

# **SAL-UGP Series**

## **Vacuum Powder Loader**

Date: Apr, 2013

Version: Ver.B (English)





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## 1. General Description



Read this manual carefully before operation to prevent damage of the machine or personal injuries.

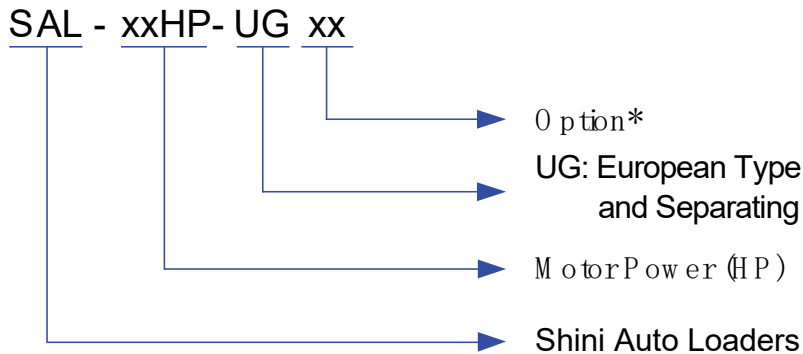
SAL-UGP series separate-vacuum hopper loader has all features that come with SAL-UG series product. There is also double-stage blower available as an option. Different model of hopper is available for each individual output capacity needs, especially suitable for 30% and 100% powder loading.



Model: SAL-3.5HP-UGP (Main Unit) Plate Filter + Bag Filter

SHR-P-60U material storage tank+ storage hopper

## 1.1 Coding Principle



Note:\*

D=Double-stage Blower

P=Powder Loader

A=Add Air Accumulator

CE=CE Conformity

## 1.2 Feature

### 1) Standard configuration

- Data backed up on EPROM in case of power failure and does not require back up battery.
- It consists of a cyclone dust separator and a dust collective bin to effectively reduce the load of filter.
- Function for setting regrind mix ratio via optional SPV-U.
- Standardly equipped with warning lamp as the alarm device.
- Based on customer's requirements, there are two types of filters: bag and plate, for 30% and 100% powder conveying respectively. The air accumulator and self-cleaning device are standard equipment for hopper.

### 2) Accessory option

- In the case of much impurity or recycled materials included in raw materials, main unit can be equipped with air accumulator auto washing unit as options, and add "A" at the model behind. (Suitable for SAL-3.5HP-UG and models above)
- Optionally provide multi-functional installation frame HMB-900 with 900 mm largest dia.adjusting range for selection.
- Provide both standard and optional heat-insulative Euro collective hopper SCH-6U/12U/24U for selection (Except for SAL-UGP series, which will use

special collective hopper).

- Optional cyclone dust separator is available for SAL-1HP/2HP-UG.
- Buzzer available as an option.
- Quick mixing valve can be opted to work with proportional valve to enhance mixing effect.

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

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

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

Headquarter and Taipei factory :

Tel: (886) 2 2680 9119

Shini Plastics Technologies (Dongguan), Inc:

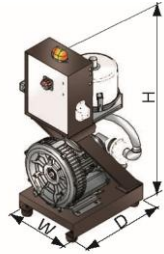
Tel: (86) 769 8111 6600

Shini Plastics Technologies India Pvt.Ltd. :

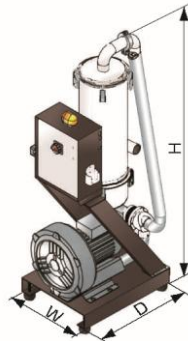
Tel: (91) 250 3021 166

## 1.3 Technical Specifications

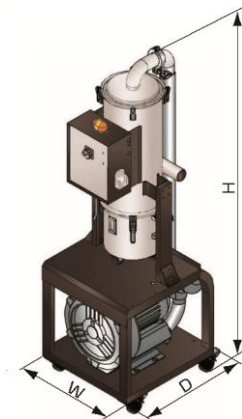
### 1.3.1 Technical Specifications (Main Unit)



Picture 1-1: SAL-1HP/2HP-UGP

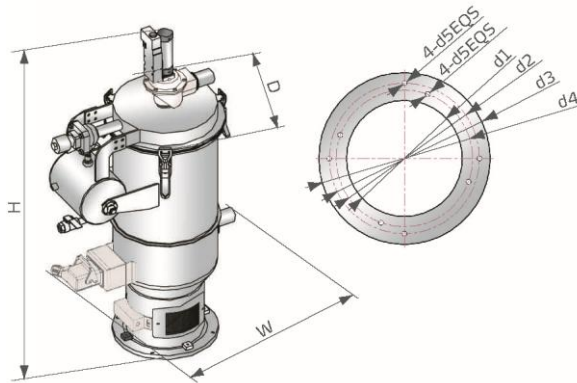


Picture 1-2: SAL-3.5HP/5HP-UGP

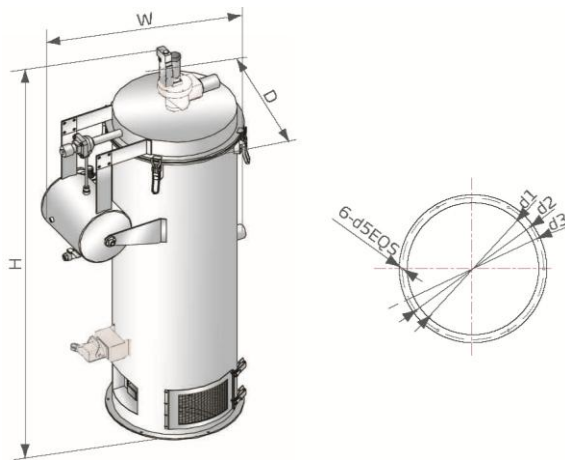


Picture 1-3: SAL-7.5HP/10HP-UGP

### 1.3.2 The Outer Dimension of Hopper

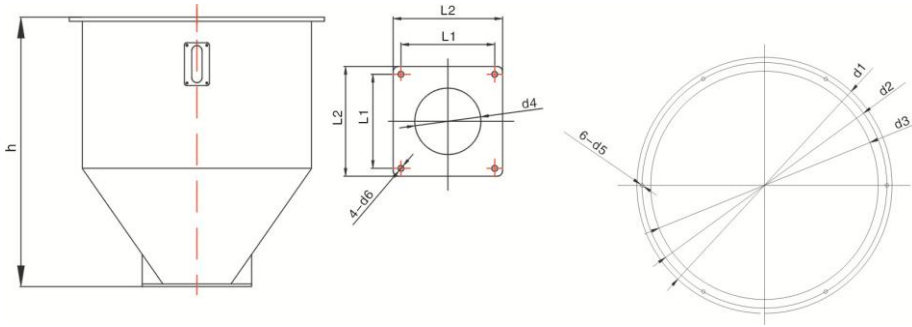


Picture 1-4: SHR-P-12U



Picture 1-5: SHR-P-30U~SHR-P-90U

### 1.3.3 The Installation Dimension of Hopper



Picture 1-6: SHR-P-30U~SHR-P-90U

Table 1-1: The Installation Dimension of Hopper

Model	D1(mm)	D2(mm)	D3(mm)	D4(mm)	D5(mm)
SHR-P-12U	Φ197	Φ254.5	Φ275	Φ231.5	Φ9
SHR-P-30U	Φ377	Φ413	Φ430	-	Φ7
SHR-P-30U-1	Φ377	Φ413	Φ430	-	Φ7
SHR-P-30U-2	Φ377	Φ413	Φ430	-	Φ7
SHR-P-60U	Φ437	Φ470	Φ490	-	Φ7
SHR-P-60U-3	Φ437	Φ470	Φ490	-	Φ7
SHR-P-90U	Φ547	Φ583	Φ600	-	Φ7
SHR-P-90U-5	Φ547	Φ583	Φ600	-	Φ7

### 1.3.4 Specifications

Table 1-2: Specifications

For Conveying Raw Material Contains 30% Powder (BAG FILTERS are fitted to the powder receiver)

Main Unit			Powder Receiver						Filter Cloth Quantity	Dimensions (mm)	
Model	Motor Power (kW) (50/60Hz)	Specification	Applied to	Conveying Pipe Dia.	Air Suction Pipe Dia.	Hopper Capacity (L)	Hopper Dia. (mm)	Conveying Capacity (kg / hr)		(Main Unit) H×W×D	(Receiver) H×W×D
SAL-1HP-UGP	0.75 / 0.85	3Φ	SHR-P-12U	1.5"	1.5"	12L	Φ270	300	3	1000×400×500	940×535×380
SAL-2HP-UGP	1.5 / 1.8		SHR-P-30U			30L	Φ380	400			7
SAL-3.5HP-UGP	2.4 / 2.6		SHR-P-60U	2"	2"	60L	Φ440	800	10	1380×490×590	1500×780×500

SAL-5HP-UGP	3.7 / 4.2	SHR-P-90U	2.5"	2.5"	90L	Φ550	1200	19		1640×890×635
SAL-5HP-UGP-D									1380×690×590	
SAL-7.5HP-UGP	5.5 / 6.3						1830×585×675			
SAL-7.5HP-UGP-D							1830×740×675			
SAL-10HP-UGP	7.5 / 8.6						1830×585×675			
SAL-10HP-UGP-D							1830×740×675			

For Conveying Raw Material Contains 100% Powder (PLATE FILTERS are fitted to the powder receiver)

Main Unit			Powder Receiver						Filter Cloth Quantity Motor Power (kW) (50/60Hz)	Dimensions (mm)	
Model	Motor Power (kW) (50/60Hz)	Specification	Applied to	Model	Motor Power (kW) (50/60Hz)	Specification	Applied to	Model		Specification	Applied to
SAL-1HP-UGP	0.75 / 0.85	3Φ	SHR-P-30U-1	1.5"	1.5"	12L	Φ270	300	1	1000×400×500	1325×730×470
SAL-2HP-UGP	1.5 / 1.8		SHR-P-30U-2			30L	Φ380	400	2		
SAL-3.5HP-UGP	2.4 / 2.6		SHR-P-60U-3	2"	2"	60L	Φ440	800	3	1380×490×570	1500×780×500
SAL-5HP-UGP	3.7 / 4.2							1200		1380×690×570	
SAL-5HP-UGP-D			5.5 / 6.3	SHR-P-90U-5	2.5"	2.5"	90L	Φ550	1500	5	1830×585×675
SAL-7.5HP-UGP	1830×740×675										
SAL-7.5HP-UGP-D	7.5 / 8.6		1830×585×675								
SAL-10HP-UGP			1830×740×675								
SAL-10HP-UGP-D							2000				

Note: 1) "P" stands for powder loader, "D" stands for double stage blower.

2) All SAL-UGP series has vacuum breaking valve to protect the blower.

3) PU heat-resistant material pipe is optionally available.

4) Test condition of conveying capacity: Use dried powder plastic material without any viscosity and its bulk density is 0.6kg/L, vertical conveying height: 4m, horizontal conveying distance: 5m.

5) Collective hopper can be optionally selected if needed.

6) Power supply: 3Φ, 230/400/460/575V, 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 professional technicians.

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 Signs and Labels

	<ol style="list-style-type: none"><li>1. Please clean the suction filter regularly to avoid clogging and ensure proper loading capacity and long life span.</li><li>2. The one year warranty does not cover the suction filter, please clean the filter carefully.</li></ol>
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## 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.

