SAL-U Series

Self-contained Hopper Loader

Date: Jun. 2017

Version: Ver.B (English)

SHINI

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1. General Description

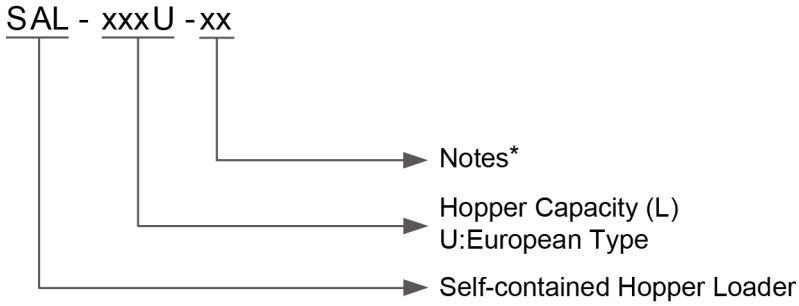
Read this manual carefully before operation to prevent personal injuries or damage of the machine.

SAL-U series self-contained hopper loader is suitable for conveying virgin material. It adopts stainless steel hopper to avoid material contamination. It looks nice, since its suface has been polished. In addition, it has a sound-proof blower cover to reduce noise produced in the process of operation. What's more, the remote operation has been realized by using a detachable controller, which is more convenient for clients to operate.

Model: SAL-1U

Model: SAL-6U

1.1 Coding Principle



Notes:*

A = Add Air Accumulator P=For Polished Hopper Inside

CE=CE Conformity

1.2 Feature

- SAL-1U~SAL-12U (-E) adopts carbon brush, which brings fast rotating speed, large air quantity and compact appearance. It's easy for transportation and installation.
- Wire-control controller is convenient to use with automatic cleaning function.
- Equipped with motor soft start function and carbon brush consumption prompt (except for three-phase motor).
- Wire connection point for SPV-U.
- Hopper and base mount positions are adjustable.
- Differential pressure switch is employed and screener blockage alarm is available (Applicable to SAL-1U~12U(E)).
- SAL-U has a reed switch, while SAL-U-E adopts photosensor switch with high sensitivity and stable quality.
- All models equipped with hinged hopper lid that are connected by hinge for easy mesh cleaning.
- SAL-3U and above models have bases with diameters of Φ 275 mm, which can work with SHD-20U and models above as well as SHD-75 anb models above.
- SAL-1U has an outer dia. Φ200mm/Φ7.9 inch base, transitional flange must be mounted when this series works with SHD-20U/40U.
- All SAL-U series machines have cloth mesh filter and auto-spraying dust cleaner as standard equipments. For SAL-6U and above models, it is available to select air accumulator to enhance purging and reduce manually clean time.

All maintenance work should be carried out by a person with technical training or corresponding professional experience. The manual contains instructions for both

operating and maintenance. Chapter 6 contains maintenance instructions 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 after-sales service. Should you have any problem during using the machine, please contact the company or the local vendor.

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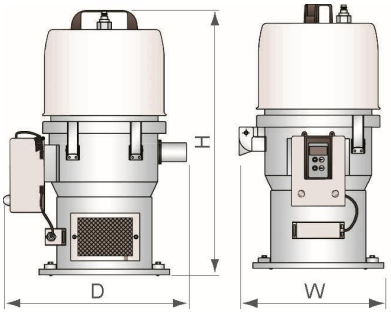
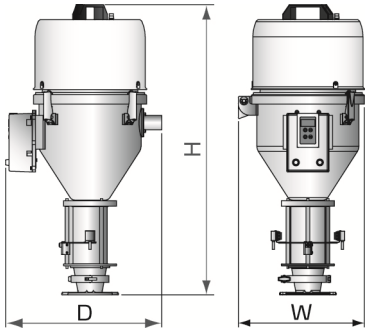
Please refer to shini.com/en/worldwide.html for local vendor near you.

1.3 Technical Specifications

1.3.1 Dimensions



Picture 1-1: SAL-U Dimensions



Picture 1-2: SAL-U-E Dimensions

1.3.2 Specifications

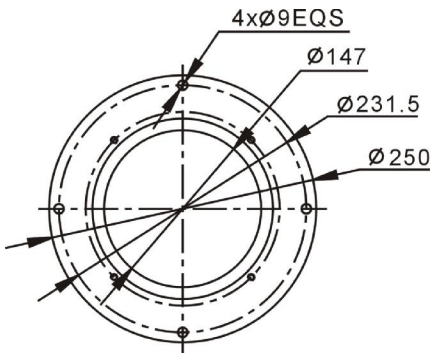
Table 1-1: Specifications

Model	SAL-1U	SAL-3U	SAL-6U	SAL-12U	SAL-1U-E	SAL-3U-E	SAL-6U-E	SAL-12U-E
Ver.	B	A	A	A	A	B	B	A
Blower Type	Carbon brush							
Blower Power (kW) (50/60Hz)	0.46 / 0.55	1.15 / 1.32			0.46 / 0.55	1.15 / 1.32		
Conveying Pipe Internal Dia. (inch)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Conveying Capacity (kg/hr)	30	200	300	400	30	200	300	400
Hopper Volume (L)	1	3	6	12	1.5	3	6	12
Power Supply (v)	1Φ, 115 / 230VAC, 50 / 60Hz							
Auto-Cleaning Function	Standard							
Air Accumulator	None		Optional		None		Optional	
Dimensions								
H (mm)	525	555	645	745	630	740	800	935
W (mm)	270	305	340	340	260	305	340	340
D (mm)	325	305	410	410	325	370	410	410
Weight (kg)	10	11	12	14	10	13	16	18

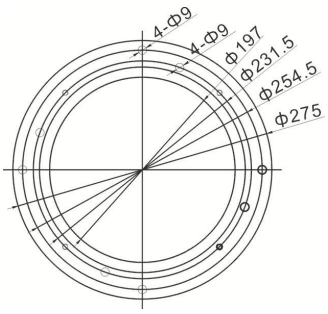
Note: 1) For hopper inside polished ones, add "P" at model behind.
2) Conveying capacity: Plastic material of bulk density 0.65kg/L, dia. 3~5 mm, vertical conveying height: 4m, horizontal conveying distance: 1m.
3) Compressed air supply: 4~6kgf/cm^2.

We reserve the right to change specifications without prior notice.

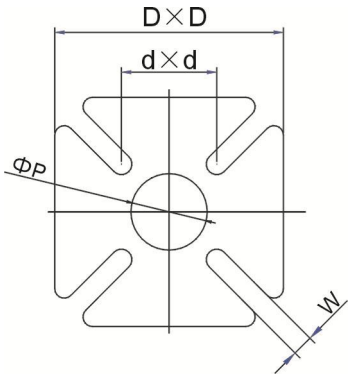
1.3.3 SAL-U Hopper Base Installation Size



Picture 1-3: SAL-1U Hopper Base Installation Size



Picture 1-4: SAL-1 U and Models above Hopper Base Installation Size



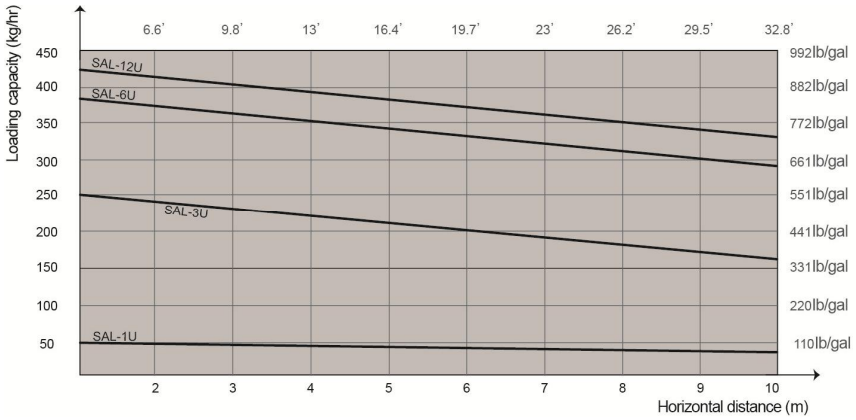
Picture 1-5: SAL-U-E(EA) Hopper Base Installation Size

1.3.4 Hopper Base Installation Size Table

Table 1-2: Hopper Base Installation Size Table

Model	D×D	d×d	W	P
SAL-1U-E	120×120	50×50	11	Φ40
SAL-3U-E	150×150	70×70	11	Φ55
SAL-6U-E	150×150	70×70	11	Φ55
SAL-6U-EA	150×150	70×70	11	Φ55
SAL-12U-E	180×180	80×80	11	Φ55
SAL-12U-EA	180×180	80×80	11	Φ55

1.3.5 Loading Capacity



Height: 4m/13.1'
Bulk density: 0.65 kg/L(5.5lb/gal)
Frequency: 60Hz

Picture 1-6: Loading Capacity

1.4 Safety Regulations

Strictly abide by the following safety regulations to prevent personal injuries and damage of equipment.

1.4.1 Safety Signs and Labels

All the electrical components should be installed by electrican.
Turn off the main switch and control switch during maintenance.

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

Warning! Caution!
Be careful when at the location or area where this sign appears!

Notice!
All screws of the electrical components in it are locked tight. No need to check it regularly.

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:

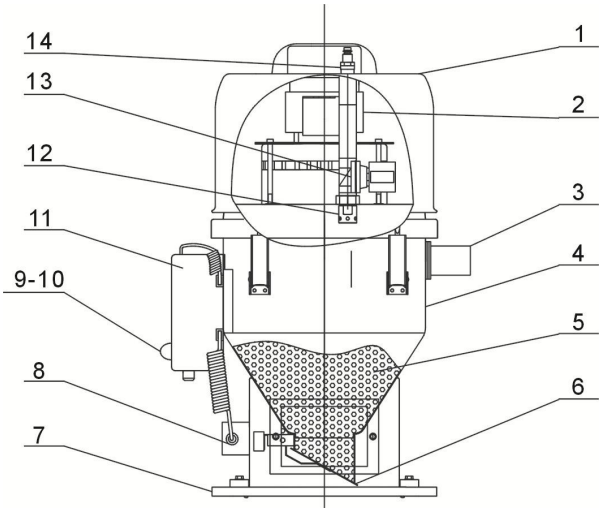
1. Any careless or man-made installations, operation and maintenances upon machines without referring to the Manual prior to machine using.
2. Any incidents beyond human controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon equipment, 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 Working Principle

SAL-U series of self-contained Hopper Loader is suitable for conveying plastic granules. It mainly conveys materials by running the blower to produce differential pressure inside the material hopper.

2.1.1 Working Principle Diagram of SAL-U-(CA)



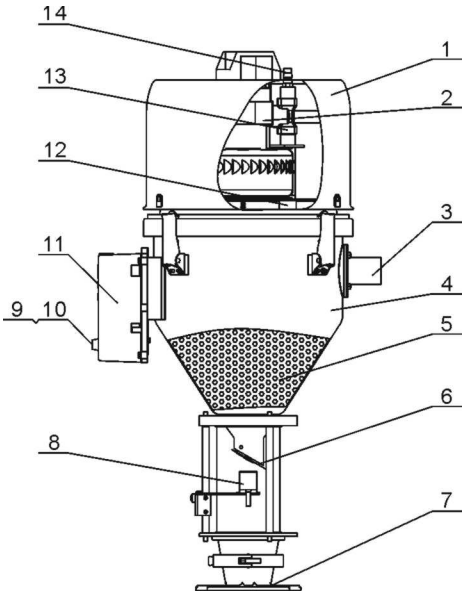
Names of Parts:

1. Blower cover	2. Blower	3. Material inlet pipe
4. Material hopper	5. Raw material	6. Non-return flap
7. Hopper base	8. Magnetic proximity switch	9. Indicator (red)
10. Indicator (green)	11. Control box	12. Auto dust cleaner
13. Solenoid valve	14. Air pipe connector	

Picture 2-1: Working Principle of SAL-U-(CA)

After starting the machine, blower (2) begins to vacuumize material hopper (4). At the same time, the non-return flap (6) is closed. Materials in the storage bin will go into material hopper (4) from material inlet pipe (3) under differential pressure. When material conveying is completed, the blower will stop working. Materials will then fall down due to gravity. When magnetic proximity switch (8) detects that there is no material left in the hopper, the solenoid valve (13) will open. Thus, the air for cleaning will flow into auto dust cleaner (12) from the air pipe connector (14) to clean the dust covering on the filter cloth and hopper inner wall. Then, the blower will start again. When lacking materials, the alarm light (9) on control box (11) will be on to sound an alarm. The equioment equipped with air acculamtor can increase air storage capacity to reinforce the dedusting efficiency of the auto dust cleaner.

