SAL-UG124 Series

"One-to-Four" Separate Hopper Loader

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SHINI

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1. General Description

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

"One-to-Four" Separate hopper loader are designed and developed on the basis of original European separate-vacuum hopper Loader. They feature more functions, easy to operate, and convenient to install. This model, equipped with a high pressure blower and four SHR-U-S type European central vacuum hoppers, is applicable to four dehumidifying and drying machines (dehumidifying dryer "SDD") or one gravimetric blender "SGB" to process plastic materials. Besides that , it can also realize the "One-to-Four" way of conveying materials to different moulding machines or hoppers to greatly lower the cost.

Model: SAL-5HP-UG124-D Main Unit + SHR-12U-S Hopper

1.1 Coding Principle

SAL - xxHP - UG124 - xx

- xx → Option*
- UG124 → UG: European Type and Separating; 124: 1 to 4 Conveying
- xxHP → Motor Power (HP)
- SAL → Shini Auto Loaders

Note:* D=Double-stage Blower CE=CE Conformity

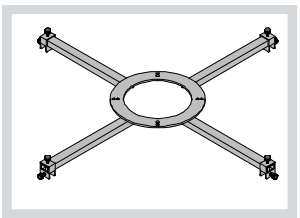
1.2 Feature

1) Standard configuration

- "One-to-Four" hopper loader can greatly lower the cost.
- The dust collective chamber features a cyclone separator and a dust collective bin to effectively reduce the load of the filter.
- Separate hopper receivers are designed in European style.
- Separate dust collector is convenient for dust cleaning.
- Main unit equips with faults and motor overload indicators to show faults fast.
- The main body of SAL-2HP~5HP equips with vacuum-breaking valve and SAL-7.5HP~10HP main body equips with vaccum valve to protect the blower.
- Standardly equipped with warning lamp as the alarm device.
- CE safety plug ensures safe and reliable operation.

2) Accessory option

- Standard Collective Hopper SCH-6U/12U/24U and Euro Insulation Collective Hopper SICH-6U/12U/24U are optional; add this collective hopper at bottom of the magnetic-proximity switch hopper can be directly mounted on the injection molding machine.
- 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, except for SAL-UGP series.)
- Optionally provide multi-functional installation frame HMB-900 with 900 mm largest dia. adjusting range



HMB-900

for selection.
- Buzzer available as an option.

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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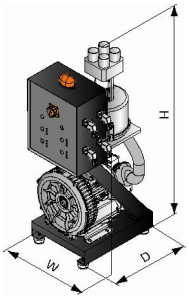
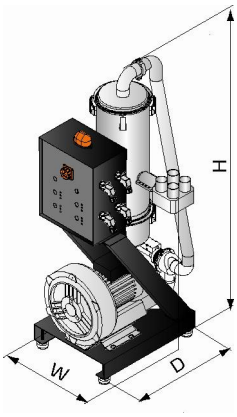
1.3 Technical Specifications

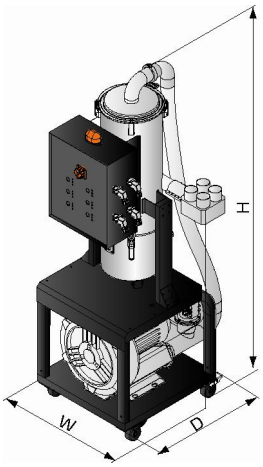
1.3.1 Technical Specifications (Main Unit)



Picture 1-1: SAL-2HP-UG124

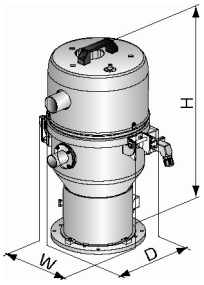


Picture 1-2: SAL-3.5HP/5HP-UG124



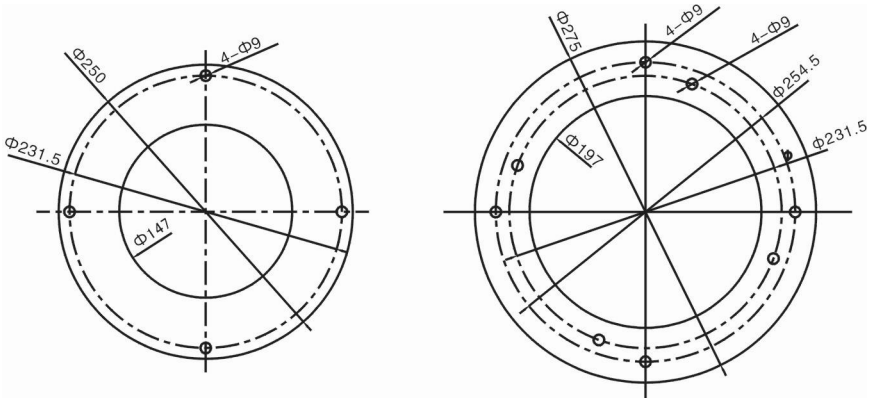
Picture 1-3: SAL-7.5HP/10HP-UG124

1.3.2 Hopper



Picture 1-4: Hopper SHR-U-S Technical Specifications

1.3.3 SHR-U-S Hopper Base Installation Size



Picture 1-5: Hopper Base Installation Size

1.3.4 Specifications

Table 1-1: Specifications

Main Unit				Hopper Receivers				Loading Pipe Dia. (Inch))	Air Suction Pipe Dia.(Inch)	Loading Capacity (kg / hr) r)
Model	Motor Power (kW) (50 / 60Hz)	Dimensions (mm) H×W×D	Weight (kg)	Applicable Model	Capacity (L)	Dimensions(mm) H×W×D	Weight (kg)			
SAL-2HP-UG124	1.5 (3Φ)	1050×430×555	60	4×SHR-3U-S	6	585×260×385	7.5	1.5	2	550
SAL-3.5HP-UG124	2.4 (3Φ)	1380×505×615	130	4×SHR-6U-S	12	555×305×430	9	1.5	2	850
SAL-5HP-UG124	3.7 (3Φ)	1380×505×615	175	4×SHR-12U-S	12	616×335×475	9	1.5	2	1200
SAL-5HP-UG124-D	3.7 (3Φ)	1380×700×515	180	4×SHR-12U-S	12	616×335×475	9	1.5	2	1350
SAL-7.5HP-UG124	5.5 (3Φ)	1830×660×740	181	4×SHR-24U-S	24	826×335×475	11	2	2.5	1450
SAL-7.5HP-UG124-D	5.5 (3Φ)	1830×875×740	183	4×SHR-24U-S	24	826×335×475	11	2	2.5	1600
SAL-10HP-UG124	7.5 (3Φ)	1830×660×740	185	4×SHR-36U-S	36	1036×335×475	12	2	2.5	1800
SAL-10HP-UG124-D	7.5 (3Φ)	1830×875×740	192	4×SHR-36U-S	36	1036×335×475	12	2	2.5	2000

Note: 1) "D" stands for double-stage blower, "124" stands for "one to four" conveying function.

2) For hopper inside polished ones, plus "P" at hopper model behind.

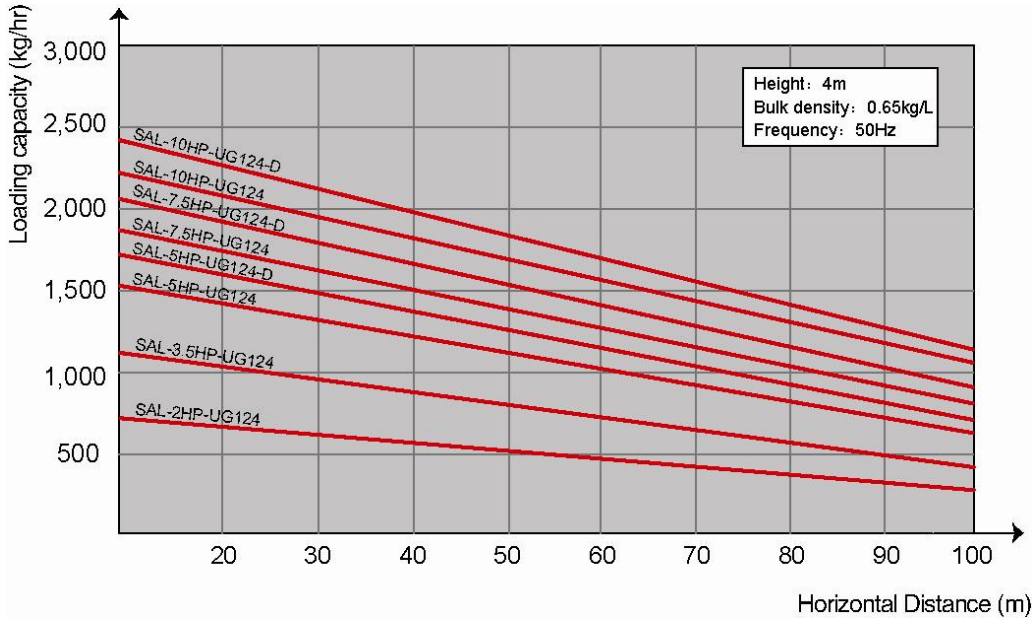
3) It is available to select ACF-1 cyclone dust separator (Applicable to SAL-2HP-UG-124 main unit).

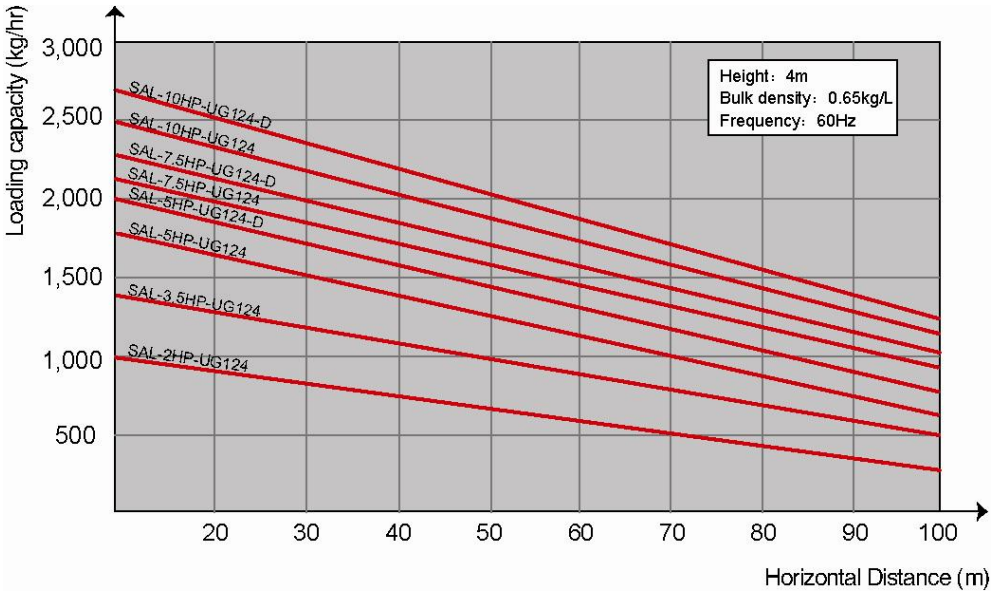
4) Optional air accumulator and filter cleaning device, and add "A" at model behind (Suitable for SAL-3.5HP-UG124 and models above).

5) Test condition of conveying capacity: Plastic material of bulk density 0.65kg/L, dia.3~5 mm, vertical conveying height: 4m, horizontal conveying distance: 5m.

6) Power supply: 3Φ, 230/400/460/575V, 50/60Hz.

1.3.5 Loading Capacity





Picture 1-6: Loading Capacity

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

	1. Please clean the suction filter regularly to avoid clogging and ensure proper loading capacity and long life span. 2. The one year warranty does not cover the suction filter, please clean the filter carefully.

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.

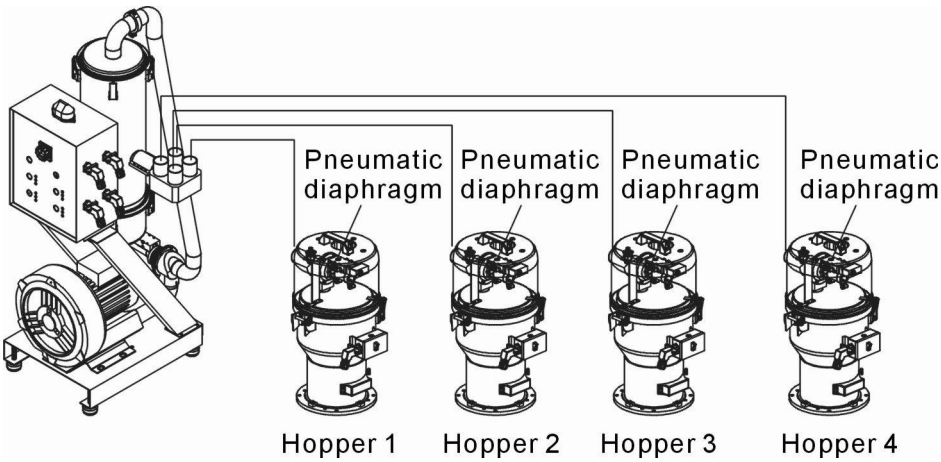
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon machine, 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-UG "Euro" separate-vacuum hopper loader is applicable to convey plastic granule. Its principle is to make use of motor generated vacuum to form a pressure gap and to convey plastic material by this way.

2.1.1 Working Principle



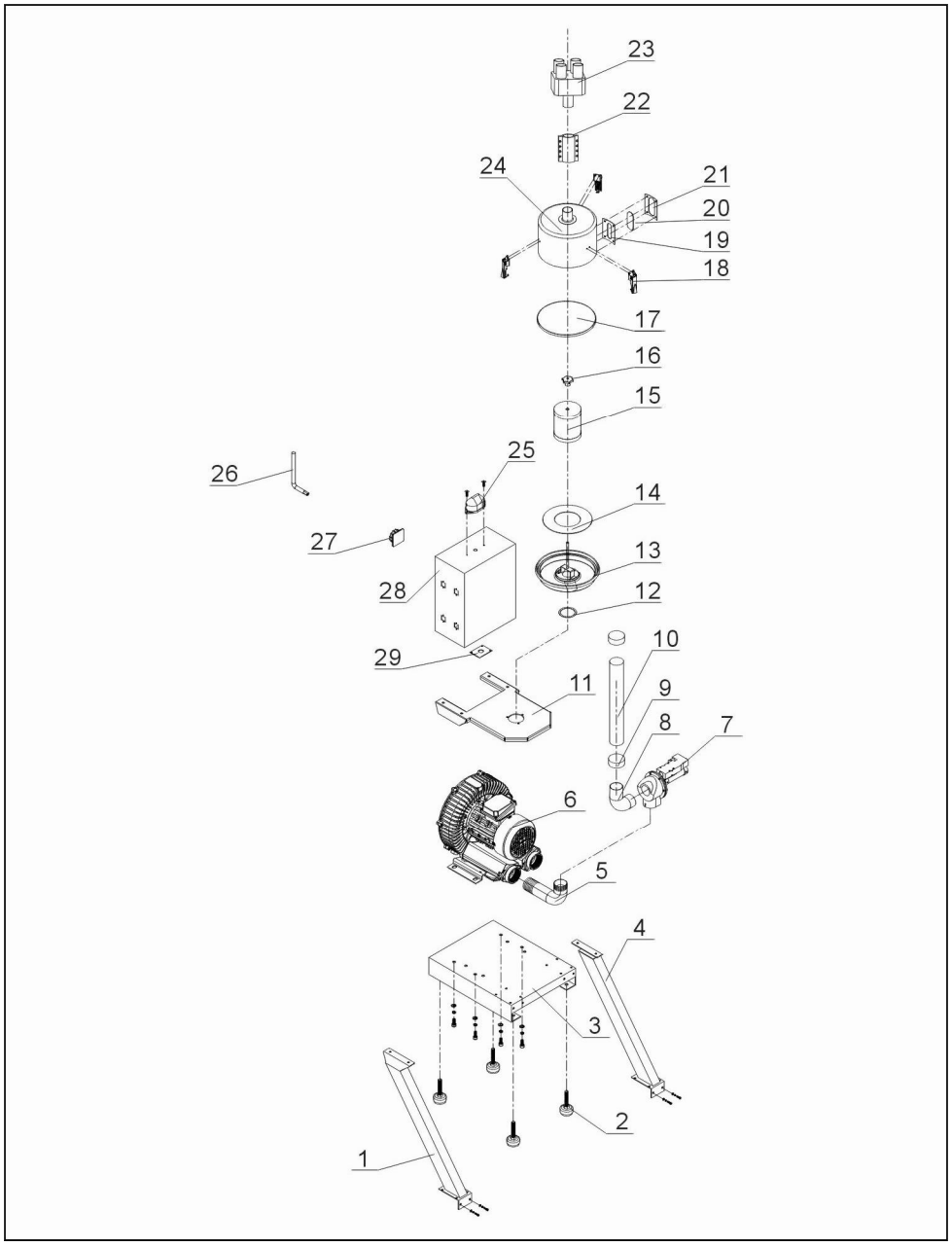
Picture 2-1: Working Principle

Turn on the switch of the feed station to start the wind blower and open the relevant diaphragm valve of the hopper. A high pressure vacuum is generated in the hopper and the non-return flap is thus closed. The crew material is thereafter suctioned into the hopper due to differential pressure. After finishing the suctioning action, stop the motor and the vacuum breaking valve is opened. The crew material is dropped by gravity. When the magnetic proximity switch detect that there is no material, the motor starts up again. When in continuously 3 times failed to load material, the red alarming light for relevant feeding station on electrical control box starts to sound the alarm.

When all the suction switches are turned on, the system will work from feeding station1 to 4 circularly.

