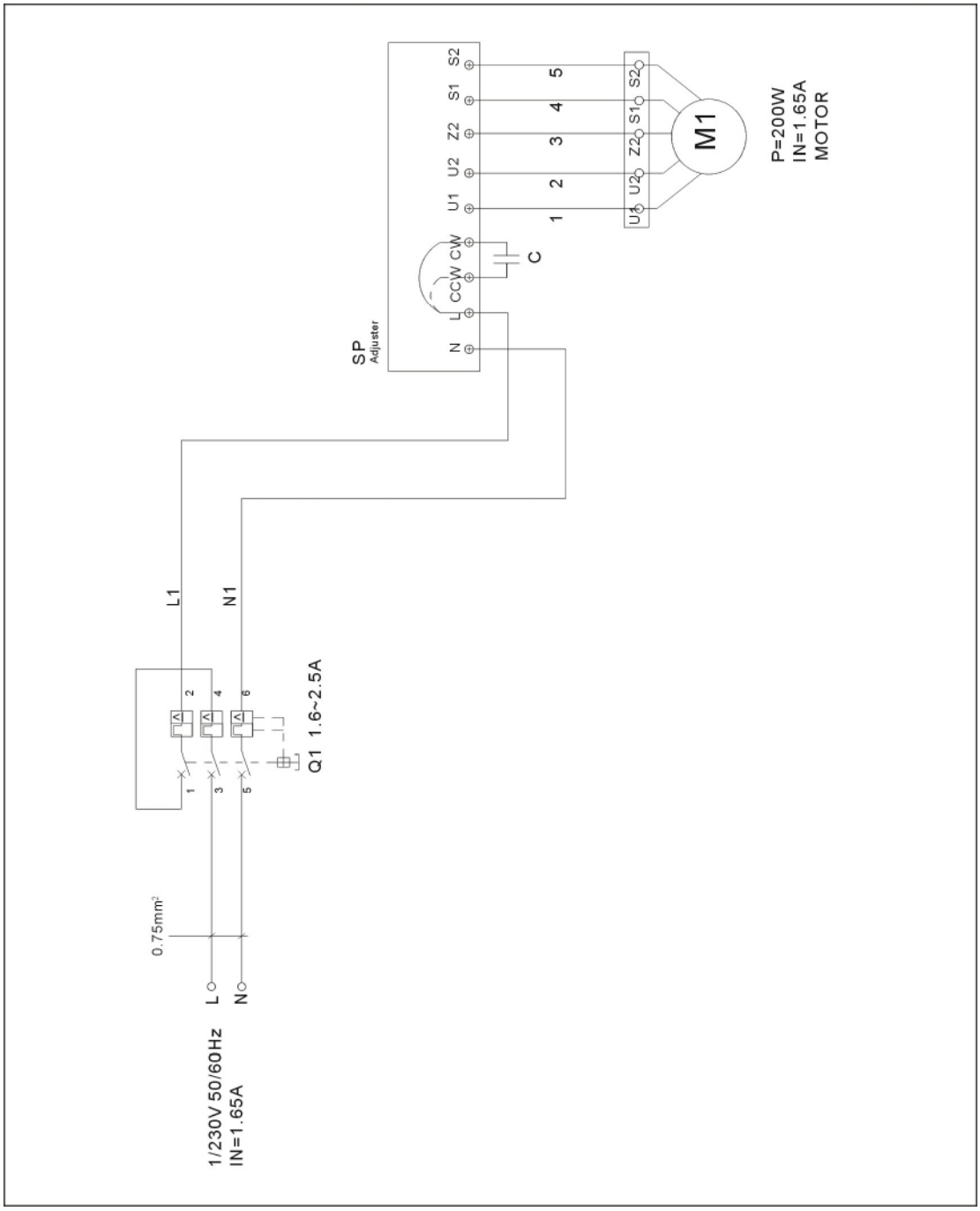
## Chart 2-6: Parts List (CB-6)