2.1.2 Working Principle of SAL-U-E(EA)



Names of Parts:

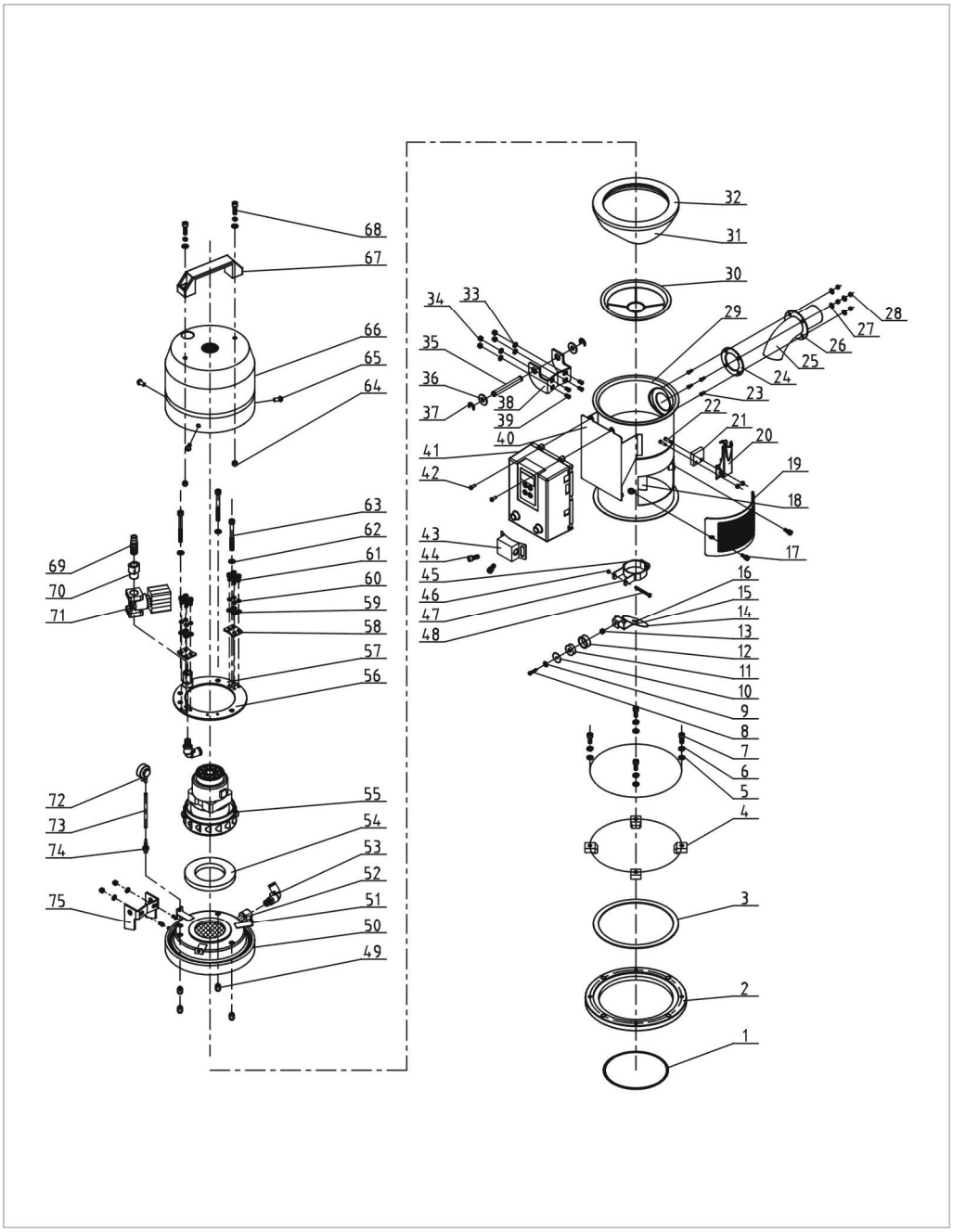
1. Blower cover	2. Blower	3. Material inlet pipe
4. Material hopper	5. Raw material	6. Non-return flap
7. Hopper base	8. Photosensor	9. Indicator (red)
10. Indicator (green)	11. Control box	12. Auto dust cleaner
13. Solenoid valve	14. Air pipe connector	

Picture 2-2: Working Principle of SAL-U-E(EA)

After starting the machine, blower (2) begins to vacuumize material hopper (4). At the same time, the non-return flap (6) is closed. Materials in the storage bin will go into material hopper (4) from material inlet pipe (3) under differential pressure. When material conveying is completed, the blower will stop working. Materials will then fall down due to gravity. When magnetic proximity switch (8) detects that there is no material left in the hopper, the solenoid valve (13) will open. Thus, the air for cleaning will flow into auto dust cleaner (12) from the air pipe connector (14) to clean the dust covering on the filter cloth and hopper inner wall. Then, the blower will start again. When lacking materials, the alarm light (9) on control box (11) will be on to sound an alarm. The equioment equipped with air acculamtor can increase air storage capacity to reinforce the dedusting efficiency of the auto dust cleaner.

2.2 Assembly Drawing

2.2.1 Assembly Drawing (SAL-1U)



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

Picture 2-3: Assembly Drawing (SAL-1U)

2.2.2 Parts List (SAL-1U)

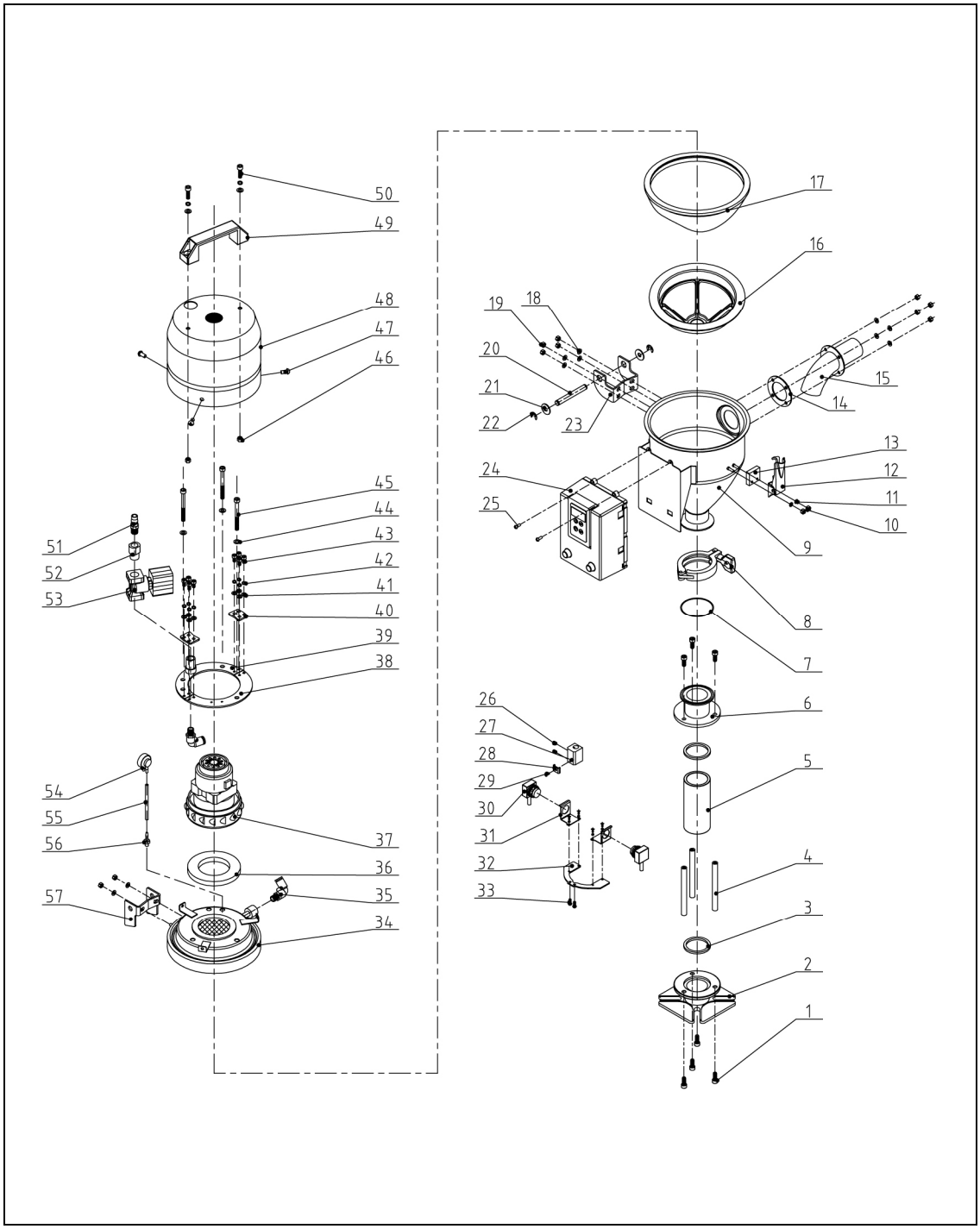
Table 2-1: Parts List (SAL-1U)

No.	Name	Part No.	No.	Name	Part No.
1	O-Type seal ring	YR20205500000	30	Split washer of filter cloth **	-
2	Base	YW20001500110	31	Hop-pocket**	BP82000100040
3	Base ring	-	32	Hopper ring*	YR10104000000
4	Pressure block	YW20000600500	33	Flat washer 5	YW66051000100
5	Flat washer Φ6×13	YW66061300000	34	Locknut M5	YW64000500000
6	Spring washer M6	YW65006000000	35	Hinge pin	BH10006003110
7	Inner hexagon screw M6×15	YW61061600300	36	Flat washer 8×22	YW66082200100
8	Cross socket head cap screw	YW63032500000	37	E-rings 6	YW63051000000
9	Flat washer 3×10	YW66031000000	38	Down hinge	BL32000600140
10	Flat washer 3×12	YW66031200000	39	Welding screw M5×10	YW69051000000
11	Permanent magnet	YW90213700000	40	Control box base	-
12	Magnet shield	BH12115000010	41	Control box	YR40030600000
13	Locknut M3	YW64000300000	42	Cross socket head cap screw M4×6	YW63040600000
14	Shut-off plate*	BL21001501920	43	Sensor shell	-
15	Connection block for shut-off plate	-	44	Inner hexagon screw	YW61061000100
16	Lentil head screw	YW09250500000	45	Shut-off plate fixing base	-
17	Star knob M6×15	YR40061500000	46	Locknut M3	YW64000300000
18	Discharge port	-	47	Shut-off plate fixing base	-
19	Ventilation window	YR40000600500	48	Cross socket head cap screw M3×40	YW63034000000
20	Snap hook	YW02003000400	49	Mini-countersunk rivet screw M6	YW64060200000
21	Pad	YR40000600300	50	Hopper cover	-
22	Welding screw M4×15	YW69041500100	51	Blower fixing base	BH10063200040
23	Welding screw M4×10	YW69041000000	52	Reverse clean pipe	-
24	Material inlet pipe fastener	YR10150300000	53	Air pipe quick connector	YW80083800200
25	Material inlet pipe	BL32333600020	54	Blower ring	-
26	Fixing plate for material inlet pipe	-	55	Carbon brush motor *	YM30122250000
27	Flat washer 4	YW66040800000	56	Fixed board 2	-
28	Locknut M4×0.7	YW64040700100	57	Fixed board 1	-
29	Material storage tank	-	58	Fixed board 3	-

No.	Name	Part No.	No.	Name	Part No.
59	Flat washer 5	YW66051000100	68	Inner hexagon screw	YW61062000300
60	Spring washer 5	YW65050000000	69	Quick connector	YW80031400000
61	Inner hexagon screw	YW61051200100	70	Connector 3	-
62	Flat washer 6	YW66061300000	71	Solenoid valve *	YE32213100000
63	Inner hexagon screw	YW61065000100	72	Pressure switch	YE16028000000
64	Locknut	YW64000600200	73	Blue air pipe	YR60060400000
65	Cross socket head cap screw	YW62051500000	74	Pressure switch connector	BH11103000010
66	Blower cover	-	75	upper hinge	BL32000600240
67	Square aluminum handle	BW20012000040			

* means possible broken parts. ** means easy broken parts. A spare backup is suggested.
Please confirm the version of manual is competitable with equipement 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-1U-E)



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

Picture 2-4: Assembly Drawing (SAL-1U-E)

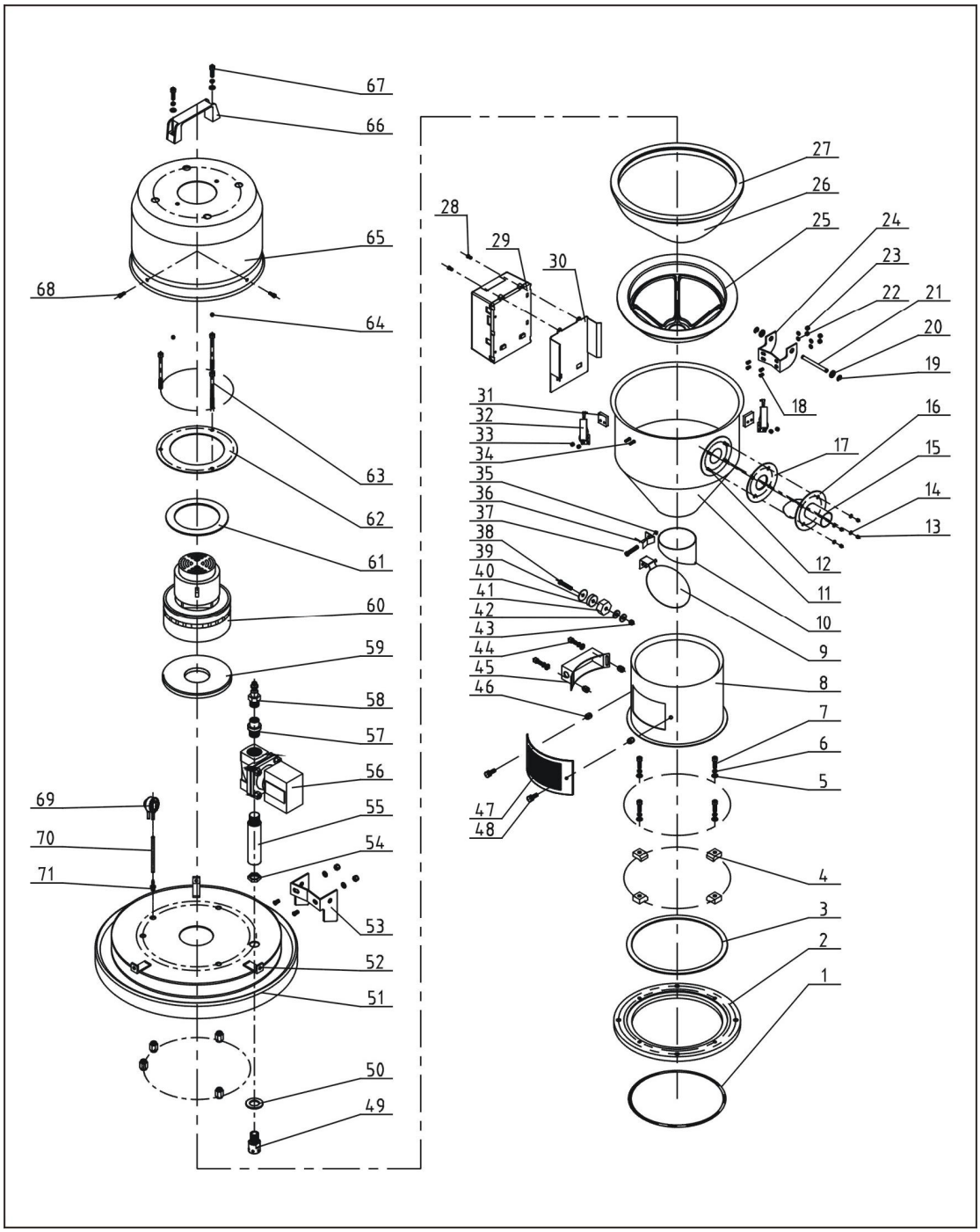
2.2.4 Parts List (SAL-1U-E)

Table 2-2: Parts List (SAL-1U-E)

No.	Name	Part No.	No.	Name	Part No.
1	Inner hexagon screwM6×15	YW61061600300	30	Photosensor	YE15143900300
2	Glass pipe down flange	YW32000300000	31	Photosensor mounting block	-
3	Glass pipe ring	YW61061600300	32	Photosensor fixing plate	BL90001000120
4	Flange connection shaft	BH10101100010	33	Cross socket head cap screw M4×10	YW63041000000
5	Glass pipe**	YW70504000000	34	Mini-countersunk rivet screw M6	YW64060200000
6	Glass pipe upper flange	BW32000300210	35	Hopper cover	BL22001500821
7	Base ring	YR10000300200	36	Blower cover fixing base	-
8	Stainless steel pipe clamp	YW07002500600	37	Reverse clean pipe	YM30122250000
9	Material storage tank	BL21001502320	38	Fixing plate 2	-
10	Locknut M4×0.7	YW64040700100	39	Fixing plate 1	-
11	Flat washer 4	YW66040800000	40	Fixing plate 3	-
12	Snap hook **	YW02003000400	41	Flat washer 5	YW66051000100
13	Block	YR40000600300	42	Spring washer 5	YW65050000000
14	Material inlet pipe ring	YR10150300000	43	Inner hexagon cylinder head screw	YW61051200100
15	Material inlet pipe	BL32333600020	44	Flat washer 6	YW66061300000
16	Filter cloth split washer**	YR40001500100	45	Inner hexagon screw M6×50	YW61065000100
17	Hop-pocket**	BP82001500044	46	Locknut M6	YW64000600200
18	Flat washer 5	YW66051000100	47	Cross socket head cap screw M5×15	YW62051500000
19	Locknut M5	YW64000500000	48	Blower cover	-
20	Hinge pin	BH10006003110	49	Square aluminum handle L120	BW20012000040
21	Flat washer Φ8×22	YW66082200100	50	Inner hexagon screw M6×20	YW61062000300
22	E rings 6	YW63051000000	51	Quick connector 3″ ×1/4PT	YW80031400000
23	Down hinge	BL32000600120	52	Connector 3	BH13031100010
24	Control box	YR40030600000	53	Solenoid valve	YE32213100000
25	Cross socket head cap screw M4×6	YW63040600000	54	Pressure switch	YE16028000000
26	Set screw M4×5	YW63040600000	55	Blue air pipe	YR60060400000
27	Photosensor fixing base	BL21001502420	56	Pressure switch connector	BH11103000010
28	Pressure block of photosensor	BL21061600020	57	Upper hinge	BL32000600240
29	Cross socket head cap screw M4×10	YW63041000000			

* means possible broken parts. ** means easy broken parts. A spare backup is suggested.
Please confirm the version of manual is competitable with equipement 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-3U)



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

Picture 2-5: Assembly Drawing (SAL-3U)

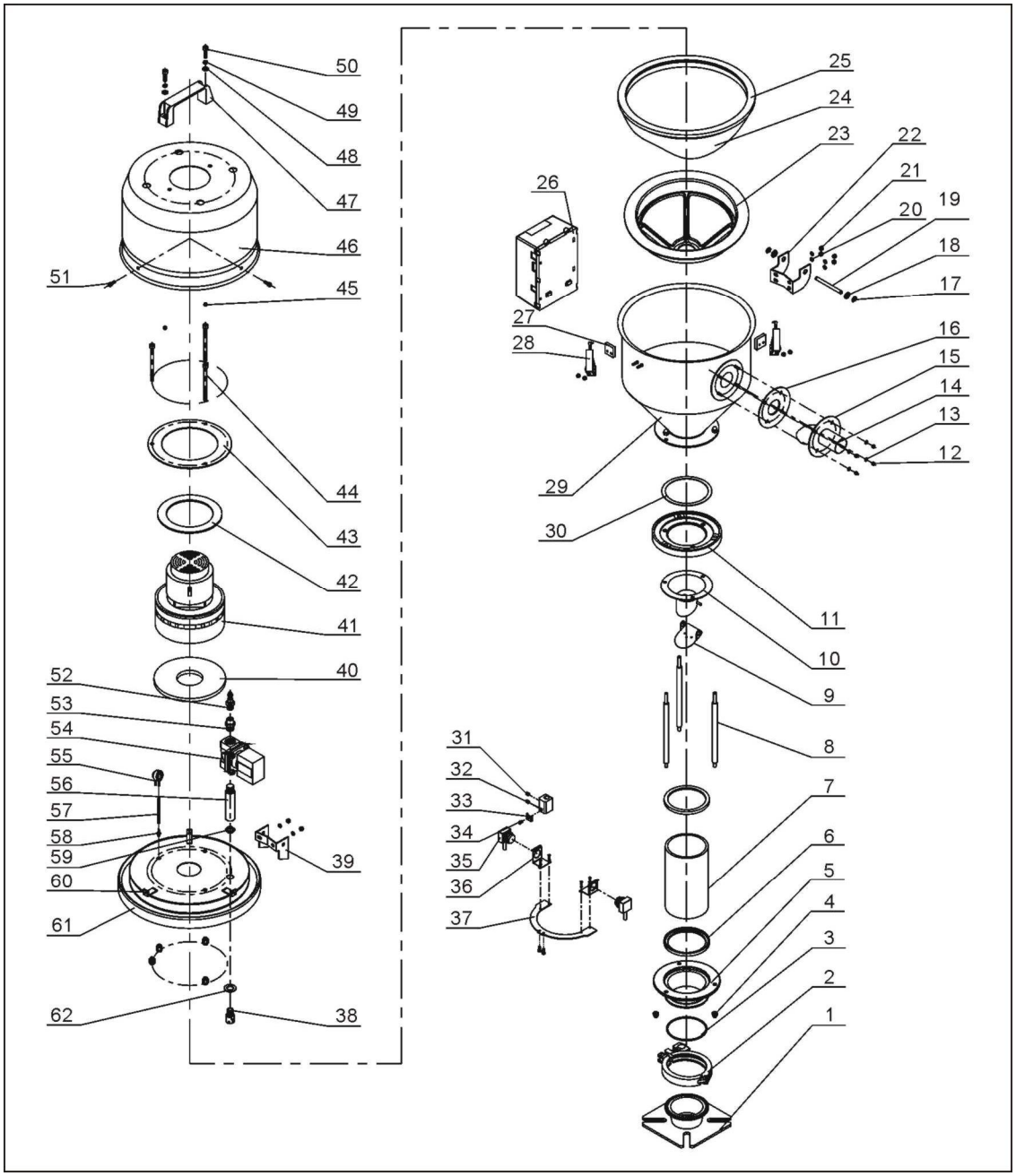
2.2.6 Parts List (SAL-3U)

Table 2-3: Parts List (SAL-3U)

No.	Name	Part No.	No.	Name	Part No.
1	O-Type seal ring	YR20205500000	37	Cross socket head cap screw M3×40	YW63034000000
2	Base	YW20006000000	38	Cross socket head cap screw M6×20	YW63062000000
3	Base ring	-	39	Magnet cover	BL21000600120
4	Pressure block	YW20000600500	40	Permanent magnet	YW90257700000
5	Spring washer M6	YW65006000000	41	Magnet sleeve	BH12000600010
6	Flat washer Φ6	YW66061300000	42	Flat washerΦ8×22	YW66082200100
7	Inner hexagon screw M6×20	YW61062000300	43	Screw M6	YW64000600200
8	Hopper fixing base	BL21063200020	44	Inner hexagon screw M6×10	YW63061000000
9	Baffle plate*	BL21000302320	45	Sensor shell	YR40000600100
10	Discharging port	BL21000600720	46	Mini-countersunk rivet screw M6	YW64060200000
11	Material storage tank	-	47	Ventilation window	YR40000600500
12	Screw M4×10	YW69041000000	48	Star spanner	YR40061500000
13	Locknut M4×0.7	YW64040700100	49	Reverse clean pipe nozzle	BH13033000810
14	Flat washerΦ4	YW66040800000	50	Washer	BP62352100050
15	Material inlet pipe	BL32333600020	51	Hopper cover	-
16	Material inlet pipe fixing plate	-	52	Blower fixing base	-
17	Material inlet pipe ring	YR10150300000	53	Upper hinge	BL32000600240
18	Screw M5×10	YW64040700100	54	Connection nut	-
19	E rings 6	YW66000500000	55	Connector 2	BH13030300010
20	Flat washer Φ8×22	YW66082200100	56	Solenoid valve	YE32213100000
21	Hinge pin	BH10006003110	57	Connector 3	BH13031100010
22	Flat washer Φ5	YW66051000100	58	Quick connector	YW80031400000
23	Locknut M5	YW64000500000	59	Blower ring (down)	YR10070000000
24	Down hinge	BL32000600140	60	Carbon brush motor*	YM30965600000
25	Filter cloth split washer**	YR40003000100	61	Blower ring (upper)	YP62141200000
26	Hop-pocket **	BP82003000044	62	Blower fixing plate	-
27	Hopper ring*	YR10000300100	63	Inner hexagon screw M6×90	YW61069000100
28	Cross socket head cap screw M4×6	YW63040600000	64	Locknut M6	YW64000600200
29	Control box	YR40030600000	65	Blower shell	YR40033000000
30	Control box base	-	66	L120 square aluminum handle	BW20012000040
31	Block	YW02003000400	67	Inner hexagon screw M6×20	YW61062000300
32	Snap hook	YR40000600300	68	Cross socket head cap screw M5×15	YW62051500000
33	Locknut M4×0.7	YW69040700100	69	Pressure switch	YE15002000100
34	Screw M4×15	YW64041500100	70	Blue air pipe	YR60060400000
35	Locknut M3	YW64000300000	71	Pressure switch connector	BH11103000010
36	Fixing base of baffle plate	BL20000601220			

* means possible broken parts. ** means easy broken parts. A spare backup is suggested.
Please confirm the version of manual is competitable with equipement 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 (SAL-3U-E)



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

Picture 2-6: Assembly Drawing (SAL-3U-E)

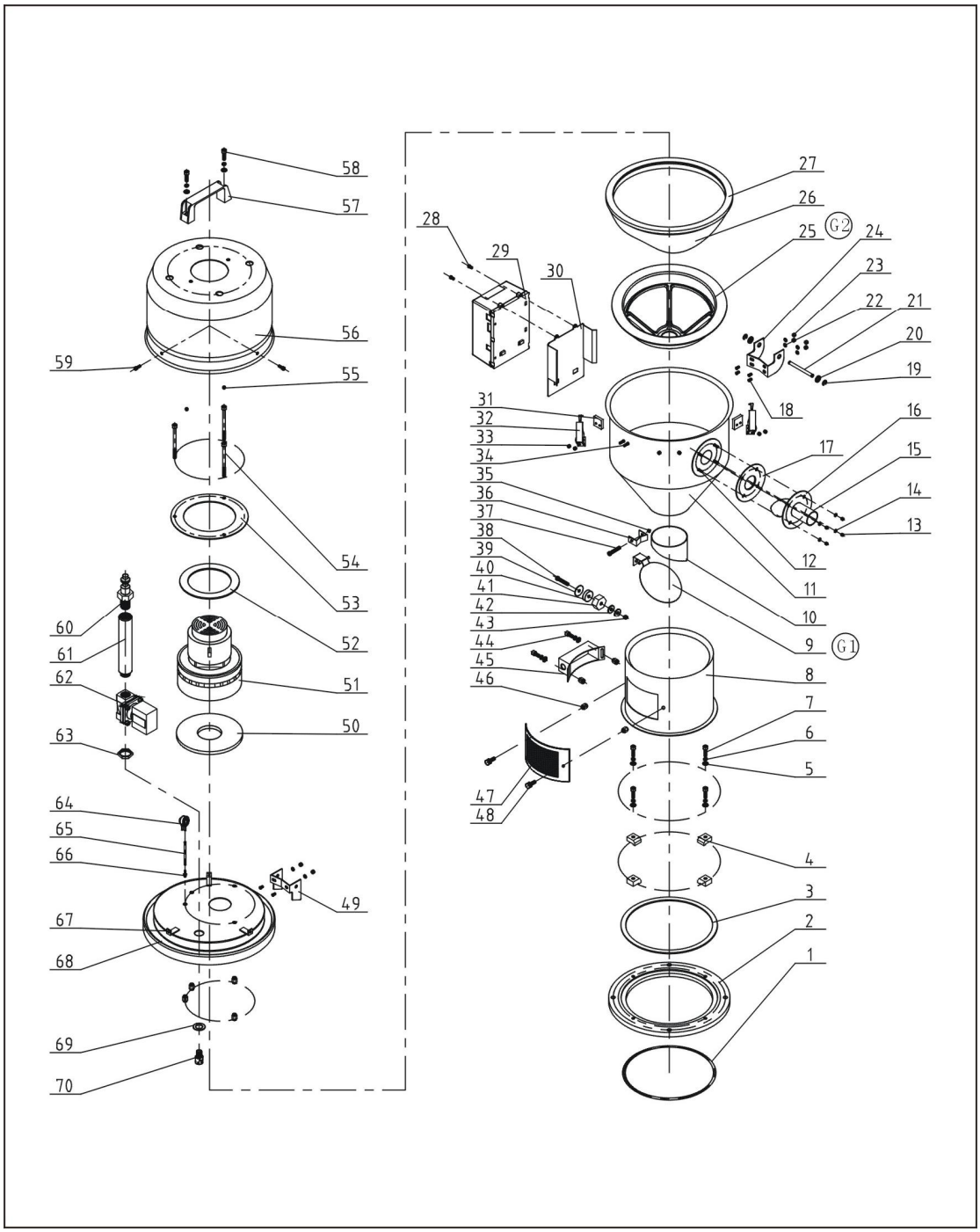
2.2.8 Parts List (SAL-3U-E)

Table 2-4: Parts List (SAL-3U-E)

No.	Name	Part No.	No.	Name	Part No.
1	Mounting flange	BH13060100040	32	Photosensor fixing base	BL90001000120
2	3” stainless steel pipe clamp	YW07000300000	33	Pressure block of photosensor	YW31616200000
3	Cap nut M6	YR20802600000	34	Cross socket head cap screw M4×10	YW63041000000
4	Cap nut M6	YW64006000100	35	Photosensor	YE15143900300
5	Glass pipe down flange	BH13062600010	36	Photosensor mounting block (come with photosensor)	-
6	Glass pipe ring	YR10060200000	37	Photosensor fixing plate	BL21061200020
7	Glass pipe*	YW70317000600	38	Reverse clean pipe nozzle	BH13033000810
8	Flange connection shaft	BH10000600640	39	Upper hinge	BL32000600240
9	Non-return flap	-	40	Blower ring (down)	YR10070000000
10	Discharging port	BW32060300610	41	Carbon brush motor 1.15kW	YM30965600000
11	Glass pipe upper flange	BH13062400010	42	Blower ring (upper)	YP62141200000
12	Locknut M4×0.7	YW64040700100	43	Blower fixing board	BL21000300420
13	Flat washer 4	YW66040800000	44	Inner hexagon cylindrical screw M6×90	YW61069000100
14	Material inlet pipe	BL32333600020	45	Locknut M6	YW64000600200
15	Material inlet pipe fixing plate	BL20036000320	46	Blower shell	YR40000300100
16	Material inlet pipe ring	YR10150300000	47	Square aluminum handle L120	BW20012000040
17	E-rings 6	YW63051000000	48	Flat washer 6	YW66061300000
18	Flat washer M8×22	YW66082200100	49	Spring washer 6	YW65006000000
19	Hinge pin	BH10006003110	50	Inner hexagon cylindrical screw M6×20	YW61062000300
20	Flat washer 5	YW66051000100	51	Cross socket head cap screw M5×15	YW62051500000
21	Locknut M5	YW64000500000	52	Quick connector 3” ×1/4PT	YW80031400000
22	Down hinge	BL32000600140	53	Connector 3	BH13031100010
23	Filter cloth split washer**	YR40003000100	54	Solenoid valve*	YE32213100000
24	Hop-pocket **	BP82003000044	55	Pressure switch	YE15002000100
25	Hopper ring*	YR10000300100	56	Connector 2	BH13030300010
26	Control box	YR40030600000	57	Blue air pipe Φ6×Φ4	YR60060400000
27	Snap hook block	YR40000600800	58	Pressure switch connector	BH11103000010
28	Snap hook	YW02003000400	59	Connection nut 1	BH12030400410
29	Material storage tank	-	60	Blower cover fixing base	-
30	Hopper base plate ring	-	61	Hopper cover	-
31	Set screw M4×5	YW68004500000	62	Washer Φ30×Φ17×2	BP62352100050

* means possible broken parts. ** means easy broken parts. A spare backup is suggested.
Please confirm the version of manual is competitable with equipement 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 (SAL-6U)



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

Picture 2-7: Assembly Drawing (SAL-6U)

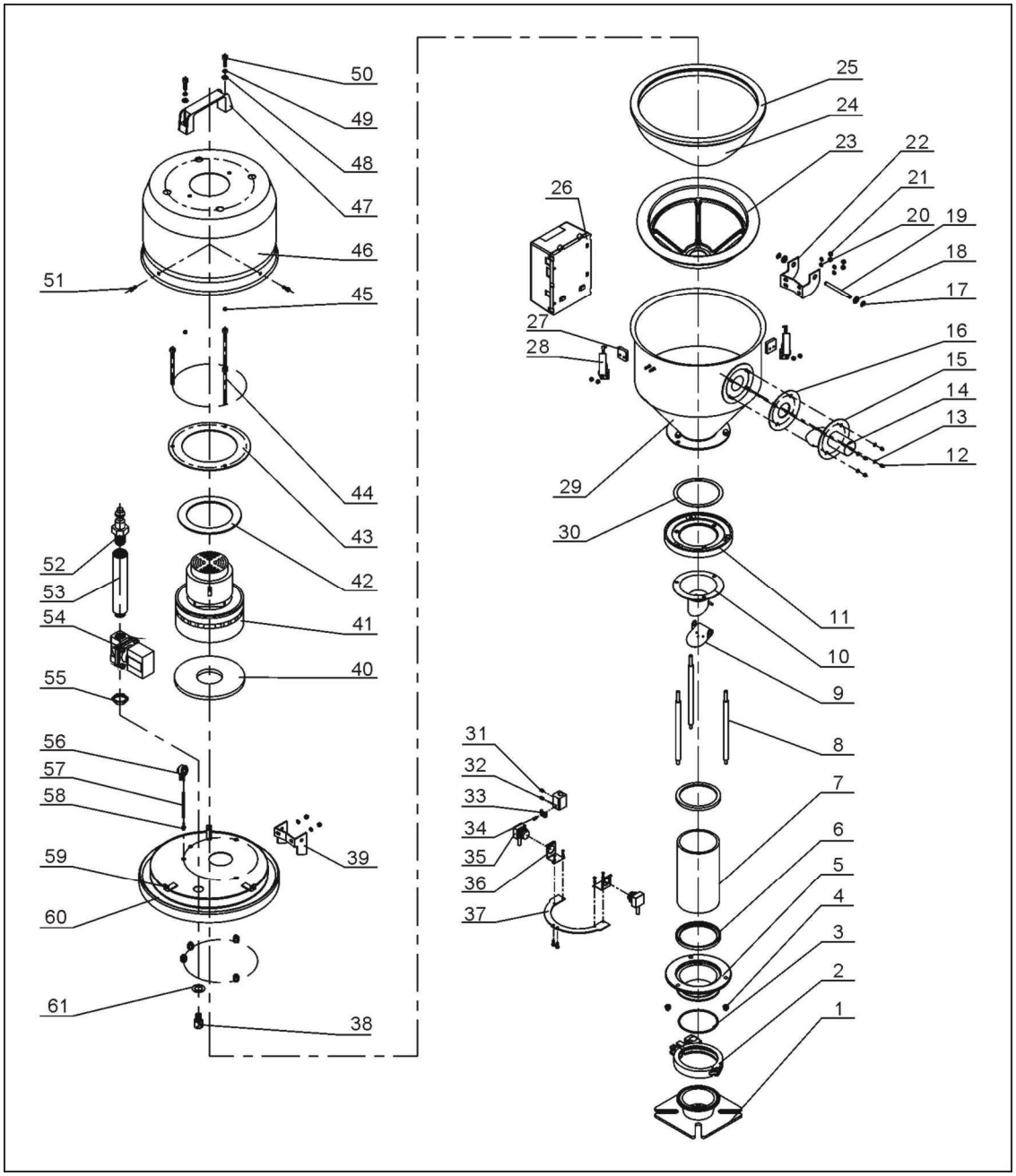
2.2.10 Parts List (SAL-6U)

Table 2-5: Parts List (SAL-6U)

No.	Name	Part No.	No.	Name	Part No.
1	O-Type seal ring	YR20205500000	36	Fixing base of baffle plate	BL20000601220
2	Base	YW20006000000	37	Cross socket head cap screw M3×40	YW63034000000
3	Base ring	-	38	Cross socket head cap screw M6×20	YW63062000000
4	Pressure block	YW20000600500	39	Magnet cover	BL21000600120
5	Spring washer M6	YW65006000100	40	Permanent magnet	YW90257700000
6	Flat washerΦ6	YW66061300000	41	Magnet sleeve	BH12000600010
7	Inner hexagon screw M6×20	YW61062000300	42	Flat washer Φ8×22	YW66082200100
8	Hopper fixing base	BL21000600020	43	Locknut M6	YW64000600200
9	Baffle plate	BL21000302320	44	Inner hexagon cylindrical screw M6×10	YW63061000000
10	Discharging port	BL21000600720	45	Sensor shell	YR40000600100
11	Material storage tank	-	46	Mini-countersunk rivet screw M6	YW64060200000
12	Screw M4×10	YW69041000000	47	Ventilation window	YR40000600500
13	Locknut M4×0.7	YW64040700100	48	Star spanner	YR40061500000
14	Flat washer Φ4	YW66040800000	49	Upper hinge	BL32000600240
15	Material inlet pipe	-	50	Blower ring (down)	YR10070000000
16	Material inlet pipe fixing plate	-	51	Carbon brush motor*	YM30965600000
17	Material inlet pipe ring	-	52	Blower ring (upper)	YP62141200000
18	Screw M5×10	YW64040700100	53	Blower fixing board	-
19	E rings	YW66000500000	54	Inner hexagon cylindrical screw M6×90	YW61069000100
20	Flat washer Φ8×22	YW66082200100	55	Locknut M6	YW64000600200
21	Hinge pin	BH10006003110	56	Blower shell	YR40036000000
22	Flat washer Φ5	YW66051000100	57	L120 Square aluminum handle	BW20012000040
23	Locknut M5	YW64000500000	58	Inner hexagon cylindrical screw M6×20	YW61062000300
24	Down hinge	BL32000600140	59	Cross socket head cap screw M5×15	YW62051500000
25	Filter cloth split washer**	YR40006000000	60	Quick connector	YW80031400000
26	Hop-pocket **	BP82006000044	61	Connector 2	BH13030300010
27	Hopper ring*	YR10000600200	62	Solenoid valve*	YE32213100000
28	Cross socket head cap screw M4×6	YW63040600000	63	Connection nut	BH12030400410
29	Control box	YR40030600000	64	Pressure switch	YE15002000100
30	Control box base	-	65	Blue air pipe	YR60060400000
31	Block	YR40000600300	66	Pressure switch connector	BH11103000010
32	Snap hook	YW02003000400	67	Blower shell fixing base	-
33	Locknut M4×0.7	YW64040700100	68	Hopper cover	-
34	Screw M4×15	YW69041500100	69	Washer	BP62352100050
35	Locknut M3	YW64000300000	70	Reverse clean pipe nozzle	BH13033000810

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

2.2.11 Assembly Drawing (SAL-6U-E)



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

Picture 2-8: Assembly Drawing (SAL-6U-E)

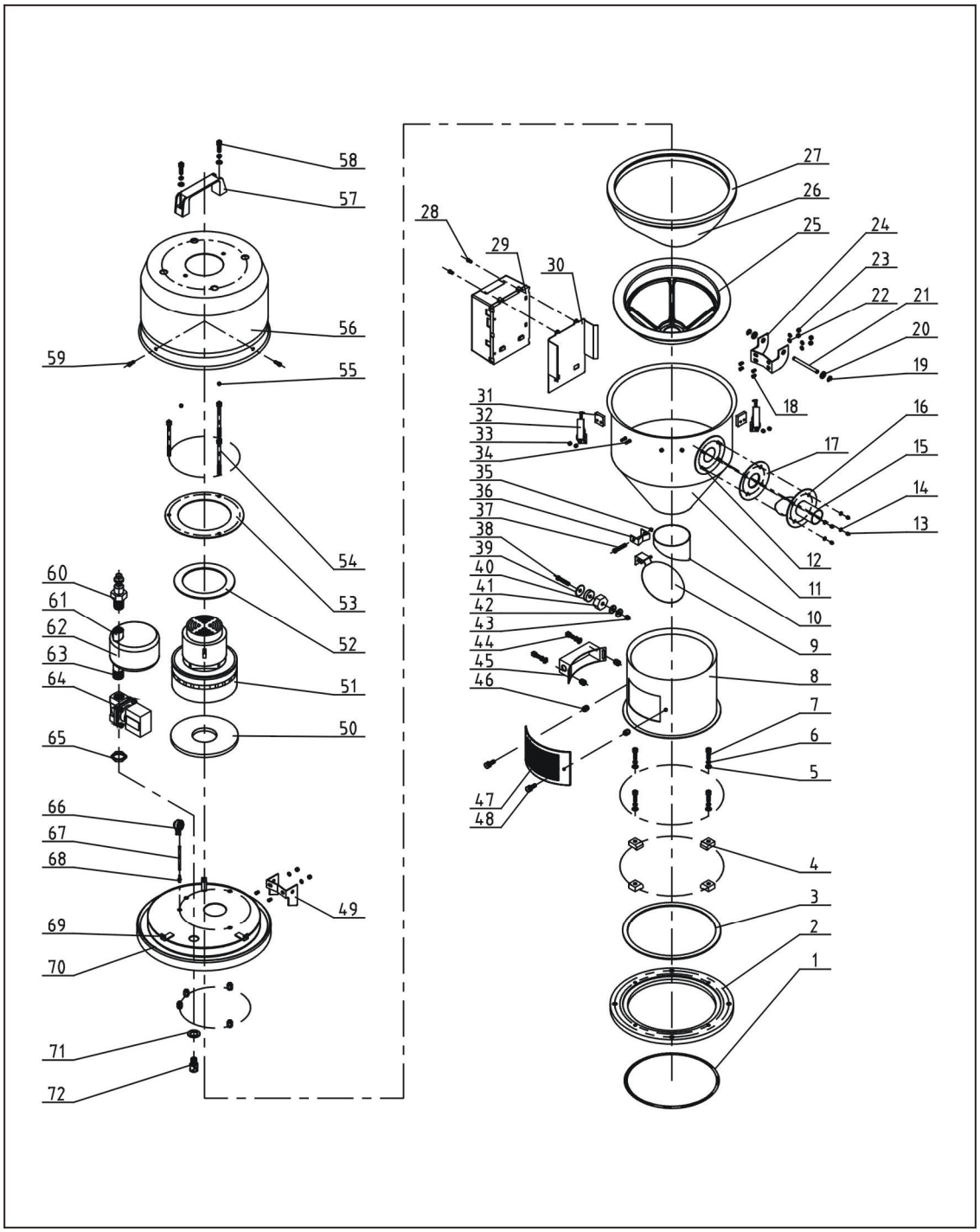
2.2.12 Parts List (SAL-6U-E)

Table 2-6: Parts List (SAL-6U-E)

No.	Name	Part No.	No.	Name	Part No.
1	Mounting flange	BH13060100040	32	Photosensor fixing base	BL90001000120
2	3” stainless steel pipe clamp	YW07000300000	33	Photosensor pressure block	YW31616200000
3	Cap nut M6	YR20802600000	34	Cross socket head cap screw M4×10	YW63041000000
4	Cap nut M6	YW64006000100	35	photosensor	YE15143900300
5	Glass pipe down flange	BH13062600010	36	Photosensor mounting block (come with photosensor)	-
6	Glass pipe ring	YR10060200000	37	Photosensor fixing plate	BL21061200020
7	Glass pipe*	YW70317000600	38	Reverse clean pipe nozzle	BH13033000810
8	Flange connection shaft	BH10000600640	39	Upper hinge	BL32000600240
9	Non-return flap	-	40	Blower ring (down)	YR10070000000
10	Discharging port	BW32060300610	41	Carbon brush motor 1.15kW	YM30965600000
11	Glass pipe upper flange	BH13062400010	42	Blower ring (upper)	YP62141200000
12	Locknut M4×0.7	YW64040700100	43	Blower fixing board	BL21000300420
13	Flat washer 4	YW66040800000	44	Inner hexagon cylindrical screw M6×90	YW61069000100
14	Material inlet pipe	-	45	Locknut M6	YW64000600200
15	Material inlet pipe fixing plate	BL20036000320	46	Blower shell	BL22001200220
16	Material inlet pipe ring	YR10061200000	47	Square aluminum handle L120	BW20012000040
17	E-rings 6	YW63051000000	48	Flat washer 6	YW66061300000
18	Flat washer M8×22	YW66082200100	49	Spring washer 6	YW65006000000
19	Hinge pin	BH10006003110	50	Inner hexagon cylindrical screw M6×20	YW61062000300
20	Flat washer 5	YW66051000100	51	Cross socket head cap screw M5×15	YW62051500000
21	Locknut M5	YW64000500000	52	Quick connector 3” ×1/4PT	YW80031400000
22	Down hinge	BL32000600140	53	Connector 2	BH13030300010
23	Filter cloth split washer**	YR40006000000	54	Solenoid valve*	YE32213100000
24	Hop-pocket **	BP82003000044	55	Connection nut 1	BH12030400410
25	Hopper ring*	YR10000300100	56	Pressure switch	YE15002000100
26	Control box	YR40030600000	57	Blue air pipe Φ6×Φ4	YR60060400000
27	Snap hook block	YR40000600300	58	Pressure switch connector	BH11103000010
28	Snap hook	YW02003000400	59	Blower cover fixing base	-
29	Material storage tank	-	60	Hopper cover	-
30	Hopper base plate ring	-	61	Washer Φ30×Φ17×2	BP62352100050
31	Set screw M4×5	YW68004500000			

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

2.2.13 Assembly Drawing (SAL-6U-A)



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

Picture 2-9: Assembly Drawing (SAL-6U-A)

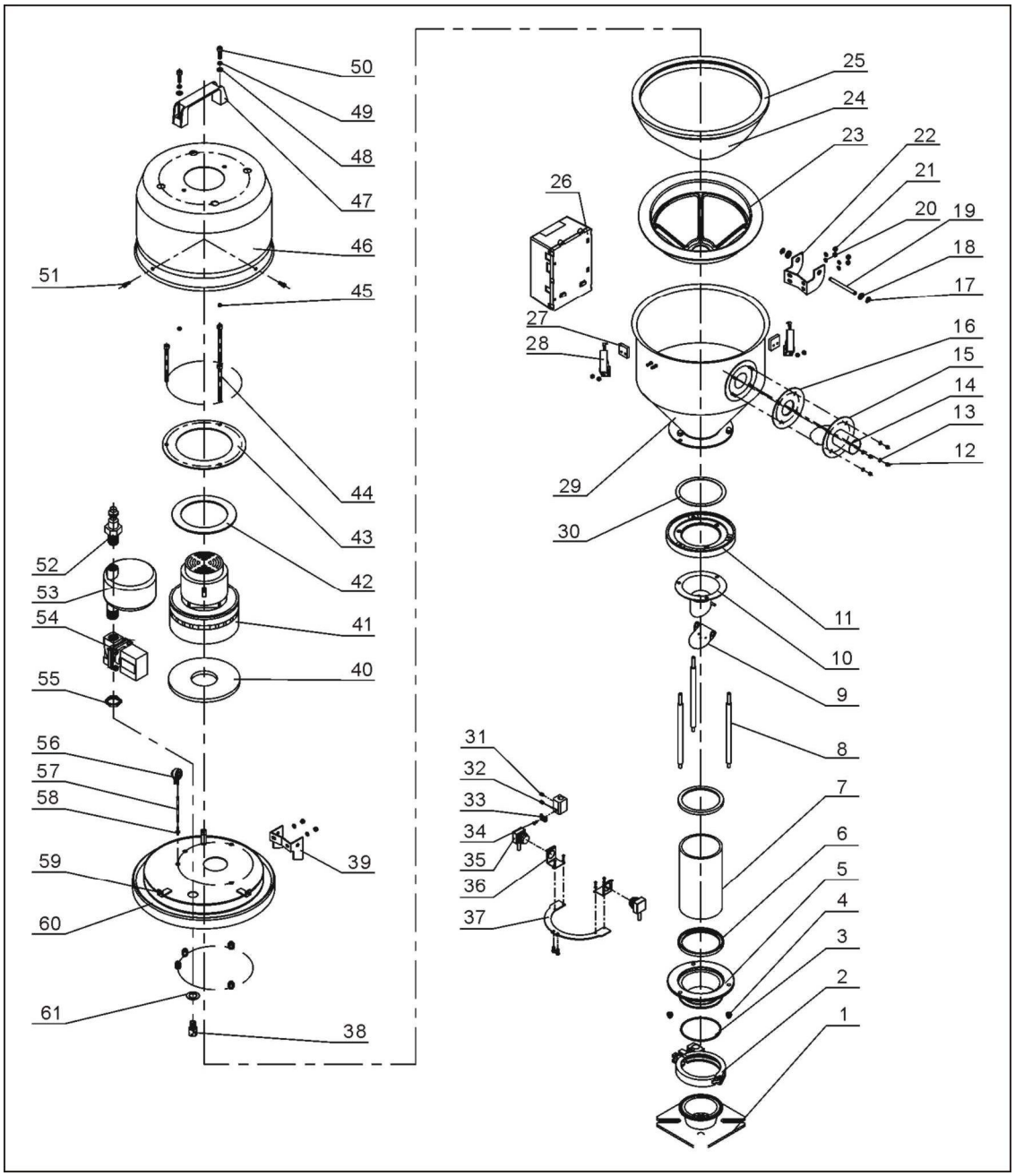
2.2.14 Parts List (SAL-6U-A)

Table 2-7: Parts List (SAL-6U-A)

No.	Name	Part No.	No.	Name	Part No.
1	O-Type seal ring	YR20205500000	37	Cross socket head cap screwM3×40	YW63034000000
2	Base	YW20006000000	38	Cross socket head cap screw M6×20	YW63062000000
3	Base ring	-	39	Magnet cover	BL21000600120
4	Pressure block	YW20000600500	40	Permanent magnet	YW90257700000
5	Spring washer M6	YW65006000100	41	Magnet sleeve	BH12000600010
6	Flat washer Φ6	YW66061300000	42	Flat washer Φ8×22	YW66082200100
7	Inner hexagon screw M6×20	YW61062000300	43	Locknut M6	YW64000600200
8	Hopper fixing base	BL21000600020	44	Inner hexagon cylindrical screw M6×10	YW63061000000
9	Baffle plate*	BL21000302320	45	Sensor shell	YR40000600100
10	Discharging port	BL21000600720	46	Mini-countersunk rivet screw M6	YW64060200000
11	Material storage tank	-	47	Ventilation window	YR40000600500
12	Screw M4×10	YW69041000000	48	Star spanner	YR40061500000
13	Locknut M4×0.7	YW64040700100	49	Upper hinge	BL32000600240
14	Flat washer Φ4	YW66040800000	50	Blower ring (down)	YR10070000000
15	Material inlet pipe	-	51	Carbon brush motor*	YM30965600000
16	Material inlet pipe fixing piece	-	52	Blower ring (upper)	YP62141200000
17	Material inlet pipe ring	-	53	Blower fixing board	-
18	Screw M5×10	YW64040700100	54	Inner hexagon cylindrical screw M6×90	YW61069000100
19	E rings	YW66000500000	55	Locknut M6	YW64000600200
20	Flat washerΦ8 × 22	YW66082200100	56	Blower shell	YR40036000000
21	Hinge pin	BH10006003110	57	L120 Square aluminum handle	BW20012000040
22	Flat washer Φ5	YW66051000100	58	Inner hexagon cylindrical screw M6×20	YW61062000300
23	Locknut M5	YW64000500000	59	Cross socket head cap screw M5×15	YW62051500000
24	Down hinge	BL32000600140	60	Quick connector	YW80031400000
25	Filter cloth split washer**	YR40006000000	61	Connection nut 1	-
26	Hop-pocket **	BP82006000044	62	Air accumulator	-
27	Hopper ring*	YR10000600200	63	Connection nut 2	-
28	Cross socket head cap screw M4×6	YW63040600000	64	Solenoid valve*	YE32213100000
29	Control box	YR40030600000	65	Connection nut	BH12030400410
30	Control box base	-	66	Pressure switch	YE15002000100
31	Block	YR40000600300	67	Blue air pipe	YR60060400000
32	Snap hook	YW02003000400	68	Pressure switch connector	BH11103000010
33	Locknut M4 × 0.7	YW64040700100	69	Blower cover fixing base	-
34	Screw M4 × 15	YW69041500100	70	Hopper cover	-
35	Locknut M3	YW64000300000	71	Washer	BP62352100050
36	Fixing base of baffle plate	BL20000601220	72	Reverse clean pipe nozzle	BH13033000810

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

2.2.15 Assembly Drawing (SAL-6U-EA)



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

Picture 2-10: Assembly Drawing (SAL-6U-EA)

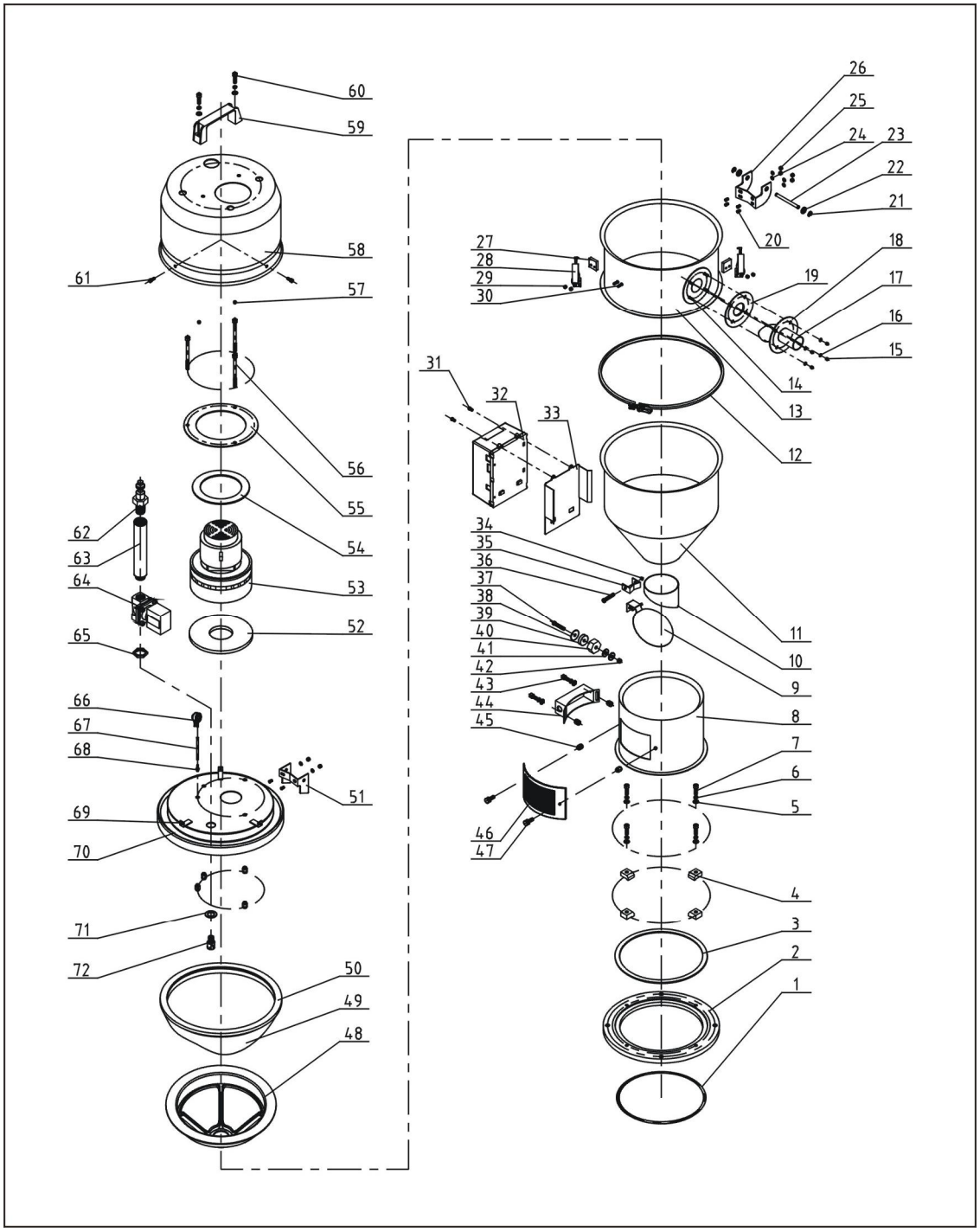
2.2.16 Parts List (SAL-6U-EA)

Table 2-8: Parts List (SAL-6U-EA)

No.	Name	Part No.	No.	Name	Part No.
1	Mounting flange	BL21060200820	32	Photosensor fixing base	BL90001000120
2	3” stainless steel pipe clamp	YW07000300000	33	Photosensor pressure block	YW31616200000
3	Cap nut M6	YR20802600000	34	Cross socket head cap screw M4×10	YW63041000000
4	Cap nut M6	YW64006000100	35	Photosensor	YE15143900000
5	Glass pipe down flange	BW32610900010	36	Photosensor mounting block (come with photosensor)	-
6	Glass pipe ring	YR10060200000	37	Photosensor fixing plate	BL21061200020
7	Glass pipe*	YW70317000600	38	Reverse clean pipe nozzle	BH13033000810
8	Flange connection shaft	BH10000600640	39	Upper hinge	BL32000600240
9	Non-return flap	-	40	Blower ring (down)	YR10070000000
10	Discharging port	-	41	Carbon brush motor 1.15kW	YM30965600000
11	Glass pipe upper flange	BW32610800010	42	Blower ring (upper)	YP62141200000
12	Locknut M4×0.7	YW64040700100	43	Blower fixing board	BL21000300420
13	Flat washer 4	YW66040800000	44	Inner hexagon cylindrical screw M6×90	YW61069000100
14	Material inlet pipe	BL32000600020	45	Locknut M6	YW64000600200
15	Material inlet pipe fixing plate	BL20036000320	46	Blower shell	BL22001200220
16	Material inlet pipe ring	YR10061200000	47	Square aluminum handle L120	BW20012000040
17	E-rings 6	YW63051000000	48	Flat washer 6	YW66061300000
18	Flat washer M8×22	YW66082200100	49	Spring washer 6	YW65006000000
19	Hinge pin	BH10006003110	50	Inner hexagon cylindrical screw M6×20	YW61062000300
20	Flat washer 5	YW66051000100	51	Cross socket head cap screw M5×15	YW62051500000
21	Locknut M5	YW64000500000	52	Quick connector 3” ×1/4PT	YW80031400000
22	Down hinge	BL32000600140	53	Air accumulator	-
23	Filter cloth split washer**	YR40006000000	54	Solenoid valve*	YE32213100000
24	Hop-pocket **	BP82003000044	55	Connection nut 1	BH12030400410
25	Hopper ring *	YR10000300100	56	Pressure switch	YE15002000100
26	Control box	YR40030600000	57	Blue air pipe Φ6×Φ4	YR60060400000
27	Snap hook block	YR40000600300	58	Pressure switch connector	BH11103000010
28	Snap hook	YW02003000400	59	Blower cover fixing base	-
29	Material storage tank	-	60	Hopper cover	-
30	Hopper base plate ring	-	61	Washer Φ30×Φ17×2	BP62352100050
31	Set screw M4×5	YW68004500000			

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

2.2.17 Assembly Drawing (SAL-12U)



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

Picture 2-11: Assembly Drawing (SAL-12U)

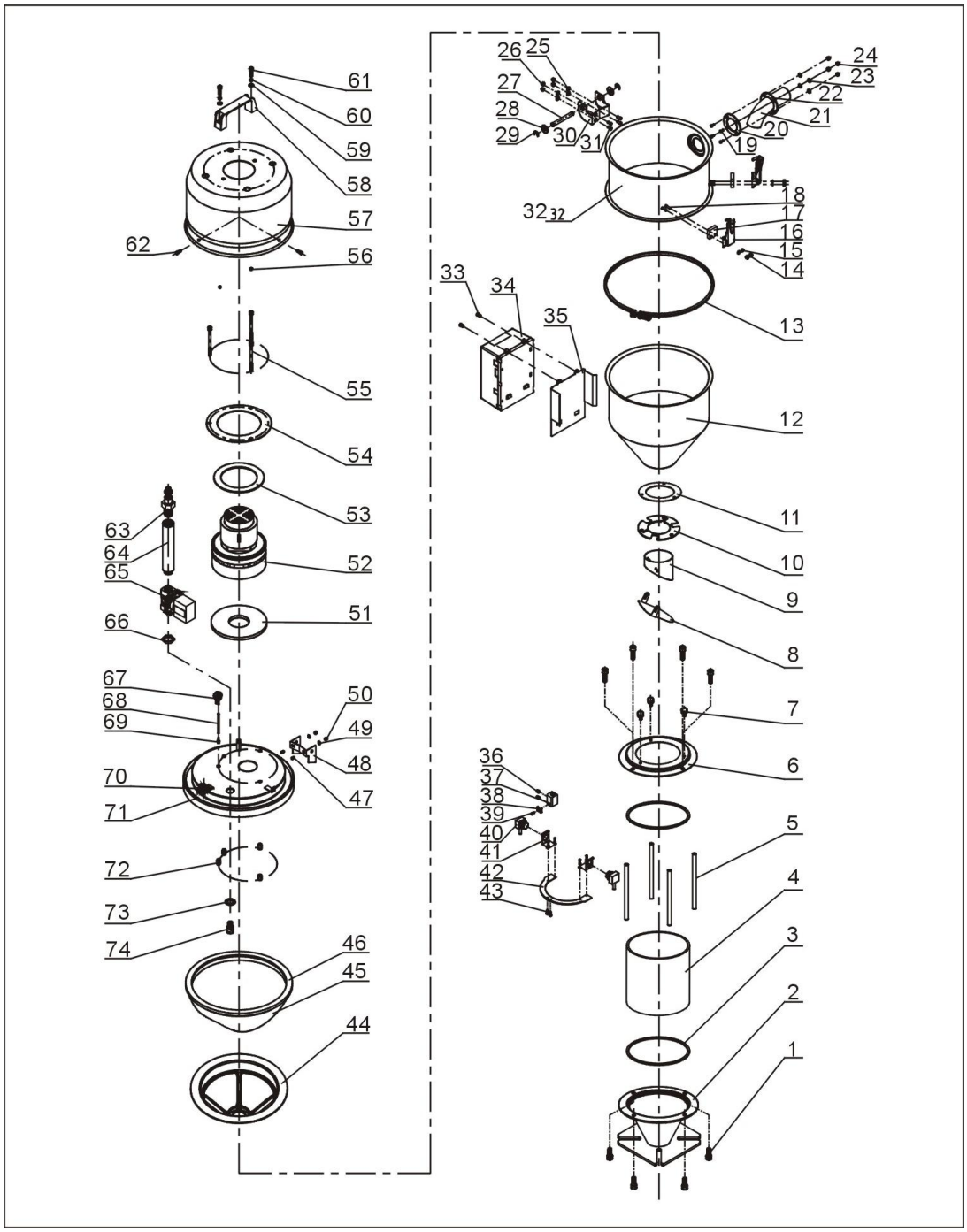
2.2.18 Parts List (SAL-12U)

Table 2-9: Parts List (SAL-12U)

No.	Name	Part No.	No.	Name	Part No.
1	O-Type seal ring	YR20205500000	37	Cross socket head cap screw M6×20	YW63062000000
2	Base	YW20006000000	38	Magnet cover	BL21000600120
3	Base ring	-	39	Permanent magnet	YW90257700000
4	Pressure block	YW20000600500	40	Magnet sleeve	BH12000600010
5	Spring washer M6	YW65006000100	41	Flat washer Φ8×22	YW66082200100
6	Flat washer Φ6	YW66061300000	42	Locknut M6	YW64000600200
7	Inner hexagon screw M6×20	YW61062000300	43	Inner hexagon cylindrical screw M6×10	YW63061000000
8	Hopper fixing base	BL21000600020	44	Sensor shell	YR40000600100
9	Baffle plate *	BL21000302320	45	Mini-countersunk rivet screw M6	YW64060200000
10	Discharging port	BL21000600720	46	Ventilation window	YR40000600500
11	Material storage tank	-	47	Star spanner	YR40061500000
12	Pipe clamp	BH11120400010	48	Filter cloth split washer**	YR40006000000
13	Extra large material tank	-	49	Hop-pocket **	BP82006000044
14	Screw M4×10	YW69041000000	50	Hopper ring *	YR10000600200
15	Locknut M4×0.7	YW64040700100	51	Upper hinge	BL32000600240
16	Flat washer Φ4	YW66040800000	52	Blower ring (down)	YR10070000000
17	Material inlet pipe	-	53	Carbon brush motor*	YM30965600000
18	Material inlet pipe fixing plate	-	54	Blower ring (upper)	YP62141200000
19	Material inlet pipe ring	-	55	Blower fixing board	-
20	Screw M5×10	YW64040700100	56	Inner hexagon cylindrical screw M6×90	YW61069000100
21	E rings	YW66000500000	57	Locknut M6	YW64000600200
22	Flat washerΦ8×22	YW66082200100	58	Blower shell	YR40036000000
23	Hinge pin	BH10006003110	59	L120 Square aluminum handle	BW20012000040
24	Flat washer Φ5	YW66051000100	60	Inner hexagon cylindrical screw M6×20	YW61062000300
25	Locknut M5	YW64000500000	61	Cross socket head cap screw M5×15	YW62051500000
26	Down hinge	BL32000600140	62	Quick connector	YW80031400000
27	Block	YR40000600300	63	Connector 2	BH13030300010
28	Snap hook	YW02003000400	64	Solenoid valve*	YE32213100000
29	Lockup nut M4×0.7	YW64040700100	65	Connection nut	BH12030400410
30	Screw M4×15	YW69041500100	66	Pressure switch	YE15002000100
31	Cross socket head cap screw M4×6	YW63040600000	67	Blue air pipe	YR60060400000
32	Control box	YR40030600000	68	Pressure switch connector	BH11103000010
33	Control box base	-	69	Blower cover fixing base	-
34	Locknut M3	YW64000300000	70	Hopper cover	-
35	Fixing base of baffle plate	BL20000601220	71	Washer	BP62352100050
36	Cross socket head cap screw M3×40	YW63034000000			

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

2.2.19 Assembly Drawing (SAL-12U-E)



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

Picture 2-12: Assembly Drawing (SAL-12U-E)

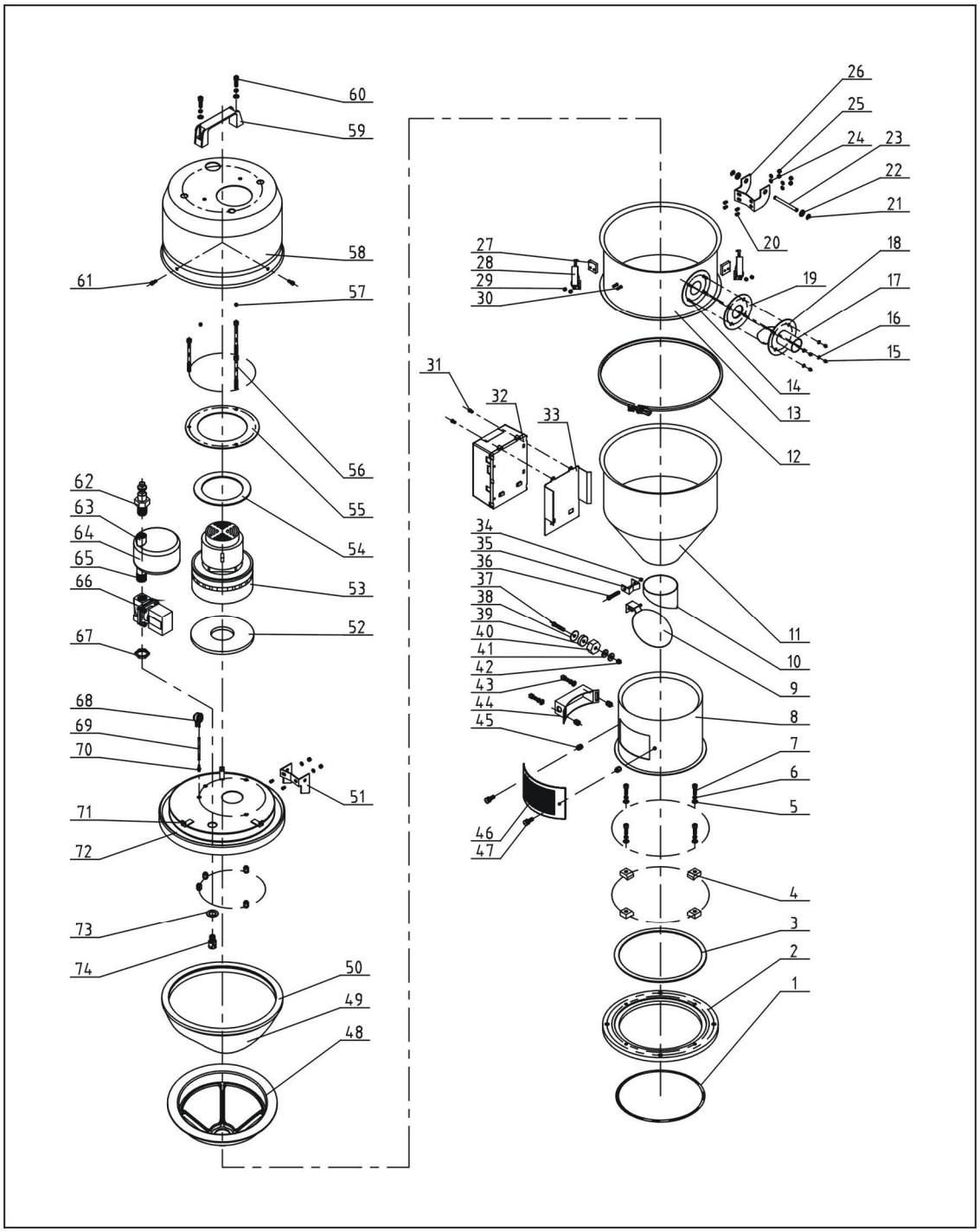
2.2.20 Parts List (SAL-12U-E)

Table 2-10: Parts List (SAL-12U-E)

No.	Name	Part No.	No.	Name	Part No.
1	Inner hexagon screw M6×15	YW61061600300	38	Photosensor pressure block	BL21001210020
2	Glass pipe down flange	YW32000600000	39	Cross socket head cap screw M4×10	YW63041000000
3	Glass pipe ring	YR10060200000	40	Photosensor	YE15143900300
4	Glass pipe *	YW70908000000	41	Photosensor mounting block	-
5	Flange connection shaft	BH10101100010	42	Photosensor fixing plate	BL21001200120
6	Glass pipe upper flange	YW32000600200	43	Cross socket head cap screw M4×10	YW63041000000
7	Plastic handle screw M6×15	YW69621600000	44	Filter cloth split washer**	YR40006000000
8	Non-return flap	BL21001200520	45	Hop-pocket **	BP82006000044
9	Discharging port	BL27001200720	46	Hopper ring *	YR10000600200
10	Hopper flange	YW32000600100	47	Screw M5×10	YW64040700100
11	Ventilation flange	-	48	Upper hinge	BL32000600220
12	Material storage tank	BL21001200820	49	Flat washer 5	YW66040800000
13	Pipe clamp	BH11120400010	50	Locknut	YW64000500000
14	Locknut M4×0.7	YW64040700100	51	Blower ring (down)	YR10070000000
15	Flat washer 4	YW66040800000	52	Carbon brush motor	YM30965600000
16	Snap hook	YW02003000400	53	Blower ring (upper)	YP62141200000
17	Block	YR40000600300	54	Blower fixing board	BL21000300420
18	Screw M4×15	YW69041500100	55	Inner hexagon cylindrical screw	YW61069000100
19	Screw M4×10	YW69041000000	56	Locknut M6	YW64000600200
20	Material inlet pipe ring	YR10061200000	57	Blower shell	YR40036000000
21	Material inlet pipe	BL32001500020	58	Square aluminum handle	BW20012000040
22	Material inlet pipe fixing plate	BL20036000320	59	Inner hexagon cylindrical screw	YW61062000300
23	Flat washer 4	YW66040800000	60	Spring washer	YW65006000000
24	Locknut M4×0.7	YW64040700100	61	Flat washer 6	YW66061300000
25	Flat washer 5	YW66051000100	62	Cross socket head cap screw M5×15	YW62051500000
26	Locknut M5	YW64000500000	63	Quick connector	YW80031400000
27	Hinge pin	BH10006003110	64	Connector 2	BH13030300010
28	Flat washer 8×22	YW66082200100	65	Solenoid valve	YE32213000100
29	E-rings 6	YW63051000000	66	Connection nut	BH12030400410
30	Down hinge	BL32000600120	67	Pressure switch	YE15002000100
31	Screw M5×10	YW64040700100	68	Blue air pipe	YR60060400000
32	Extra large material tank	BL21001200621	69	Pressure switch connector	BH11103000010
33	Cross socket head cap screw	YW63040600000	70	Blower cover fixing base	BH10063200040
34	Control box	YR40030600000	71	Hopper cover	BL22001200721
35	Control box base	BL21000602020	72	Mini-countersunk rivet screw M6	YW64060200000
36	Set screw	YW68004500000	73	Washer	BP62352100050
37	Photosensor fixing base	YW20061500000	74	Reverse clean pipe nozzle	BH13033000810

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

2.2.21 Assembly Drawing (SAL-12U-A)



Remarks: Please refer to material list 2.2.26 for specific explanation of the Arabic numbers in parts drawing.

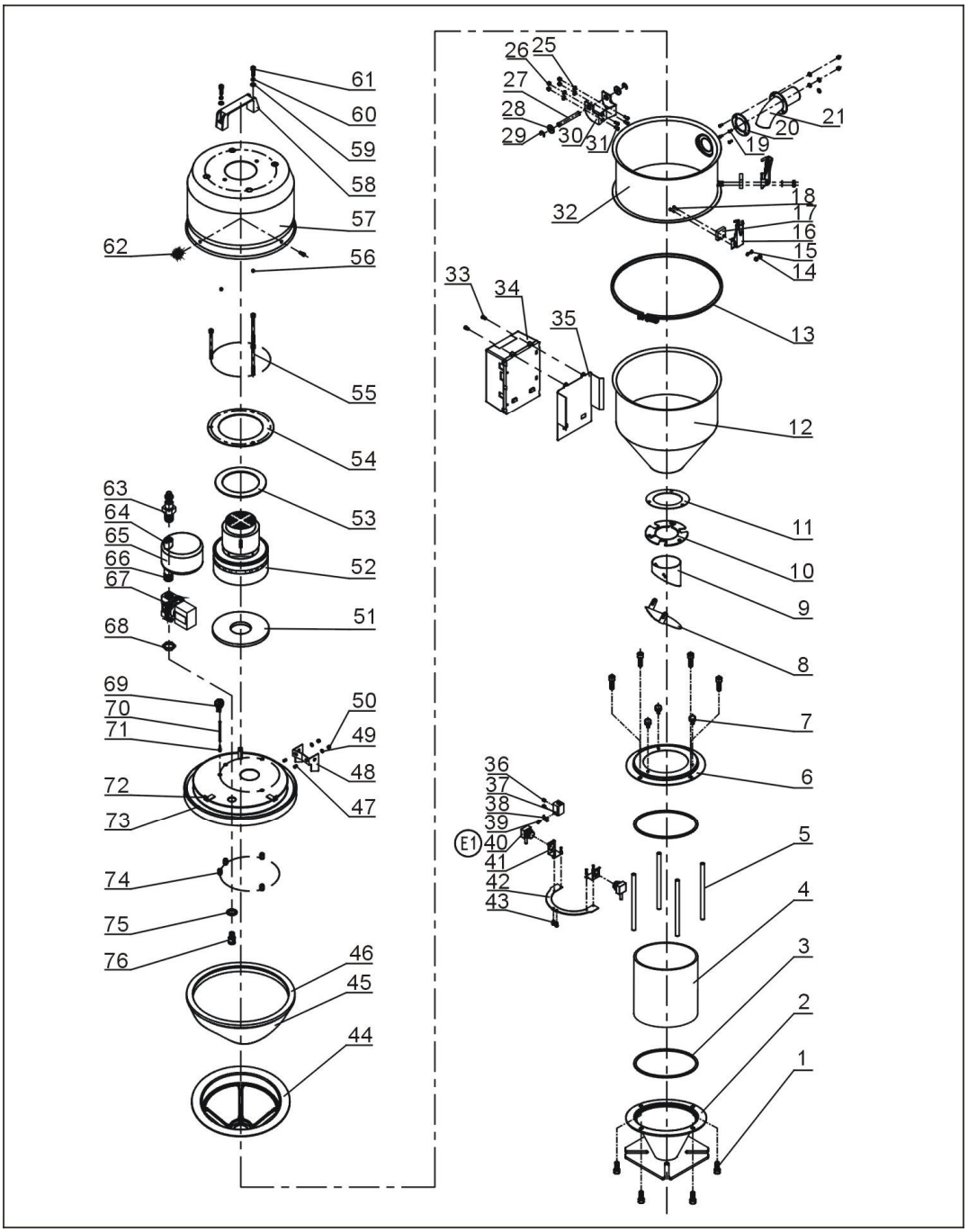
Picture 2-13: Assembly Drawing (SAL-12U-A)

2.2.22 Parts List (SAL-12U-A)

Table 2-11: Parts List (SAL-12U-A)

No.	Name	Part No.	No.	Name	Part No.
1	O-Type seal ring	YR20205500000	38	Magnet cover	BL21000600120
2	Base	YW20006000000	39	Permanent magnet	YW90257700000
3	Base ring	-	40	Magnet sleeve	BH12000600010
4	Pressure block	YW20000600500	41	Flat washer Φ8×22	YW66082200100
5	Spring washer M6	YW65006000100	42	Locknut M6	YW64000600200
6	Flat washerΦ6	YW66061300000	43	Inner hexagon cylindrical screw M6×10	YW63061000000
7	Inner hexagon screw M6×20	YW61062000300	44	Sensor shell	YR40000600100
8	Hopper fixing base	BL21000600020	45	Mini-countersunk rivet screw M6	YW64060200000
9	Baffle plate*	BL21000302320	46	Ventilation window	YR40000600500
10	Discharging port	BL21000600720	47	Star spanner	YR40061500000
11	Material storage tank	-	48	Filter cloth split washer**	YR40006000000
12	Pipe clamp	BH11120400010	49	Hop-pocket **	BP82006000044
13	Extra large material tank	-	50	Hopper ring *	YR10000600200
14	Screw M4×10	YW69041000000	51	Upper hinge	BL32000600240
15	Locknut M4×0.7	YW64040700100	52	Blower ring (down)	YR10070000000
16	Flat washer Φ4	YW66040800000	53	Carbon brush motor*	YM30965600000
17	Material inlet pipe	BL32000600020	54	Blower ring (upper)	YP62141200000
18	Material inlet pipe fixing plate	-	55	Blower fixing board	-
19	Material inlet pipe ring	YR10061200000	56	Inner hexagon cylindrical screw M6×90	YW61069000100
20	Screw M5×10	YW64040700100	57	Locknut M6	YW64000600200
21	E rings	YW66000500000	58	Blower shell	YR40036000000
22	Flat washerΦ8×22	YW66082200100	59	L120 Square aluminum handle	BW20012000040
23	Hinge pin	BH10006003110	60	Inner hexagon cylindrical screw M6×20	YW61062000300
24	Flat washer Φ5	YW66051000100	61	Cross socket head cap screw M5×15	YW62051500000
25	Locknut M5	YW64000500000	62	Quick connector	YW80031400000
26	Down hinge	BL32000600140	63	Connection nut 1	-
27	Block	YR40000600300	64	Air accumulator	-
28	Snap hook	YW02003000400	65	Connection nut 2	-
29	Locknut M4×0.7	YW64040700100	66	Solenoid valve*	YE32213100000
30	Screw M4×15	YW69041500100	67	Connection nut	-
31	Cross socket head cap screw M4×6	YW63040600000	68	Pressure switch	YE15002000100
32	Control box	YR40030600000	69	Blue air pipe	YR60060400000
33	Control box base	-	70	Pressure switch connector	-
34	Locknut M3	YW64000300000	71	Blower cover fixing base	-
35	Fixing base of baffle plate	BL20000601220	72	Hopper cover	-
36	Cross socket head cap screw M3×40	YW63034000000	73	Washer	BP62352100050
37	Cross socket head cap screw M6×20	YW63062000000	74	Reverse clean pipe nozzle	-

2.2.23 Assembly Drawing (SAL-12U-EA)



Remarks: Please refer to material list 2.2.28 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-14: Assembly Drawing (SAL-12U-EA)

2.2.24 Parts List (SAL-12U-EA)

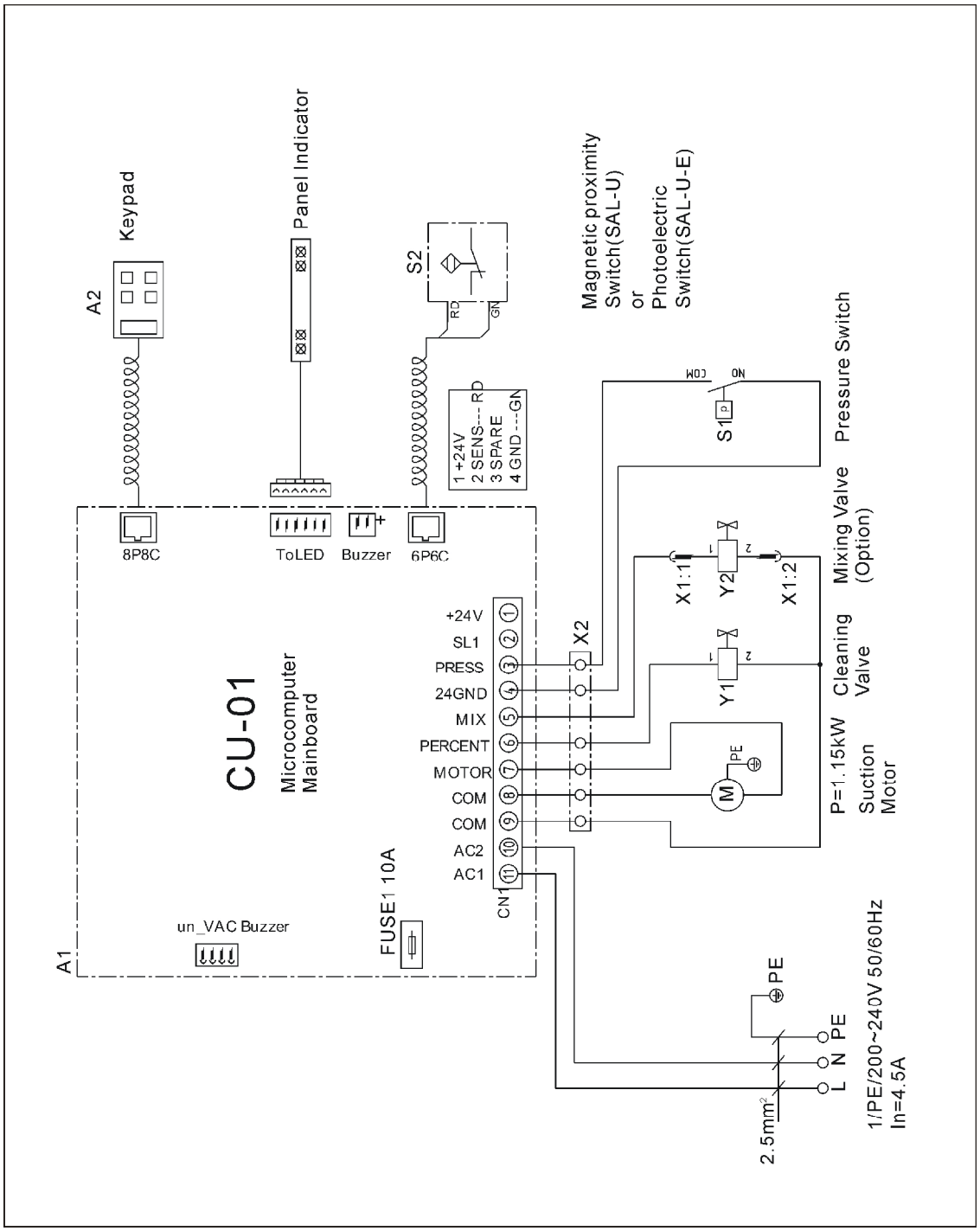
Table 2-12: Parts List (SAL-12U-EA)

No.	Name	Part No.	No.	Name	Part No.
1	Inner hexagon screw M6×15	YW61061600300	32	Extra large material tank	BL21001200621
2	Glass pipe down flange	YW32000600000	33	Cross socket head cap screw	YW63040600000
3	Glass pipe ring	YR10060200000	34	Control box	YR40030600000
4	Glass pipe *	YW70908000000	35	Control box base	BL21000602020
5	Flange connection shaft	BH10101100010	36	Set screw	YW68004500000
6	Glass pipe upper flange	YW32000600200	37	Photosensor fixing base	YW20061500000
7	Plastic handle screw M6×15	YW69621600000	38	Photosensor pressure block	BL21001210020
8	Non-return flap	BL21001200520	39	Cross sockethead cap screw M4×10	YW63041000000
9	Discharging port	BL27001200720	40	Photosensor	YE15143900000
10	Hopper flange	YW32000600100	41	Photosensor mounting block	-
11	Ventilation flange	-	42	Photosensor fixing plate	BL21001200120
12	Material storage tank	BL21001200820	43	Cross socket head cap screw M4×10	YW63041000000
13	Pipe clamp	BH11120400010	44	Filter cloth split washer**	YR40006000000
14	Locknut M4×0.7	YW64040700100	45	Hop-pocket **	BP82006000044
15	Flat washer 4	YW66040800000	46	Hopper ring *	YR10000600200
16	Snap hook	YW02003000400	47	Screw M5×10	YW64040700100
17	Block	YR40000600300	48	Upper hinge	BL32000600220
18	Screw M4×15	YW69041500100	49	Flat washer 5	YW66040800000
19	Screw M4×10	YW69041000000	50	Locknut	YW64000500000
20	Material inlet pipe ring	YR10061200000	51	Blower ring (down)	YR10070000000
21	Material inlet pipe	BL32001500020	52	Carbon brush motor	YM30965600000
22	Material inlet pipe fixing plate	BL20036000320	53	Blower ring (upper)	YP62141200000
23	Flat washer 4	YW66040800000	54	Blower fixing board	BL21000300420
24	Locknut M4×0.7	YW64040700100	55	Inner hexagon cylindrical screw M6×90	YW61069000100
25	Flat washer 5	YW66051000100	56	Locknut M6	YW64000600200
26	Locknut M5	YW64000500000	57	Blower shell	YR40036000000
27	Hinge pin	BH10006003110	58	Square aluminum handle	BW20012000040
28	Flat washer 8×22	YW66082200100	59	Inner hexagon cylindrical screw M6×20	YW61062000300
29	E-rings 6	YW63051000000	60	Spring washer	YW65006000000
30	Down hinge	BL32000600120	61	Flat washer 6	YW66061300000
31	Screw M5×10	YW64040700100	62	Cross socket head cap screw M5×15	YW62051500000
63	Quick connector	YW80031400000	70	Blue air pipe	YR60060400000
64	Connection nut 2	BH13030300010	71	Pressure switch connector	BH11103000010
65	Air accumulator	BL21000601420	72	Blower cover fixing base	BH10063200040
66	Connection nut 1	BH12030400410	73	Hopper cover	BL22001200721
67	Solenoid valve	YE32213000100	74	Mini-countersunk rivet screw M6	YW64060200000
68	Connection nut	-	75	Washer	BP62352100050
69	Pressure switch	YE15002000100	76	Reverse clean pipe nozzle	BH13033000810

* means possible broken parts. ** means easy broken parts. A spare backup is suggested.
Please confirm the version of manual is competitable with equipement 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 SAL-U Main Circuit (230V)



Picture 2-15: SAL-U Main Circuit (230V)

2.3.2 SAL-U Electrical Components List (230V)

Table 2-13: Electrical Components List (SAL-1U) (230V)

NO.	Symbol	Name	SAL-1U	
			Specification	Part NO.
1	A1	Microcomputer mainboard*	230VAC 50/60Hz	YE80023560000
2	A2	Keypad*	-	YE80001000000
3	S1	Pressure switch*	250VAC 20MA	YE15002000100
4	S2	Magnetic proximity switch*	24VDC	YE15123000100
5	X1	Waterproof Connector	250V 3P	YE62163000100
6	X2	Terminal board	10A	YE61000600300
7	Y1	Solenoid valve	230V 50/60Hz	YE32213100000

* means possible broken parts.

** means easy broken parts. A spare backup is suggested.

Please confirm the version of manual is competitable with equipement 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-3U~12U) (230V)

NO.	Symbol	Name	SAL-3U~12U	
			Specification	Part NO.
1	A1	Microcomputermainboard*	230VAC 50/60Hz	-
2	A2	Keypad*	-	-
3	S1	Pressure switch*	250VAC 20MA	YE15002000100
4	S2	Magnetic proximity switch*	24VDC	YE15123000100
5	X1	Waterproof Connector	250V 3P	YE62163000100
6	X2	Terminal board	10A	YE61000600300
7	Y1	Solenoid valve	230V 50/60Hz	YE32213100000

* means possible broken parts.

** means easy broken parts. A spare backup is suggested.

Please confirm the version of manual is competitable with equipement 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-U~E) (230V)

NO.	Symbol	Name	SAL-U~E	
			Specification	Part NO.
1	A1	Microcomputermainboard*	230VAC 50/60Hz	-
2	A2	Keypad*	-	-
3	S1	Pressure switch*	250VAC 20MA	YE15002000100
4	S2	Magnetic proximity switch*	24VDC	YE15143900000
5	X1	Waterproof Connector	250V 3P	YE62163000100
6	X2	Terminal board	10A	YE61000600300
7	Y1	Solenoid valve	230V 50/60Hz	YE32213100000

* means possible broken parts.

** means easy broken parts. A spare backup is suggested.

Please confirm the version of manual is competitable with equipement 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 Photoelectric Switch

1) It is applied to material conveying control and material shortage alarm for SAL-U-E series.
2) Mounted on photosensor fixing plate.

Picture 2-16: Photoelectric Switch

2.4.2 Magnetic Proximity Switch

1) It is applied to material conveying control and material shortage alarm for SAL-U-E series.
2) Mounted on photosensor fixing plate.

Picture 2-17: Magnetic Proximity Switch

2.5 Optional Accessories

2.5.1 Air Accumulator

2.5.1.1 Function of Air Accumulator

Air accumulator is fixed on SAL-6U/12U-(CA) which can reinforce the auto cleaning.

Picture 2-18: 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.

3. Installation and Debugging

This series of models only could be applied in working environment with good ventilation.

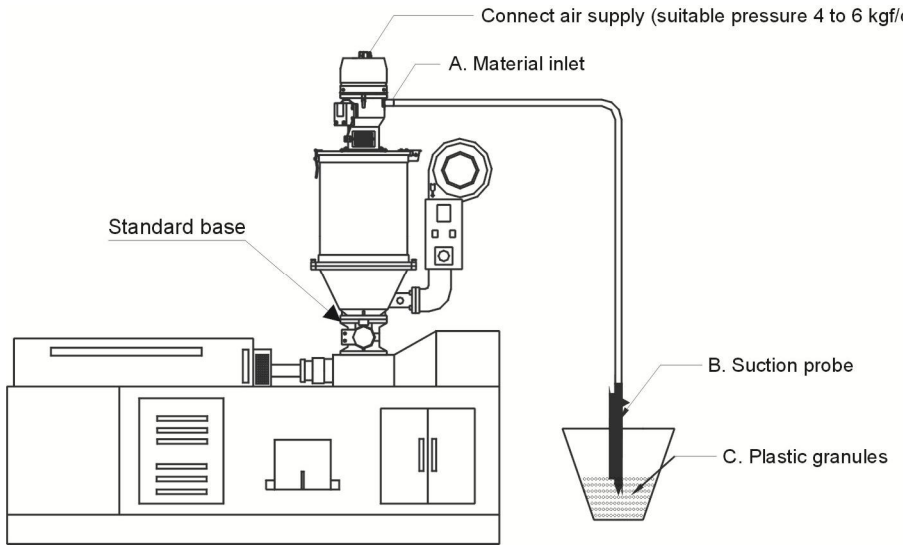
Notice!

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

Power supply should be fixed by qualified technicians!

3.1 Install the equipement on dryers or molding machines.

3.1.1 Installation of SAL-U (-A)



Picture 3-1: Installation of SAL-U (-A)

Install the Hopper Loader (SAL-U) on a hopper dryer (refer to the above drawing) by fastening the screws on the hopper base. Connect one end of the conveying pipe with material inlet (A) and the other end with suction pipe (B). Then insert the end with suction pipe B into the storage tank.

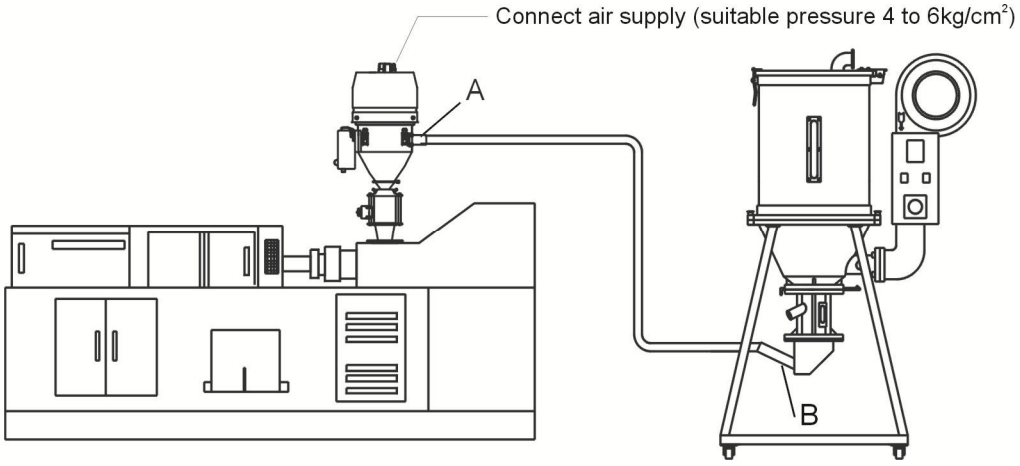
3.1.2 Power Supply of SAL-U (-A)

Connect SAL-1.5U / 3U / 6U / 12U-(A) with AC 1Φ 230V, 50 Hz power supply and earth wire.

Warning!

Make sure that power supply is turned off before you connect the electrical wires.

3.1.3 Installation of SAL-U-E (A)



Picture 3-2: Installation of SAL-U-E (A)

Install the hopper loader (SAL-3U / 6U / 12U-E (A)) on the molding machine (refer to the above drawing) by fastening the 4 screws on the hopper base. Connect material inlet (A) with suction box (B) of the dryer. If equipped with optional air accumulator or cleaning function, please connect with air supply.

3.1.4 Power Supply of SAL-U-E(A)

Connect SAL-U-E (A) series of machines with AC1Φ, 230V, 50Hz power supply and earth wire.

Warning!

Make sure that power supply is turned off before you connect the electrical wires.

4. Application and Operation

4.1 Start / Stop the Machine

The start and stop of SAL-U series is controlled by start/stop switch on the control panel.

4.2 Keypad on the Control Panel

SET Input values before selecting or canceling items.

ENT Input values before selecting or saving items. It is also used to clear the alarm when alarm occurs.

▲ Increase value.

▼ Decrease value.

▲ + ▼ Stop the machine in 3 seconds. By then, the machine stop working and the screen doesn't display. Press SET to resume operation.

Notice!

The machine will restart if connecting the power supply again.

4.3 Parameters Setting

4.3.1 Enter Setting Mode of Layer One

Under normal operation, press SET for about 1 second to enter [F.01] setting screen. Then the screen will alternately display [F.01] and the setting value respectively for 0.8 sec.

If [F.04] is set, the system will switch to [F.99]. The screen will alternately display [F.99] and the setting value respectively for 0.8 sec. Input correct password to enter [F.01].

4.3.2 Edit Parameters

Press ▲ to increase parameter value. Hold ▲ for about 1 second to quickly increase value to the maximum input.

Press ▼ to decrease parameter value. Hold ▼ for about 1 second to quickly decrease value to the minimum input.

Press ENT to confirm input setting and save input setting into the memory. It will

switch to next item. If you did not change anything, press ENT to enter the next item.

Press SET to cancel input values and return to the setting screen. If you did not change anything, press SET to enter into next setting item.

4.3.3 Exit

Hold SET for 1 second to return to default display.

If no input for 20 seconds, it will return to default display without saving changes.

4.3.4 Layer One Function List

Para. code	Functions	Value Default/Range		Note
F.01	Blower suction time when lacking material. Action code: S.02	10 seconds	5-127 seconds	-
F.02	Blending time The blending time is set according to the material suction time. It is calculated by the following formula: material suction time×[F.02]%. Set 0 to disable the function.	0% no start	0-100%	-
F.03	Set blending times Means to start blending once every time when certain times of material suction is finished since startup. If set it to be 1, it means blending material after every time of material suction. If no require of blending, set [F.02] to be 0.	1 time	1-9 times	-
F.04	Password Layer One If [F.04] is not set as 0, the display will switch to [F.99] to require input of correct password to enter [F.01]. If the password is incorrect, the screen will return to default display. If it's set to be 0, it means turn off the password setting.	0	0-999	-

The password can be set by youself.

Please contact us, if the equipment is lockup by password.

4.4 Function Setting

4.4.1 Enter Setting Mode

Start the machine, press SET for about 1 sec. to enter the initial setting mode. Hold both SET and ENT to enter parameter [F.05] in about 1 sec. The screen will alternately display [F.05] and the setting value respectively for 0.8 sec. If password [F.12] is set, the system will switch to [F.98]. The screen will alternately display [F.98] and the setting value respectively for 0.8 sec. Input correct password to enter [F.05].

4.4.2 Edit Parameters

Press ▲ to increase parameter value. Hold ▲ for about 1 second to quickly increase value to the maximum input.

Press ▼ to decrease parameter value. Hold ▼ for about 1 second to quickly decrease value to the minimum input.

Press ENT to confirm input setting and save input setting into the memory. It will switch to next item. If you did not change anything, press ENT to enter the next item.

Press SET to cancel input values and return to the setting screen. If you did not change anything, press SET to enter into next setting item.

4.4.3 Exit

Hold SET for 1 second to return to default display.

If no input for 20 seconds, it will return to default display without saving changes.

4.4.4 Layer Two Function List

Para. code	Functions	Value Default/Range		Note
F.05	Time delay The delayed time between material conveying cycles. Deafult 0: No time delay Action code: S.06	0 seconds	9990 seconds	10 secs. per unit
F.06	Auto Cleaning Duration Filter cleaning time before material suction Deafult 0: disable auto cleaning. Action code: S.01	3 seconds	0-99 seconds	-
F.07	Auto Cleaning Duration Filter cleaning time after material suction Deafult 0: disable auto cleaning Action code: S.03	3 seconds	0-99 seconds	-

Para. code	Functions	Value Default/Range		Note
F.C1	Frequency of auto cleaning. Cleaning once after several times of material suction.	3 seconds	1~99 seconds	-
F.08	Check Discharging Time Check the time for material discharge. If there is signal within the discharging time, enter into next action. If no signal within the discharging time, count it as one time of lacking material. If the times reach to the setting value [F.09], the machine will sound an alarm. Action code: S.04	10 seconds	0-99 seconds	-
F.09	No material discharge alarm Set times of no material falling into the material tank after which the machine sounds an alarm. