SVM-U Series

Vertical Batch Mixer

Date: Oct, 2013

Version: Ver.A (English)

SHINI

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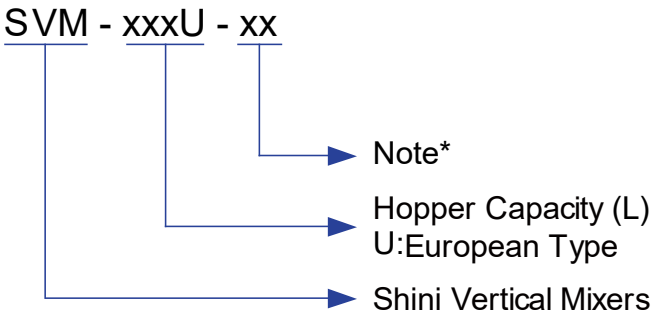
1. General Description

Read this manual before installation and using of the machine to prevent personal injuries and damage of the machine.

SVM-U is mainly used for mixing plastics as raw materials, masterbatch and recycled materials. SVM-U can not be used dealing with plastic powder and all kinds of foods, chemicals, and inflammable, explosive and volatile materials. Bulk density should be taken into account when the dimension of material is uneven or in other forms.

Model: SVM-160U

1.1 Coding Principle



Note*
CE=CE Conformity

1.2 Feature

- Vertically mounted blending screw and cylinder ensure even mixing of materials.
- Removable top assembly (lid, motor, and control box) for easy cleaning.
- Function of feeding plus mixing simultaneously can save time significantly.
- 0~300 hours auto-stop function.
- Equipped with main power switch and safety interlock protective device to ensure operator's safety and no damage to the machine.

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 7, 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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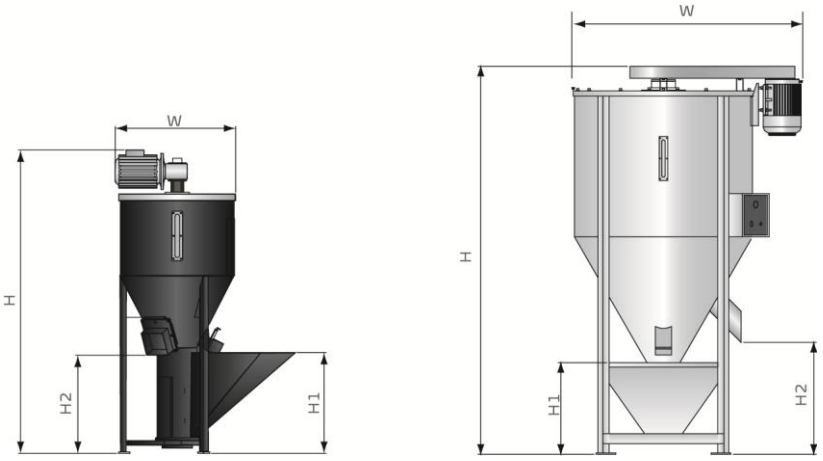
1.3 Technical Specifications

1.3.1 Technical Specifications



SVM-300U and below SVM-1000U and above

Picture 1-1： Technical Specifications

1.3.2 Specifications

Table 1-1: Specifications

Model SVM-	160U	300U	1000U	2000U	3000U	4000U	6000U	10000U
Motor Power (kW)(50/60Hz)	0.75	1.1	4	5.5	5.5	5.5	7.5	11
Processing Capacity (kg/hr)	400	800	2600	3900	5850	7800	9750	13000
Blending Barrel (L)	160	300	1000	2000	3000	4000	6000	10000
Dimensions								
H(mm)	1620	1700	2600	2850	3200	3200	3800	4300
H1(mm)	553	583	710	720	770	770	710	780
H2(mm)	557	528	650	650	650	650	650	650
W(mm)	955	1050	1200	1550	1680	1880	2050	2350
Weight (kg)	150	200	455	750	890	1000	1270	1700

Notes: 1) Max. noise level is 70dB (A).
2) Max. mixing capacity is tested based on continuous processing material of 0.65kg/L in bulk density and 2~3mm in size.
3) Power 3Φ, 230 / 400 / 460 / 575VAC, 50 / 60Hz.

We reserve the right to change specifications without prior notice.

1.4 Safety Regulations

Strictly abide by the following safety regulations to prevent damage of the machine or personal injuries.

1.4.1 Safety Signs and Labels


All the electrical components should be installed by qualified electricians. Turn off the main switch and control switch during maintenance or repair.


Warning! High voltage!
This sign is attached on the cover of control box!


Warning! Be careful!
Be more careful at the place where this sign appears!


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

1.4.2 Transportation and Storage of the Machine

Transportation

1) SVM-U series vertical batch mixer are packed in crates or plywood cases with wooden pallet at the bottom, suitable for quick positioning by fork lift.
2) Do not rotate the machine and avoid collision with other objects during transportation to prevent improper functioning.
3) The structure of the machine is well-balanced, although it should also be handled with care when lifting the machine for fear of falling down.
4) The machine and its attached parts can be kept at a temperature from -25℃ to +55℃ for long distance transportation and for a short distance, it can be transported with temperature under +70℃.

Storage

1) SVM-U series vertical batch mixer should be stored indoors with temperature kept from 5℃ to 40℃ and humidity below 80%.
2) Disconnect all power supply and turn off main switch and control switch.
3) Keep the whole machine, especially the electrical components away from

water to avoid potential troubles caused by the water.
4) Plastic film should be used to protect the machine from dust and rains.

The machine should be operated:

1) Indoors in a dry environment with max. temperature +45℃ and humidity no more than 80%.