| No. | Name | Part No. | No. | Name | Part No. |
|---|---|---|---|---|---|
| 1 | Material block | - | 27 | Protection board for the motor | - |
| 2 | Front top board | - | 28 | Gear motor | YM50102000000 |
| 3 | Front board | - | 29 | Flat washer (Φ10x30) | YW66103200000 |
| 4 | Fork head screw shaft | BH10000603840 | 30 | Six-corner head screw (M8x30) | YW60083000100 |
| 5 | Adjustable sleeve | BH10060400010 | 31 | The cover for the gearmotor | BL56000032320 |
| 6 | Front beam | - | 32 | Hexagram inside screw (M6x12) | YW61061200000 |
| 7 | Front side board | - | 33 | The sleeve for the press out wheel | BH10062700010 |
| 8 | Front encircle board | - | 34 | Iron stick (Φ50x490) | YW08063700000 |
| 9 | Middle encircle board | - | 35 | The small sleeve | BH10062600010 |
| 10 | Middle side board | - | 36 | Combination of the press out wheel | BH10062700010 |
| 11 | Middle protection board | - | 37 | Cover for the press out wheel | - |
| 12 | Back encircle board | - | 38 | Undraw cat M12 | YW64101600000 |
| 13 | Combination of the fixed board | BH10061300010 | 39 | Lifter | - |
| 14 | The base of the bearing | YW11020500200 | 40 | Base | - |
| 15 | Feeding rotor (Φ73x490) | YW08063500000 | 41 | Adjustable glue sleeve | BH10060400010 |
| 16 | Right below cover | - | 42 | Butterfly screw shaft (Φ50 4L M10x15) | YR40104500000 |
| 17 | Left below cover | - | 43 | Castor | YW03010000000 |
| 18 | Back beam | - | 44 | Adjustable bolt (M12x25) | YW60122500100 |
| 19 | Horizontal support shelf | - | 45 | Shim (D12) | YW66061200000 |
| 20 | Feeding rotor | YW08063600000 | 46 | Nut (M12) | YW64101600000 |
| 21 | The inner line bar | - | 47 | Nut (M27) | YW64002700000 |
| 22 | Middle beam | - | 48 | Screw shaft (M27) | BH10061100010 |
| 23 | The motor confine board | - | 49 | Driving wheel (M27) | YW09002700000 |
| 24 | Side belt block | - | 50 | Main screw shim (12x48) | - |
| 25 | Back side board | - | 51 | Shim (18x48x3) | - |
| 26 | Feed-in board | - | | | |

* 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.

# 2.3 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

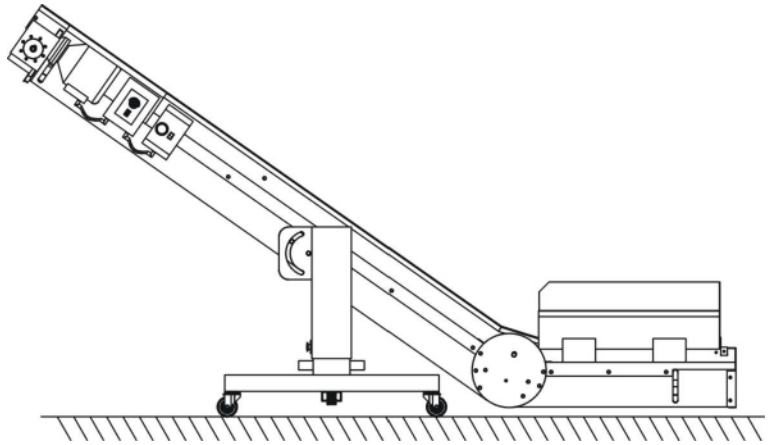
Read this chapter carefully before installation, Must observe the installation steps as follows!

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 accroding 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: ±10%
   Main power frequency: ±2%