2.2 Assembly Drawing

2.2.1 Assembly Drawing (SAL-2HP-UG124)



Remarks: Please refer to material list 2.2.2 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-2: Assembly Drawing (SAL-2HP-UG124)

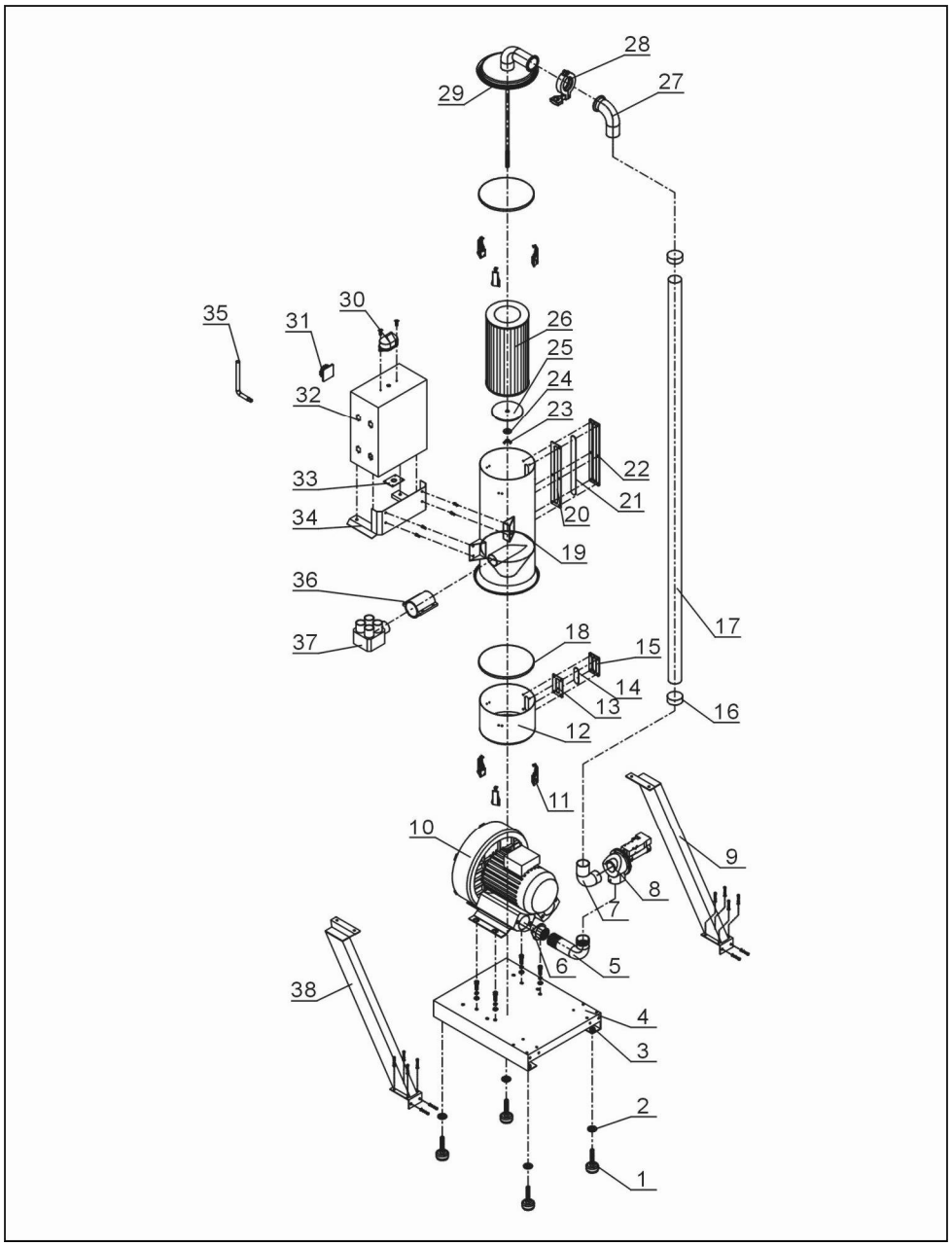
2.2.2 Parts List (SAL-2HP-UG124)

Table 2-1: Parts List (SAL-2HP-UG124)

No.	Name	Part No.	No.	Name	Part No.
1	Left standing pole	-	15	Filter	YR50708000000
2	Anti-vibration pad	YW03005000000	16	Hexagon nut 5/16”	YW69051600000
3	Base	-	17	Filter barrel fastener	YR10708000100
4	Right stand column	-	18	Snap hook	YW02003000400
5	Air inlet pipe	-	19	Four hole material window fastener	YW09000000400
6	High pressure blower 1HP	BM30031000150	20	Four hole acryl	YR40001200100
	High pressure blower 2HP	BM30042000050	21	Four hole material window sheet iron	YR40000400000
7	Vacuum breaking diaphragm valve 1.5”	BY20015000050	22	Pipe connector 2”	BW20002002050
8	Vacuum breaking diaphragm valve piping	-	23	Five-way pipe	-
9	Pipe bundle 2.5”	YW02002500000	24	Filter barrel	-
10	Steel wire rubber pipe 2”	YR60205040100	25	Alarm light	YE83305100200
11	Support structure of filter barrel	-	26	Dedicated wrench for anti-theft screw	JT40450000000
12	Filter barrel base fastener	-	27	Main power switch	YE10210300000
13	Filter barrel lid assembly	-	28	Control cabinet	BH32012040050
14	Filter barrel lid fastener	YR10030000000	29	Line jig fixed plate	-

* 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 (-D)-124)



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 (-D)-UG124)

2.2.4 Parts List (SAL-3.5HP/5HP (-D)-UG124)

Table 2-2: Parts List (SAL-3.5HP/5HP (-D)-UG124)

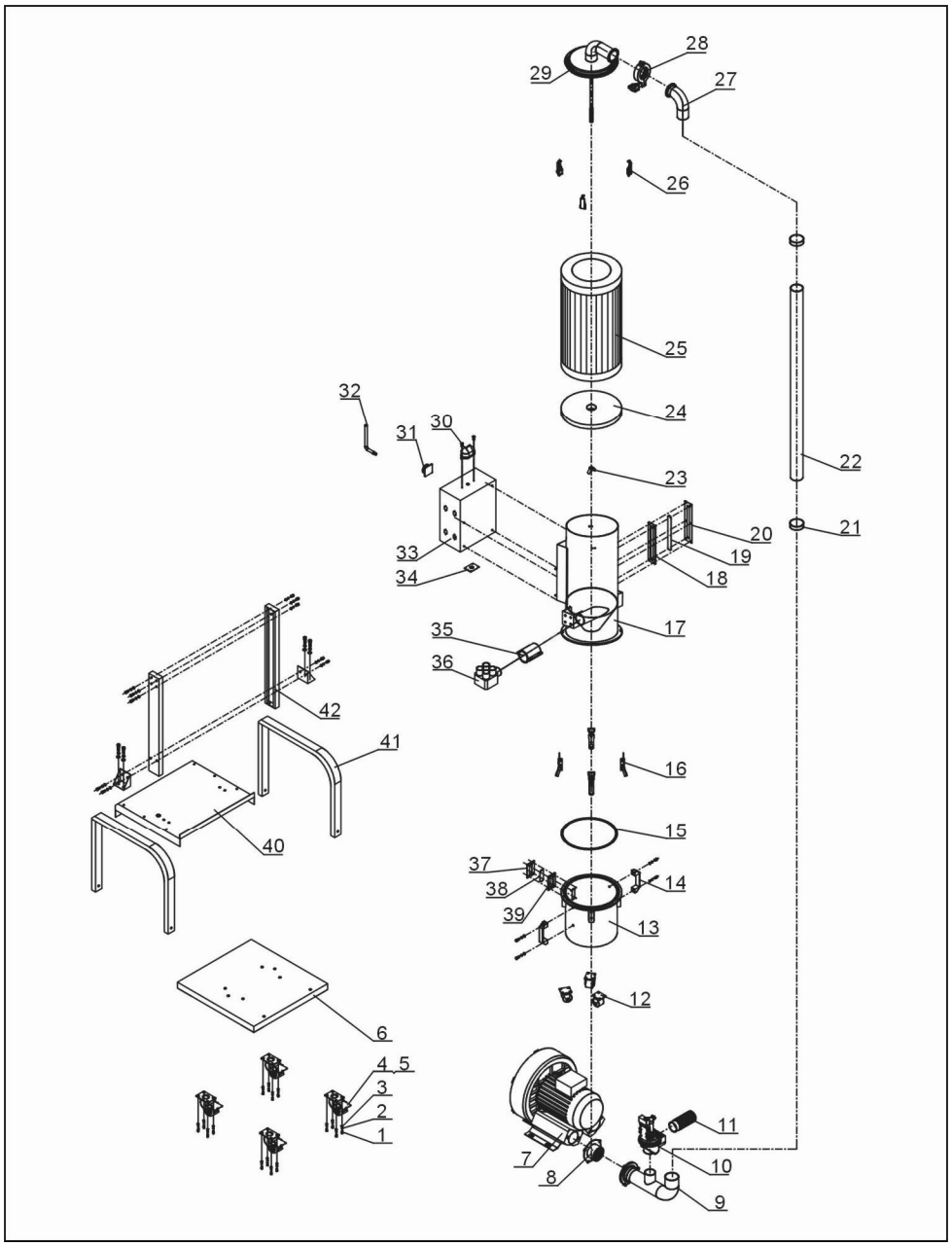
No.	Name	Part No.	No.	Name	Part No.
1	Anti-vibration pad Φ50	YW03005000000	19	Filter barrel roll	-
2	Flat washer 8	YW66082200100	20	Six hole material window fastener	YR40000600000
3	Nut M12	YW64012100000	21	Six acryl	YR40001200000
4	Dust collecting barrel	BL21003500120	22	Six hole material windw sheet iron	YW09000600000
5	Air inlet pipe	BL26003506520-	23	Butterfly nut 5/16″	YW69051600000
6	Blower flange	-	24	Flat washer 8	YW66082200100
7	Vacuum breaking diaphragm valve 1.5”	BY20015000050	25	Strainer fixed plate	BL26003502520
8	Vacuum breaking diaphragm valve piping	-	26	FilterADC2	YR50181100000
9	Right stand column	-	27	Air suction pipe	-
10	High pressure blower 3.5HP	BM30053500050	28	Pipe clamp	YW07000200000
	High pressure blower 5HP	BM30055000050	29	Filter barrel lid assembly	-
	High pressure blower 5HP (two stage)	YM30433700000	30	Alarm light LTE-3051 AC220V	YE83305100200
11	Snap hook	YW02003000400	31	Main power switch	YE10210300000
12	Dust collecting barrel	BL26003507021	32	Control cabinet	-
13	Four hole material window fastener	YR40000400000	33	Line jig fixed plate	-
14	Four hole acryl	YR40001200100	34	Support structure of filter barrel	-
15	Four hole material window sheet iron	YW09000000400	35	Dedicated wrench for anti-theft screw	JT40450000000
16	Pipe bundle 2.5”	YW02002500000	36	Pipe connector 2”	YW20002000700
17	Steel wire rubber pipe 2”	YR60205040100	37	Five-way pipe	-
18	Dust collecting barrel fastener	YR10708000100	38	Left stand column	-

* 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 (-D)-UG124)



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 (-D)-UG124)

2.2.6 Parts List (SAL-7.5HP/10HP (-D)-UG124)

Table 2-3: Parts List (SAL-7.5HP/10HP (-D)-UG124)

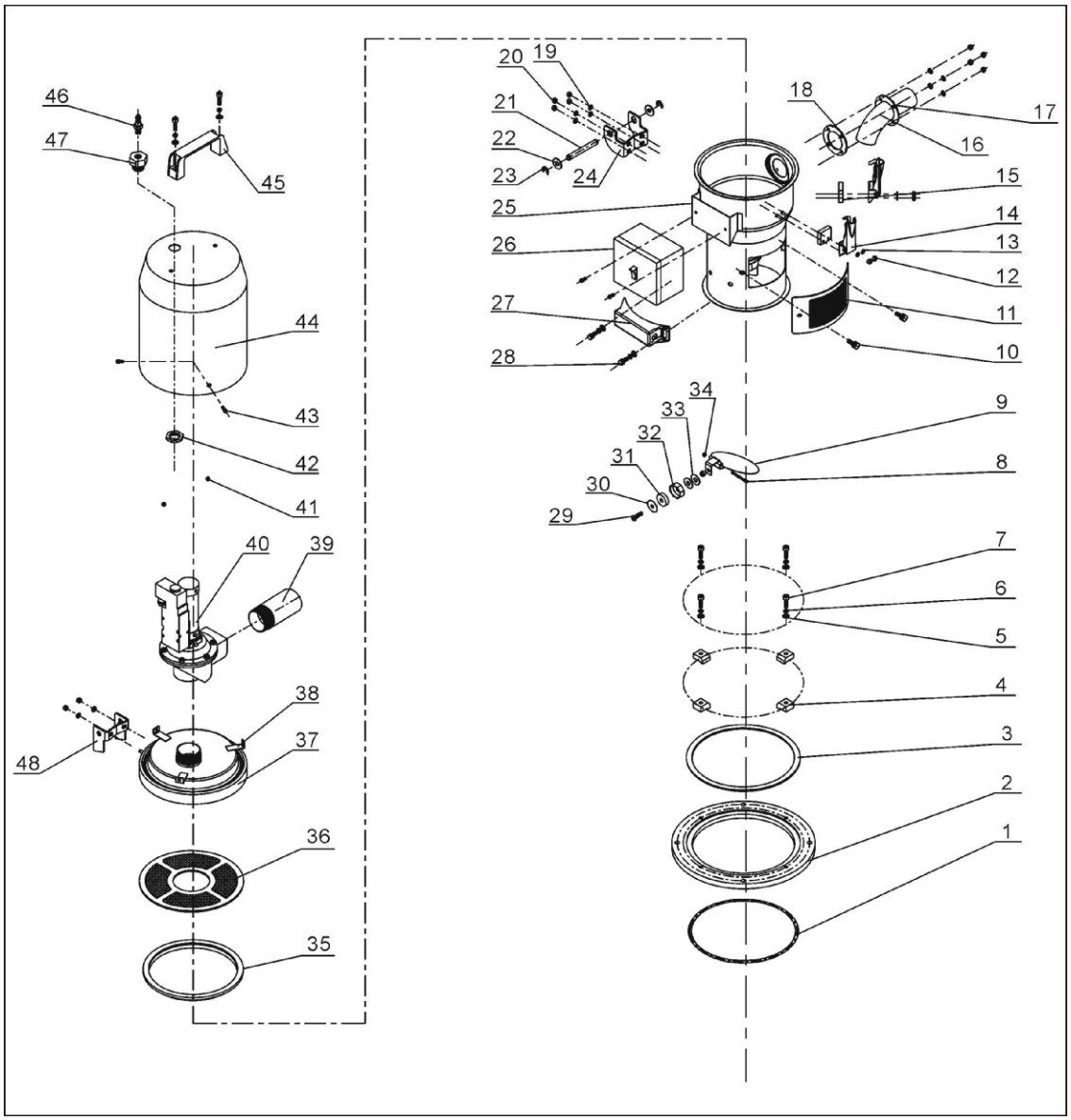
No.	Name	Part No.	No.	Name	Part No.
1	Outer hexagon screw M6×16	YW60061600100	21	Stainless steel pipe bundle 3”	YW02000300000
2	Flat washer 6	YW66061300000	22	Steel wire rubber pipe 2.5”	YR60253000000
3	Spring washer 6	YW65006000100	23	Butterfly nut 5/16”	YW69051600000
4	Braking universal caster 3”	YW03000300000	24	Strainer fixed plate	BL26007504720
5	Freestyle universal caster 3”	YW03000300200	25	Filter	YR50221400000
6	Dust collecting barrel	BL26007502721	26	Snap hook	YW02003000400
7	High pressure blower 7.5HP	BM30075000050	27	Air suction pipe	-
	High pressure blower 7.5HP(two stage)	YM30635500000	28	Pipe clamp	YW07002500600
	High pressure blower 10HP	BM30081000050	29	Filter barrel lid assembly	-
	High pressure blower 10HP(two stage)	YM30637500000	30	Alarm light	YE83305100200
8	Blower flange	-	31	Main power switch	YE10210300000
9	Air inlet pipe	-	32	Dedicated wrench for anti-theft screw	JT40450000000
10	Vacuum breaking valve 2”	BY20500000050	33	Control cabinet	-
11	Air refill screen	-	34	Line jig fixed plate	-
12	Universal caster 2.5”	YW03002500000	35	Pipe connector 2.5”	BH80002510050
13	Dust collecting barrel	BL26007502421	36	Five-way pipe	-
14	Aluminum handle L120	BW20012000040	37	Four hole material window fastener	YW09000000400
15	Dust collecting barrel fastener	YE32051800100	38	Four hole acryl	YR40000400000
16	Big handle	YW02003000100	39	Four hole material window sheet iron	YR40001200100
17	Filter barrel assembly	-	40	Intermediate plate	-
18	Six hole material window fastener	YR40000600000	41	Frame 1	-
19	Six acryl	YR40001200000	42	Filter barrel stand column	-
20	Six hole material windw sheet iron	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 Parts Drawing (SHR-3U-S)



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

Picture 2-5: Parts (SHR-3U-S)

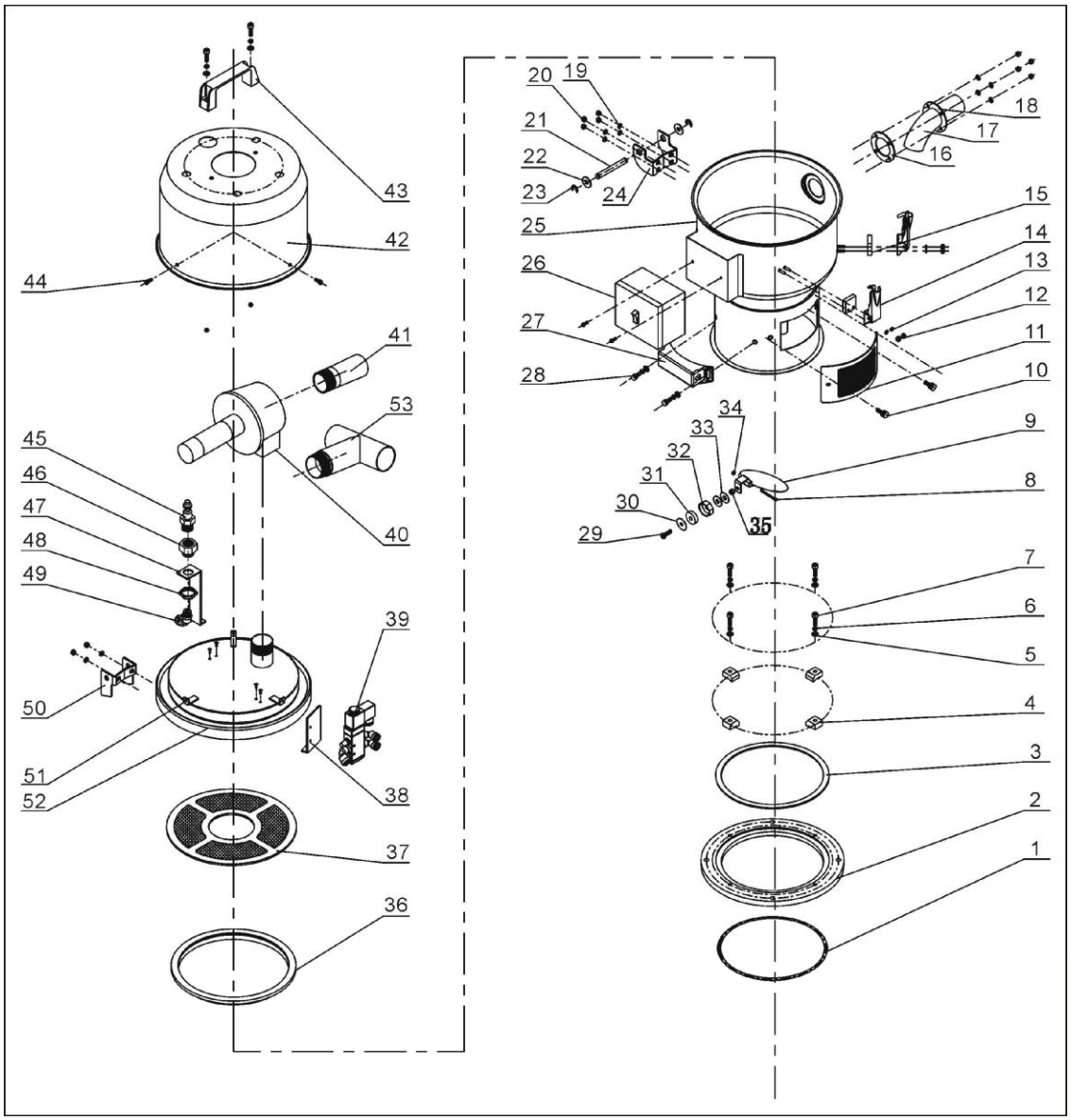
2.2.8 Parts List (SHR-3U-S)