Do not use the machine:

1) If it is with a damaged cord.
2) On a wet floor or when it is exposed to rain to avoid electrical shock.
3) If it has been dropped or damaged until it is checked or fixed by a qualified serviceman.
4) This equipment works normally in the environment with altitude within 3000m.
5) At least a clearance of 1m surrounding the equipment is required during operation. Keep this equipment away from flammable sources at least two meters.
6) Avoid vibration, magnetic disturbance at the operation area.

Rejected parts disposal

When the equipment has run out its life time and can not be used any more, unplug the power supply and dispose of it properly according to local code.

Fire hazard

 In case of fire, Co_2 dry powder fire extinguisher should be applied.

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,

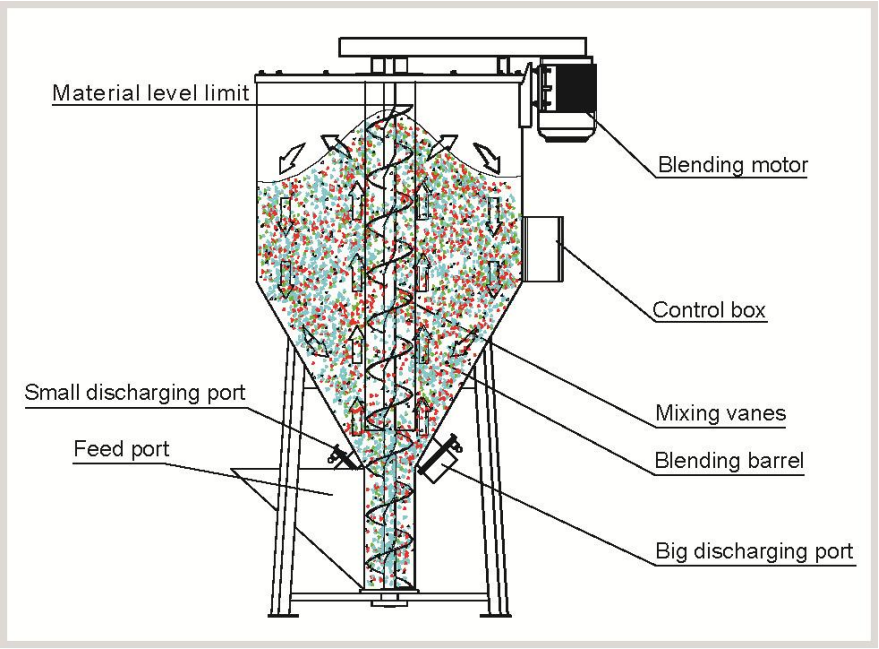
including adding or replacing accessories, dismantling, delivering or repairing.

4. Employing consumables or oil media that are not appointed by Shini.

2. Structure Characteristics and Working Principle

To achieve the aim of mixing material, screw blades are used to generate vortex. Materials are sucked towards mixing screws at the center of hopper bottom by vortex, then materials whirl upward to the top and fall down so that the evenly mixing can be fulfilled in a short period.

2.1 Working Principle

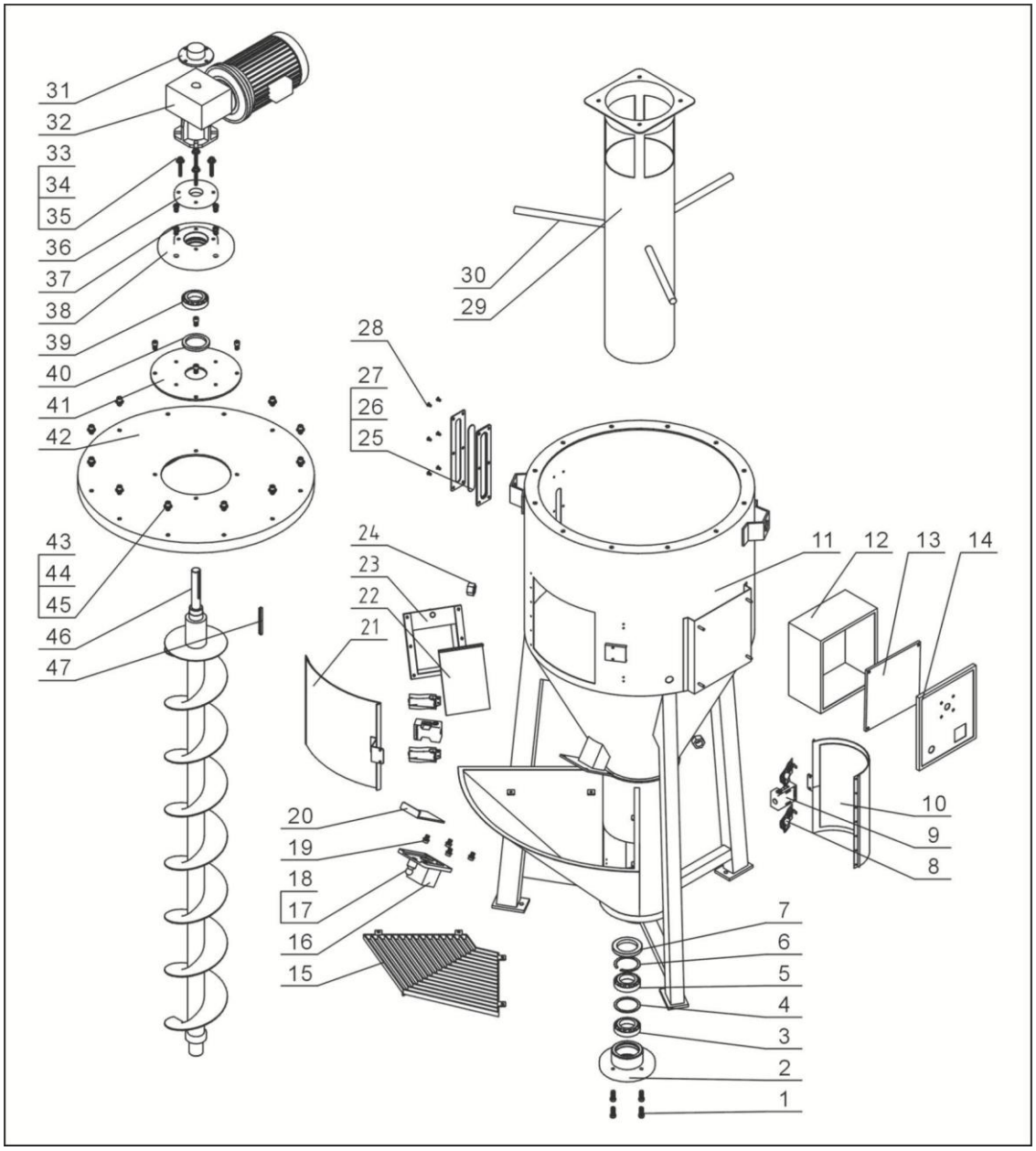


Picture 2-1: SVM-750U Working Principle Illustration

Signals from the control cabinet will be sent to blending motor which drives the blending screw to start material blending. Then material conveyed along the cylinder up to the top is evenly spread in the blending barrel. This process mixes material evenly in a short time, saving energy. After blending, draw open the shut-off plate to discharge the material.

2.2 Drawing and Parts List

2.2.1 Assembly Drawing (SVM-160U/300U)



Remarks: Please refer to material list 2.2.8 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-2：Assembly Drawing (SVM-160U/300U)

2.2.2 Parts List (SVM-160U/300U)

Table 2-1： Parts List (SVM-160U)

No.	Name	Part No.	No.	Name	Part No.
1	Socket head cap screw M8×25	YW61082000200	25	Six holes material sight glass fastener	YR40001200000
2	Lower bearing cap	-	26	Six hole acryl	YW65010000000
3	Deep groove ball bearing 6008	YW11600800000	27	Six hole material sight glass sheet iron	YW09000600000
4	Bearing shim	-	28	Cross recess pan head screw M6×15	YW61061500100
5	Single direction thrust ball bearing 51208	YW11512000000	29	Sleeve	-
6	Circlip for hole Φ70	YW68706500000	30	Screw	-
7	Framework oil seal GPΦ60×Φ85×H10	YR20608500000	31	Blower end cap weld	-
8	Snap hook	YW02003000400	32	Reduction gear 0.75kW	YM50755800000
9	Safety switch	YE16147600100	33	Socket head cap screw M8×45	YW61084500000
10	Lower clearance door assembly	-	34	Spring washer 8	YW65008000100
11	Tank body weld	-	35	Flat washer 8	YW66081600000
12	Electrical cabinet	-	36	Upper bearing cover	-
13	Electrical installation plate	-	37	Socket head cap screw M8×20	YW61082000200
14	Electrical cabinet cover	-	38	Upper bearing seat	-
15	Wire frame	-	39	Deep groove ball bearing 6008	YW11600800000
16	Small discharging port weld	-	40	Felt collar 60	YR20805800000
17	Sphere handle	YW30003600100	41	Adapter flange	-
18	Spring latch	BH10003600210	42	Hopper lid assembly	-
19	Socket head cap screw M6×16	YW61061600200	43	Spring washer 10	YW65008000100
20	Small shut-off plate	-	44	Flat wahser10	YW66081600000
21	Upper clearance door assembly	-	45	Socket head cap screw M10×15	YW61101500000
22	Big shut-off plate	-	46	Mixer assembly	-
23	Big discharging port weld	-	47	Motor shaft key	-
24	Hexagon nut M20	YW64200200000			

* 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.

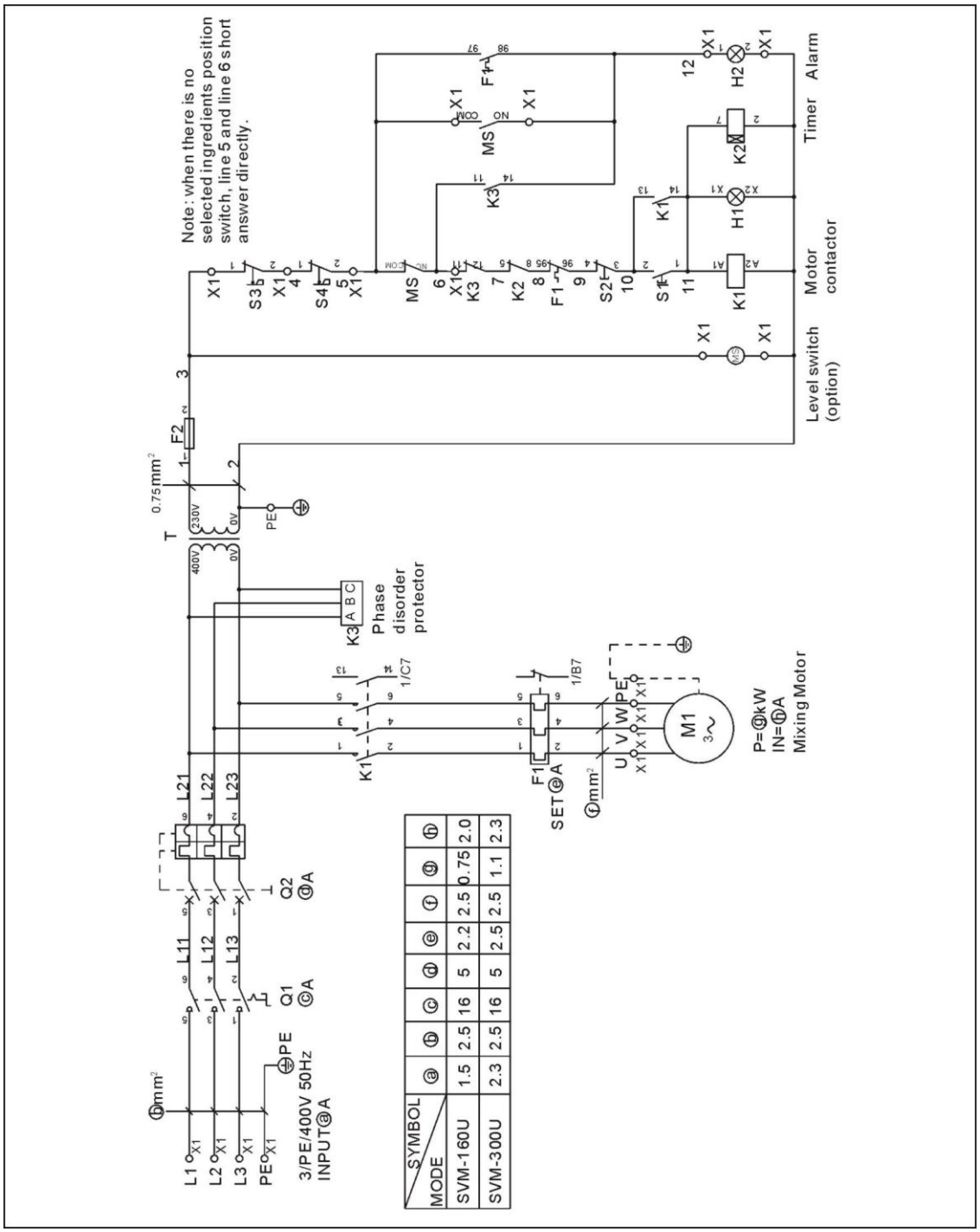
Table 2-2：Parts List (SVM-300U)

No.	Name	Part No.	No.	Name	Part No.
1	Socket head cap screw M8×25	YW61082000200	25	Six holes material sight glass fastener	YR40001200000
2	Lower bearing cap	-	26	Six hole acryl	YW65010000000
3	Deep groove ball bearing6008	YW11600800000	27	Six hole material sight glass sheet iron	YW09000600000
4	Bearing shim	-	28	Cross recess pan head screw M6×15	YW61061500100
5	Single direction thrust ball bearing51208	YW11512000000	29	Sleeve	-
6	Circlip for holeΦ70	YW68706500000	30	Screw	-
7	Framework oil seal GPΦ60×Φ85×H10	YR20608500000	31	Blower end cap weld	-
8	Snap hook	YW02003000400	32	Reduction gear 1.1kW	YM50575800000
9	Safety switch	YE16147600100	33	Socket head cap screw M8×45	YW61084500000
10	Lower clearance door assembly	-	34	Spring washer 8	YW65008000100
11	Tank body weld	-	35	Flat washer 8	YW66081600000
12	Electrical cabinet	-	36	Upper bearing cover	-
13	Electrical installation plate	-	37	Socket head cap screw M8×20	YW61082000200
14	Electrical cabinet cover	-	38	Upper bearing seat	-
15	Wire frame	-	39	Deep groove ball bearing6008	YW11600800000
16	Small discharging port weld	-	40	Felt collar 60	YR20805800000
17	Sphere handle	YW30003600100	41	Adapter flange	-
18	Spring latch	BH10003600210	42	Hopper lid assembly	-
19	Socket head cap screw M6×16	YW61061600200	43	Spring washer 10	YW65008000100
20	Small shut-off plate	-	44	Flat wahser10	YW66081600000
21	Upper clearance door assembly	-	45	Socket head cap screw M10×15	YW61101500000
22	Big shut-off plate	-	46	Mixer assembly	-
23	Big discharging port weld	-	47	Motor shaft key	-
24	Hexagon nut M20	YW64200200000			

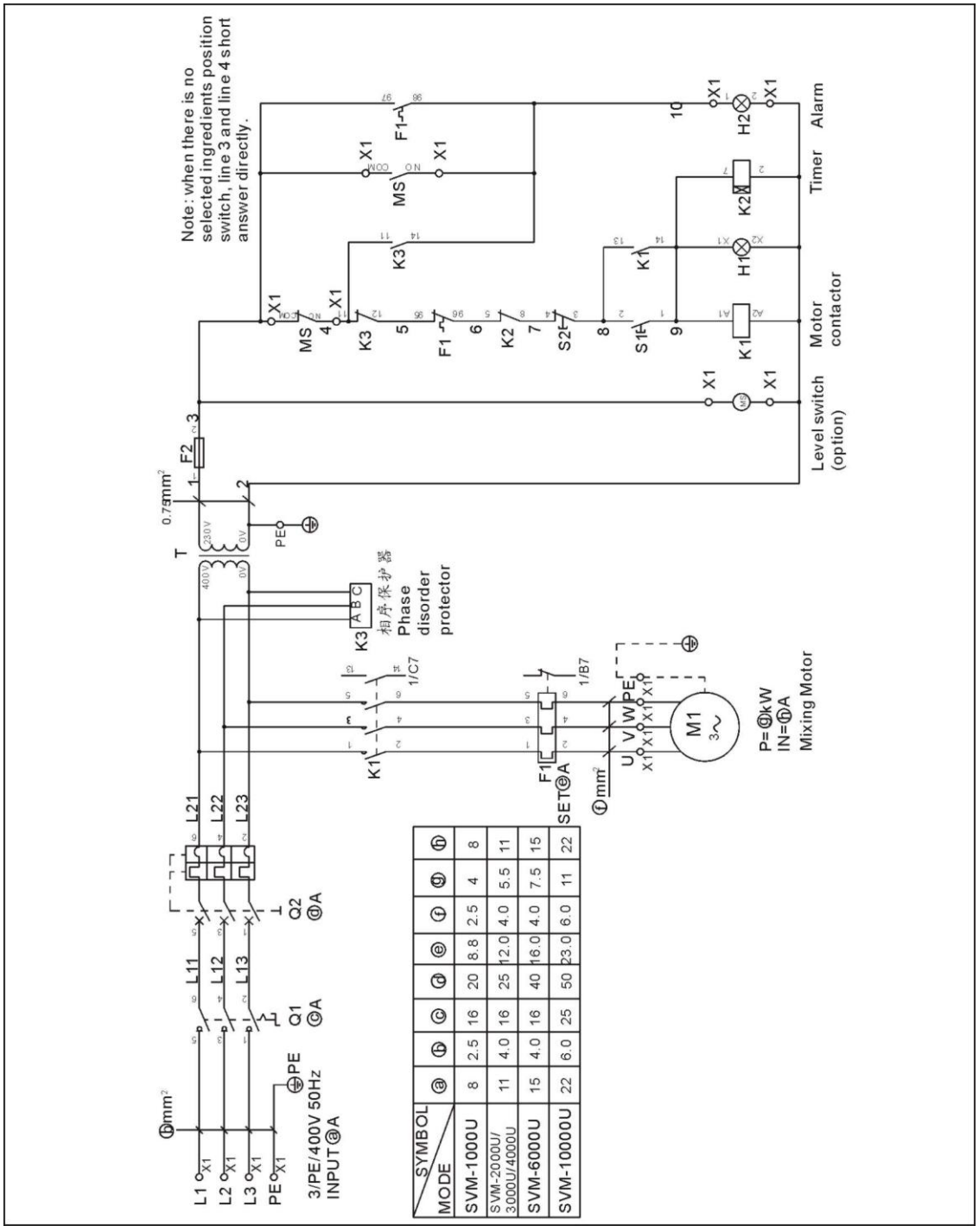
* means possible broken parts.
** means easy broken part. and spare backup is suggested.
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

2.3 Electrical Circuit

2.3.1 Main Circuit (SVM-160U~10000U)

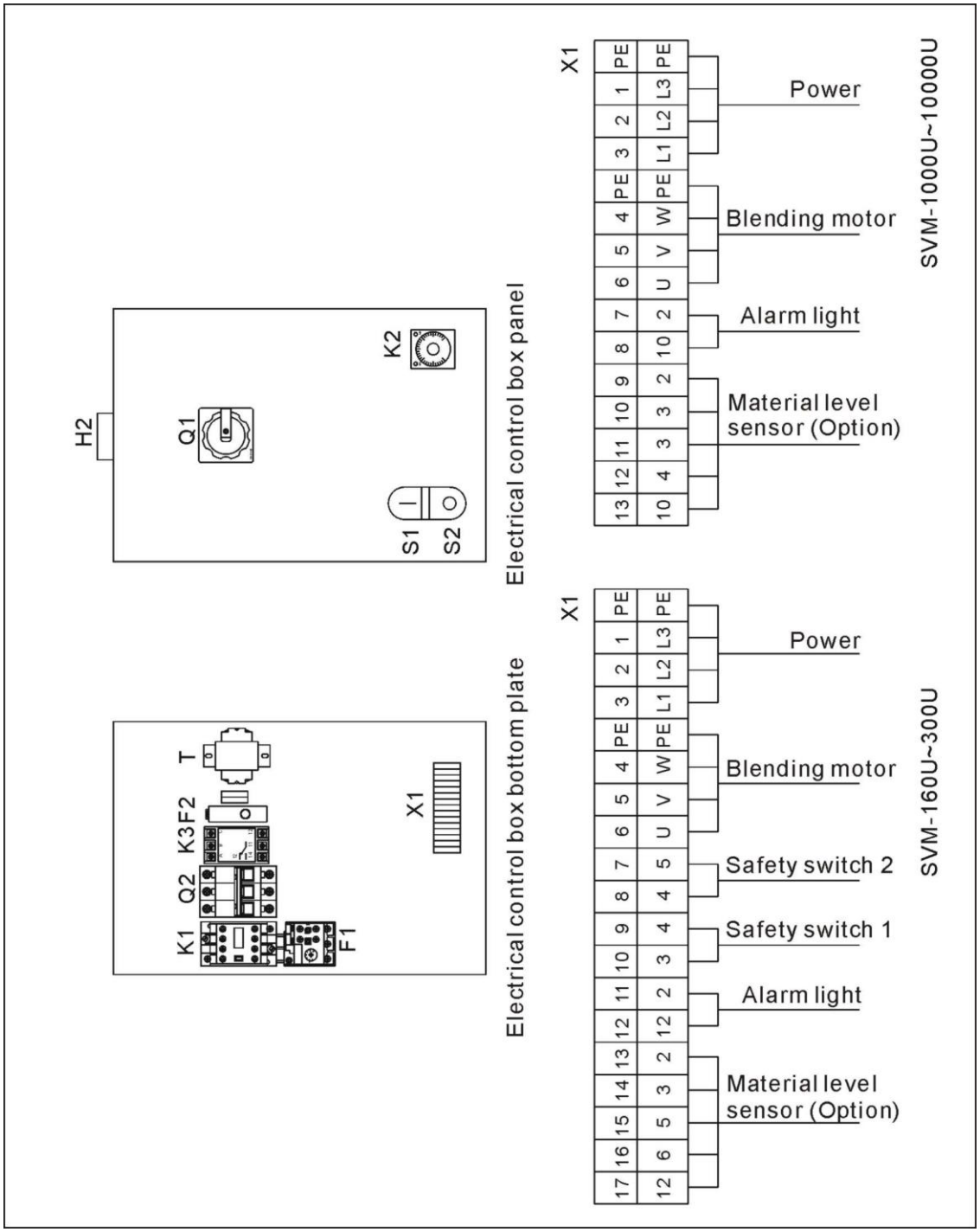


Picture 2-3: Main Circuit (SVM-160U/300U)



Picture 2-4：Main Circuit (SVM-1000U~10000U)

2.3.2 Components Layout (SVM-160U~10000U)



Picture 2-5：Components Layout (SVM-160U~10000U)

2.3.3 Electrical Components List (SVM-160U~10000U)

Table 2-3：Electrical Components List (SVM-160U)

NO.	Symbol	Name	Specification	Part NO.
1	Q1	Main switch*	16A	YE10021160000
2	Q2	Circuit breaker*	5A	YE40603000000
3	K1	Contactor*	230V 50/60Hz	YE00601621000
4	K2	Timer**	230V 50/60Hz	YE86300800000
5	K3	Phase relay	400V	YE03103800000
6	T	Transformer*	300mA	YE70402300700
7	F1	Overload relay*	1.8~2.5A	YE01160180000
8	F2	Fuse**	2A	YE41001000000
9	H2	Pulse indicate lamp	230VAC 50Hz	YE83305100300
10	X1	Terminal	$2.5mm^2$	YE61250040000
11	-	-	$2.5mm^2$PE	YE61253500000
12	-	-	$2.5mm^2$	YE61250040000
13	S1 S2	Control switch	600V 10A	YE11221000000
14	S3 S4	Safety switch*	230VAC	YE16147600100
15	M1	Motor	400V 50/60Hz 0.75kW	YM50754500000
16	MS	Feed position motor	250VAC	YE15000200100

* 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.

Table 2-4：Electrical Components List (SVM-300U)

NO.	Symbol	Name	Specification	Part NO.
1	Q1	Main switch*	16A	YE10021160000
2	Q2	Circuit breaker*	5A	YE40603000000
3	K1	Contactor*	230V 50/60Hz	YE00601621000
4	K2	Timer**	230V 50/60Hz	YE86300800000
5	T	Transformer*	300mA	YE70402300700
6	K3	Phase relay	400V	YE03103800000
7	H2	Pulse indicate lamp	230VAC 50Hz	YE83305100300
8	F1	Overload relay*	2.2~3.2A	YE01160220000
9	F2	Fuse**	2A	YE41001000000
10	X1	Terminal	2.5mm^2	YE61250040000
11	-	-	2.5mm^2	YE61250040000
12	-	-	2.5mm^2 PE	YE61253500000
13	S1 S2	Control switch	600V 10A	YE11221000000
14	S3 S4	Safety switch*	230VAC	YE16147600100
15	M1	Motor	400V 50/60Hz 1.1kW	YM50755800000
16	MS	Feed position motor	250VAC	YE15000200100

* 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.

Table 2-5：Electrical Components List (SVM-1000U)

NO.	Symbol	Name	Specification	Part NO.
1	Q1	Main switch*	16A	YE10021160000
2	Q2	Circuit breaker*	16A	YE40601500000
3	K1	Contactor*	230V 50/60Hz	YE00601721000
4	K2	Timer**	230V 50/60Hz	YE86300800000
5	K3	Phase relay	400V	YE03103800000
6	H2	Pulse indicate lamp	230VAC 50Hz	YE83305100300
7	T	Transformer*	300mA	YE70402300700
8	F1	Overload relay*	7~10A	YE01167100000
9	F2	Fuse**	2A	YE41001000000
10	X1	Terminal	2.5mm^2	YE61250040000
11	-	-	2.5mm^2	YE61250040000
12	-	-	2.5mm^2 PE	YE61253500000
13	S1 S2	Control switch	600V 10A	YE11221000000
14	M1	Motor	400V 50/60Hz 4kW	YM10134400000
15	MS	Feed position motor	250VAC	YE15000200100

* 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.

Table 2-6：Electrical Components List (SVM-2000U~4000U)

NO.	Symbol	Name	Specification	Part NO.
1	Q1	Main switch*	16A	YE10021160000
2	Q2	Circuit breaker*	25A	YE40602500000
3	K1	Contactor*	230V 50/60Hz	YE00602522000
4	K2	Timer**	230V 50/60Hz	YE86300800000
5	T	Transformer*	300mA	YE70402300700
6	K3	Phase relay	400V	YE03103800000
7	H2	Pulse indicate lamp	230VAC 50Hz	YE83305100300
8	F1	Overload relay*	11~16A	YE01260110000
9	F2	Fuse**	2A	YE41001000000
10	X1	Terminal	4.0mm^2	YE61040000000
11	-	-	4.0mm^2 PE	YE61043500000
12	-	-	2.5mm^2	YE61250040000
13	-	-	2.5mm^2	YE61250040000
14	S1 S2	Control switch	600V 10A	YE11221000000
15	M1	Motor	400V 50/60Hz 5.5kW	YM10135500000
16	MS	Feed position motor	250VAC	YE15000200100

* 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.

Table 2-7：Electrical Components List (SVM-6000U)

NO.	Symbol	Name	Specification	Part NO.
1	Q1	Main switch*	16A	YE10021160000
2	Q2	Circuit breaker*	32A	YE40603200000
3	K1	Contactor*	230V 50/60Hz	YE00602622000
4	K2	Timer**	230V 50/60Hz	YE86300800000
5	T	Transformer*	300mA	YE70402300700
6	K3	Phase relay	400V	YE03103800000
7	H2	Pulse indicate lamp	230VAC 50Hz	YE83305100300
8	F1	Overload relay*	14~20A	YE01260140000
9	F2	Fuse**	2A	YE41001000000
10	X1	Terminal	4.0mm^2	YE61040000000
11	-	-	4.0mm^2 PE	YE61043500000
12	-	-	2.5mm^2	YE61250040000
13	-	-	2.5mm^2	YE61250040000
14	S1 S2	Control switch	600V 10A	YE11221000000
15	M1	Motor	400V 50/60Hz 7.5kW	YM10137500000
16	MS	Feed position motor	250VAC	YE15000200100

* 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.

Table 2-8: Electrical Components List (SVM-10000U)

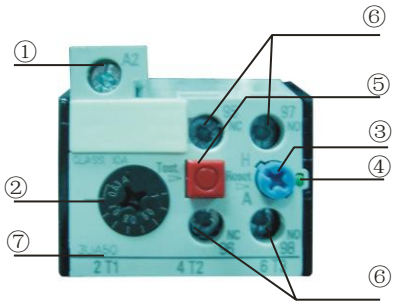
NO.	Symbol	Name	Specification	Part NO.
1	Q1	Main switch*	25A	YE10125250000
2	Q2	Circuit breaker*	40A	YE40604000000
3	K1	Contactor*	230V 50/60Hz	YE00602722000
4	K2	Timer**	230V 50/60Hz	YE86300800000
5	T	Transformer*	300mA	YE70402300700
6	K3	Phase relay	400V	YE03103800000
7	H2	Pulse indicate lamp	230VAC 50Hz	YE83305100300
8	F1	Overload relay*	20~25A	YE01260200000
9	F2	Fuse**	2A	YE41001000000
10	X1	Terminal	6.0mm^2	YE61060000000
11	-	-	6.0mm^2 PE	YE61063500000
12	-	-	2.5mm^2	YE61250040000
13	-	-	2.5mm^2	YE61250040000
14	S1 S2	Control switch	600V 10A	YE11221000000
15	M1	Motor	400V 50/60Hz 11kW	YM10161140000
16	MS	Feed position motor	250VAC	YE15000200100

* 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.

2.3.4 Main Electrical Components Description

Overload Relay

At delivery, the overload relay is set for mannual reset. (the reset button pointing to H). Manually reset the relay at the tripping of the switch. When motor overload occurs, stop the machine, then check and solve the problem. After that open the door of control box, press down the reset button of overload relay (if you can not press down the reset button, wait for one minute).



Picture 2-6：Overload Relay

1) Terminal for contact coil A2.
2) Setting current adjusting scale.
3) Reset (blue).

H: manual reset

A: automatic reset

4) Switch position indication (green).
   Tripping of a manual-resetting is indicated by a pin projecting from the front plate.
5) Test button (red).
6) Auxiliary contact terminals shown in 95.96.97.98. NC and NO contacts are shown in position 95.96. and 97.98. respectively.
7) Main circuit connection No. must be correspond with terminal Number of contactor.

2.3.5 Timer

Picture 2-7：Timer

Function Description:

1 Adjusting scale.

2 Choose sec/min/hrs/10h as a time unit by turning this button.

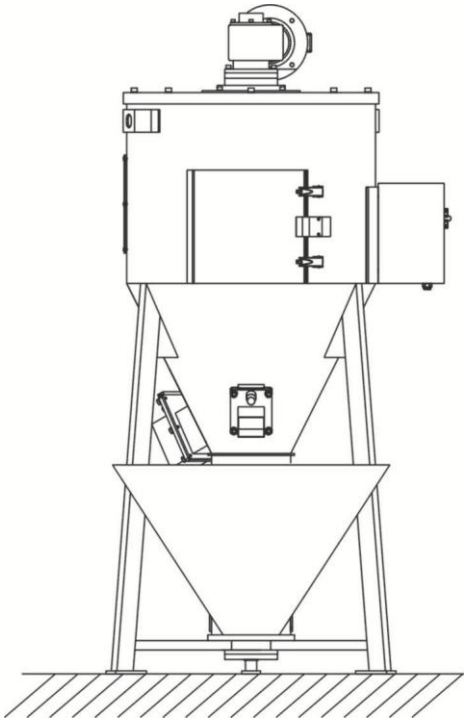
3 Set the time-rate by just turning this button.

3. Installation and Debugging

Before installation, read this chapter carefully. Install the machine according to following steps!

Power supply of the mixer should be connected by qualified electricians!

3.1 Install the Machine on a Water-level Floor



Picture 3-1: Install the Machine on a Water-level Floor

Vertical batch mixer should be placed on a water-level floor with castors locked, ensuring the machine well-balanced and no vibration.

3.2 Installation Space

Keep at least 500mm space around the machine when installing it. As the following figure shows: Do not install the machine in a narrow space, because this will make it uneasy to repair or maintenance. Do not sit on the top of the

machine or place any inflammable objects around the machine.

Picture 3-2：Installation Space

3.3 Installation of Motor

Do not enforce any force on the output parts of decelerate motor or case. Pleases meet the machine and gear motor's respective requirement for concentricity or verticality.

3.4 Installation of Blending Vanes

Pleases meet the blending screw and gear motor's respective requirement for concentricity or verticality when install the machine.

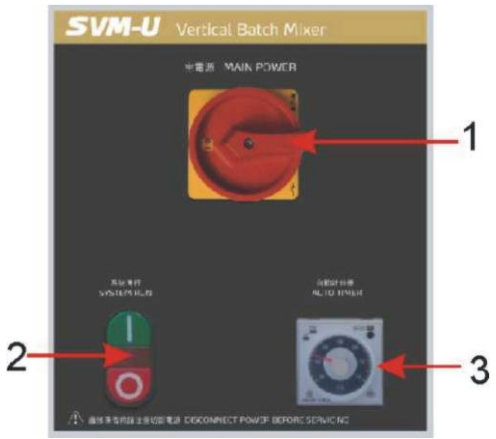
3.5 Power Connection

Connect the control box of the vertical batch mixer to power line and earth wire as indicated by the nameplate. Usually adopts 3Φ400V power supply and it can be also made on customer's special demand.

Check the motor's running direction after connects to power，if it is running reversely，please cut off the power and transpose any two lines of the three lines from the main power.(warning: reverse running is not allowed when the machine is in operation otherwise it will cause obstruction and lead to motor damage)

4. Application and Operation

4.1 Description of Control Panel



Picture 4-1： Description of Control Panel

4.2 Control Panel Description

No.	Name	Function Description	Remarks
1	Main power	Main power switch of the control system.	
2	System run	Start/stop of blending motor.	Red for stop and green for start.
3	Auto-timer	Timer for auto-stop after set material blending time.	When system is turned on, use the timer to set motor blending time after which the machine will stop working automatically.

4.3 Start/stop of the Machine

1) Check power supply is turned on.
2) Turn on the main switch on control panel.
3) Press the green button to start material blending.
4) Use the red button to stop the machine, and main power switch to cut off power supply.

4.4 Operation Guide

1) Open blending barrel lid, fill in materials.
   Note: material level should not higher than the top opening of the cylinder..
2) Close blending barrel lid, plug in safety switch and fasten the snap hook.
   Note: tightly close the blending barrel lid to secure safety switch, or the machine cannot be started.
3) Turn on main power switch on the control panel.
4) Press the green button on control panel to start the machine.
5) Turn the adjusting scale of the timer if needed to set material blending time. The machine will stop working automatically after set time.
6) Press the stop button to stop material mixing after the material is evenly mixed if the timer is not set for automatic stop.

5. Trouble-shooting

Failures	Solutions
After turning on main power and pressing down green system run button, the indicator cannot turn bright, motor does not work.	Check the electrical circuit, the reasons may be: 1. Electrical wire break. 2. Fuse melted. 3. The shut-off plate for Blending barrel lid not closed or safety switch not fully connected. 4. Material blending time is set to 0. If motor can work, but indicator cannot turn bright, it shows that the indicator is broken. If indicator turns bright, but motor can not work, this may caused by motor failures or solenoid valve problems.
Machine cannot stop after setting time.	Check the electrical circuit, the reasons may be: 1. The timer is broken. 2. Electrical wire problems.
Overload relay frequently tripping off.	Check the electrical circuit, the reason can be: 1. Adjust overload relay setting current 1.1 times of motor rated current. 2. Wires of solenoid valve short circuit or break. 3. Overload relay is burnt out. 4. Motor problems. 5. Motor runs reversely.
Cannot stop the working of material blending by pressing the stop button.	The contact of stop button may be stuck together. If so, please replace the stop button.
Materials can not be well mixed, although no problems with machine start and stop function.	Material mixing time not enough, increase material mixing time.

Motor overload

Motor overload will cause overload relay to trip off, which stops working of the motor. Switch position is indicated by a pin (blue)(A) projecting at the front plate. Press "Reset" button to reset the relay. Please refer to chapter 2.3.3 has details.

6. Maintenance and Repair

6.1 Service

All the repair work should be done by qualified technicians to prevent personal injuries and damage of the machine.

6.2 Maintenance

6.2.1 Maintenance of Blending Motor

Replace the lubricating oil of the gear motor after first 400 hours running. After that, replace the lubricating oil at about every 4000 hours. Check on times that there's enough lubricant in the gear box. Add or replace the lubricant before oil used up or when oil is turned bad. Keep motor and gear box covers clean from dusts or dirt’s for quick cooling.

6.2.2 Maintenance of Blending Barrel and Blending Screw

Disassemble blending barrel lid, motor, blending screw, and control box; use a piece of soft cloth to clean blending barrel from material remains.

Note!

Turn off the main switch and control switch before repairing or maintenance.

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 the machine is installed on a water-level floor.

☐ Check the installation of the motor.

☐ Check the safety switch of blending barrel.

Electrical Installation

☐ Power supply: _____ V _____ Hz

☐ Fuse melt current: 1Φ _____ A 3Φ _____ A

☐ Check the electrical wire connections of the control.

6.3.3 Daily Checking

__/ /__

☐Check the main power switch

☐Check system start button

☐Check the safety switch

6.3.4 Weekly Checking

__/ /__

☐Check all the electrical wires

☐Check motor overload protection function

6.3.5 Monthly Checking

Replace the lubricating oil of the gear motor after first 400 hours running. After that, replace the lubricating oil at about every 4000 hours. Check on times that there's enough lubricant in the gear box. Add or replace the lubricant before oil is used up or when the oil is turned bad.