## 3.2 Horizontal Installation



Picture 3-1: Horizontal Installation

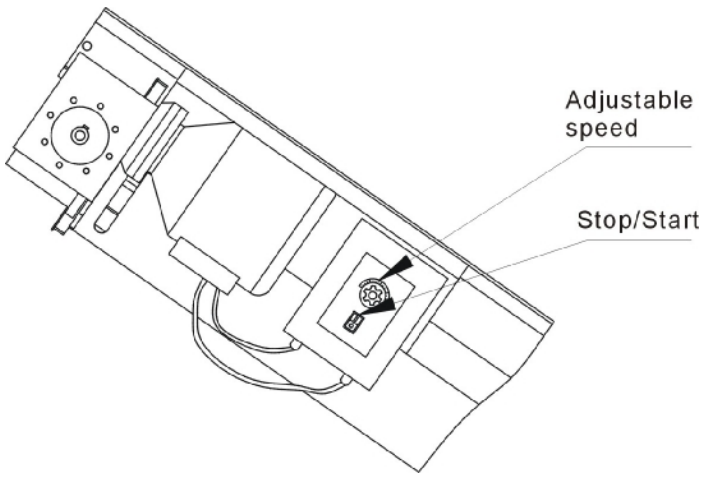
Conveyor don't require any particular preliminary operation before starting-up. The conveyor must be plugged into an outlet of suitable characteristics, by using the cable and the plug supplied by the manufacturer.
With reference to the layout of the cables, make sure that they are protected against damage and that they don't hamper the operators.

Attention!

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

## 3.3 Power Connections

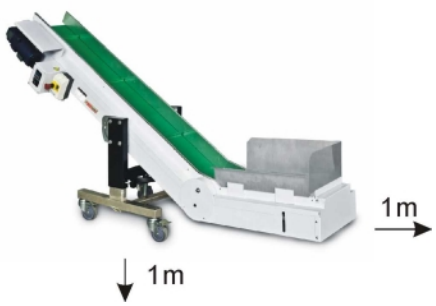
The wire of the inclined belt conveyor, speed regulator and motor protector should be connected strictly comply with the wiring diagram.




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

# 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).

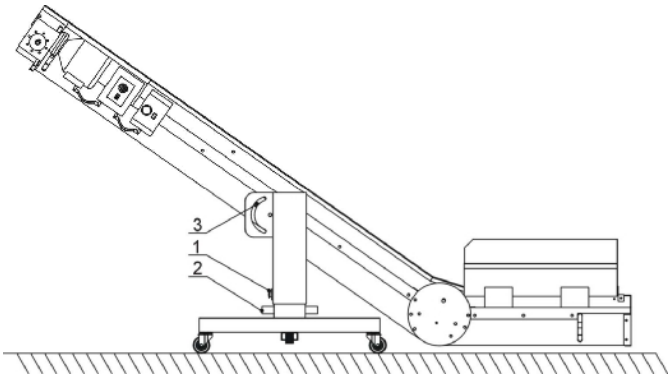
Picture 4-1: Control Panel

## 4.2 Adjustment of the Height of the Conveyor

Loosen the locking butterfly knob(1), rotate the manual-wheel(2), to adjust the height, and then tighten the butterfly knob again(1).

## 4.3 Adjusting Adjustor Panel

The black key (3) on the adjustor panel can control the power on/off of gear motor, while the rotating key (4) will be used for adjust the speed of gear motor.



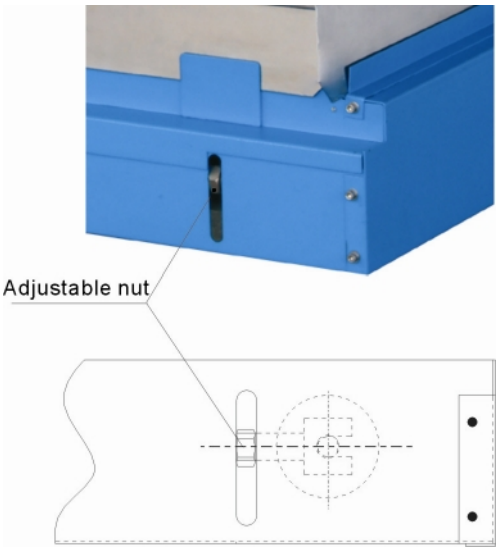

Picture 4-2: Conveyor Belt Adjusting Drawing

Attention!

If the screw does not locked after adjustment, the conveyer belt will lost it's balance!

## 4.4 Adjusting the Central Space of the PU Belt

Rotate this nut to adjust the central space of the PU Belt




Picture 4-3: PVC 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℃). 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℃.

## 4.5 Regulation of Sidewall

By rotating this screw bolt, position of the sidewall can be regulated to guide the direction of the belt.