Table 2-4: Parts List (SHR-3U-S)

No.	Name	Part No.	No.	Name	Part No.
1	Inner diameter of O type seal ringΦ200×5.5	YR20205500000	25	Material storage tank	-
2	Base	BW20171200010	26	Control box	BH90615000010
3	Base fastener	-	27	Sensor shell	YR40000601100
4	Pressure block	BW20000630500	28	Inner hexagon cylinder head screw M6×10	YW63061000000
5	Flat gasket 6	YW66061300000	29	Cross recess pan head screw M3×25	YW63032500000
6	Spring gasket 6	YW65006000000	30	Flat gasket 8×22	YW66082200100
7	Inner hexagon cylinder head screw M6×20	YW61062000300	31	Permanent magnet Φ21×Φ3×7	YW90213700000
8	Cross recess pan head screw M3×40	YW63034000000	32	Magnet sleeve	BH12115000010
9	Discharge port	-	33	Flat gasket 3×12	YW66031200000
10	Star knob	YR40061500000	34	Locknut M3	YW64000300000
11	Ventilation window	YR40000601000	35	Hopper fastener	YR10001500000
12	Locknut M4×0.7	YW64040700100	36	Filter screen	BL20000300120
13	Flat gasket 4	YW66040800000	37	Hopper cover	-
14	Snap hook	YW02003000400	38	Motor cover fixing base	BL21001501320
15	Snap hook pad	YR40000600800	39	Air suction pipe	-
16	Material inlet pipe	-	40	Vacuum separating valve SPDV-38	-
17	Material inlet pipe fixing plate	-	41	Locknut M6	YW64000600200
18	Material inlet pipe fastener	YR10150300000	42	Connecting nut	BH12003600410
19	Flat gasket 5	YW66051000100	43	Cross recess pan head screw M5×15	YW62051500000
20	Locknut M5	YW64000500000	44	Diaphragm valve cover	-
21	Hinge pin	BH10006003110	45	Aluminum square handle L120	BW20012000040
22	Flat gasket 8×22	YW66082200100	46	Quick connector SPC8-1/4	YW80081400000
23	E rings 6	YW66000500000	47	Connection copper head	BH12002400010
24	Down hinge	BL32000600140	48	Up hinge	BL32000600240

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.9 Parts Drawing (SHR-6U-S)



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

Picture 2-6: Parts (SHR-6U-S)

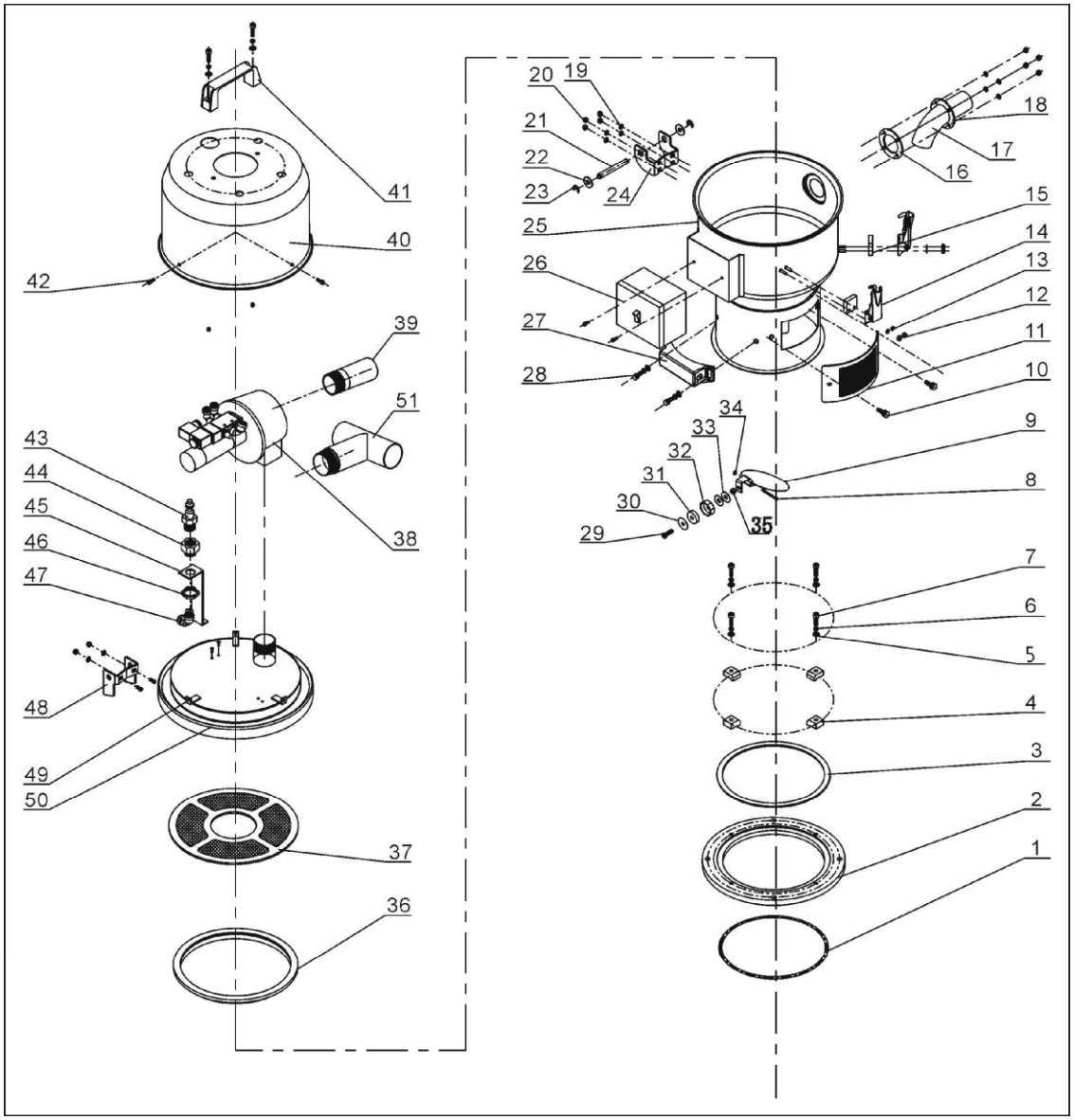
2.2.10 Parts List (SHR-6U-S)

Table 2-5: Parts List (SHR-6U-S)

No.	Name	Part No.	No.	Name	Part No.
1	Inner diameter of O type seal Φ200×5.5	YR20205500000	28	Inner hexagon cylinder head screw M6×10	YW63061000000
2	Base	BW20171200010	29	Cross recess pan head screw M6×20	YW63062000000
3	Base fastener	-	30	Magnet cover	BL21000600120
4	Pressure block	BW20000630500	31	Permanent magnet Φ21×Φ3×7	YW90257700000
5	Flat gasket 6	YW66061300000	32	Magnet sleeve	BH12000600010
6	Spring gasket 6	YW65006000000	33	Flat gasket 8×22	YW66082200100
7	Inner hexagon cylinder head screw M6×20	YW61062000200	34	Locknut M3	YW64000300000
8	Cross recess pan head screw M3×40	YW63034000000	35	Locknut M6	YW64000600200
9	Discharge plate	BL21000302320	36	Hopper fastener	YR10000300100
10	Star knob	YR40061500000	37	Filter screen	BL21000600620
11	Ventilation window	YR40000601000	38	Solenoid valve fixing plate	BL27000601120
12	Locknut M4×0.7	YW64040700100	39	Solenoid valve	YE32051800100
13	Flat gasket 4	YW66040800000	40	Diaphragm valve 1.5”	-
14	Snap hook	YW40000600800	41	Air suction pipe	-
15	Snap hook pad	YR40000600300	42	Motor cover	BR40033000110
16	Material inlet pipe fastener	YR10150300000	43	Aluminum square handle L120	BW20012000040
17	Material inlet pipe	-	44	Cross recess pan head screw M5×15	YW62051500000
18	Material inlet pipe fixing plate	-	45	Quick connector 3”×1/4PT	YW80031400000
19	Flat gasket 5	YW66051000100	46	Connection copper head	BH12002400010
20	Locknut M5	YW64000500000	47	Air pipe connector fixing block	BL27000601520
21	Hinge pin	BH10006003110	48	Connecting nut	BH12003600410
22	Flat gasket 8×22	YW66082200100	49	Quick connector APL8-1/4PT	YW80081400100
23	E rings 8	YW69896800000	50	Up hinge	BL32000600240
24	Down hinge	BL32000600140	51	Motor cover fixing base	BL21001501320
25	Material storage tank	-	52	Hopper cover	-
26	Control box	BH90615000010	53	T-branch air suction pipe (optional)	-
27	Sensor shell	YR40000601100			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.11 Parts Drawing (SHR-12U-S)



Notes: Please refer to material list 2.2.12 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-7: Parts (SHR-12U-S)

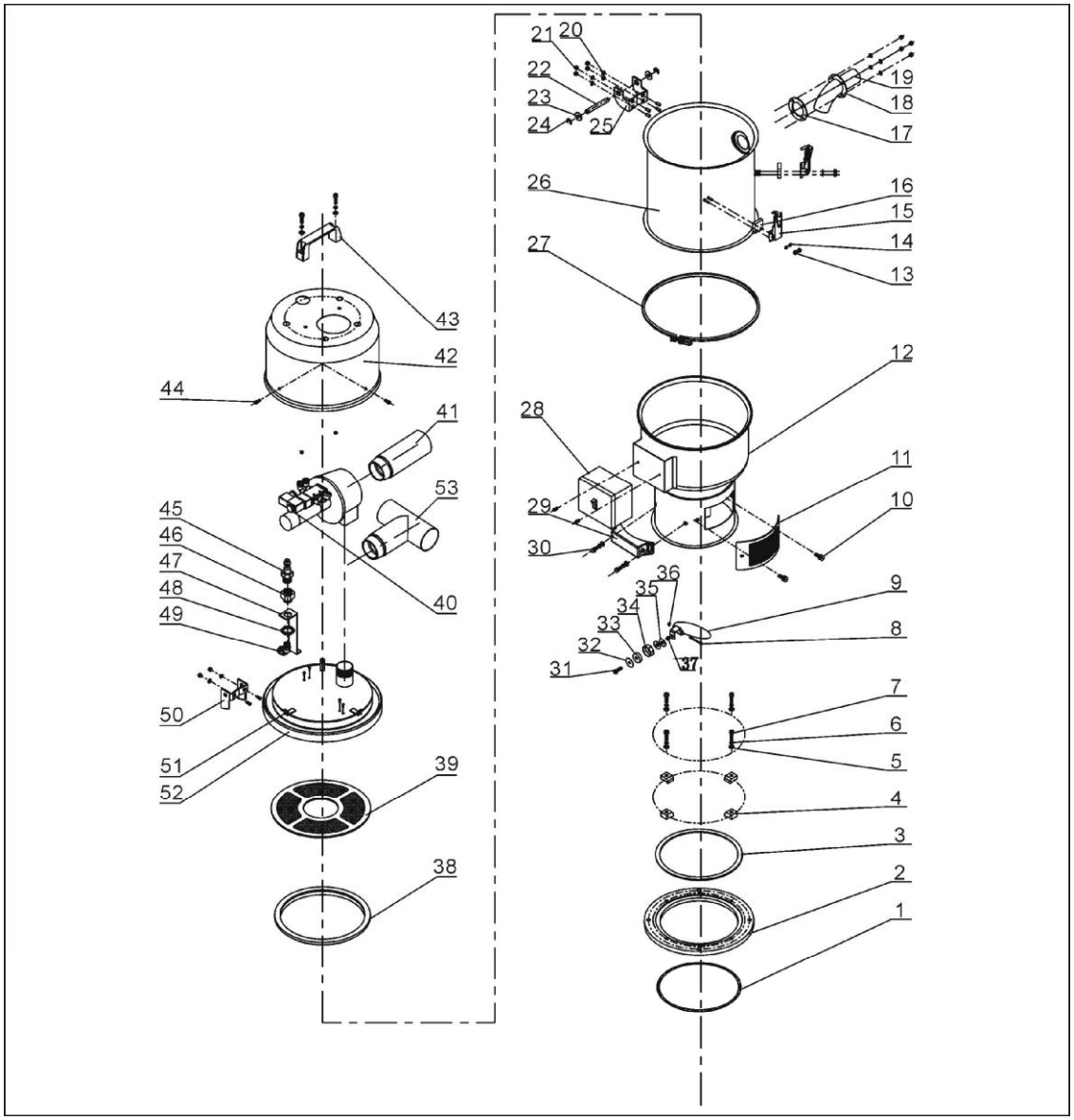
2.2.12 Parts List (SHR-12U-S)

Table 2-6: Parts List (SHR-12U-S)

No.	Name	Part No.	No.	Name	Part No.
1	Inner diameter of O type seal ring Φ200×5.5	YR20205500000	27	Sensor shell	YR40000601100
2	Base	BW20171200010	28	Inner hexagon cylinder head screw M6×10	YW63061000000
3	Base fastener	-	29	Cross recess pan head screw M6×20	YW63062000000
4	Pressure block	BW20000630500	30	Magnet cover	BL21000600120
5	Flat gasket 6	YW66061300000	31	Permanent magnet Φ21×Φ3×7	YW90257700000
6	Spring gasket 6	YW65006000000	32	Magnet sleeve	BH12000600010
7	Inner hexagon cylinder head screw M6×20	YW61062000200	33	Flat gasket 8×22	YW66082200100
8	Cross recess pan head screw M3×40	YW63034000000	34	Locknut M3	YW64000300000
9	Discharge port	-	35	Locknut M6	YW64000600200
10	Star knob	YR40061500000	36	Hopper fastener	YR10000600200
11	Ventilation window	YR40000601000	37	Filter screen	BL21001200320
12	Locknut M4×0.7	YW64040700100	38	Diaphragm valve 1.5”	-
13	Flat gasket 4	YW66040800000	39	Air suction pipe	-
14	Snap hook	YW02003000400	40	Motor cover	BR40036000310
15	Snap hook pad	YR40000600800	41	Aluminum square handle L120	BW20012000040
16	Material inlet pipe fastener	YR10061200000	42	Cross recess pan head screw M5×15	YW62051500000
17	Material inlet pipe	-	43	Quick connector 3”×1/4PT	YW80031400000
18	Material inlet pipe fixing plate	-	44	Connection copper head	BH12002400010
19	Flat gasket 5	YW66051000100	45	Air pipe connector fixing block	-
20	Locknut M5	YW64000500000	46	Connecting nut	BH12003600410
21	Hinge pin	BH10006003110	47	Quick connector APL8-1/4PT	YW80081400100
22	Flat gasket 8×22	YW66082200100	48	Up hinge	BL32000600240
23	E rings 8	YW69896800000	49	Motor cover fixing base	BL21001501320
24	Down hinge	BL32000600140	50	Hopper cover	-
25	Material storage tank	-	51	T-branch air suction pipe (optional)	-
26	Control box	BH90615000010			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.13 Parts Drawing (SHR-24U-S)



Notes: Please refer to material list 2.2.14 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-8: Parts (SHR-24U-S)

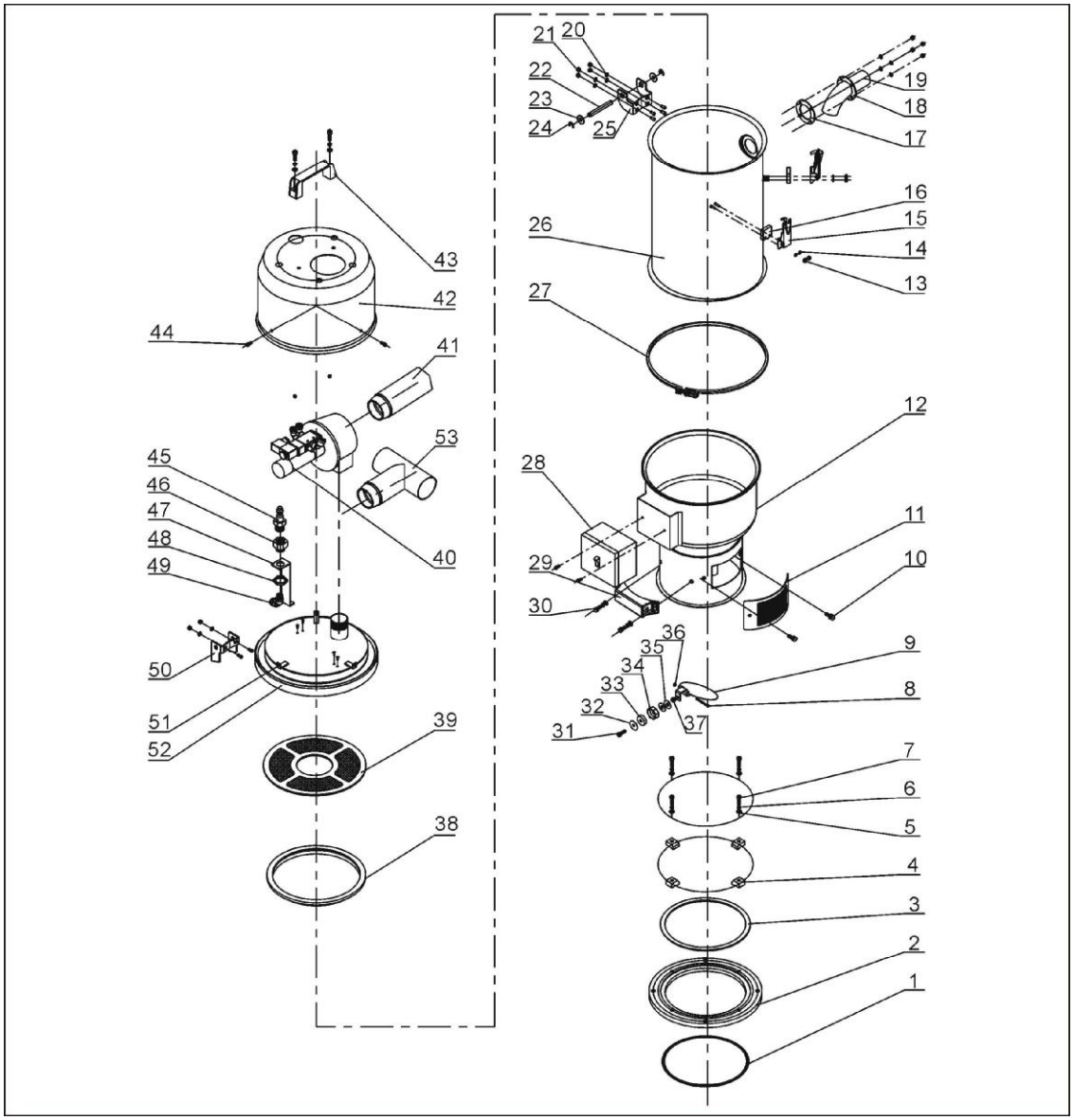
2.2.14 Parts List (SHR-24U-S)