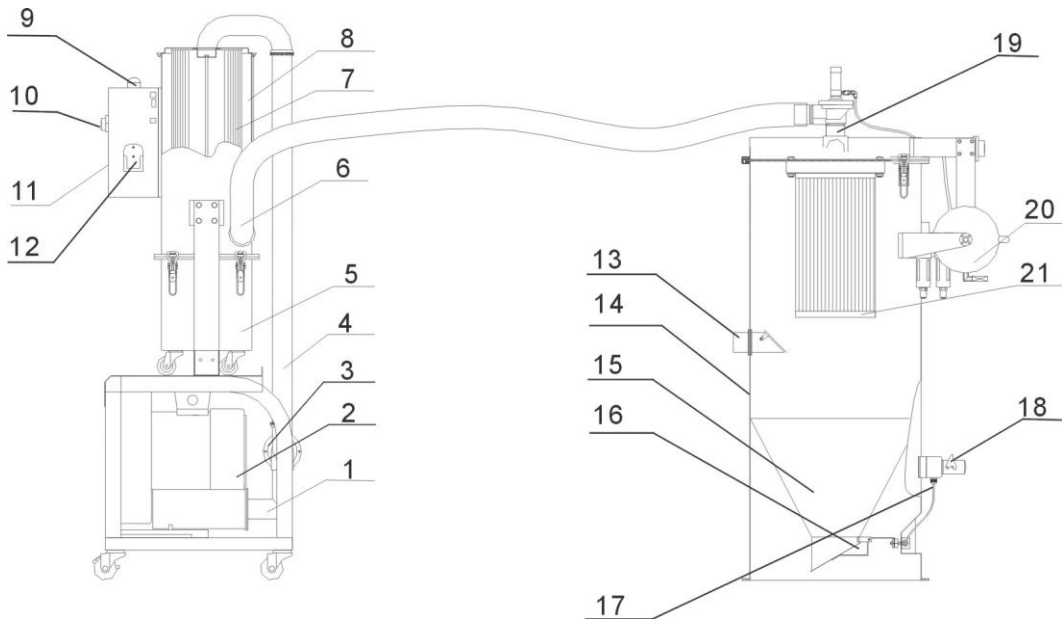
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon machine, 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

### 2.1 Main Functions

SAL-UGP "Euro" separate-vacuum hopper loader are applicable to convey the mixture of plastic granule and powder or all powders. It makes good use of motor generated vacuum to form a pressure gap within hopper, by which means to convey.

#### 2.1.1 SAL-UGP Working Principle



Names of Parts:

- |                                  |                           |                                    |
|----------------------------------|---------------------------|------------------------------------|
| 1. Air suction pipe (blower use) | 2. Blower                 | 3. Vacuum breaking diaphragm valve |
| 4. Steel wired plastic pipe      | 5. Dust collective barrel |                                    |
| 6. Air suction pipe (hopper use) | 7. Filter 1               | 8. Filtering barrel                |
| 9. Red alarm light               | 10. Main power switch     | 11. Electrical control box         |
| 12. Manual controller            | 13. Material inlet pipe   | 14. Hopper                         |
| 15. Crew material                | 16. Non-return flap       | 17. Magnetic proximity switch      |
| 18. Wiring box                   | 19. Diaphragm valve       | 20. Storage tank                   |
| 21. Filter 2                     |                           |                                    |

Picture 2-1: SAL-UGP Working Principle

After starting the machine, blower (2) begins to work to produce high-pressure vacuum inside of material hopper (15), meanwhile close the reverse stopping

flap (17). Materials will be drawn into material hopper by pressure difference through material inlet (13). When material suction is completed, motor stops working, and the materials automatically fall down by self-gravity. Motor will be delayed when magnetic proximity switch (18) detects no materials left in the hopper. And then, open the diaphragm valve (19), the high-pressure air in the storage tank (20) will pass the washing device to clean the dust covered in the filter 1 (21) and hopper (14), then the motor starts again. If the machine cannot suck materials for three times, the red alarm light (9) on control box (11) will blink.

When the blower (2) sucks materials, the air inside the air-inputting pipe will past filter 2 (7) for filtering. Few dust sticks to the filter. After the blower finishes the suction, the vacuum breaking diaphragm valve (3) installed between the blower and filter will create a reverse impulsive airflow to shake down the dust sticking to the filter to the dust collection bucket (5).



## 2.2.2 Parts List (SAL-1HP/2HP-UGP)

Table 2-1: Parts List (SAL-1HP/2HP-UGP)

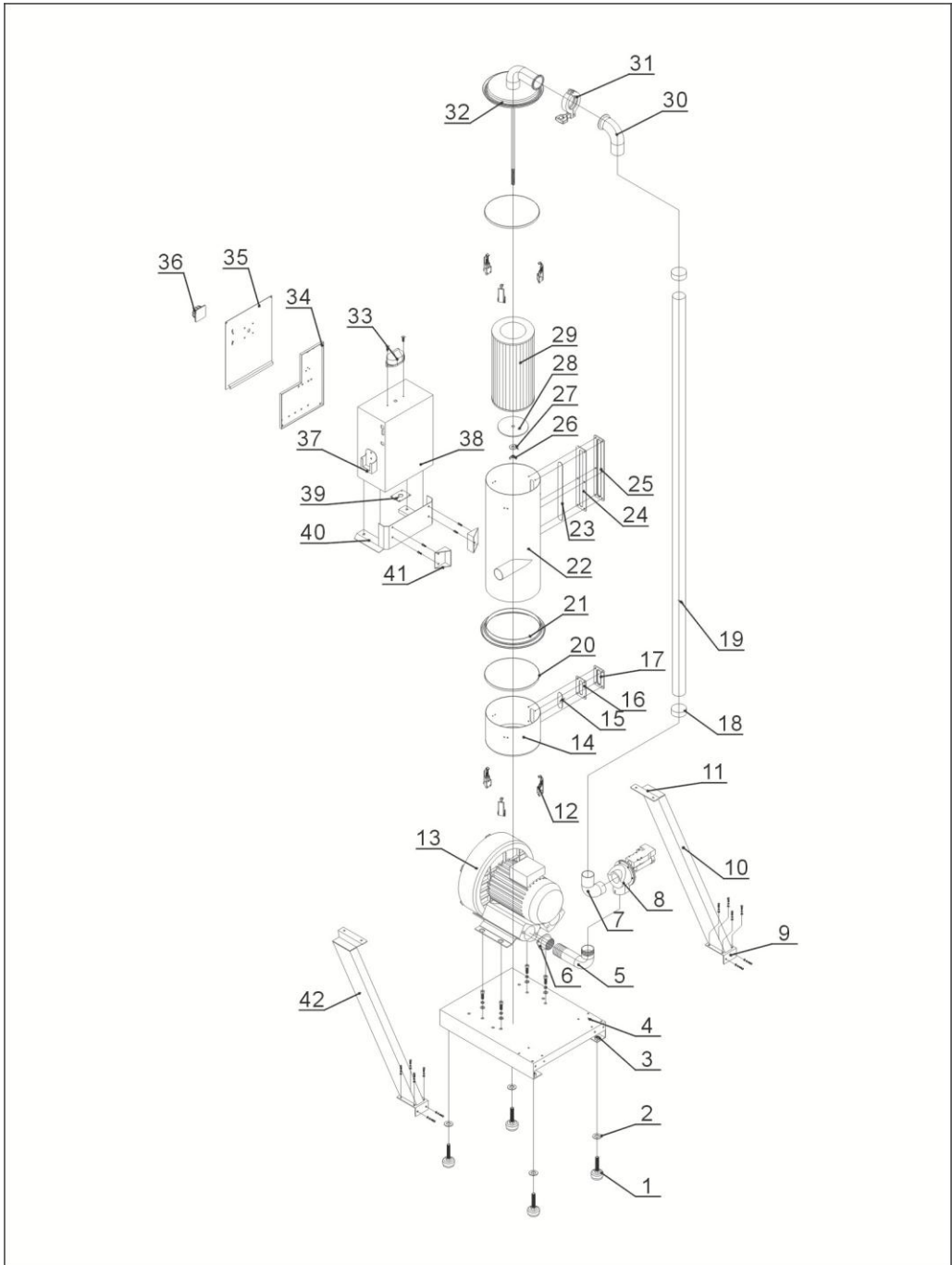
No.	Name	Part No.	No.	Name	Part No.
1	Anti-vibration pad	YW03005000000	15	Filter barrel lid assembly	-
2	Base	BL26000202420	16	Controller holder	BL26010241820
3	Lower welding block on column	-	17	Main switch *	YE10200300000
4	Standing post	BL26000202920	18	Control box	BL21000101920
5	Upper welding block on column	-	19	Alarm light	YE83305100200
6	Blower flange	-	20	Filter barrel lid barrel	YR10030000000
7	Air inlet pipe	BL21000200320	21	Filter barrel lid	-
8	Diaphragm valve connection pipe	-	22	Air filter*	YR50708000000
9	Vacuum breaking diaphragm valve	BY20015000050	23	Star nut	YW09051600000
10	High pressure pipe 1HP	BM30031000150	24	Filter container seal ring*	YR10708000100
	High pressure pipe 2HP	BM30042000050	25	Spring clip*	YW02003000400
11	Clip	YW02000200000	26	Acryl	BH32070000050
12	Steel wired plastic pipe	YR60157000000	27	Seal ring	YR40000400000
13	Filter fixing bracket	-	28	Iron sheet of 4-hole sight glass	YW09000000400
14	Filter barrel base fastener	-	29	Filter barrel	BL26000203621

\* 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 Assembly Drawing (SAL-3.5HP/5HP-UGP)



Remarks: Please refer to material list 2.2.4 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-3: Assembly Drawing (SAL-3.5HP/5HP-UGP)

## 2.2.4 Parts List (SAL-3.5HP/5HP-UGP)

Table 2-2: Parts List (SAL-3.5HP/5HP-UGP)

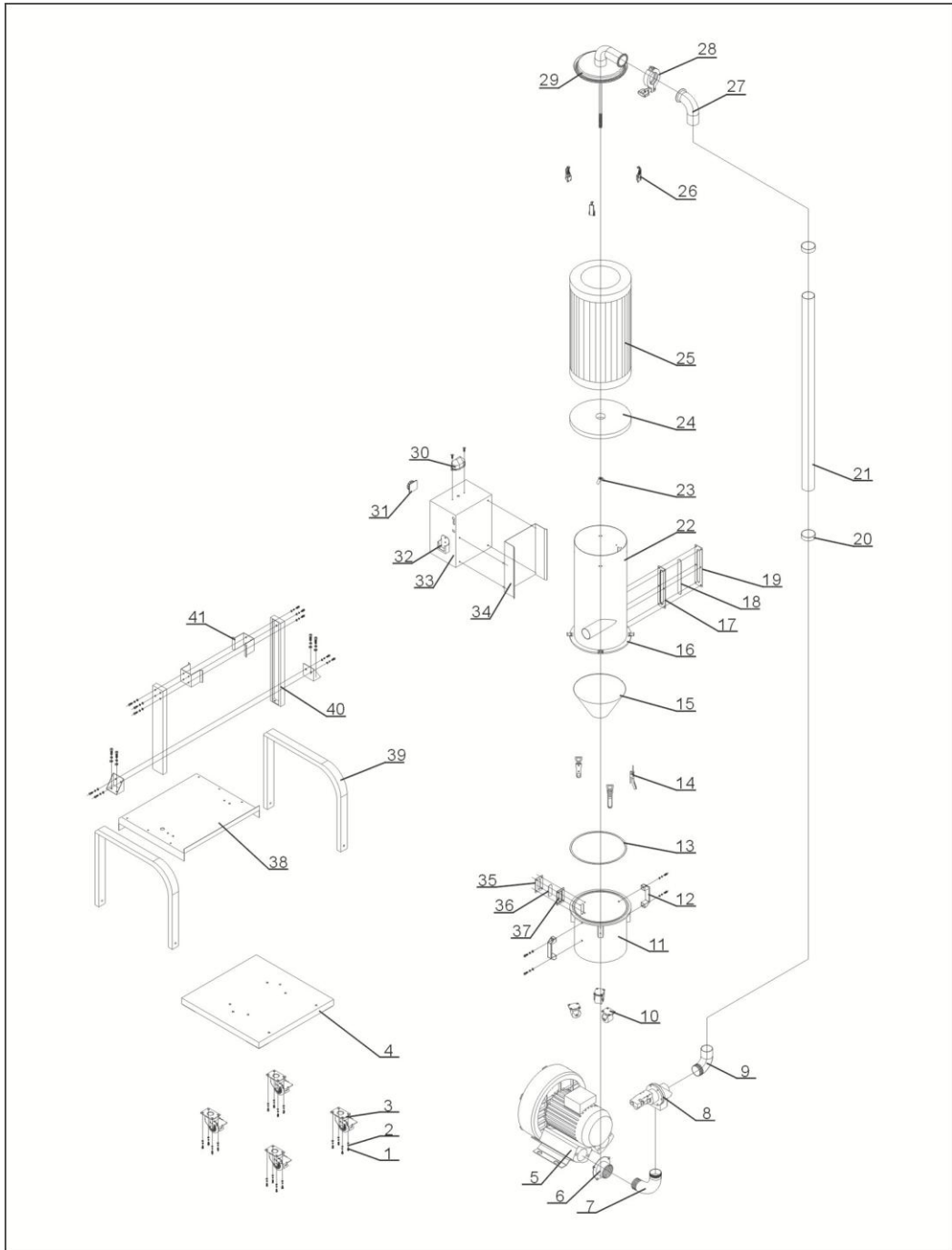
No.	Name	Part No.	No.	Name	Part No.
1	Anti-vibration pad $\Phi$ 50	YW03005000000	21	Filter barrel roll	BL19003500120
2	Flat washer 8	YW66082200100	22	Filter barrel assembly	-
3	Nut M12	YW64012100000	23	6-hole acryl	YR40001200000
4	Base	BL21003500120	24	6-hole sight glass fastene	YR40000600000
5	Air inlet pipe	BL26003506520-	25	Iron sheet of 6-hole sight glass	YW09000600000
6	Blower flange	-	26	Butterfly nut 5/16"	YW09051600000
7	Vacuum breaking diaphragm valve 1.5"	BY20015000050	27	Flat washer	YW66082200100
8	Vacuum breaking diaphragm valve piping	BL21003500420	28	Strainer fixing plate 8	BL21003500520
9	Lower welded block of stand column	-	29	Air filter ADC2	YR50181100000
10	Right stand column	BL26003506620	30	Air suction pipe	-
11	Upper welded block of stand column	-	31	Coupling clip	YW07000200000
12	Snap hook*	YW02003000400	32	Filter barrel lid assembly	-
13	High pressure blower 3.5HP	BM30053500050	33	Alarm light	YE83305100200
	High pressure blower 5HP	BM30055000050	34	Control base board	-
	High pressure blower 5HP (two-stage)	YM30433700000	35	Cover board	-
14	Dust collection bin	BL26003507021	36	Main power switch	YE10210300000
15	4-hole acryl	BH32070000050	37	Controller holder	BL26010241820
16	4-hole sight glass fastener	YR40000400000	38	Control box	BL26003505321
17	Iron sheet of 4-hole sight glass	YW09000000400	39	Line jig fixing plate Insulation material	-
18	Pipe bundle 2.5"	YW02002500000	40	Filter barrel support	-
19	Steel wired plastic Pipe 2"	YR60205000100	41	Control cabinet mounting plate	-
20	Dust collecting barrel fastener*	YR10708000100	42	Left stand column	BL26003506620