Picture 4-4: Regulation of Sidewall

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 aviod the risk of being

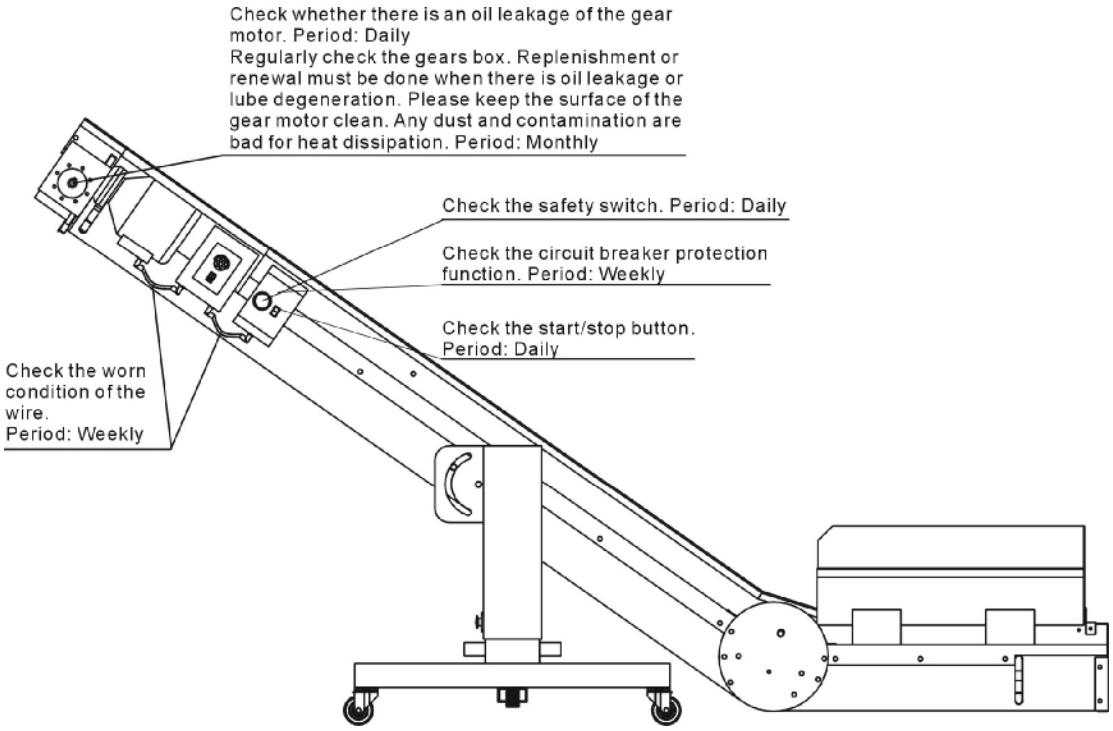
caught.

# 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. | 1. Check the speed regulator to see if the knob is pointing to 0, if so, adjust the speed knob.<br>2. Check the circuit according to wiring diagram, the possible reasons can be as follows:<br>a: The power is failure.<br>b: The circuit is disconnected.<br>c: The motor protector is damaged.<br>d: The motor is failure. |
| The circuit breaker often trips off. | Check the circuit according to wiring diagram, the possible reasons can be as follows:<br>a: The setting value of the breaker was too low, adjust the value to 1.1 times of the current one.<br>b: Short circuit may exist.<br>c: The motor protector is damaged.<br>d: The motor is failure. |

# 6. Service and Maintenance

Up-feed belt conveyor do not require any particular maintenance.




## 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. 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℃-60℃.

### 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.

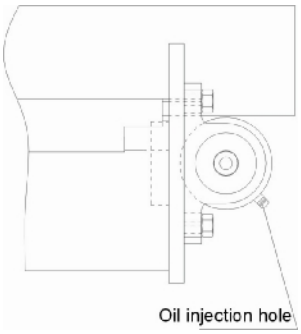
It is forbidden to use flammable liquids during the cleaning operation. Periodically check the status of the PU belt, and replace it, if necessary. Once the machine has been cleaned, the operator must check for worn out or damaged parts (in which case, he must replace it immediately),or for parts which 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_____Φ_____V Frequency _____ Hz Power _____ kW

### 6.3.2 Check After Installation

☐Check if the body of the machine installated 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.