Table 2-7: Parts List (SHR-24U-S)

No.	Name	Part No.	No.	Name	Part No.
1	Inner diameter of O type seal ring Φ200×5.5	YR20205500000	28	Control box	BH90615000010
2	Base	BW20171200010	29	Sensor shell	YR40000601100
3	Base fastener	-	30	Inner hexagon cylinder head screw M6×10	YW63061000000
4	Pressure block	BW20000630500	31	Cross recess pan head screw M6×20	YW63062000000
5	Flat gasket 6	YW66061300000	32	Magnet cover	BL21000600120
6	Spring gasket 6	YW65006000000	33	Permanent magnet Φ21×Φ3×7	YW90257700000
7	Inner hexagon cylinder head screw M6×20	YW61062000200	34	Magnet sleeve	BH12000600010
8	Cross recess pan head screw M3×40	YW63034000000	35	Flat gasket 8×22	YW66082200100
9	Discharge port	-	36	Locknut M3	YW64000300000
10	Star knob	YR40061500000	37	Locknut M6	YW64000600200
11	Ventilation window	YR40000601000	38	Hopper fastener	YR10000300100
12	Material storage tank	-	39	Filter screen	BL21001200320
13	Locknut M4×0.7	YW64040700100	40	Diaphragm valve 2”	-
14	Flat gasket 4	YW66040800000	41	Air suction pipe	-
15	Snap hook	YW02003000400	42	Motor cover	BR40036000310
16	Snap hook pad	YR40000600800	43	Aluminum square handle L120	BW20012000040
17	Material inlet pipe fastener	YR10150300000	44	Cross recess pan head screw M5×15	YW62051500000
18	Material inlet pipe fixing plate	-	45	Quick connector 3”×1/4PT	YW80031400000
19	Material inlet pipe	-	46	Connection copper head	BH12002400010
20	Flat gasket 5	YW66051000100	47	Air pipe connector fixing block	-
21	Locknut M5	YW64000500000	48	Connecting nut	BH12003600410
22	Hinge pin	BH10006003110	49	Quick connector APL8-1/4PT	YW80081400100
23	Flat gasket 8×22	YW66082200100	50	Up hinge	BL32000600240
24	E rings 8	YW69896800000	51	Motor cover fixing base	BL21001501320
25	Down hinge	BL32000600140	52	Hopper cover	-
26	Enlarged material tank	-	53	T-branch air suction pipe (optional)	-
27	Pipe clamp	-			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.15 Parts Drawing (SHR-36U-S)



Notes: Please refer to material list 2.2.16 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-9: Parts (SHR-36U-S)

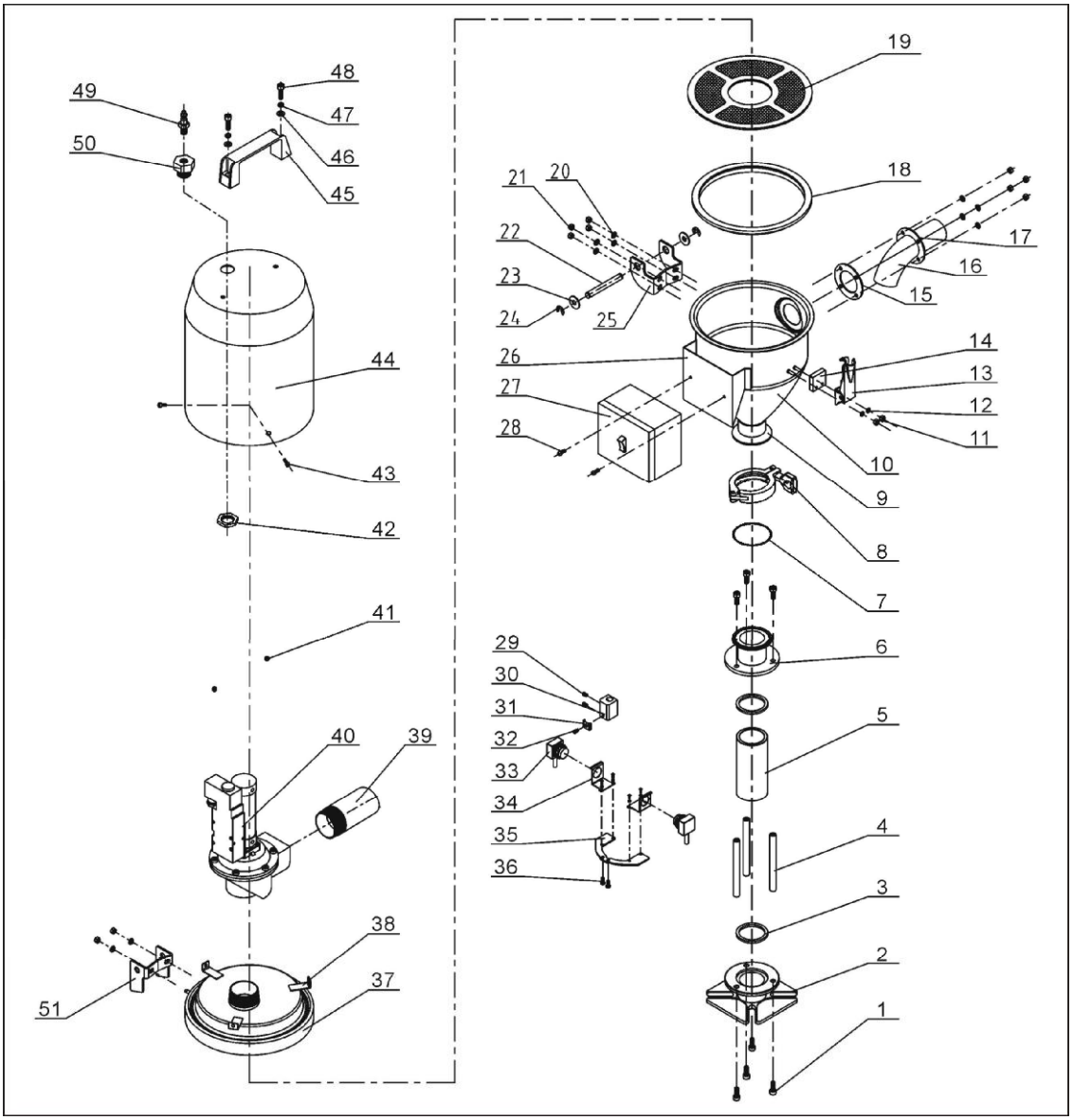
2.2.16 Parts List (SHR-36U-S)

Table 2-8: Parts List (SHR-36U-S)

No.	Name	Part No.	No.	Name	Part No.
1	Inner diameter of O type seal ring Φ200×5.5	YR20205500000	28	Control box	BH90615000010
2	Base	BW20171200010	29	Sensor shell	YR40000601100
3	Base fastener	-	30	Inner hexagon cylinder head screw M6×10	YW63061000000
4	Pressure block	BW20000630500	31	Cross recess pan head screw M6×20	YW63062000000
5	Flat gasket 6	YW66061300000	32	Magnet cover	BL21000600120
6	Spring gasket 6	YW65006000000	33	Permanent magnet Φ21×Φ3×7	YW90257700000
7	Inner hexagon cylinder head screw M6×20	YW61062000200	34	Magnet sleeve	BH12000600010
8	Cross recess pan head screw M3×40	YW63034000000	35	Flat gasket 8×22	YW66082200100
9	Discharge plate	-	36	Locknut M3	YW64000300000
10	Star knob	YR40061500000	37	Locknut M6	YW64000600200
11	Ventilation window	YR40000601000	38	Hopper fastener	YR10000300100
12	Material storage tank	-	39	Filter screen	BL21001200320
13	Locknut M4×0.7	YW64040700100	40	Diaphragm valve 2”	-
14	Flat gasket 4	YW66040800000	41	Air suction pipe	-
15	Snap hook	YW02003000400	42	Motor cover	BR40036000310
16	Snap hook pad	YR40000600800	43	Aluminum square handle L120	BW20012000040
17	Material inlet pipe fastener	YR10243600000	44	Cross recess pan head screw M5×15	YW62051500000
18	Material inlet pipe fixing plate	-	45	Quick connector 3”×1/4PT	YW80031400000
19	Material inlet pipe	-	46	Connection copper head	BH12002400010
20	Flat gasket 5	YW66051000100	47	Air pipe connector fixing block	-
21	Locknut M5	YW64000500000	48	Connecting nut	BH12003600410
22	Hinge pin	BH10006003110	49	Quick connector APL8-1/4PT	YW80081400100
23	Flat gasket 8×22	YW66082200100	50	Up hinge	BL32000600240
24	E rings 8	YW69896800000	51	Motor cover fixing base	BL21001501320
25	Down hinge	BL32000600140	52	Hopper cover	-
26	Enlarged material tank	-	53	T-branch air suction pipe (optional)	-
27	Pipe clamp	-			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.17 Parts Drawing (SHR-3U-ES)



Notes: Please refer to material list 2.2.18 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-10: Parts (SHR-3U-ES)

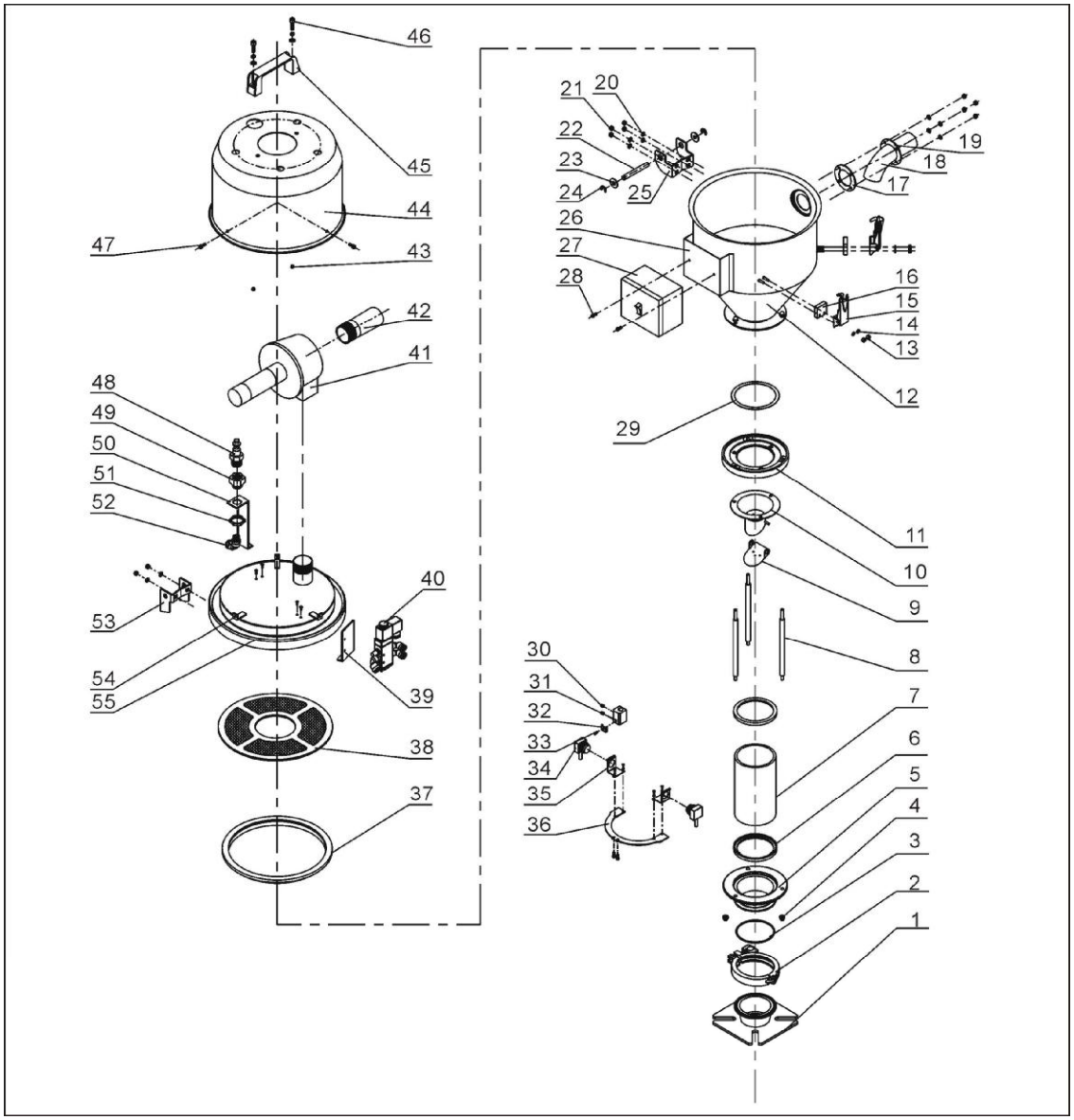
2.2.18 Parts List (SHR-3U-ES)

Table 2-9: Parts List (SHR-3U-ES)

No.	Name	Part No.	No.	Name	Part No.
1	Inner hexagon cylinder head screw M6×15	YW61061600300	27	Control box	BH90615000010
2	Down flange of glass pipe	BW32000300010	28	Cross recess pan head screw M4×10	YW63041000000
3	Glass pipe fastener	YR10000300000	29	Set screw M4×5	YW68004500000
4	Flange connection shaft	BH11030400540	30	Photosensor fixing base	BL90001000120
5	Glass pipe Φ50.5×Φ40.5×111	YW70504000000	31	Photosensor cable pressure block	YW31616200000
6	Up flange of glass pipe	BW32000300210	32	Cross recess pan head screw M4×10	YW63041000000
7	Base fastener	YR10000300200	33	Photosensor FOTEK T18-3MN-PE	YE15143900000
8	2”Stainless steel pipe clamp	YW07000200000	34	Photosensor mounting plate	-
9	Hopper flange	-	35	Photosensor fixing plate	-
10	Material storage tank	-	36	Cross recess pan head screw M4×10	YW63041000000
11	Locknut M4×0.7	YW64040700100	37	Hopper cover	-
12	Flat gasket 4	YW66040800000	38	Motor cover fixing base	BL21001501320
13	Snap hook	YW02003000400	39	Air suction pipe	-
14	Snap hook pad	YR40000600800	40	Vacuum separating valve SPDV-38	-
15	Material inlet pipe fastener	YR10150300000	41	Locknut M6	YW64000600200
16	Material inlet pipe	-	42	Connecting nut	BH12003600410
17	Material inlet pipe fixing plate	-	43	Cross recess pan head screw M5×15	YW62051500000
18	Hopper fastener	YR10001500000	44	Diaphragm valve cover	-
19	Filter screen	BL20000300120	45	Aluminum square handle L120	BW20012000040
20	Flat gasket 5	YW66051000100	46	Flat gasket 6	YW66061300000
21	Locknut M5	YW64000500000	47	Spring gasket 6	YW65006000000
22	Hinge pin	BH10006003110	48	Inner hexagon cylinder head screw M6×20	YW61062000300
23	Flat gasket 8×22	YW66082200100	49	Quick connector SPC8-1/4	YW80081400000
24	E rings 6	YW66000500000	50	Connection copper head	BH12002400010
25	Down hinge	BL32000600140	51	Up hinge	BL32000600240
26	Control box base	-			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.19 Parts Drawing (SHR-6U-ES)



Notes: Please refer to material list 2.2.20 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-11: Parts (SHR-6U-ES)

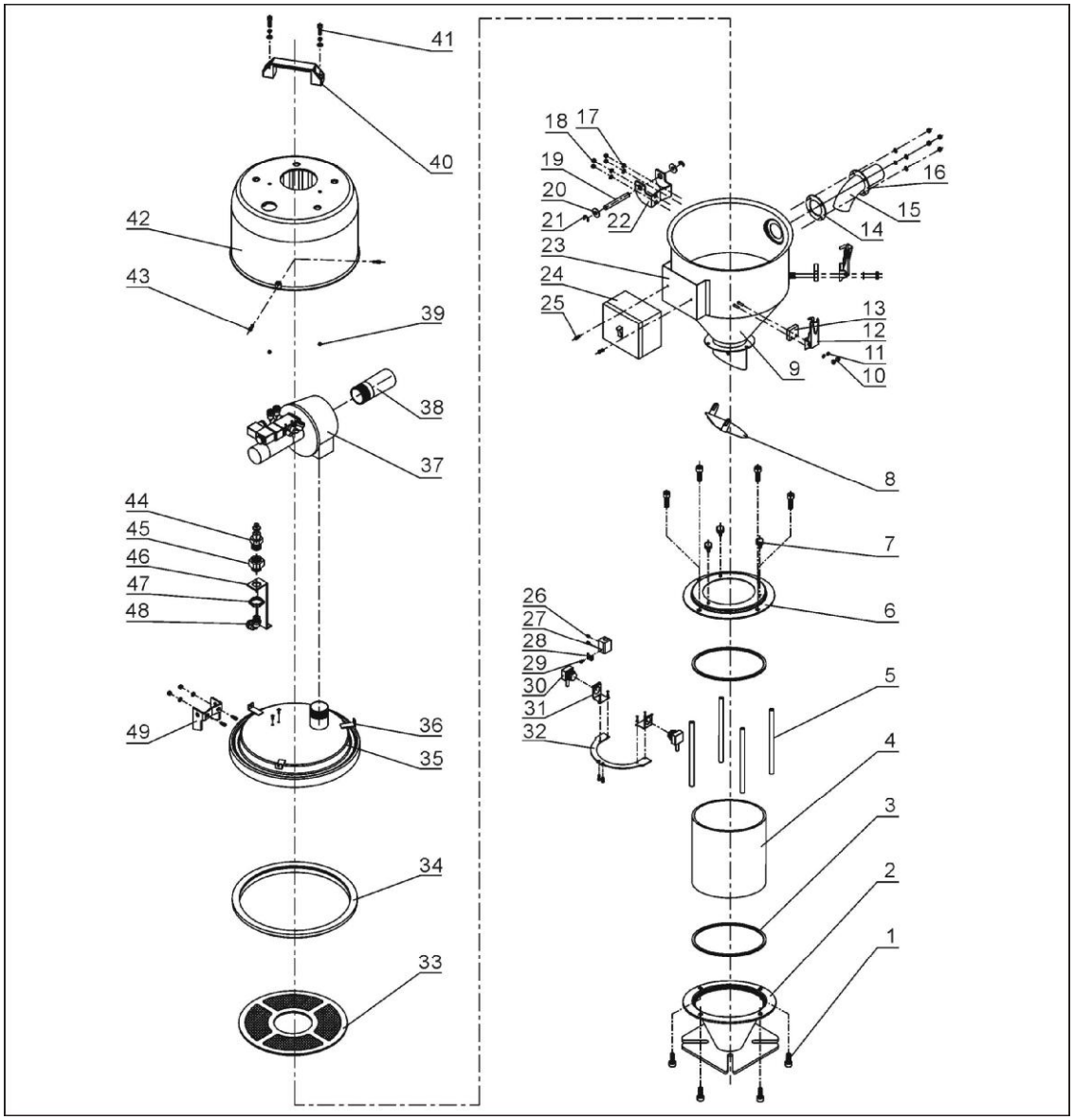
2.2.20 Parts List (SHR-6U-ES)

Table 2-10: Parts List (SHR-6U-ES)

No.	Name	Part No.	No.	Name	Part No.
1	Mounting flange	BL21060200820	29	Cross recess pan head screw M4×6	YW63040600000
2	3” Stainless steel pipe clamp	YW07000300000	30	Set screw M4×5	YW68004500000
3	O type seal ring	YR20802600000	31	Photosensor fixing base	BL90001000120
4	Cap nut M6	YW64006000100	32	Photosensor cable pressure block	YW31616200000
5	Down flange of glass pipe	BW32610900010	33	Cross recess pan head screw M4×10	YW63041000000
6	Glass pipe fastener	YR10060200000	34	Photosensor	YE15143900000
7	Glass pipe	YW70317000600	35	Photosensor mounting plate	-
8	Flange connection shaft	BH10000600640	36	Photosensor fixing plate	BL21061200020
9	Non-return flap	-	37	Hopper fastener	YR10000300100
10	Discharge port	-	38	Filter screen	BL21000600620
11	Up flange of glass pipe	BW32610800010	39	Solenoid valve fixing plate	-
12	Material storage tank	-	40	Solenoid valve	YE32051800100
13	Locknut M4×0.7	YW64040700100	41	Diaphragm valve 1.5”	-
14	Flat gasket 4	YW66040800000	42	Air suction pipe	-
15	Snap hook	YW02003000400	43	Locknut M6	YW64000600200
16	Pad	YR40000600800	44	Motor cover	BR40033000110
17	Material inlet pipe fastener	YR10150300000	45	Aluminum square handle L120	BW20012000040
18	Material inlet pipe	-	46	Inner hexagon cylinder head screw M6×20	YW61062000300
19	Material inlet pipe fixing plate	-	47	Cross recess pan head screw M5×15	YW62051500000
20	Flat gasket 5	YW66051000100	48	Quick connector 3” ×1/4PT	YW80031400000
21	Locknut M5	YW64000500000	49	Connection copper head	BH12002400010
22	Hinge pin	BH10006003110	50	Air pipe connector fixing block	-
23	Flat gasket 8×22	YW66082200100	51	Connecting nut	BH12003600410
24	E rings 8	YW69896800000	52	Quick connector	YW80081400100
25	Down hinge	BL32000600140	53	Up hinge	BL32000600240
26	Control box base	-	54	Motor cover fixing base	BL21001501320
27	Control box	BH90615000010	55	Hopper cover	-
28	Hopper base plate fastener	-			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.21 Parts Drawing (SHR-12U-ES)



Notes: Please refer to material list 2.2.22 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-12: Parts (SHR-12U-ES)

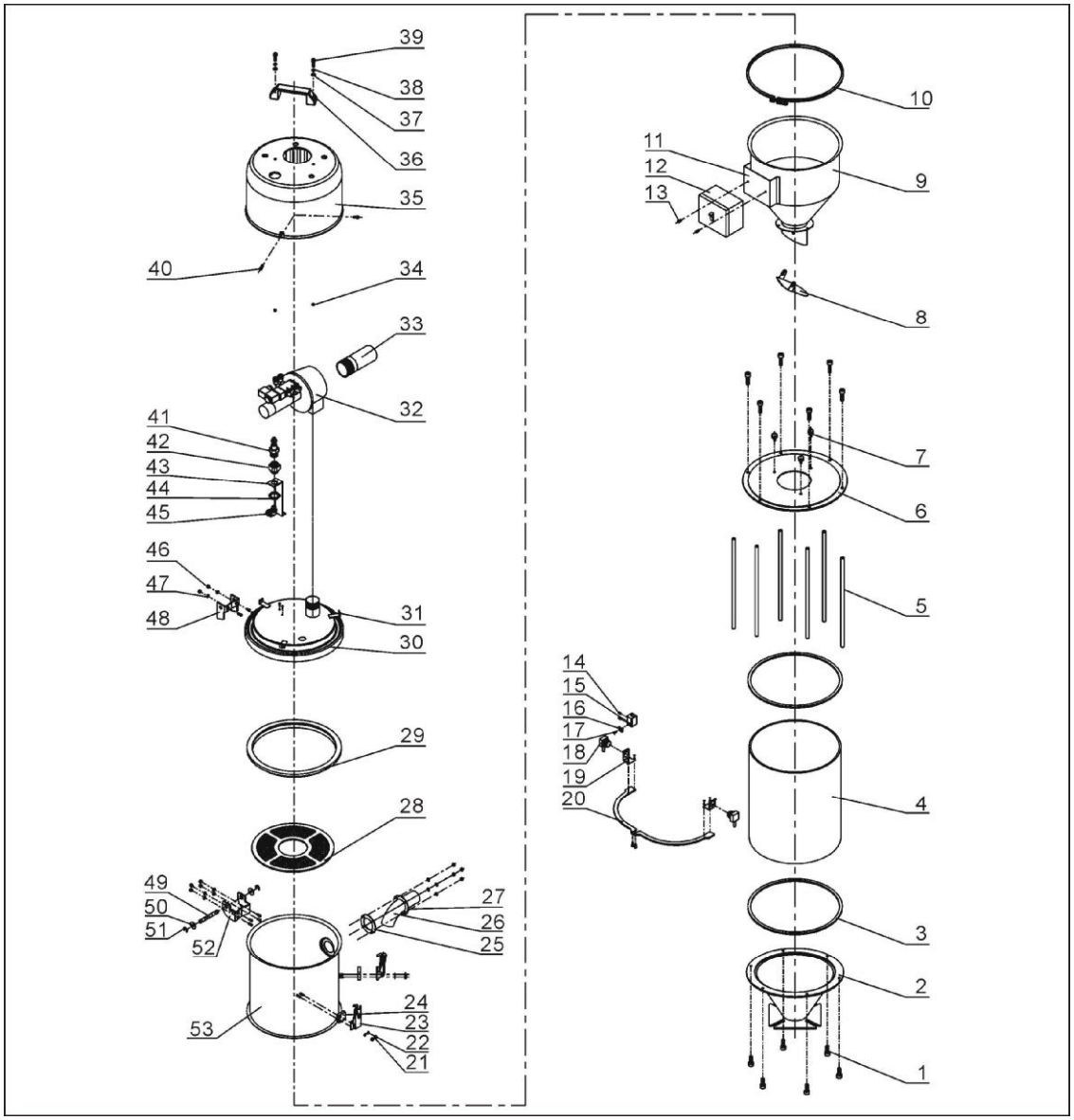
2.2.22 Parts List (SHR-12U-ES)

Table 2-11: Parts List (SHR-12U-ES)

No.	Name	Part No.	No.	Name	Part No.
1	Inner hexagon cylinder head screw M6×15	YW61061600300	26	Set screw M4×5	YW68004500000
2	Down flange of glass pipe	BL21000610710	27	Photosensor cable pressure block	BL90001000120
3	Glass pipe fastener	YR10001200100	28	Photosensor cable pressure block	YW31616200000
4	Glass pipe Φ170×Φ160×170	YW70171700000	29	Cross recess pan head screw M4×10	YW63041000000
5	Flange connection shaft	BH10101600210	30	Photosensor FOTEK T18-3MN-PE	YE15143900000
6	Up flange of glass pipe	BW32001200110	31	Photosensor mounting plate	-
7	Plastic handle screw M6×15	YW69621600000	32	Photosensor fixing plate	-
8	Non-return flap	-	33	Filter screen	BL21001200320
9	Material storage tank	-	34	Hopper fastener	YR10000600200
10	Locknut M4×0.7	YW64040700100	35	Hopper cover	-
11	Flat gasket 4	YW66040800000	36	Motor fixing base	BL21001501320
12	Snap hook	YW02003000400	37	Diaphragm valve 1.5”	-
13	Snap hook pad	YR40000600800	38	Air suction pipe	-
14	Material inlet pipe fastener	YR10061200000	39	Locknut M6	YW64000600200
15	Material inlet pipe	-	40	Aluminum square handle L120	BW20012000040
16	Material inlet pipe fixing plate	-	41	Inner hexagon cylinder head screw M6×20	YW61062000300
17	Flat gasket 5	YW66051000100	42	Motor cover	BR40036000310
18	Locknut M5	YW64000500000	43	Cross recess pan head screw M5×15	YW62051500000
19	Hinge pin	BH10006003110	44	Quick connector 3” ×1/4PT	YW80031400000
20	Flat gasket 8×22	YW66082200100	45	Connection copper head	BH12002400010
21	E rings 6	YW69896800000	46	Air pipe connector fixing block	-
22	Down hinge	BL32000600140	47	Connecting nut	BH12003600410
23	Control box base	-	48	Quick connector APLB8-1/4PT	YW80081400100
24	Control box	BH90615000010	49	Up hinge	BL32000600240
25	Cross recess pan head screw M4×6	YW63040600000			

* 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 make sure that the item number of the spare part is in accordance with the real object.

2.2.23 Parts Drawing (SHR-24U-ES)



Notes: Please refer to material list 2.2.24 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-13: Parts (SHR-24U-ES)

2.2.24 Parts List (SHR-24U-ES)

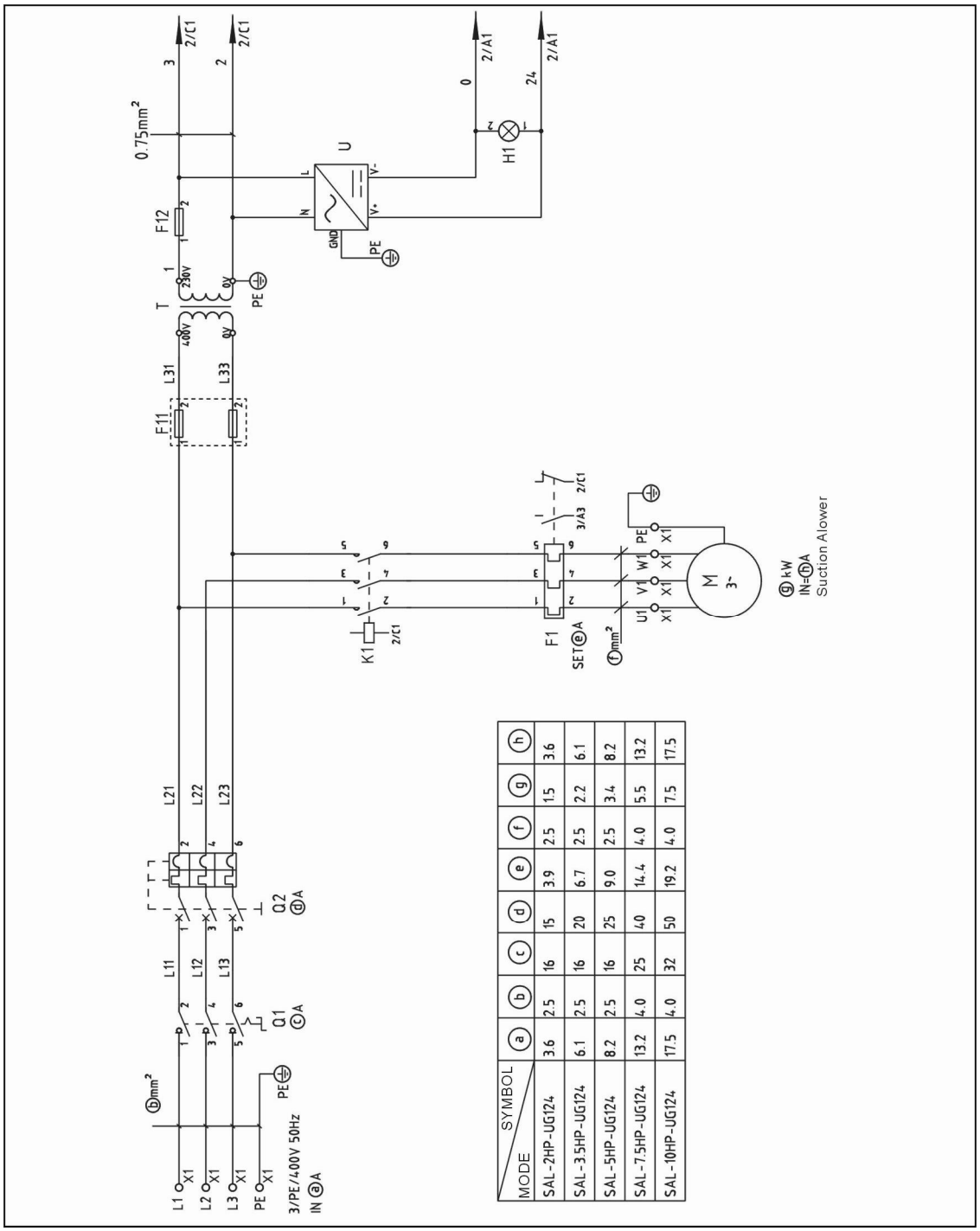
Table 2-12: Parts List (SHR-24U-ES)

No.	Name	Part No.	No.	Name	Part No.
1	Inner hexagon cylinder head screw M6×15	YW61061600300	28	Filter screen	BL21001200320
2	Down flange of glass pipe	-	29	Hopper fastener	YR10000600200
3	Glass pipe fastener	YR10001200100	30	Hopper cover	-
4	Glass pipe Φ280×Φ270×340	YW70282700000	31	Motor cover fixing base	BL21001501320
5	Flange connection shaft	BH10103300040	32	Diaphragm valve 2”	-
6	Up flange of glass pipe	-	33	Air suction pipe	-
7	Plastic handle screw M6×15	YW69621600000	34	Locknut M6	YW64000600200
8	Non-return flap	-	35	Motor cover	BR40036000310
9	Material storage tank	-	36	Aluminum square handle L120	BW20012000040
10	Pipe clamp	-	37	Flat gasket 6	YW66061300000
11	Control box base	-	38	Spring gasket 6	YW65006000000
12	Control box	BH90615000010	39	Inner hexagon cylinder head screw M6×20	YW61062000300
13	Cross recess pan head screw M4×6	YW63040600000	40	Cross recess pan head screw M5×15	YW62051500000
14	Set screw M4×5	YW68004500000	41	Quick connector 3” ×1/4PT	YW80031400000
15	Photosensor fixing base	BL90001000120	42	Connection copper head	BH12002400010
16	Photosensor cable pressure block	YW31616200000	43	Air pipe connector fixing block	-
17	Cross recess pan head screw M4×10	YW63041000000	44	Connecting nut	BH12003600410
18	Photosensor	YE15143900000	45	Quick connector	YW80081400100
19	Photosensor mounting plate	-	46	Locknut M5	YW64000500000
20	Photosensor fixing plate	-	47	Flat gasket 5	YW66051000100
21	Locknut M4×0.7	YW64040700100	48	Up hinge	BL32000600240
22	Flat gasket 4	YW66040800000	49	Hinge pin	BH10006003110
23	Snap hook	YW02003000400	50	Flat gasket 8×22	YW66082200100
24	Pad	YR40000600800	51	E rings 8	YW69896800000
25	Material inlet pipe fastener	YR10243600000	52	Down hinge	BL32000600140
26	Material inlet pipe	-	53	Enlarged material tank	-
27	Material inlet pipe fixing plate	-			

* 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 make sure that the item number of the spare part is in accordance with the real object.

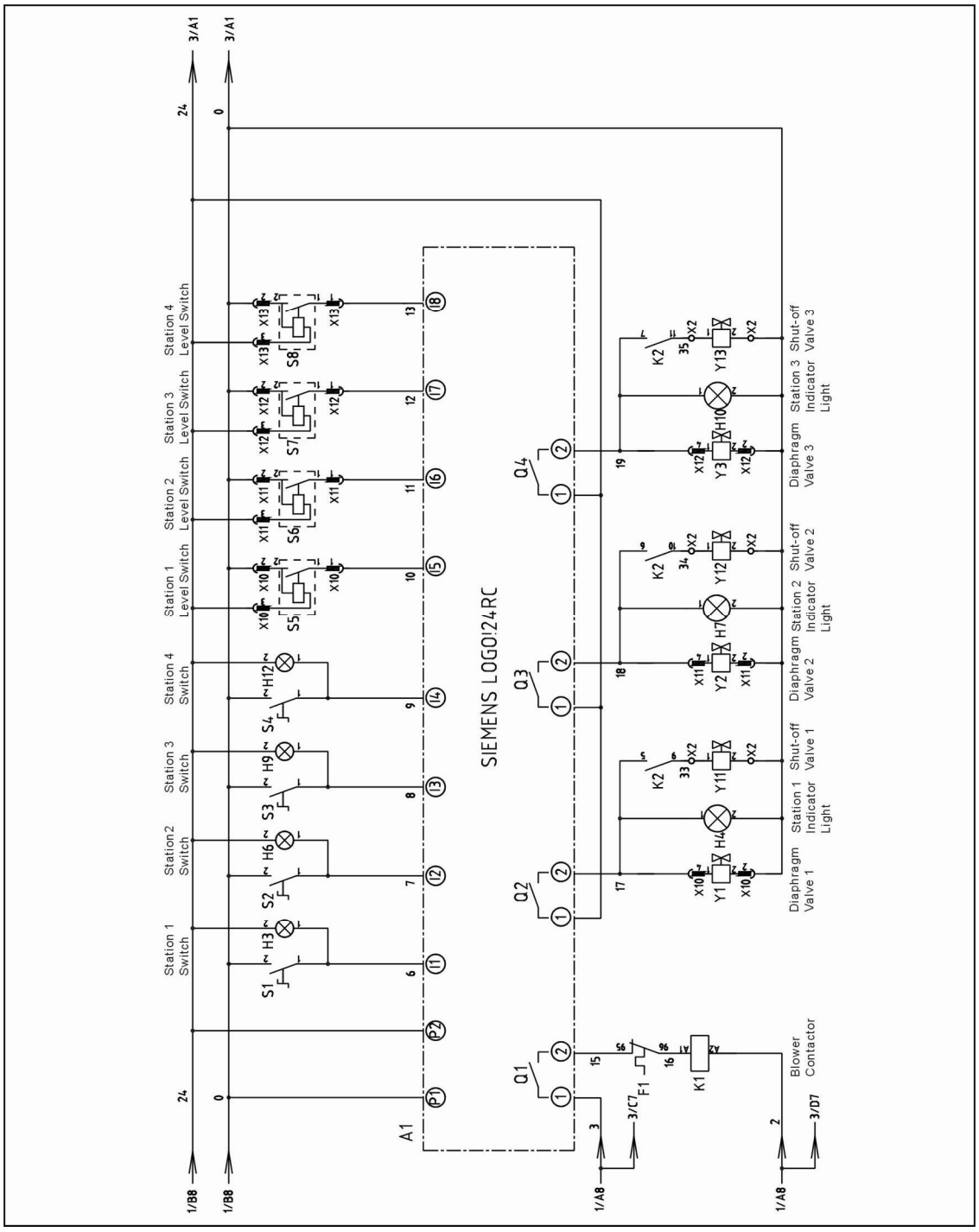
2.3 Electrical Diagram

2.3.1 Main Circuit (400V)

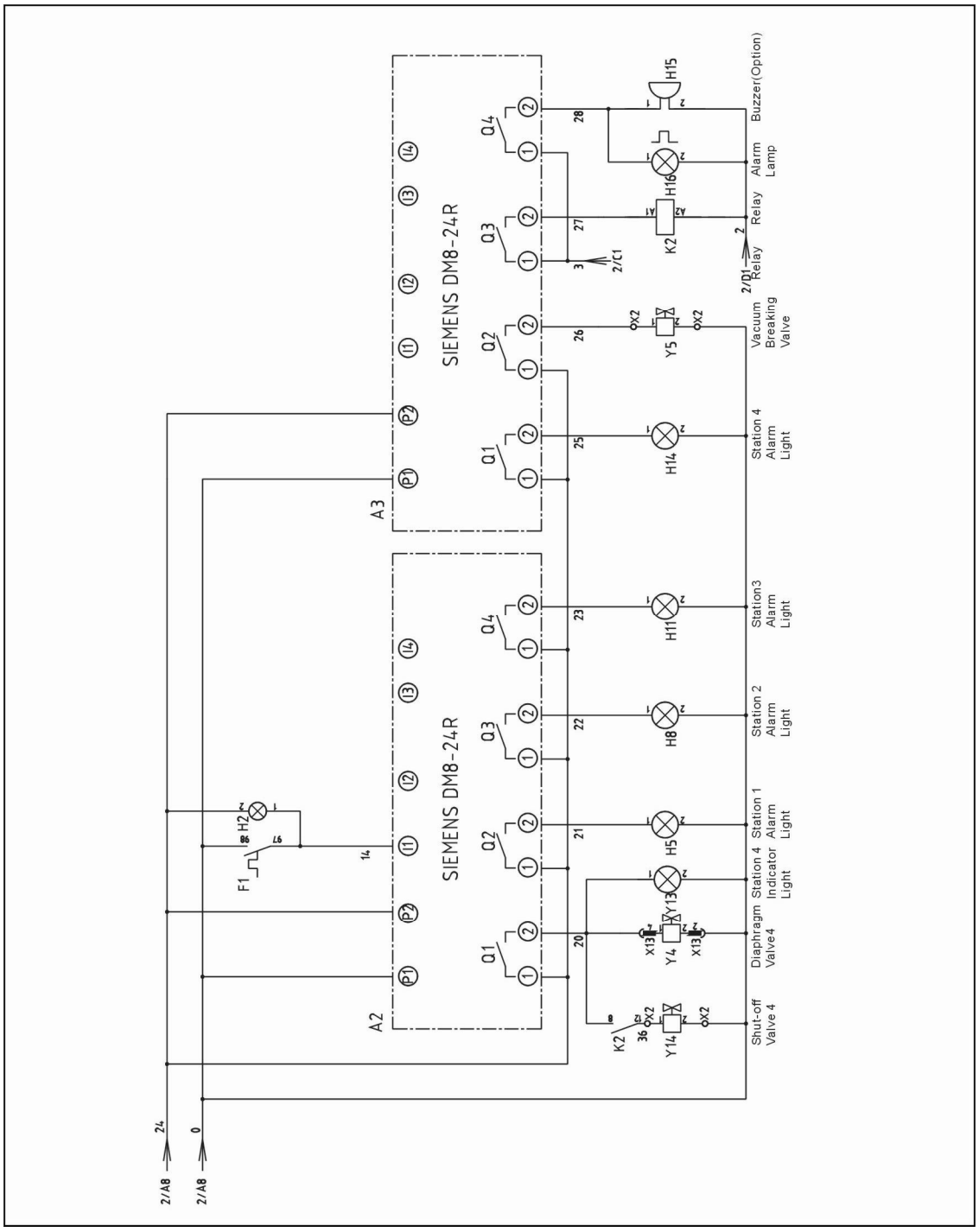


MODE \ SYMBOL	ⓐ	ⓑ	ⓒ	ⓓ	ⓔ	ⓕ	ⓖ	ⓗ
SAL-2HP-UG124	3.6	2.5	16	15	3.9	2.5	1.5	3.6
SAL-3.5HP-UG124	6.1	2.5	16	20	6.7	2.5	2.2	6.1
SAL-5HP-UG124	8.2	2.5	16	25	9.0	2.5	3.4	8.2
SAL-7.5HP-UG124	13.2	4.0	25	40	14.4	4.0	5.5	13.2
SAL-10HP-UG124	17.5	4.0	32	50	19.2	4.0	7.5	17.5

Picture 2-14: Main Circuit 1(400V)

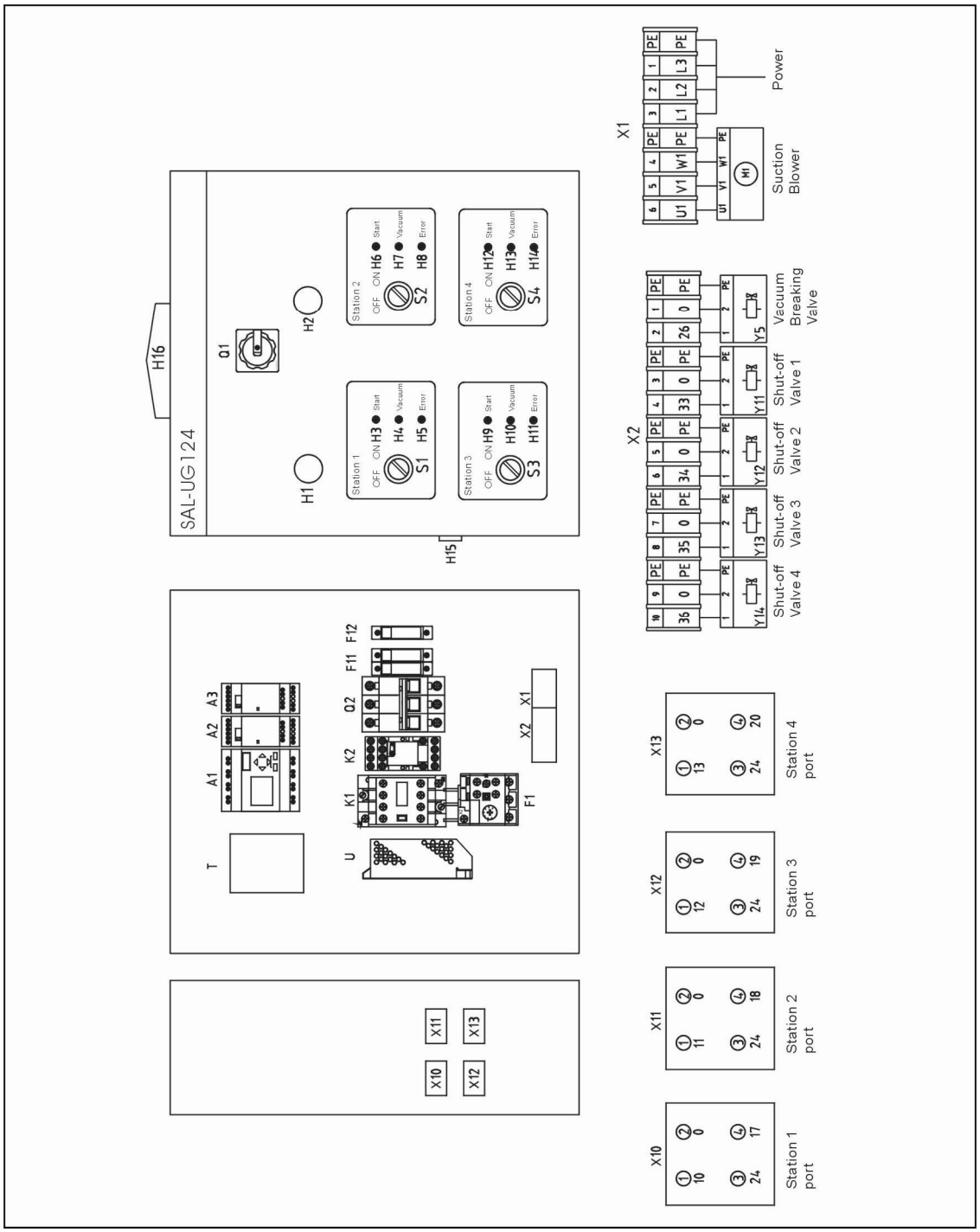


Picture 2-15: Main Circuit 2(400V)



Picture 2-16: Main Circuit 3(400V)

2.3.2 Electrical Components Layout (400V)



Picture 2-17: Electrical Components Layout (400V)

2.3.3 Parts List (400V)

Table 2-13: Parts List (SAL-2HP-UG124) (400V)

No.	Symbol	Name	SAL-2HP-UG124	
			Specification	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers**	15A	YE40601500000
3	K1	Contactors**	220V 50/60Hz	YE00601621000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	3.2~5A	YE01160350000
6	F11 F12	Fuse box	2A	YE41001000000
7	T	Transformer**	500mA	YE70402300800
8	A1	Program controller	24VDC	YE81002400000
9	A2 A3	Extended module	24VDC	YE82082400000
10	U1	DC power*	24VDC 1.5A	YE71352400000
11	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
12	S5~S8	Photosensor*	10...30VDC	YE15000400000
13	-	Reed switch	24VDC	YE15123000000
14	Y1~Y5	Solenoid valve*	24VDC	-
15	Y11~Y14	Solenoid valve*	24VDC	-
16	H1	Indicator light	24VDC	YE83050200100
17	H2	Indicator light	24VDC	YE83050200000
18	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
19	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
20	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
21	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
22	X1	Terminal block*	-	YE61250040000
23	-	Terminal block	-	YE61253500000
24	X10~X13	Port	4P	YE60000040000
25	-	Port	4P	YE60000400200
26	X2	Terminal block	-	YE61250040000
27	-	Terminal block	-	YE61253500000
28	M	Blower**	2HP 400V 50Hz	-

* 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: Parts List (SAL-3.5HP-UG124) (400V)

No.	Symbol	Name	SAL3.5HP-UG124	
			Specification	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers**	20A	YE40602000000
3	K1	Contactors**	220V 50/60Hz	YE00601721000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	5.5~8A	YE01160550000
6	F11 F12	Fuse box	2A	YE41001000000
7	T	Transformer**	500mA	YE70402300800
8	A1	Program controller	24VDC	YE81002400000
9	A2 A3	Extended module	24VDC	YE82082400000
10	U1	DC power*	24VDC 1.5A	YE71352400000
11	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
12	S5~S8	Photosensor*	10...30VDC	YE15000400000
13	-	Reed switch	24VDC	YE15123000000
14	Y1~Y5	Solenoid valve*	24VDC	-
15	Y11~Y14	Solenoid valve*	24VDC	-
16	H1	Indicator light	24VDC	YE83050200100
17	H2	Indicator light	24VDC	YE83050200000
18	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
19	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
20	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
21	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
22	X1	Terminal block*	-	YE61250040000
23	-	Terminal block	-	YE61253500000
24	X10~X13	Port	4P	YE60000040000
25	-	Port	4P	YE60000400200
26	X2	Terminal block	-	YE61250040000
27	-	Terminal block	-	YE61253500000
28	M	Blower**	3.5HP 400V 50Hz	-

* 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: Parts List (SAL-5HP(-D)-UG124) (400V)

No.	Symbol	Name	SAL-5HP(-D)-UG124	
			Specification	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers**	25A	YE40602500000
3	K1	Contactors**	220V 50/60Hz	YE00601800000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	7~10A	YE01167100000
6	F11 F12	Fuse box	2A	YE41001000000
7	T	Transformer**	500mA	YE70402300800
8	A1	Program controller	24VDC	YE81002400000
9	A2 A3	Extended module	24VDC	YE82082400000
10	U1	DC power*	24VDC 1.5A	YE71352400000
11	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
12	S5~S8	Photosensor*	10...30VDC	YE15000400000
13	-	Reed switch	24VDC	YE15123000000
14	Y1~Y5	Solenoid valve*	24VDC	-
15	Y11~Y14	Solenoid valve*	24VDC	-
16	H1	Indicator light	24VDC	YE83050200100
17	H2	Indicator light	24VDC	YE83050200000
18	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
19	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
20	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
21	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
22	X1	Terminal block*	-	YE61250040000
23	-	Terminal block	-	YE61253500000
24	X10~X13	Port	4P	YE60000040000
25	-	Port	4P	YE60000400200
26	X2	Terminal block	-	YE61250040000
27	-	Terminal block	-	YE61253500000
28	M	Blower**	5HP 400V 50Hz	-

* 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: Parts List (SAL-7.5HP(-D)-UG124) (400V)

No.	Symbol	Name	SAL-7.5HP(-D)-UG124	
			Specification	Part No.
1	Q1	Main switch*	25A	YE10210300000
2	Q2	Circuit breakers**	40A	YE40604000000
3	K1	Contactors**	220V 50/60Hz	YE00602522000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	11~16A	YE01260110000
6	F11 F12	Fuse box	2A	YE41001000000
7	T	Transformer**	500mA	YE70402300800
8	A1	Program controller	24VDC	YE81002400000
9	A2 A3	Extended module	24VDC	YE82082400000
10	U1	DC power*	24VDC 1.5A	YE71352400000
11	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
12	S5~S8	Photosensor*	10...30VDC	YE15000400000
13	-	Reed switch	24VDC	YE15123000000
14	Y1~Y5	Solenoid valve*	24VDC	-
15	Y11~Y14	Solenoid valve*	24VDC	-
16	H1	Indicator light	24VDC	YE83050200100
17	H2	Indicator light	24VDC	YE83050200000
18	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
19	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
20	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
21	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
22	X1	Terminal block*	-	YE61250040000
23	-	Terminal block	-	YE61253500000
24	X10~X13	Port	4P	YE60000040000
25	-	Port	4P	YE60000400200
26	X2	Terminal block	-	YE61250040000
27	-	Terminal block	-	YE61253500000
28	M	Blower**	7.5HP 400V 50Hz	-

* 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: Parts List (SAL-10HP(-D)-UG124) (400V)

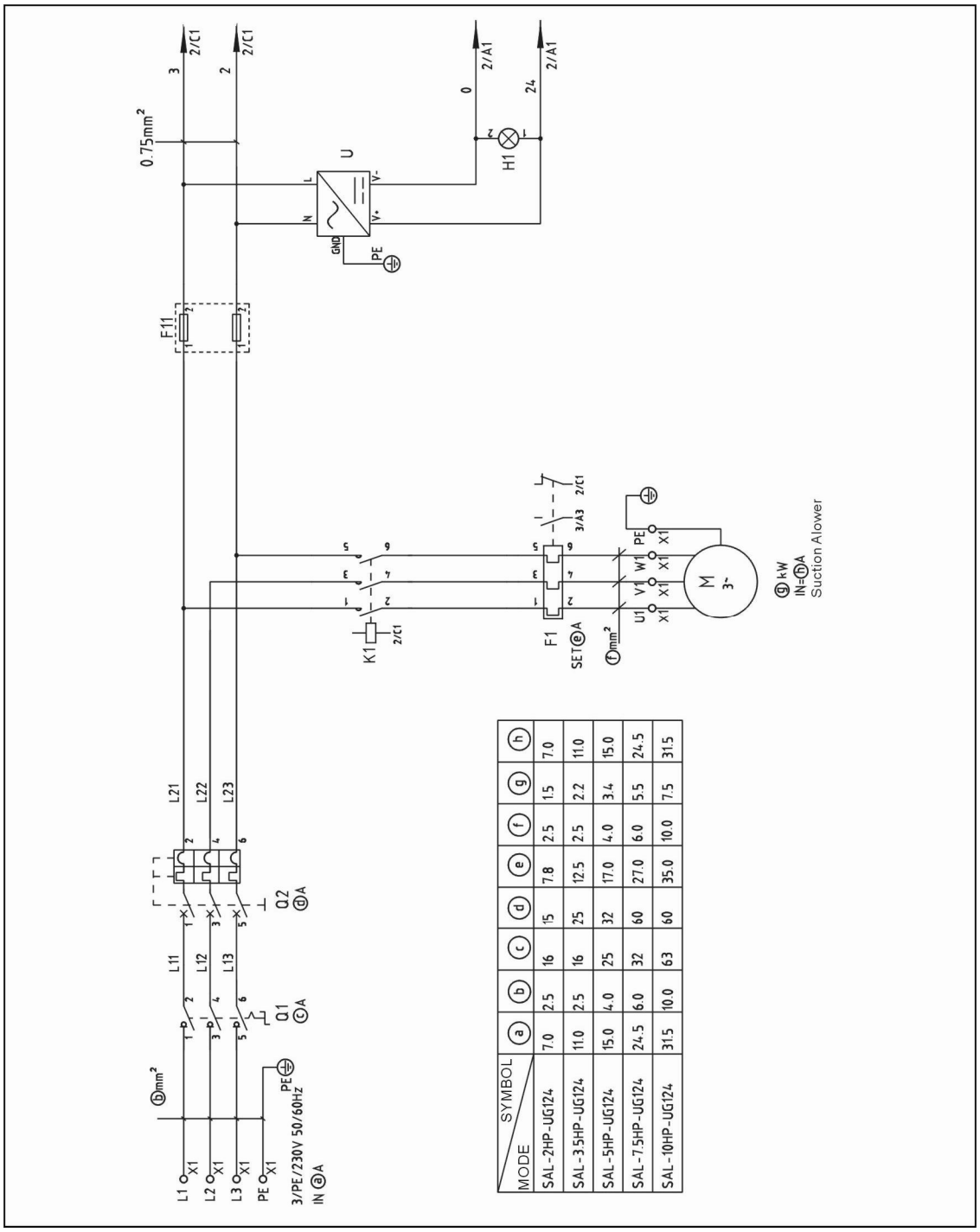
No.	Symbol	Name	SAL-10HP(-D)-UG124	
			Specification	Part No.
1	Q1	Main switch*	32A	YE10220300000
2	Q2	Circuit breakers**	50A	YE40604000000
3	K1	Contactors**	220V 50/60Hz	YE00602622000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	17~22A	YE01260170000
6	F11 F12	Fuse box	2A	YE41001000000
7	T	Transformer**	500mA	YE70402300800
8	A1	Program controller	24VDC	YE81002400000
9	A2 A3	Extended module	24VDC	YE82082400000
10	U1	DC power*	24VDC 1.5A	YE71352400000
11	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
12	S5~S8	Photosensor*	10...30VDC	YE15000400000
13	-	Reed switch	24VDC	YE15123000000
14	Y1~Y5	Solenoid valve*	24VDC	-
15	Y11~Y14	Solenoid valve*	24VDC	-
16	H1	Indicator light	24VDC	YE83050200100
17	H2	Indicator light	24VDC	YE83050200000
18	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
19	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
20	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
21	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
22	X1	Terminal block*	-	YE61250040000
23	-	Terminal block	-	YE61253500000
24	X10~X13	Port	4P	YE60000040000
25	-	Port	4P	YE60000400200
26	X2	Terminal block	-	YE61250040000
27	-	Terminal block	-	YE61253500000
28	M	Blower**	10HP 400V 50Hz	-

* means possible broken parts.

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

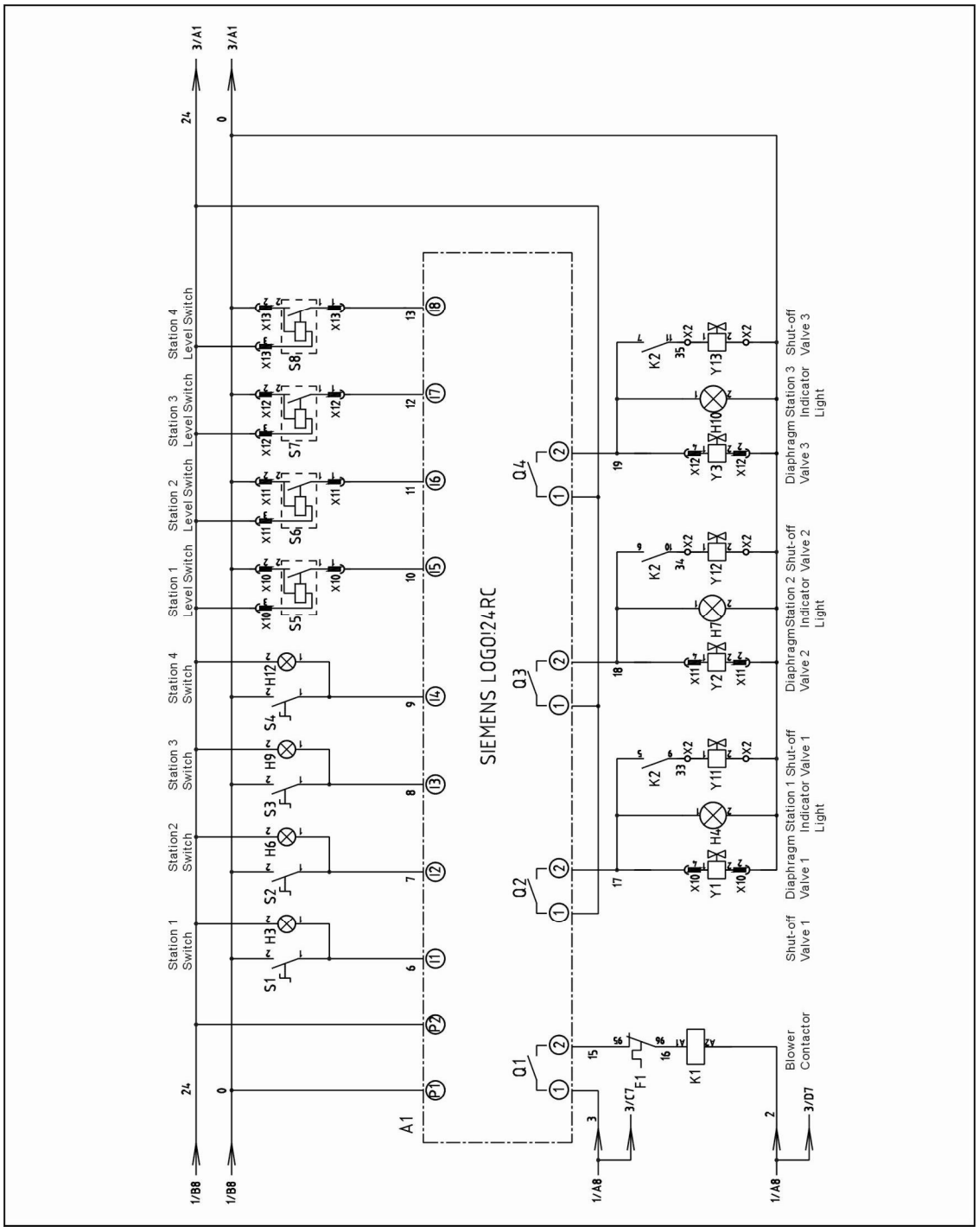
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

2.3.4 Main Circuit (230V)

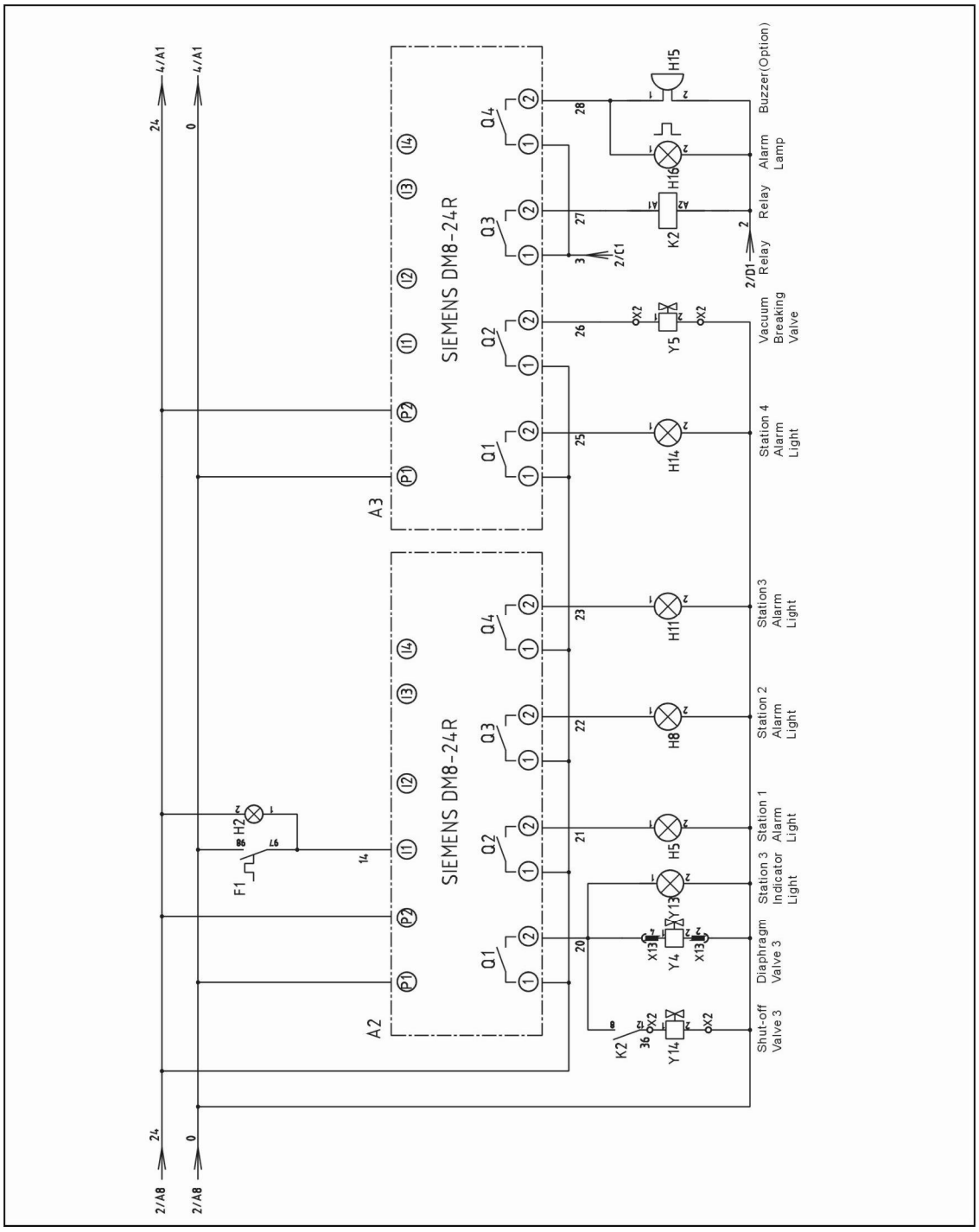


MODE \ SYMBOL	ⓐ	ⓑ	ⓒ	ⓓ	ⓔ	ⓕ	ⓖ	ⓗ
SAL-2HP-UG124	7.0	2.5	16	15	7.8	2.5	1.5	7.0
SAL-3.5HP-UG124	11.0	2.5	16	25	12.5	2.5	2.2	11.0
SAL-5HP-UG124	15.0	4.0	25	32	17.0	4.0	3.4	15.0
SAL-7.5HP-UG124	24.5	6.0	32	60	27.0	6.0	5.5	24.5
SAL-10HP-UG124	31.5	10.0	63	60	35.0	10.0	7.5	31.5

Picture 2-18: Main Circuit 1(400V)

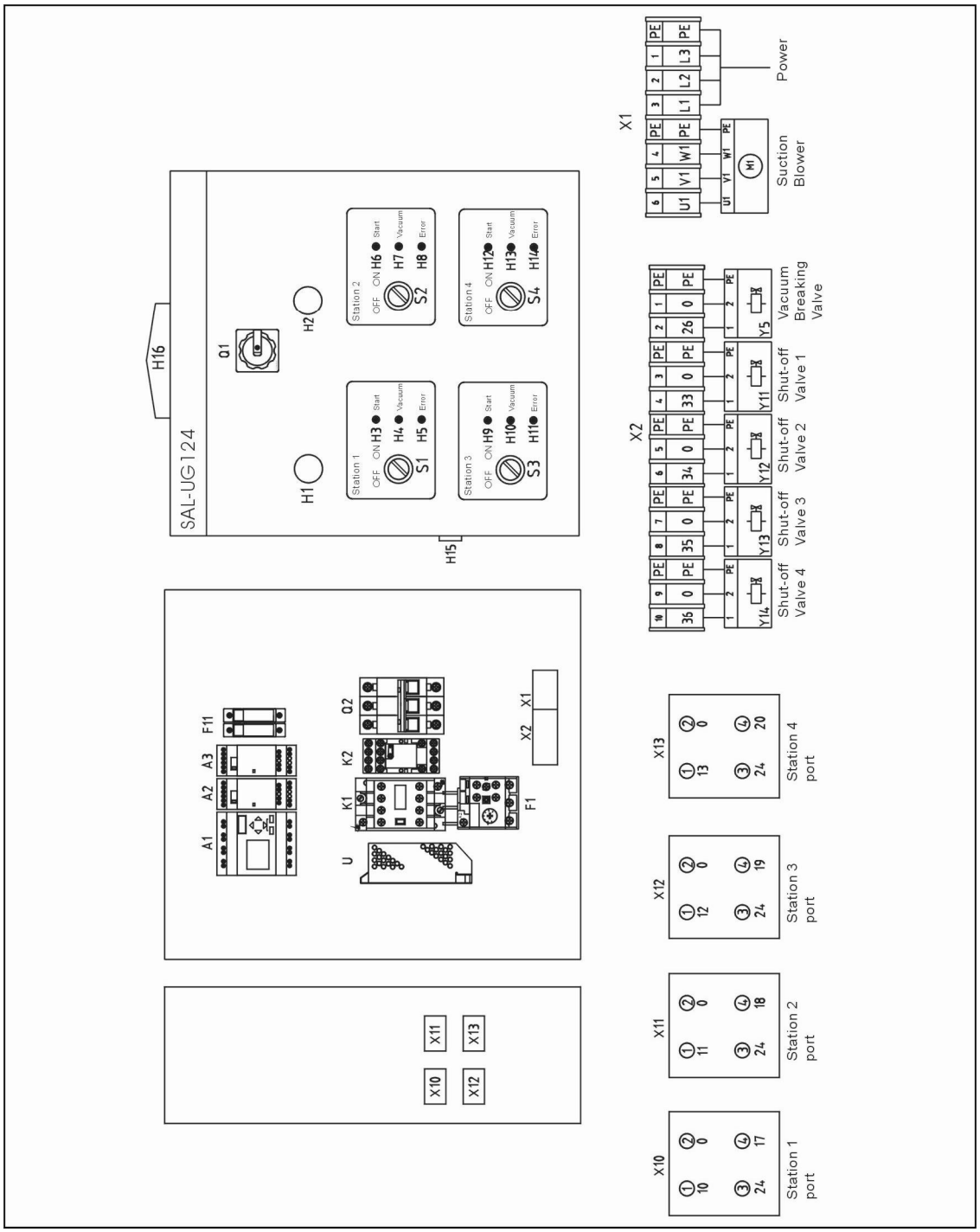


Picture 2-19: Main Circuit 2(230V)



Picture 2-20: Main Circuit 3(230V)

2.3.5 Electrical Components Layout (230V)



Picture 2-21: Electrical Components Layout (230V)

2.3.6 Parts List (230V)

Table 2-18: Parts List (SAL-2HP-UG124) (230V)

No.	Symbol	Name	SAL-2HP-UG124	
			Specification	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers**	15A	YE40601500000
3	K1	Contactors**	220V 50/60Hz	YE00601721000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	7~10A	YE01167100000
6	F11	Fuse box	2A	YE41001000000
7	A1	Program controller	24VDC	YE81002400000
8	A2 A3	Extended module	24VDC	YE82082400000
9	U1	DC power*	24VDC 1.5A	YE71352400000
10	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
11	S5~S8	Photosensor*	10...30VDC	YE15000400000
12	-	Reed switch	24VDC	YE15123000000
13	Y1~Y5	Solenoid valve*	24VDC	-
14	Y11~Y14	Solenoid valve*	24VDC	-
15	H1	Indicator light	24VDC	YE83050200100
16	H2	Indicator light	24VDC	YE83050200000
17	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
18	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
19	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
20	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
21	X1	Terminal block*	-	YE61250040000
22	-	Terminal block	-	YE61253500000
23	X10~X13	Port	4P	YE60000040000
24	-	Port	4P	YE60000400200
25	X2	Terminal block	-	YE61250040000
26	-	Terminal block	-	YE61253500000
27	M	Blower**	2HP 230V 50/60Hz	-

* 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 2-19: Parts List (SAL-3.5HP-UG124) (230V)

No.	Symbol	Name	SAL3.5HP-UG124	
			Specification	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers**	25A	YE40602500000
3	K1	Contactors**	220V 50/60Hz	YE00601800000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	11~16A	YE01611640000
6	F11	Fuse box	2A	YE41001000000
7	A1	Program controller	24VDC	YE81002400000
8	A2 A3	Extended module	24VDC	YE82082400000
9	U1	DC power*	24VDC 1.5A	YE71352400000
10	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
11	S5~S8	Photosensor*	10...30VDC	YE15000400000
12	-	Reed switch	24VDC	YE15123000000
13	Y1~Y5	Solenoid valve*	24VDC	-
14	Y11~Y14	Solenoid valve*	24VDC	-
15	H1	Indicator light	24VDC	YE83050200100
16	H2	Indicator light	24VDC	YE83050200000
17	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
18	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
19	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
20	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
21	X1	Terminal block*	-	YE61250040000
22	-	Terminal block	-	YE61253500000
23	X10~X13	Port	4P	YE60000040000
24	-	Port	4P	YE60000400200
25	X2	Terminal block	-	YE61250040000
26	-	Terminal block	-	YE61253500000
27	M	Blower**	3.5HP 230V 50/60Hz	-

* 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 2-20: Parts List (SAL-5HP(-D)-UG124) (230V)

No.	Symbol	Name	SAL-5HP(-D)-UG124	
			Specification	Part No.
1	Q1	Main switch*	25A	YE10210300000
2	Q2	Circuit breakers**	32A	YE40603200000
3	K1	Contactors**	220V 50/60Hz	YE00602622000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	14~20A	YE01260140000
6	F11	Fuse box	2A	YE41001000000
7	A1	Program controller	24VDC	YE81002400000
8	A2 A3	Extended module	24VDC	YE82082400000
9	U1	DC power*	24VDC 1.5A	YE71352400000
10	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
11	S5~S8	Photosensor*	10...30VDC	YE15000400000
12	-	Reed switch	24VDC	YE15123000000
13	Y1~Y5	Solenoid valve*	24VDC	-
14	Y11~Y14	Solenoid valve*	24VDC	-
15	H1	Indicator light	24VDC	YE83050200100
16	H2	Indicator light	24VDC	YE83050200000
17	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
18	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
19	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
20	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
21	X1	Terminal block*	-	YE61250040000
22	-	Terminal block	-	YE61253500000
23	X10~X13	Port	4P	YE60000040000
24	-	Port	4P	YE60000400200
25	X2	Terminal block	-	YE61250040000
26	-	Terminal block	-	YE61253500000
27	M	Blower**	5HP 230V 50/60Hz	-

* 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 2-21: Parts List (SAL-7.5HP(-D)-UG124) (230V)

No.	Symbol	Name	SAL-7.5HP(-D)-UG124	
			Specification	Part No.
1	Q1	Main switch*	32A	YE10220300000
2	Q2	Circuit breakers**	60A	YE40606000000
3	K1	Contactors**	220V 50/60Hz	YE00602722000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	27~32A	YE01612600600
6	F11	Fuse box	2A	YE41001000000
7	A1	Program controller	24VDC	YE81002400000
8	A2 A3	Extended module	24VDC	YE82082400000
9	U1	DC power*	24VDC 1.5A	YE71352400000
10	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
11	S5~S8	Photosensor*	10...30VDC	YE15000400000
12	-	Reed switch	24VDC	YE15123000000
13	Y1~Y5	Solenoid valve*	24VDC	-
14	Y11~Y14	Solenoid valve*	24VDC	-
15	H1	Indicator light	24VDC	YE83050200100
16	H2	Indicator light	24VDC	YE83050200000
17	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
18	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
19	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
20	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
21	X1	Terminal block*	-	YE61250040000
22	-	Terminal block	-	YE61253500000
23	X10~X13	Port	4P	YE60000040000
24	-	Port	4P	YE60000400200
25	X2	Terminal block	-	YE61250040000
26	-	Terminal block	-	YE61253500000
27	M	Blower**	7.5HP 230V 50/60Hz	-

* 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 2-22: Parts List (SAL-10HP(-D)-UG124) (230V)

No.	Symbol	Name	SAL-10HP(-D)-UG124	
			Specification	Part No.
1	Q1	Main switch*	63A	YE10250400000
2	Q2	Circuit breakers**	60A	YE40606000000
3	K1	Contactors**	220V 50/60Hz	YE00602822000
4	K2	Relay	230V 50/60Hz	YE03570700000
5	F1	Overload relays	34~40A	YE01612640000
6	F11	Fuse box	2A	YE41001000000
7	A1	Program controller	24VDC	YE81002400000
8	A2 A3	Extended module	24VDC	YE82082400000
9	U1	DC power*	24VDC 1.5A	YE71352400000
10	S1~S4	Knob switch	Ui=300V Ith=5A	YE12210100000
11	S5~S8	Photosensor*	10...30VDC	YE15000400000
12	-	Reed switch	24VDC	YE15123000000
13	Y1~Y5	Solenoid valve*	24VDC	-
14	Y11~Y14	Solenoid valve*	24VDC	-
15	H1	Indicator light	24VDC	YE83050200100
16	H2	Indicator light	24VDC	YE83050200000
17	H3 H4 H6 H7 H9 H10 H12 H13	Indicator light	24VDC	YE83002400200
18	H5 H8 H11 H14	Indicator light	24VDC	YE83002400000
19	H15	Buzzer	60-250VAC 50/60Hz	YE84003500000
20	H16	Alarm lamp	230VAC 50/60Hz	YE83305100200
21	X1	Terminal block*	-	YE61250040000
22	-	Terminal block	-	YE61253500000
23	X10~X13	Port	4P	YE60000040000
24	-	Port	4P	YE60000400200
25	X2	Terminal block	-	YE61250040000
26	-	Terminal block	-	YE61253500000
27	M	Blower**	10HP 230V 50/60Hz	-

* means possible broken parts.

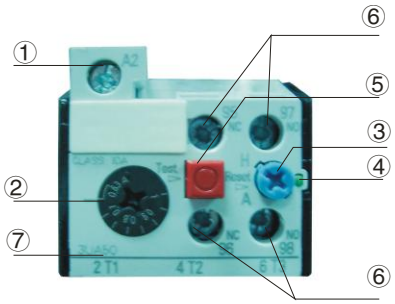
** means easy broken part. and spare backup is suggested.

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 Electrical Component Instruction

2.4.1 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 2-22: 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.

2.5 Optional Accessories

2.5.1 Air Accumulator

2.5.1.1 Function of air Accumulator

Picture 2-23: Air Accumulator

2.5.1.2 Specification of air Accumulator

Air accumulator: HxD=170x76mm

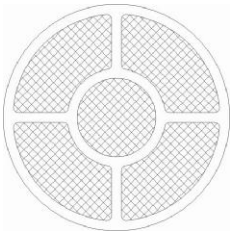
Note!

Please fix the air supply correctly. Air pressure not less than 4 bar.

2.5.2 Filter Screen

2.5.2.1 Which Condition Need to Choose this Filter Screen.

This type filter screen can used up to 30% grinding material can increased working life.



Picture 2-24: Filter Screen

2.5.2.2 Spec of the Filter Screen

Screen number: 14 Steel dia.: 0.5mm

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 Space

When install this machine, make sure to have enough space for installation (there should be 1m remain space around the machine), like show in the figure. It is not convenient for checking and maintence of the machine if it is installed in a narrow space.

Picture 3-1: Installation Space

3.2 Power Connection

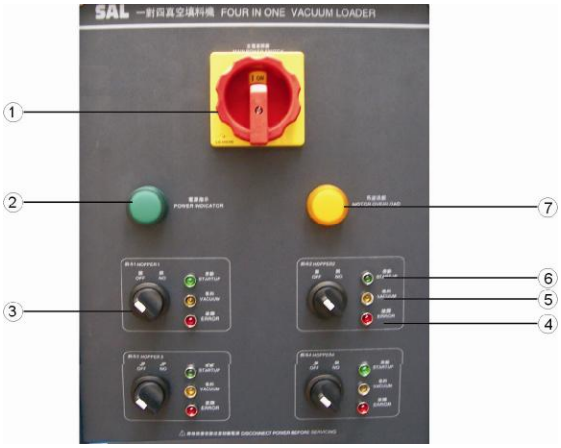
Make sure the power supply is complied with the required specification before connection.

The power specification of the machine is preset as 3Φ400V usually and can be also made on customer's specific requirements.

Before connecting to power supply, make sure the power switch is in shut off position.

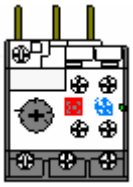
4. Application and Operation

4.1 Control Panel



Picture 4-1: Control Panel

No.	Name	Function description	Notice
1	Main power switch	Machine power control.	Notice: turn the main power switch to " OFF" position when not in use.
2	Power indicator	When connected to the power supply and this light is bright when turns on main power switch.	Notice: do not disassemble any unit or contact any pole, otherwise it will lead to electric shock.
3	Feeding switch	When placed in on feeding action is carried out. When off no feeding action.	The machine is designed to have four feeding station, and the four feeding switches on the control panel are respectively control them.
4	Failure indicator	When in continuously 3 times no material loading, this light is alight and buzzer is sounding. This feeding station stops working.	Material shortage.
5	Feeding indicator	Alight when feeding.	
6	Feeding station startup indicator	Alight when placing the feeding switch on off.	

No.	Name	Function description	Notice
7	Motor overload indicator	When the motor is overloaded, this light lights up and the buzzer is sounding. The system stops working.	Check the motor to see if there are problems such as getting stuck or bearing damage. If not, check setup current of the thermo overload relay to see whether it is too little. Wait for one minute after shooting the above troubles. Then press "reset" to restart the thermo overload relay to reset the alarm indicator. 

4.2 Operational Steps

1) Turn on the main power. The green power indicator is alight.
2) The startup indicator is alight after turning the switch of one feeding stations to ON position. When receiving signals for feeding, feeding action begins. And the feeding indicator is alight. When the feeding stations are all ON, feeding action will be in turn.
3) When in continuously 3 times no receiving signals being detected, the system will sound the alarm and the feeding stations stop working.

4.3 Parameters Setup

Parameters setup is conducted via SIEMENS LOGO! Firstly, define the parameters according to demand; secondly, input the parameters into the controller manually. Open the control panel, enter the LOGO! Parameters setup interface.

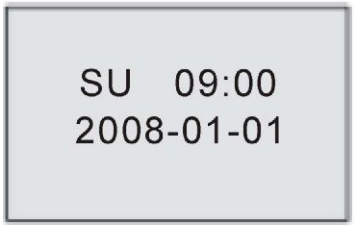
4.4 Parameter list

Parameter Block No.	Function	Remarks
B1	Feeding time for station 1	Setting value is according to the hopper's capacity and distance of station 1, the factory value is 20S
B2	Feeding time for station 2	Setting value is according to the hopper's capacity and distance of station 2, the factory value is 20S
B3	Feeding time for station 3	Setting value is according to the hopper's capacity and distance of station 3, the factory value is 20S
B4	Feeding time for station 4	Setting value is according to the hopper's capacity and distance of station 4, the factory value is 20S

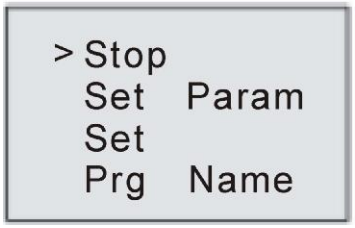
Parameter Block No.	Function	Remarks
B5	Stop time delay	Suction motor factory delaying stop time is 60S
B7	Material shortage alarming times for station 1	Material is not enough, how many times the recorded alarms， the factory value is 3times
B8	Material shortage alarm ing times for station 2	Material is not enough, how many times the recorded alarms, the factory value is 3times
B9	Material shortage alarming times for station 3	Material is not enough, how many times the recorded alarms, the factory value is 3times
B10	Material shortage alarming times for station 4	Material is not enough, how many times the recorded alarms, the factory value is 3times
B45	Material checking time for station 1	Setting value is according to the hopper's capacity and distance of station 1, the factory value is 12S
B46	Material checking time for station 2	Setting value is according to the hopper's capacity and distance of station 2, the factory value is 12S
B47	Material checking time for station 3	Setting value is according to the hopper's capacity and distance of station 3, the factory value is 12S
B48	Material checking time for station 4	Setting value is according to the hopper's capacity and distance of station 4, the factory value is 12S

4.5 Parameter Input

The SIMENS LOGO! Controller originally displays date and time.



1) Press "ESC", the LOGO! Controller shifts from operating mode to parameter mode and display parameter setup menu.



The four menus work respectively:

STOP

Choose this command to stop the controller.

Warning

Do not choose the functions in this menu because it will stop the running system forcefully.

Set Parameter

B1, B2, B3, B4, B5 parameter blocks will be configured via choosing this command.

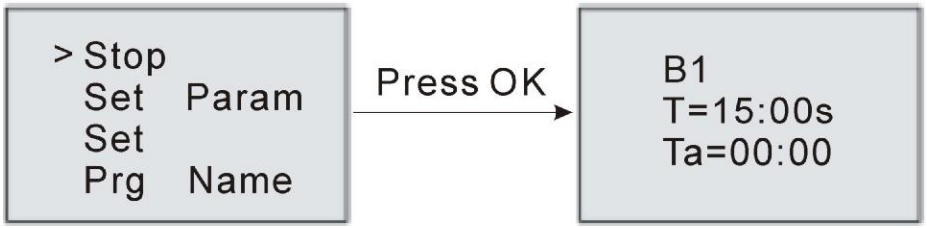
Set

Setup the time of the LOGO! Controller via this command.

Parameter Name

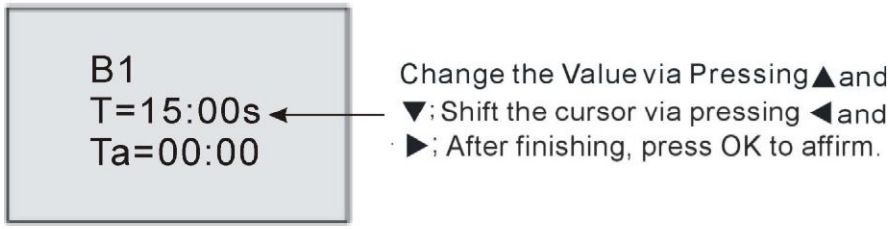
This command only allows you to access to the name of the controller program.

2) Move the “>” cursor to “Set Param” by pressing ▲or▼.

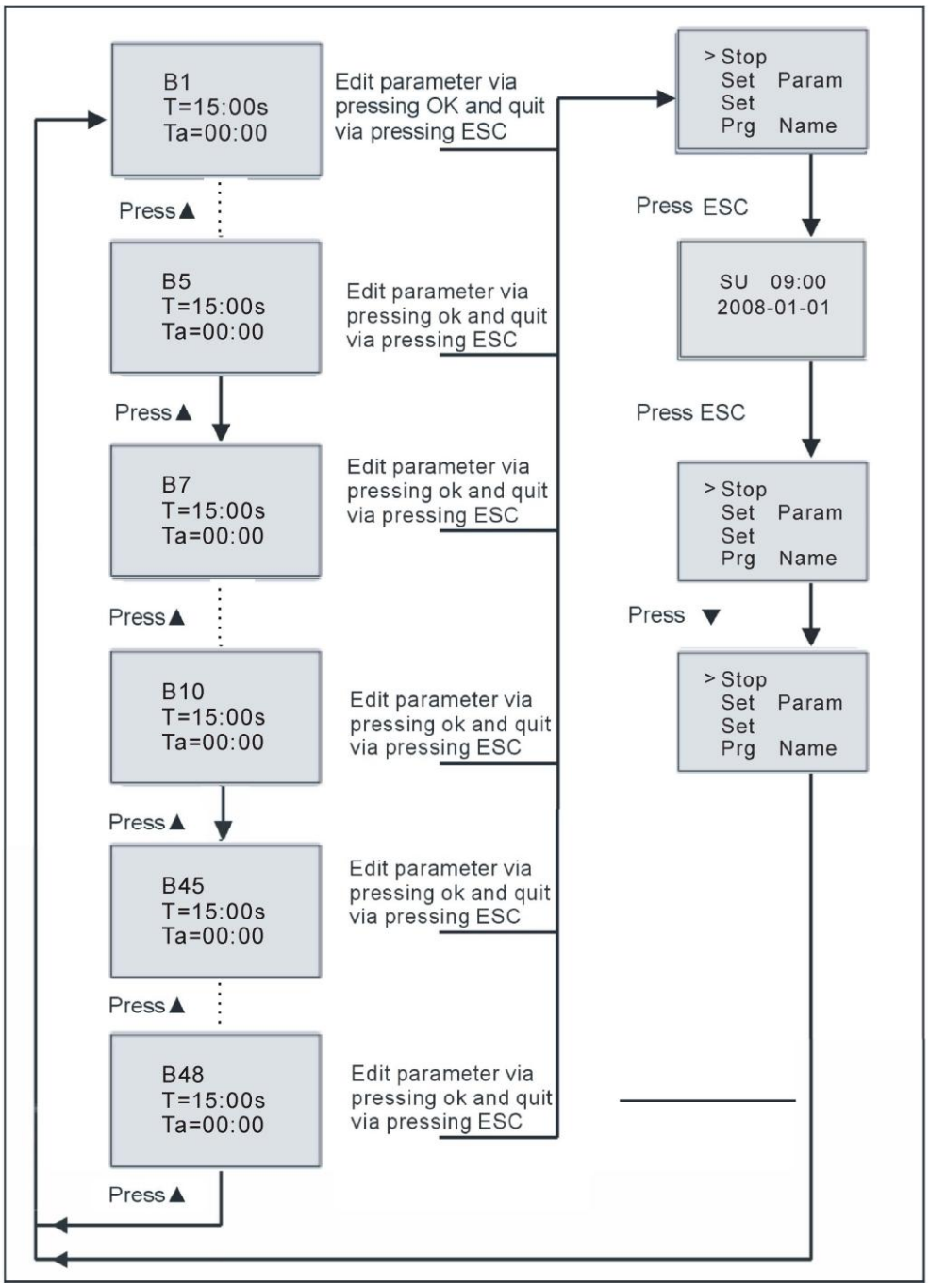


3) Press OK to affirm and LOGO! Displays the first parameter block B1.

4) Repress OK to affirm editing parameters.



5) Press ▲after finishing the setup of B1 parameter block and the LOGO! Displays the second parameter block B2. Press OK to edit the parameter. Repress ▲and the same way LOGO! Displays the third parameter B3. Setup B3, B4, B5 etc. the same way. Quit the setup interface after finishing.

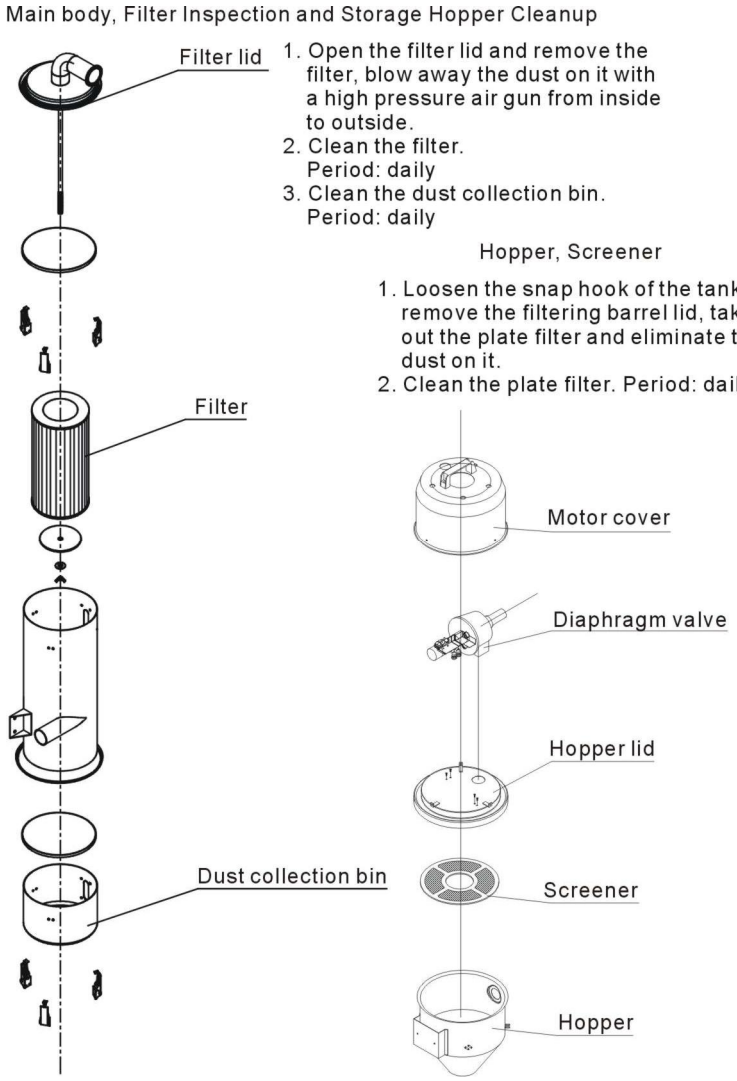

B1
T=15:00s
Ta=00:00
Edit parameter via pressing OK and quit via pressing ESC
> Stop
Set Param
Set
Prg Name
Press▲
Press ESC
B5
T=15:00s
Ta=00:00
Edit parameter via pressing ok and quit via pressing ESC
SU 09:00
2008-01-01
Press▲
Press ESC
B7
T=15:00s
Ta=00:00
Edit parameter via pressing ok and quit via pressing ESC
> Stop
Set Param
Set
Prg Name
Press▲
Press ▼
B10
T=15:00s
Ta=00:00
Edit parameter via pressing ok and quit via pressing ESC
> Stop
Set Param
Set
Prg Name
Press▲
B45
T=15:00s
Ta=00:00
Edit parameter via pressing ok and quit via pressing ESC
Press▲
B48
T=15:00s
Ta=00:00
Edit parameter via pressing ok and quit via pressing ESC
Press▲

5. Trouble-shooting

Failures	Possible reasons	Solutions
Power indicator is not alight after opening the power	Unconnected to main power. Power switch is damaged. Power cable fails. Fuse of control circuit is fused. Control transformer fails.	Connect to the main power. Replace power switch. Check power cables. Check cable and replace fuse. Replace transformer.
After turn on the power switch, power indicator is alight but LOGO! Controller cannot display and system stops working	Cable failure. LOGO! Controller is damaged.	Check the cable. Replace the controller. Check the cable.
System cannot work after turning on the system switch	Cable failure. LOGO! Controller is in stop condition. Feed-in switch is damaged or in full-receiver state.	Let LOGO! Controller in start position. clean the materials or replace switch.
The feed in hopper cannot suction after a long time of lack of materials.	Cable failure. Magnetic proximity switch is damaged.	Check the cable. Replace the magnetic. Proximity switch.
One station suctions for 3 times and there is a red alarm. (Red indicator is alight)	Cable failure. Magnetic proximity switch is damaged. Diaphragm valve is damaged. The tube is not airproof to suction the materials.	Check the cable. Replace the magnetic proximity switch. Replace the diaphragm valve. Check to see whether there is any leakage.
Full storage but the blower is still working.	The magnetic proximity switch is in the condition of "ON". Signal cable is short circuit. Contactor is of mechanical failure or the contacting point have stuck. LOGO! Controller failure.	Adjust or replace the switch. Check the signal cable. Repair or replace. Check and replace.
Feed-in motor can not work.	Motor is damaged. Contactor is damaged. overload relay is damaged. LOGO! is damaged. Cable failure.	Check and replace. Check and replace. Check and replace. Check and replace. Check and 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.



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 swith 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 conveying hose connections at material inlet are loose or not, and if the seal ring is sealed up.

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 stopping flap is out of shape. If it is, please replace it.
3) Check the performance of magnetic proximity switch or photo sensor. If there is poor contact, adjust or replace it.
4) Check the working condition of the suction motor.

6.6 Maintenance Schedule

6.6.1 About the Machine

Model _____ SN _____ Manufacture date _____

Voltage_____Φ_____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 function of the magnetic proximity switch.