\* 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.

### 2.2.5 Assembly Drawing (SAL-7.5HP/10HP-UGP)



Remarks: Please refer to material list 2.2.6 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-4: Assembly Drawing (SAL-7.5HP/10HP-UGP)

## 2.2.6 Parts List (SAL-7.5HP/10HP/15HP-UG)

Table 2-3: Parts List (SAL-7.5HP/10HP-UG)

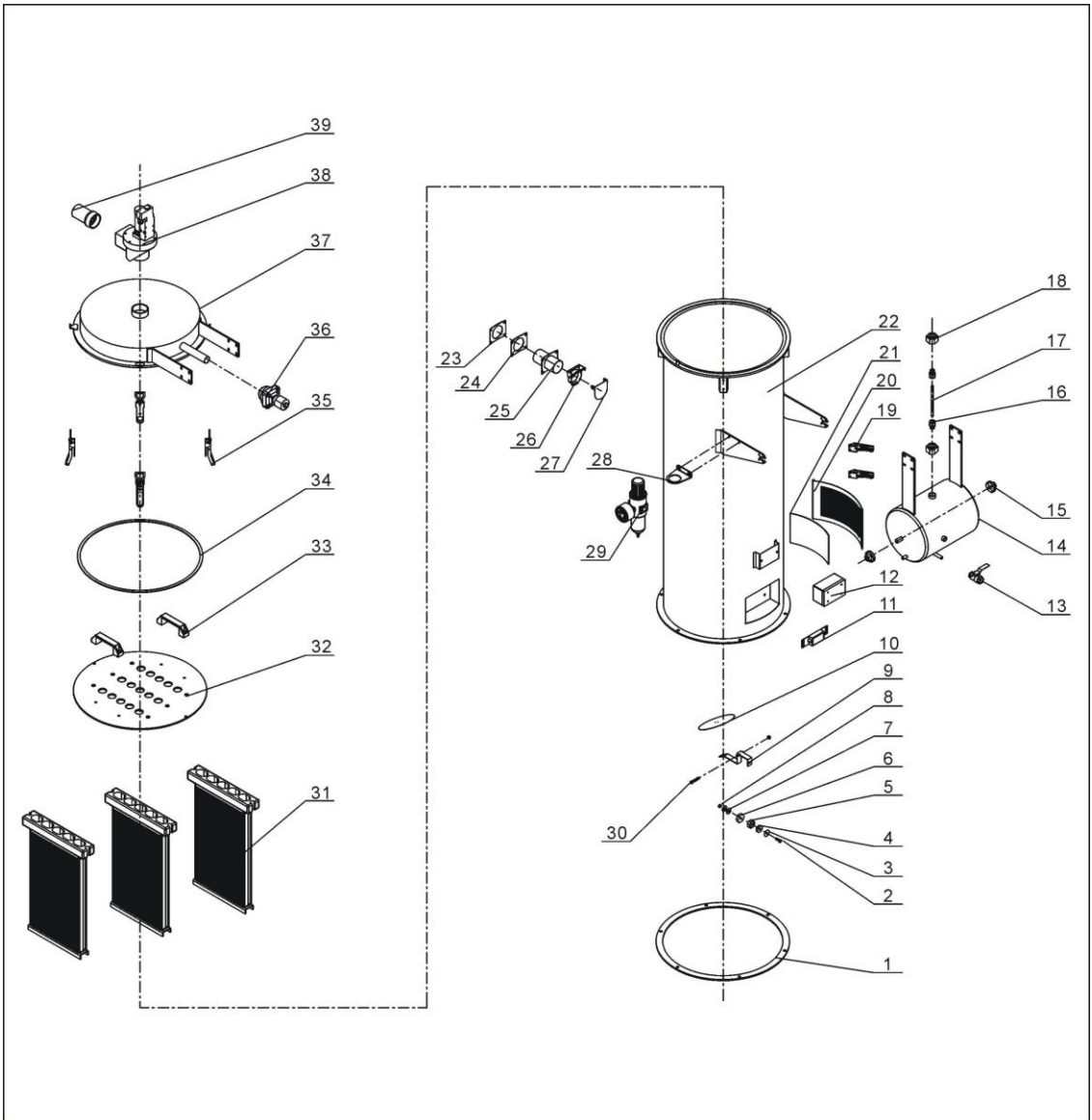
No.	Name	Part No.	No.	Name	Part No.
1	Hex. head screw	YW60084000200	20	Clip	YW02002500000
2	Spring washer	YW66081600000	21	Steel wire hose	YR60002500000
3	3" movable castor	YW03000300200	22	Filter barrel assembly	-
	3" castor with brake	YW03000300000	23	Butterfly nut	YW69051600000
4	Base	BL26007502721	24	Filter fixing plate	BL26007504720
5	High pressure blower 7.5HP	BM30075000050	25	Air filter*	YR50221400000
	High pressure blower 7.5HP single-stage	YM30635500000	26	Spring clip*	YW02003000400
	High pressure blower 10HP	BM30081000050	27	Filter barrel lid assembly	-
	High pressure blower 10HP single-stage	YM30637500000	28	2.5" coupling clip	YW07002500600
6	Blower flange	-	29	Filter barrel lid assembly	-
7	Air inlet fastener	BL26007504920	30	Alarm light	YE83305100200
8	Pneumatic diaphragm valve	BY20020000150	31	Main switch	YE10210300000
9	Pneumatic valve coupling	BL26007502020	32	Controller holder	BL26010241820
10	Castor	YW03002500000	33	Control cabinet	BL26007503521
11	Dust collecting barrel	BL26007502421	34	Control cabinet mounting plate	-
12	Aluminium handle	BW20012000040	35	Iron sheet of 4-hole sight glass	YW09000000400
13	Dust collecting barrel seal ring*	-	36	Acryl	BH32070000050
14	Large handle	YW02003000100	37	4-holes window seal ring	YR40000400000
15	Cyclone baffle	-	38	Middle board	-
16	Bottom ring of filter barrel	-	39	Supporting frame 1	-
17	6-holes window seal ring	YR40000600000	40	Pillar of filter barrel	-
18	Acryl	YR40001200000	41	Filter fixing bracket	-
19	Iron sheet of 6-hole sight glass	YW09000600000			

\* 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.

## 2.2.7 Assembly Drawing of Storage Hopper with Plate Filter



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

Picture 2-5: Assembly Drawing of Storage Hopper with Plate Filter

## 2.2.8 Parts List of Storage Hopper with Plate Filter

Table 2-4: Parts List of Storage Hopper with Plate Filter

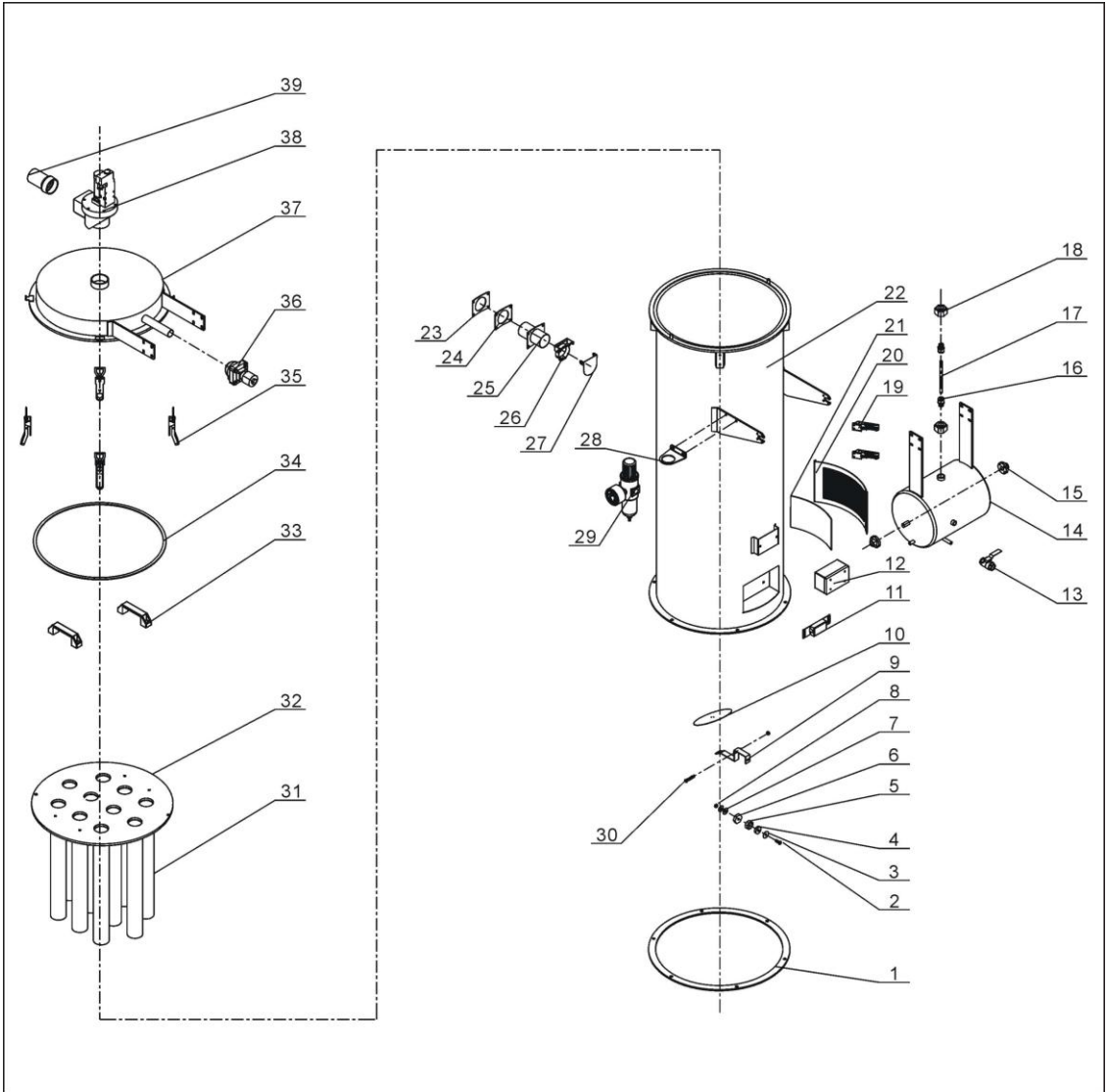
No.	Name	Part No.	No.	Name	Part No.
1	Fastener for filtering barrel	YR10010000200	21	Filter cloth	YP82050000000
2	Cruciform slot screw	YW63063000000	22	Filter barrel body	-
3	Magnet cover	BL21000600120	23	Fixing plate of suction pipe	-
4	Permanent magnet	YW90213700000	24	Fastener of the suction pipe	-
5	Magnet cover	BH12000600010	25	Suction pipe	-
6	Press block	-	26	Non-return flap	BL27002400920
7	Flat washer	YR40000400000	27	Non-return valve	-
8	Lockup nut	YW64000600200	28	Mounting bracket	YE30004200000
9	Connecting block for discharging plate	BL27006000020	29	Pressure regulating valves	YE30421400000
10	Discharging plate	BL27006001120	30	Cruciform slot screw	YW63064000000
11	The cover of sensor	-	31	Plate filter	YR50450500000
12	Control box	-	32	Flange for the filter	-
13	Ball valve 3/8"	YW50030800100	33	Square aluminum handle	BW20012000040
14	Air accumulator	BL27006000120	34	Filter barrel lid fastener	-
15	Fixing flange of the air accumulator	-	35	Big handle in new design	-
16	Air pipe coupling	YW80161200000	36	Diaphragm valve	YE30020000100
17	Air pipe	YR60161000000	37	Filter barrel lid	-
18	Copper connector	-	38	vacuum separating valve	BY20500000050
19	Spring clip**	YW02003000400	39	Air suction port coupling	BL27006001620
20	Air vent window	BL27006001320			

\* 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.

## 2.2.9 Assembly Drawing of the Storage Hopper with Bag Filter



Remarks: Please refer to material list 2.2.10 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-6: Assembly Drawing of the Storage Hopper with Bag Filter

## 2.2.10 Parts List of the Storage Hopper with Bag Filter

Table 2-5: Parts List of the Storage Hopper with Bag Filter

No.	Name	Part No.	No.	Name	Part No.
1	Fastener for filtering barrel	YR10010000200	21	Filter cloth	YP82050000000
2	Cruciform slot screw	YW63063000000	22	Filter barrel body	-
3	Magnet cover	BL21000600120	23	Fixing plate of suction pipe	-
4	Permanent magnet	YW90213700000	24	Fastener of the suction pipe	-
5	Magnet cover	BH12000600010	25	Suction pipe	-
6	Press block	-	26	Non-return flap	BL27002400920
7	Flat washer	YR40000400000	27	Non-return valve	-
8	Lockup nut	YW64000600200	28	Mounting bracket	YE30004200000
9	Connecting block for discharging plate	BL27006000020	29	Pressure regulating valves	YE30421400000
10	Discharging plate	BL27006001120	30	Cruciform slot screw	YW63064000000
11	The cover of sensor	-	31	Filtering bag SHR-P-30U-90U / SHR-P-12U	BP82774800044 BP82774000044
12	Control box	-	32	Flange for the filter	-
13	Ball valve 3/8"	YW50030800100	33	Square aluminum handle	BW20012000040
14	Air accumulator	BL27006000120	34	Filter barrel lid fastener	-
15	Fixing flange of the air accumulator	-	35	Big handle in new design	-
16	Air pipe coupling	YW80161200000	36	Diaphragm valve	YE30020000100
17	Air pipe	YR60161000000	37	Filter barrel lid	-
18	Copper connector	-	38	vacuum separating valve	BY20500000050
19	Spring clip**	YW02003000400	39	Air suction port coupling	BL27006001620
20	Air vent window	BL27006001320			

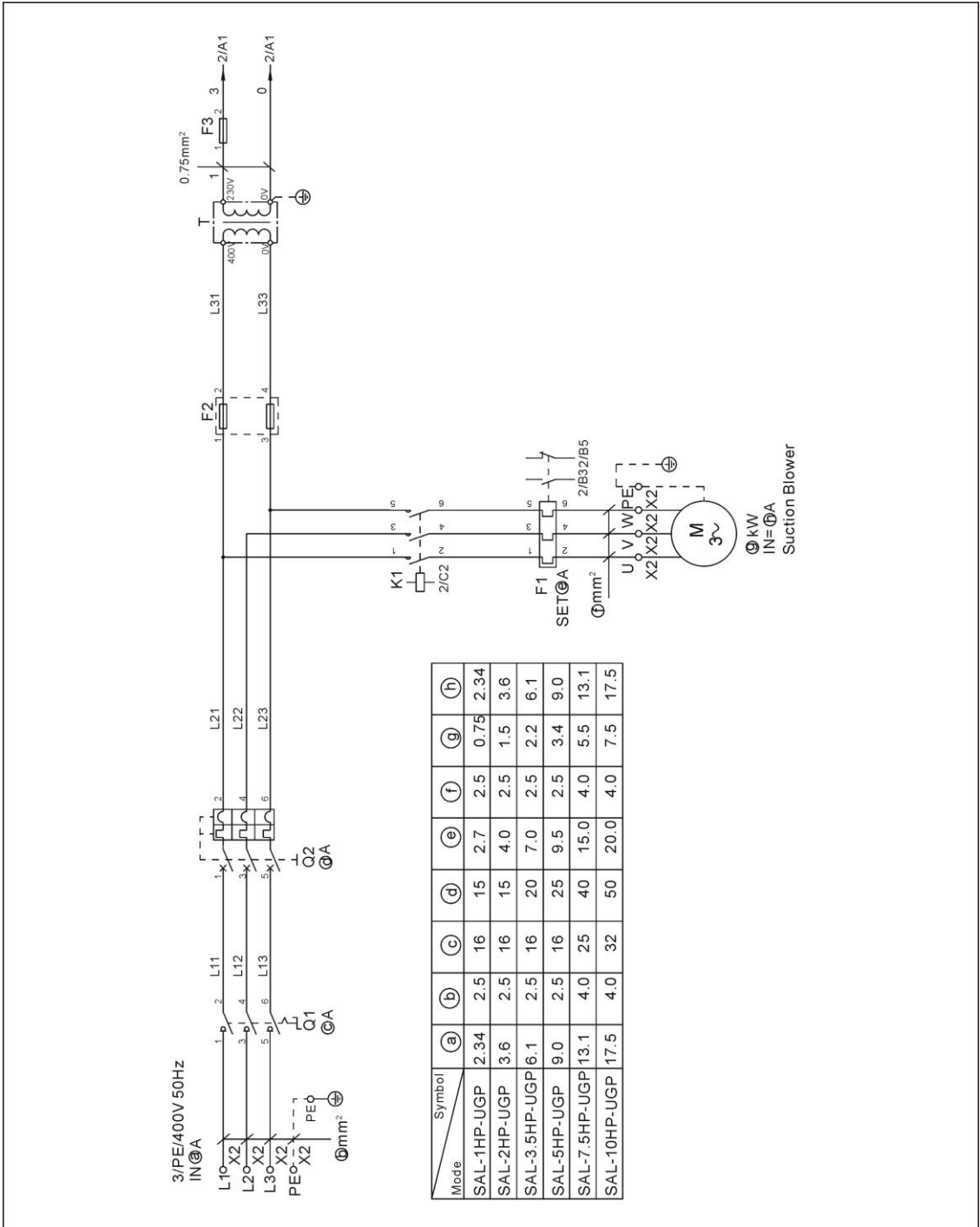
\* means possible broken parts.

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

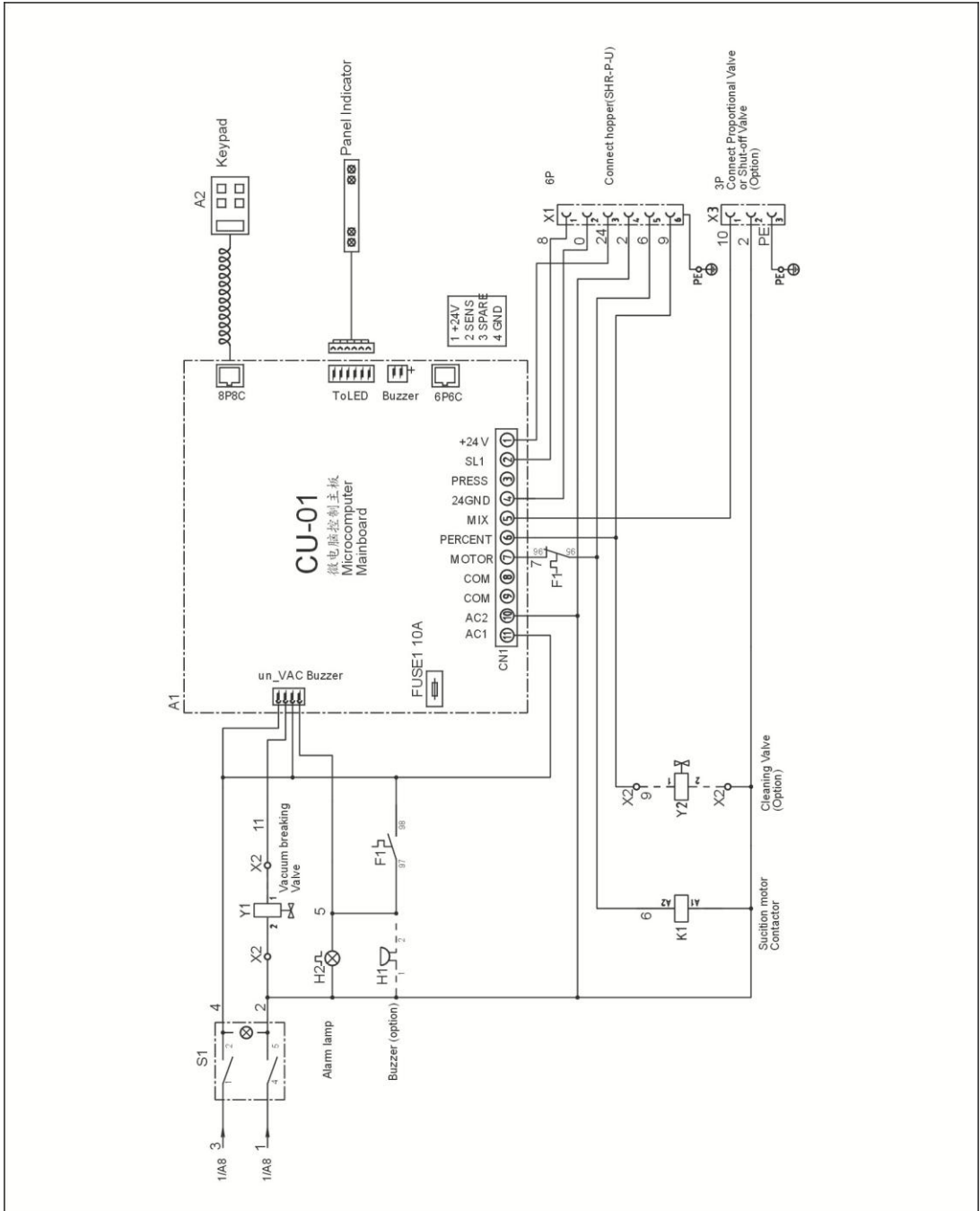
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

## 2.3 Electrical Diagram

### 2.3.1 Main Circuit (400V)

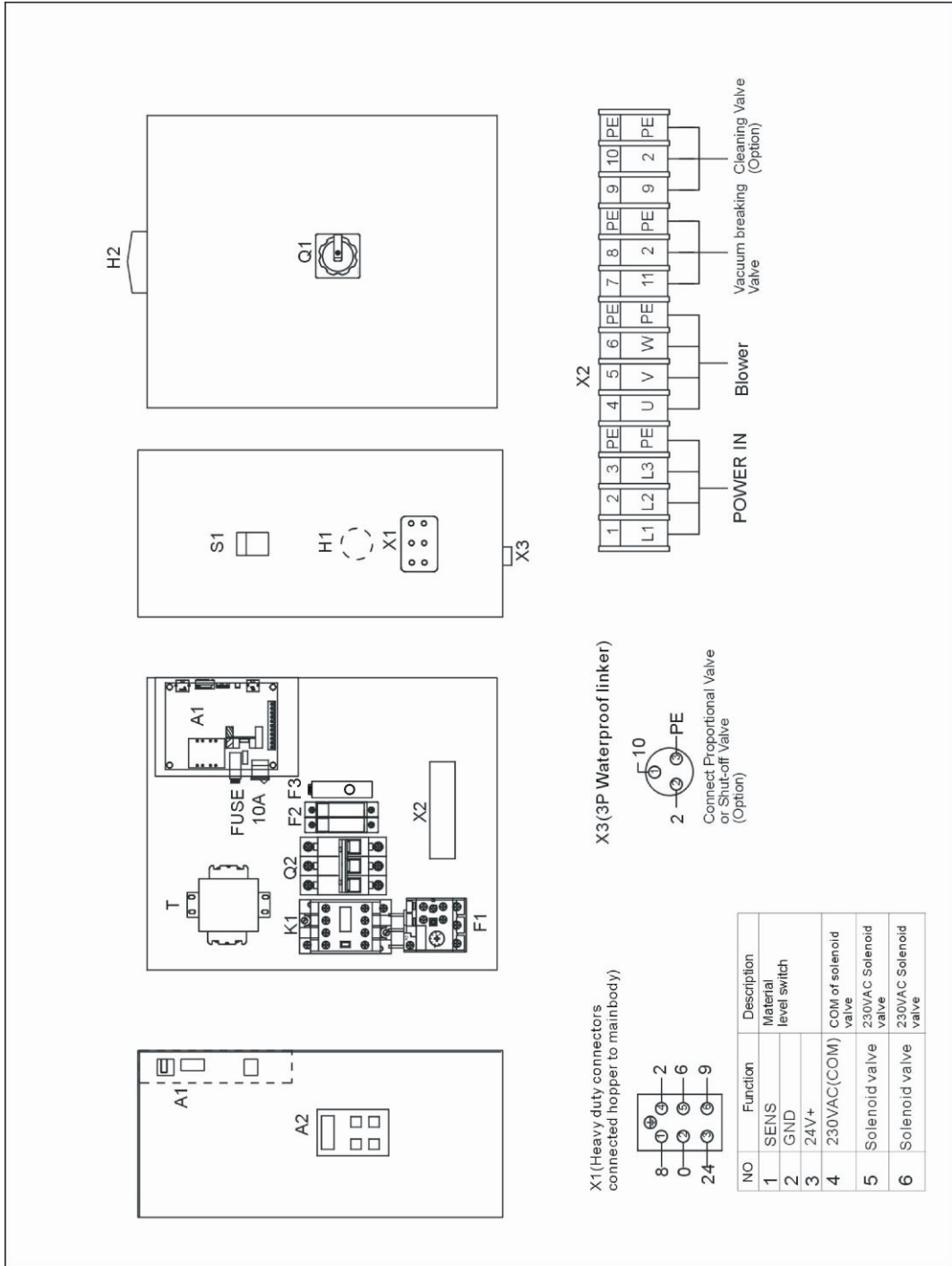


Picture 2-7: Main Circuit 1 (400V)



Picture 2-8: Main Circuit 2 (400V)

### 2.3.2 Electrical Components Layout (400V)



Picture 2-9: Electrical Components Layout (400V)

### 2.3.3 Electrical Components List (400V)

Table 2-6: Electrical Components List (SAL-1HP-UGP) (400V)

NO.	Symbol	Name	SAL-1HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230V 50/60Hz	YE00300000000
4	T	Transformer**	350mA	YE70350400000
5	F1	Overload relays	2~3.2A	YE01023200000
6	F2	Fuse box**	500V 32A	YE41032200000
7	-	Fuse**	500V 2A 10×38	YE46002000100
8	F3	Fuse box**	250V 2A	YE41001000000
9	S1	Control switch	4P (WH)	YE10210400000
10	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
11	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
12	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
13	A2	Keypad**	-	-
14	X1	Heavy duty connectors	16A 400V	YE68061640100
15	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
16	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
17	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
18	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
19	X3	Waterproof linker	250V 3P	YE62163000100
20	M	Blower**	1HP	-
21	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
22	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 (SAL-2HP-UGP) (400V)

NO.	Symbol	Name	SAL-2HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230V 50/60Hz	YE00300000000
4	T	Transformer**	350mA	YE70350400000
5	F1	Overload relays	3.2~5A	YE01032500000
6	F2	Fuse box**	500V 32A	YE41032200000
7	-	Fuse**	500V 2A 10×38	YE46002000100
8	F3	Fuse box**	250V 2A	YE41001000000
9	S1	Control switch	4P (WH)	YE10210400000
10	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
11	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
12	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
13	A2	Keypad**	-	-
14	X1	Heavy duty connectors	16A 400V	YE68061640100
15	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
16	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
17	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
18	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
19	X3	Waterproof linker	250V 3P	YE62163000100
20	M	Blower**	2HP	-
21	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
22	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 (SAL-3.5HP-UGP) (400V)

NO.	Symbol	Name	SAL-3.5HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	20A	YE40602000000
3	K1	Contactors**	230V 50/60Hz	YE00310000000
4	T	Transformer**	350mA	YE70350400000
5	F1	Overload relays	5~8A	YE01050800000
6	F2	Fuse box**	500V 32A	YE41032200000
7	-	Fuse**	500V 2A 10×38	YE46002000100
8	F3	Fuse box**	250V 2A	YE41001000000
9	S1	Control switch	4P (WH)	YE10210400000
10	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
11	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
12	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
13	A2	Keypad**	-	-
14	X1	Heavy duty connectors	16A 400V	YE68061640100
15	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
16	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
17	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
18	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
19	X3	Waterproof linker	250V 3P	YE62163000100
20	M	Blower**	3.5HP	-
21	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
22	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-9: Electrical Components List (SAL-5HP-UGP) (400V)

NO.	Symbol	Name	SAL-5HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	25A	YE40602500000
3	K1	Contactors**	230V 50/60Hz	YE00310000000
4	T	Transformer**	350mA	YE70350400000
5	F1	Overload relays	6.3~10A	YE01631000000
6	F2	Fuse box**	500V 32A	YE41032200000
7	-	Fuse**	500V 2A 10×38	YE46002000100
8	F3	Fuse box**	250V 2A	YE41001000000
9	S1	Control switch	4P (WH)	YE10210400000
10	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
11	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
12	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
13	A2	Keypad**	-	-
14	X1	Heavy duty connectors	16A 400V	YE68061640100
15	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
16	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
17	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
18	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
19	X3	Waterproof linker	250V 3P	YE62163000100
20	M	Blower**	5HP	-
21	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
22	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-10: Electrical Components List (SAL-7.5HP-UGP) (400V)

NO.	Symbol	Name	SAL-7.5HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	25A	YE10210300000
2	Q2	Circuit breakers*	40A	YE40604000000
3	K1	Contactors**	230V 50/60Hz	YE00320000000
4	T	Transformer**	350mA	YE70350400000
5	F1	Overload relays	10~16A	YE01101600100
6	F2	Fuse box**	500V 32A	YE41032200000
7	-	Fuse**	500V 2A 10×38	YE46002000100
8	F3	Fuse box**	250V 2A	YE41001000000
9	S1	Control switch	4P (WH)	YE10210400000
10	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
11	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
12	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
13	A2	Keypad**	-	-
14	X1	Heavy duty connectors	16A 400V	YE68061640100
15	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
16	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
17	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
18	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
19	X3	Waterproof linker	250V 3P	YE62163000100
20	M	Blower**	7.5HP	-
21	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
22	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-11: Electrical Components List (SAL-10HP-UGP) (400V)

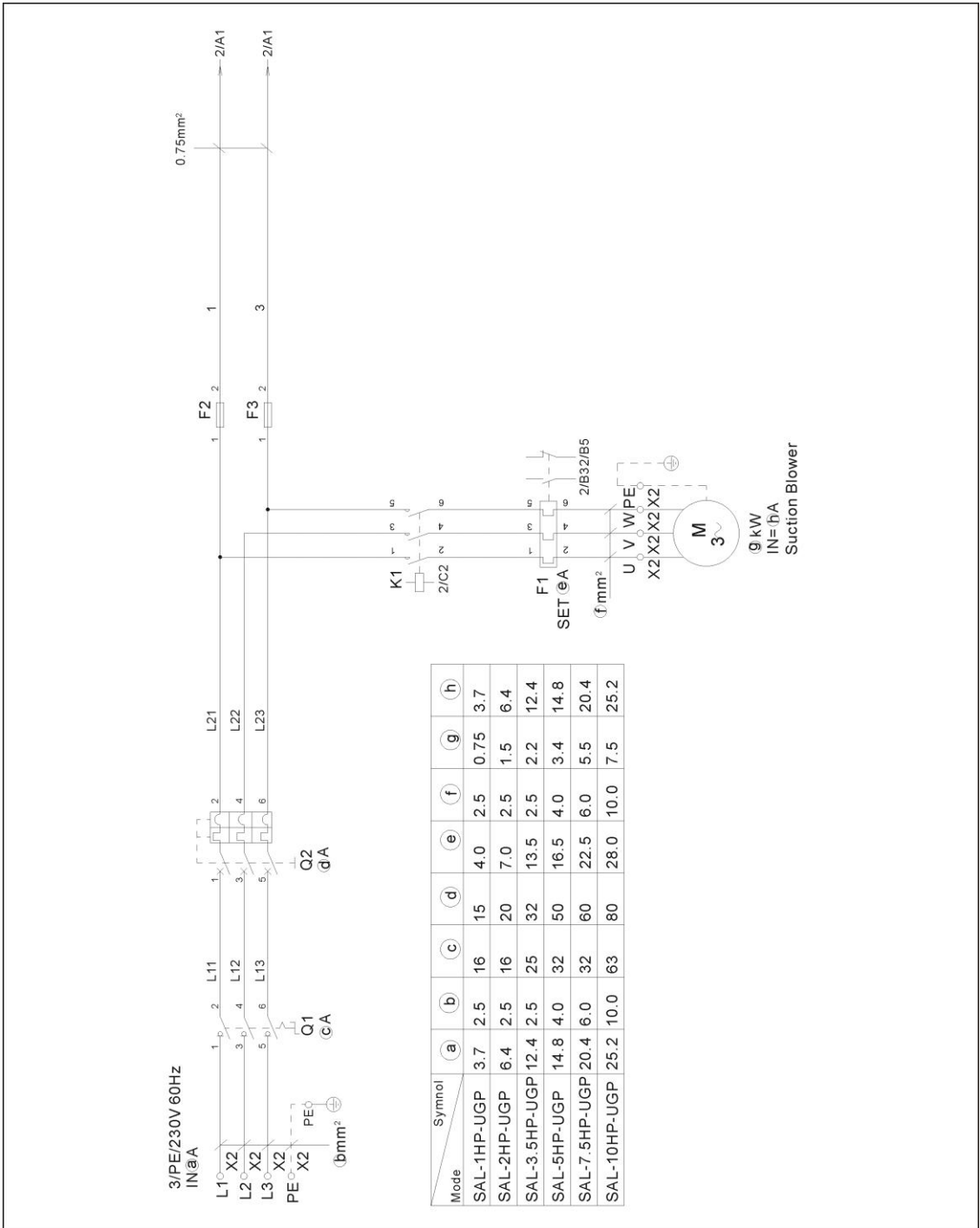
NO.	Symbol	Name	SAL-10HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	32A	YE10220300000
2	Q2	Circuit breakers*	50A	YE40605000000
3	K1	Contactors**	230V 50/60Hz	YE00330000000
4	T	Transformer**	350mA	YE70350400000
5	F1	Overload relays	12.5~20A	YE01125200100
6	F2	Fuse box**	500V 32A	YE41032200000
7	-	Fuse**	500V 2A 10×38	YE46002000100
8	F3	Fuse box**	250V 2A	YE41001000000
9	S1	Control switch	4P (WH)	YE10210400000
10	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
11	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
12	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
13	A2	Keypad**	-	-
14	X1	Heavy duty connectors	16A 400V	YE68061640100
15	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
16	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
17	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
18	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
19	X3	Waterproof linker	250V 3P	YE62163000100
20	M	Blower**	10HP	-
21	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
22	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* means possible broken parts.

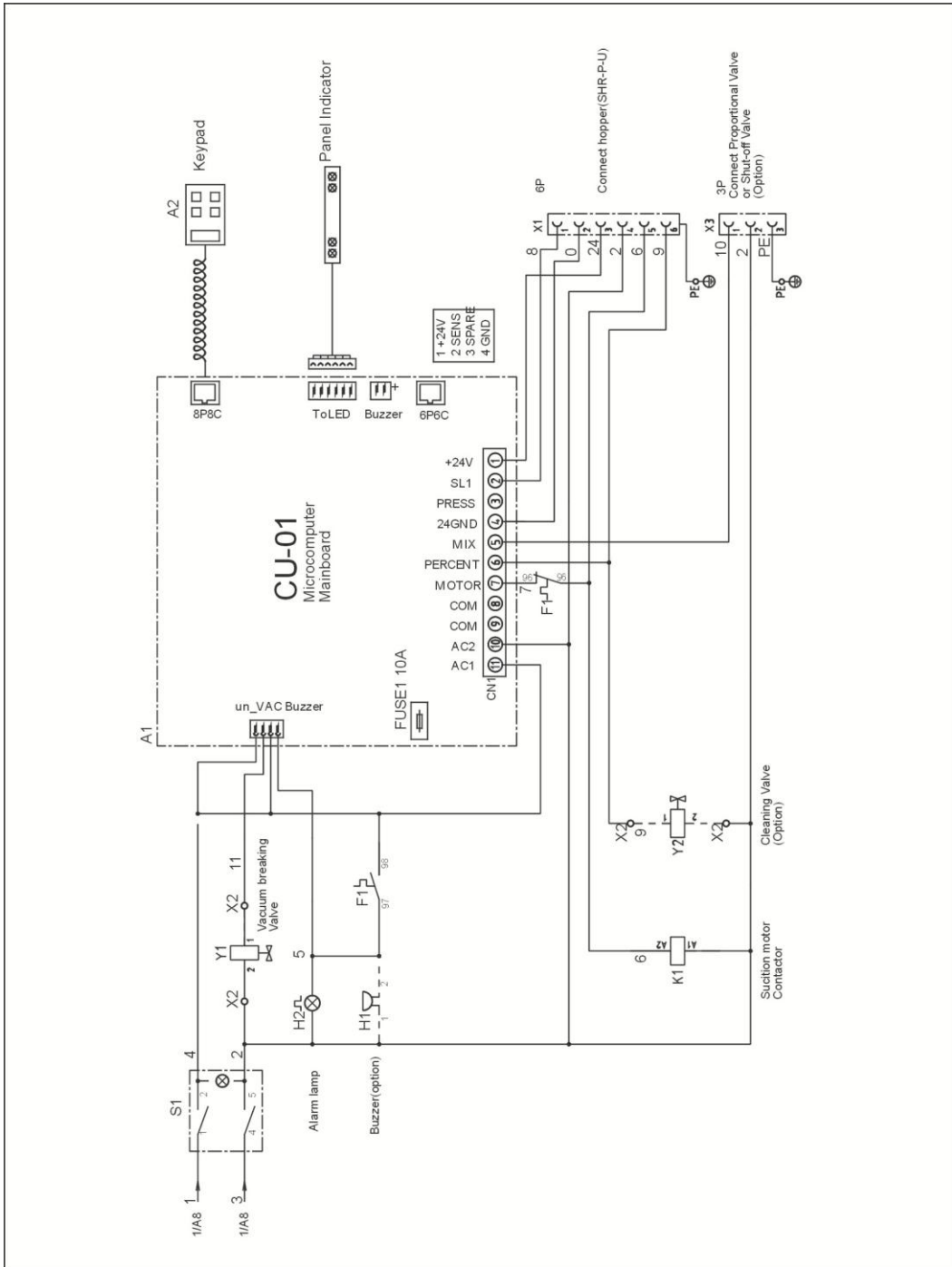
\*\* means easy broken part. and spare backup is suggested.

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 Circuit (230V)



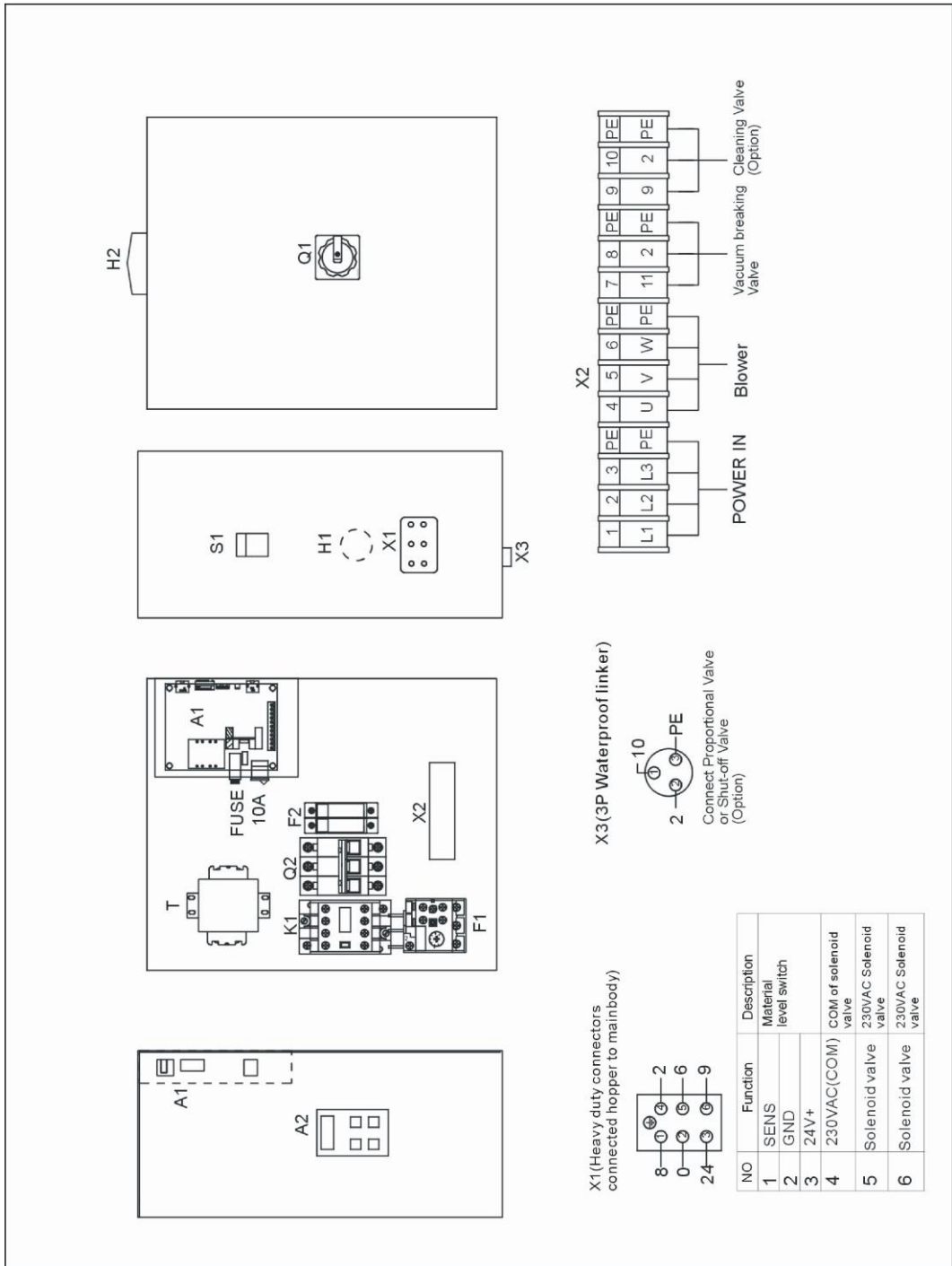
Picture 2-10: Main Circuit 1 (230V)



Picture 2-11: Main Circuit 2 (230V)



### 2.3.5 Electrical Components Layout (230V)



Picture 2-12: Electrical Components Layout (230V)

### 2.3.6 Electrical Components List (230V)

Table 2-12: Electrical Components List (SAL-1HP-UGP) (230V)

NO.	Symbol	Name	SAL-1HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230V 50/60Hz	YE00300000000
4	F1	Overload relays	3.2~5A	YE01032500000
5	F2 F3	Fuse**	250V 2A	YE41001000000
6	S1	Control switch	4P (WH)	YE10210400000
7	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
8	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
9	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
10	A2	Keypad**	-	-
11	X1	Heavy duty connectors	16A 400V	YE68061640100
12	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
13	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
14	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
15	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
16	X3	Waterproof linker	250V 3P	YE62163000100
17	M	Blower**	1HP	-
18	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
19	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-13: Electrical Components List (SAL-2HP-UGP) (230V)

NO.	Symbol	Name	SAL-2HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	20A	YE40602000000
3	K1	Contactors**	230V 50/60Hz	YE00310000000
4	F1	Overload relays	5~8A	YE01050800000
5	F2 F3	Fuse**	250V 2A	YE41001000000
6	S1	Control switch	4P (WH)	YE10210400000
7	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
8	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
9	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
10	A2	Keypad**	-	-
11	X1	Heavy duty connectors	16A 400V	YE68061640100
12	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
13	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
14	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
15	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
16	X3	Waterproof linker	250V 3P	YE62163000100
17	M	Blower**	2HP	-
18	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
19	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-14: Electrical Components List (SAL-3.5HP-UGP) (230V)

NO.	Symbol	Name	SAL-3.5HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	25A	YE10210300000
2	Q2	Circuit breakers*	32A	YE40603200000
3	K1	Contactors**	230V 50/60Hz	YE00320000000
4	F1	Overload relays	8~12.5A	YE01812500100
5	F2 F3	Fuse**	250V 2A	YE41001000000
6	S1	Control switch	4P (WH)	YE10210400000
7	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
8	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
9	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
10	A2	Keypad**	-	-
11	X1	Heavy duty connectors	16A 400V	YE68061640100
12	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
13	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
14	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
15	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
16	X3	Waterproof linker	250V 3P	YE62163000100
17	M	Blower**	3.5HP	-
18	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
19	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-15: Electrical Components List (SAL-5HP-UGP) (230V)

NO.	Symbol	Name	SAL-5HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	32A	YE10220300000
2	Q2	Circuit breakers*	50A	YE40605000000
3	K1	Contactors**	230V 50/60Hz	YE00330000000
4	F1	Overload relays	12.5~20A	YE01125200100
5	F2 F3	Fuse**	250V 2A	YE41001000000
6	S1	Control switch	4P (WH)	YE10210400000
7	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
8	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
9	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
10	A2	Keypad**	-	-
11	X1	Heavy duty connectors	16A 400V	YE68061640100
12	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
13	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
14	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
15	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
16	X3	Waterproof linker	250V 3P	YE62163000100
17	M	Blower**	5HP	-
18	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
19	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-16: Electrical Components List (SAL-7.5HP-UGP) (230V)

NO.	Symbol	Name	SAL-7.5HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	63A	YE10250400000
2	Q2	Circuit breakers*	60A	YE40606000000
3	K1	Contactors**	230V 50/60Hz	YE00340000000
4	F1	Overload relays	16~25A	YE01162500300
5	F2 F3	Fuse**	250V 2A	YE41001000000
6	S1	Control switch	4P (WH)	YE10210400000
7	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
8	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
9	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
10	A2	Keypad**	-	-
11	X1	Heavy duty connectors	16A 400V	YE68061640100
12	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
13	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
14	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
15	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
16	X3	Waterproof linker	250V 3P	YE62163000100
17	M	Blower**	7.5HP	-
18	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
19	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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 2-17: Electrical Components List (SAL-10HP-UGP) (230V)

NO.	Symbol	Name	SAL-10HP-UGP	
			Specification	Part NO.
1	Q1	Main switch*	63A	YE10250400000
2	Q2	Circuit breakers*	80A	YE40800300000
3	K1	Contactors**	230V 50/60Hz	YE00350000000
4	F1	Overload relays	25~36A	YE01253600300
5	F2 F3	Fuse**	250V 2A	YE41001000000
6	S1	Control switch	4P (WH)	YE10210400000
7	H1	Buzzer	60-250VAC 50/60Hz	YE84003500000
8	H2	Alarm lamp	230VAC 50/60Hz	YE83305100200
9	A1	Microcomputer mainboard**	230VAC 50/60Hz	-
10	A2	Keypad**	-	-
11	X1	Heavy duty connectors	16A 400V	YE68061640100
12	X2	Terminal board	2.5mm <sup>2</sup>	YE61250040000
13	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
14	-	Terminal board	2.5mm <sup>2</sup>	YE61250040000
15	-	Terminal board	2.5mm <sup>2</sup> PE	YE61253500000
16	X3	Waterproof linker	250V 3P	YE62163000100
17	M	Blower**	10HP	-
18	Y1	Solenoid vavle*	230V 50/60Hz	YE32051800300
19	Y2	Solenoid vavle*	230V 50/60Hz	YE32212000000

\* 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.

## 2.4 Description of Electrical Components

### 2.4.1 Magnetic Proximity Switch

- 1) Used for SAL-UGP series for control of material conveying and material shortage alarm.
- 2) It is installed at the bottom of material hopper.

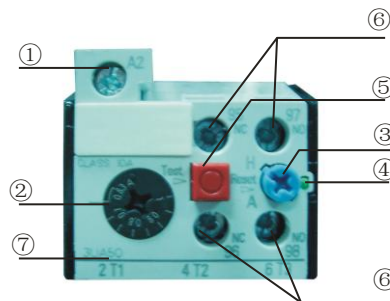


Picture 2-13: Magnetic Proximity Switch

### 2.4.2 Main Electrical Components Description

#### Overload Relay

At delivery, the overload relay is set for manual 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 2-14: 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.

### 3. Installation and Debugging



Read this chapter carefully before installation of the machine. Install the machine by following steps.

Power supply should be fixed by qualified technicians!

#### 3.1 Installation Steps

- 1) Put the main body of the machine at a proper place and connect it with power supply.
- 2) Install material hopper onto the dryer and connect it with signal wires from the main body.
- 3) Use steel wire hose to connect the suction mouth of vacuum hopper to the relative suction mouth of dust-suction main machine, in turn connect the suction mouth of dust-suction main machine to the suction mouth of vacuum hopper.
- 4) Connect high pressure air pipe with air supply (pressure at 5~6kgf / cm<sup>2</sup>).

##### 3.1.1 Power Supply

SAL-UGP series should be connected to 3Φ, 400V, 50 / 60Hz power and earth.



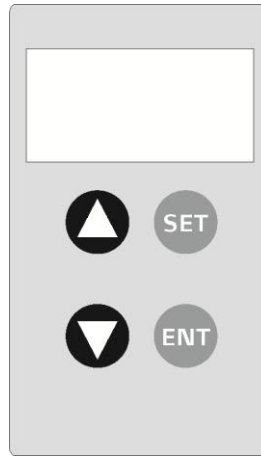
Make sure main switch is turned off before you connect the power.

## 4. Application and Operation








### 4.1 Start / Stop of the Machine

The start / stop of SAL-UGP series is controlled by main switch in front of electrical control box and start / stop switches on the side.

### 4.2 Keys on the Control Panel



Picture 4-1: Keys on the Control Panel

-  Choose an item or cancel current input.
-  Choose an item and store current input value. It is also used to clear the alarm when alarm occurs.
-  Increase setting value.
-  Decrease setting value.
-  +  Stop the machine in 3 sec. Press  to resume operation.




Notes!

It will back to start status when power is connected again.

### 4.3 Parameter Setting

#### 4.3.1 Enter Basic Setting Mode

During normal operation, press  for about 1 sec. to enter [F.01] setting screen. [F.01] and its value show alternatively after 0.8 sec. If you want to set

[F.04], the system will show [F.99]. [F.99] and its value will show alternatively after 0.8 sec. Input correct password to enter [F.01], then press  to switch to [F.04].

#### 4.3.2 Modify a Parameter

Press  to increase parameter value. Keep on pressing  to quickly increase it's value until the maximum of it. Press  to decrease parameter value. Keep on pressing  to reduce it's value until the minimum of it. Press  to confirm parameter setting to store its value into the microprocessor and enter next setting item. If you did not change anything, press  to enter into next setting item. Press  to cancel parameter setting and return back to current setting screen. If you did not change anything, press  to enter into next setting item.

#### 4.3.3 Finish Parameter Setting

Keep on pressing  for about 1 sec. to return to normal display mode. If you did not touch any keys for 20 seconds, the machine will return to normal display mode without storing any changes of the parameter.

#### 4.3.4 Basic Parameter List

Para. code	Functions	Value		Note
F.01	<p>Material conveying time</p> <p>Material conveying time can be controlled and set by two manners:</p> <ol style="list-style-type: none"> <li>[F.01] is defined as material conveying time (DIP8 is off). It is stored in the microprocessor. It's value could be seen when setting [F.01] and can be revised and re-stored in the microprocessor.</li> <li>Set conveying time by DIP switch (DIP8 is on) on the control box. DIP switch is working according to a binary system. Material conveying time set by DIP switch will not be stored in the micro-processor, but the machine will read the value each time you start the machine. You can check the value of [F.01] for conveying time set by DIP switch. It can be revised and stored into the microprocessor through control panel. The machine will read set value as material conveying time each time you start the machine.</li> </ol> <p>Action code: S.02</p>	10 seconds	5-127 seconds	F.01
F.02	<p>Material mixing time</p> <p>This function will be started simultaneously with material conveying. It is set as a percentage of conveying time: it's value is calculated by following formula: conveying time×[F.02]%. Set it's value as 0 to disenable it.</p>	0% Not enabled	0-100%	F.02
F.03	<p>Material mixing frequency setting</p> <p>[F.02] means to start material mixing after a certain times of material conveying. Set [F.02] as 1, which means to start material mixing at every material conveying. Set it's value as 0 to cancel material mixing.</p>	1	1-9	F.03
F.04	<p>First layer lockup</p> <p>When to enter first layer setting, if [F.04] is not set as 0, then the screen will switch to [F.99], and require you to input a password before setting [F.01]. If the password is incorrect, the screen will return to normal display mode. Set [F.04] as 0 to cancel the password.</p>	0	0-999	F.04



At delivery, the machine was not coded. You can set a code for the machine. In case of losing the code, please contact our company.

## 4.4 Process Setting

### 4.4.1 Enter into Process Setting Mode

Start the machine, press **SET** for about 1 sec. To enter basic setting mode. Then press **SET** and **ENT** at the same time to enter parameter [F.05] setting. [F.05] and it's value show alternatively. If you have set [F.12], the system will switch to

[F.98]. Enter correct password to enter [F.05], then press **SET** to switch to [F.12].

#### 4.4.2 Modify a Parameter

Press **▲** to increase parameter value. Keep on pressing **▲** to quickly increase it's value until the maximum of it. Press **▼** to reduce parameter value. Keep on pressing **▼** to reduce it's value until the minimum of it. Press **ENT** to confirm parameter setting and store it's value into the micro-processor and to enter next setting item. If you did not change anything, press **SET** to enter into next setting item. Press **SET** to cancel parameter setting and return back to current setting screen. If you did not change anything, press **ENT** to enter into next setting item.

#### 4.4.3 Finish Parameter Setting

Keep on pressing **SET** for about 1 sec. to return to normal display mode. If you did not touch any keys for 20 secretary, the machine will return to normal display mode without storing any changes of the parameter.

#### 4.4.4 Process Parameter List

Para. code	Functions	Value		Note
F.05	Material conveying delayed time The delayed time between first material conveying and later conveying action. 0 stands for no delaying time. Action code: S.06	0 seconds	9990 seconds	10 seconds for unit
F.06	Filter screen cleaning time before material conveying 0 stands for no filter cleaning action. Action code: S.01	3 seconds	0-99 seconds	-
F.07	Filter screen cleaning time after material conveying 0 stands for no filter cleaning action. Action code: S.03	3 seconds	0-99 seconds	-
F.CT	Cycle of mesh cleaning Mesh cleaning is done after several times' suction.	3 seconds	1~99 seconds	-
F.08	Check material discharging time Check material discharging time after material conveying. If there are directive signals, then the machine gets into next procedure. If not, add 1 to material shortage counter. When this situation continues until material shortage times exceed the setting value of [F.09], the machine will raise the alarm. Action code: S.04	10 seconds	0-99 seconds	-

Para. code	Functions	Value		Note
F.09	<p>Material shortage alarm</p> <p>If there are not any materials for discharging for several times, the machine would sound the alarm.</p> <ol style="list-style-type: none"> <li>1. The alarm will be reset if the machine can get material again.</li> <li>2. Press ENT on the control panel to clear the alarm</li> <li>3. Restart the machine.</li> </ol> <p>Action code: A.01</p>	3	1-9	-
F.10	<p>Material shortage counting and stop of the machine</p> <p>If there are not any materials for discharging, the machine would stop and sound the alarm.</p> <ol style="list-style-type: none"> <li>1. Press ENT to clear the alarm.</li> <li>2. Restart the machine. Set it's value as 99 to cancel this function.</li> </ol> <p>Action code: A.04</p>	99	[F.09]-99	-
F.11	<p>Setting waiting time before or after loading</p> <p>Set screen clean as 0, for either before or after each loading. So it is waiting to be shut before loading. If set 0 for screen clean after loading, so it is waiting to be shut after loading. Set as 0, which indicates no waiting before or after loading.</p>	30	999	-
F.12	<p>Second layer lockup</p> <p>When to enter second layer setting, if [F.12] is not set as 0, then the screen will switch to [F.98], and require you to input a password before setting [F.05]. If the password is incorrect, the screen will return to normal display mode. Set [F.05] as 0 to cancel the password.</p>	0	999	-



At delivery, the machine was not coded. You can set a code for the machine. In case of losing the code, please contact our company.

## 4.5 Special Process Setting

### 4.5.1 Enter into Special Step Setting Mode

Enter into setting mode according to the steps described in 4.4. Press **SET** to choose [F.11], then press **SET** for about 1 sec. to enter into the setting of [F.13]. [F.13] and it's value will show alternatively.

### 4.5.2 Modify a Parameter

Press **▲** to increase parameter value. Keep on pressing **▲** to quickly increase it's value until the maximum of it. Press **▼** to decrease parameter value. Keep on pressing **▼** to reduce it's value until the minimum of it. Press **ENT** to confirm parameter setting and store it's value into the microprocessor and to enter next setting item. If you did not change anything, press **ENT** to enter into

next setting item. Press **SET** to cancel parameter setting and return back to current setting screen. If you did not change anything, press **SET** to enter into next setting item.

#### 4.5.3 Finish Parameter Setting

Keep on pressing **SET** for about 1 sec. to return to normal display mode. If you did not touch any keys for 20 seconds, the machine will return to normal display mode without storing any changes of the parameter.

#### 4.5.4 Parameter List of Special Process Setting

Para. code	Functions	Value		Note
F.13	<p>Buzzer working mode</p> <p>Setup buzzer working mode</p> <p>0: uninterrupted sounding</p> <p>1: Slow, interrupted sounding</p> <p>2: Quick, interrupted sounding</p>	0	0-2	-
F.14	<p>Set buzzer sounding period</p> <p>Set buzzer sounding period: Set [F.13] as 999 to cancel buzzer sounding function.</p>	999	999	-
F.15	<p>First carbon brush alarm</p> <p>When carbon brush working hours [F.17] get to a certain point, [F.14] will raise the alarm. Please replace the carbon brushes. The alarm will last 5 minutes, and will repeat every 15 minutes until [F.17] set as 0. Set [F.14] as 0 to cancel this function.</p> <p>Action code: A.05</p>	80 Unit 10 Hrs	0-999	-
F.16	<p>Second carbon brush alarm</p> <p>When carbon brush working hours [F.17] get to a certain point, [F.15] will raise the alarm. Please replace the carbon brushes. The alarm will last 5 minutes, and will repeat every 15 minutes until [F.17] set as 0. Set [F.15] as 0 to cancel this function.</p> <p>Action code: A.06</p>	100 Unit 10 Hrs	[F.14]-999	-
F.17	<p>Third carbon brush alarm</p> <p>When carbon brush working hours [F.17] get to a certain point, [F.16] will raise the alarm until [F.17] set as 0. Please replace the carbon brushes. Set [F.16] as 0 to cancel this function.</p> <p>Action code: A.07</p>	110 Unit 10 Hrs	[F.15]-999	-

Para. code	Functions	Value		Note
F.18	Carbon brush usage record Checking and clear the working hours of carbon brush. Clear carbon brush working hours: set its value as 0, press ENT to confirm.	0	0-999 Set its value as 0 to clear the record.	-
F.19	Motor startup protective switch Set to on or off the motor startup protective switch 0: if it is on, which indicates slow speed protection of the start up loading motor 1: if it is off, which indicates full speed protection of the start up loading motor.	0	0: soft start on 1: soft start off	-
F.20	Motor Delay Stop Time When motor delay stop, vaccum breaking valve is opened and suck up air, to cool conveying blower and avoid starting/stopping frequently. Olly suitable for SAL-UG/UGP. Not suitable for SAL-U. Must be set to "0".	0	0~999 seconds	-

## 4.6 Explanation of Operation Procedures


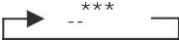


### 4.6.1 Operation Procedures




The machine can work without control panel connected with it. The following is an explanation of operation procedures.

Indicators	Action code	Operation procedures	Relative parameter	Parameter description	
				Default	Range
Red light flickering	S. 01	Filter cleaning.	F. 06	3 seconds	0-99 seconds
	S. 02	Material suction.	F. 01	10 seconds	5-127 seconds
		Masterbatch suction.	F.02	0%	0-100%
			F. 03	3	1-9 times
	S. 03	Filter cleaning and material falling into storage bin.	F. 07	3 seconds	0-99 seconds
	S. 04	Wait until materials completely discharged.	F. 08	10 seconds	0-99 seconds
	S. 05	Check alarm information (instantly completed, no display on control panel.)	-	-	-
	S. 06	Delayed time for material conveying.	F. 05	0 seconds	0-999 seconds
Green light shines	-	Time for material conveying confirmation.	-	-	-

## 4.6.2 Alarms

Alarm information display and relative solutions.

Red alarm light	Code	Possible reasons	Solutions	Remarks
	[A.01]	Material shortage alarm [F.9] 1. Material loading time is too short. 2. Can not get any materials. 3. Conveying hose blocked, 4. Not enough suction power.	1. Add material. 2. Increase material conveying time. 3. Stop the machine and check the conveying hose. The alarm will be cleared when the machine can again load the material, or by pressing ENT on the control panel or by cutting off power supply.	
	[A.03]	Filter trouble alarm 1. Filter blocked	1. Stop the machine to clean filter screen or replace it. The alarm will be cleared by cutting off the power or press ENT on the control panel.	
	[A.04]	Non-operation alarm [F.10] 1. After a certain period time of material shortage, the machine will stop working.	Please refer to the solutions of [A.01] or modify the value of [F.10]. The alarm will be cleared by cutting off the power or press ENT on the control panel. Please fix the control panel onto the machine and modify its value.	
	[A.05]	First carbon brush alarm When carbon brush working hours [F.17] gets to a certain point(800 hrs), [F.14] will raise the alarm.	Please prepare the carbon brush for replacement. The alarm will last for 5 minutes. The machine will repeat the alarm every 15 minutes until you reset carbon brush working hour.	

Red alarm light	Code	Possible reasons	Solutions	Remarks
	[A.06]	<p>Second carbon brush alarm When carbon brush working hours [F.17] gets to a certain point (1000 hrs), [F.15] will raise the alarm.</p>	<p>Please replace the carbon brush and reset carbon brush working hour. The alarm will last for 5 minutes. The machine will repeat the alarm every 15 minutes until you reset carbon brush working hour.</p>	
	[A.07]	<p>Third carbon brush alarm When carbon brush working hours [F.17] gets to a certain point (1100 hrs), [F.16] will raise the alarm.</p>	<p>Please replace the carbon brush and reset carbon brush working hour. The machine won't stop the alarm until carbon brush working hour is reset.</p>	
	[A.08]	<p>Data can not be stored into EEPROM.</p>	<p>Please contact our company to replace the PCB.</p>	

--Denotes the light is off, \*Stands for flash of the light.

## 5. Trouble-shooting

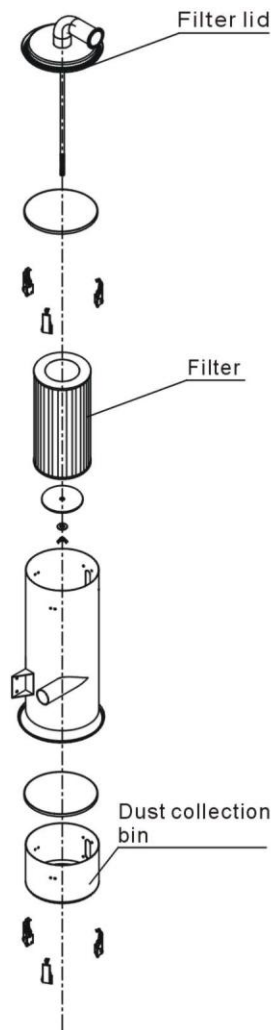
Failures	Possible reasons	Solutions
Motor does not work long after material discharge.	1. Main power switch or control switch is off or poorly connected.	1. Turn on main switch or control switch and make sure they are well connected.
	2. Poor contact or broken of magnetic proximity switch / capacitor contactor.	2. Repair or replace.
	3. Signal wire is broken.	3. Reconnect signal wire.
Motor can not fully load material hopper, or machine sounds material shortage alarm.	1. No material left for conveying.	1. Add the material.
	2. Air pipe leakage.	2. Firmly lock the air pipe or replace.
	3. Filter is jammed.	3. Clean the filter.
Motor can not work.	Motor is burn out.	Repair or replace.
Fuse melts when turn on the machine.	Short circuit or motor is burn out.	Check electrical circuit.
Motor keeps on working after material hopper is full-loaded.	PCB problems.	Repair or replace.

## 6. Maintenance and Repair



All the repair work should be done by professionals in order to prevent personal injuries and damage of the machine.

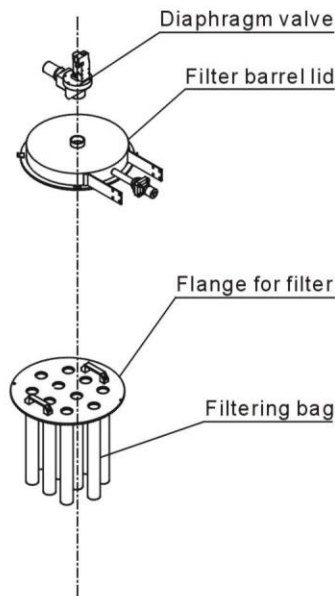
Main body, Filter Inspection and Storage Hopper Cleanup



1. Open the filter lid and remove the filter, blow away the dust on it with a high pressure air gun from inside to outside.
2. Clean the filter.  
Period: daily
3. Clean the dust collection bin.  
Period: daily

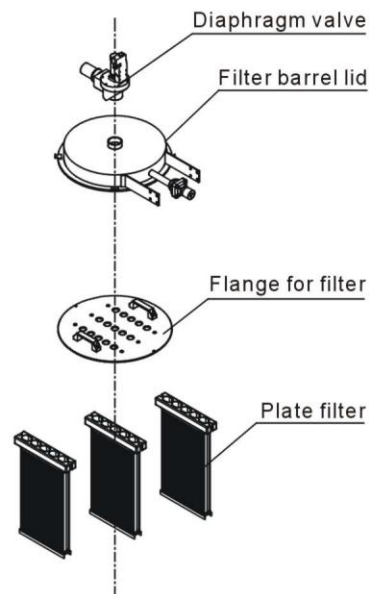
### Cloth bag filter filter

1. Loosen the snap hook of the tank, remove the filtering barrel lid, take out the plate filter and eliminate the dust on it.
2. Clean the plate filter. Period: daily



### Plate filter

1. Loosen the snap hook of the tank, remove the filtering barrel lid, take out the plate filter and eliminate the dust on it.
2. Clean the plate filter. Period: daily



### 6.1 Material Hopper

Clean material hopper periodically or when you find conveying capacity reduced. Please loose the spring clips, take down the hopper lid, and take out filter screen. Remove all the dusts and fines on filter screen and inside of material hopper.

### 6.2 Main Body

Take out the air filter to make it clean periodically or when you find conveying capacity reduced. Always keep smooth air flow through air filter to maintain good conveying capacity.

Cleaning steps:

- 1) Loosen spring clips of filter cover and butterfly screws, and take out the filter.
- 2) Remove the dusts adhering to the filter to keep good suction power.

### 6.3 Reed Switch, Photoelectric Switch

Reed switch

When the indicator of the reed switch doesn't work, check the switch contact and replace with a new one if it doesn't work well.

- 1) Unscrew the outer box of the sensor.
- 2) Adjust the depth or move position the sensor inserted into the box, the indicator lamp lights means that magnetism has been detected and the switch is well worked.
- 3) If magnetism cannot be detected by magnets, please check whether the switch is bad contacted or damaged.

Photoelectric Switch

When the indicator of the photoelectric switch doesn't work, check the switch contact and replace with a new one if it doesn't work well.

- 1) Check whether the wires are bad contacted.
- 2) Please replace with a new one if the switch is damaged.

### 6.4 Weekly Checking

- 1) Check if there are broken electrical wires or not. Replace the broken wires immediately.
- 2) Check the function of the keys on the control panel.
- 3) Check if screws at material inlet and the seal ring are loose or not.



Note!

Cut off power supply when you check electrical wires.

### 6.5 Monthly Checking

- 1) Check if the clips of hopper lid is loose or not.

- 2) Check if the discharging plate is out of shape. If it is, please replace it.
- 3) Check the contact performance of magnetic proximity switch. If there is any poor contact, please adjust it or replace it.

## 6.6 Maintenance Schedule

### 6.6.1 About the Machine

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

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

### 6.6.2 Installation & Inspection

- Check if the takeover pipe has been correctly connected.
- Check if that pipe is locked up by clips.
- Check if mounting base is locked tightly.

#### Electrical Installation

- Voltage: \_\_\_\_\_ V \_\_\_\_\_ Hz
- Fuse melting current: One-phase: A \_\_\_\_\_ Three-phase: \_\_\_\_\_ A
- Check phase sequence of power supply.

### 6.6.3 Daily Checking

- Check main power switch.
- Check filter mesh.
- Check working status of the motor.

### 6.6.4 Weekly Checking

- Check all the electrical cables.
- Check if there are loose connections of electrical components.
- Check the screw of the feed-in pipe's flange is loosed or not.
- Check the air filter.

### 6.6.5 Monthly Checking

- Check the spring lock on the hopper cover is loosed or not.
- Check the reversal stop piece is deformed or not.
- Check the performance of magnetic proximity switch/photoelectrical sensor.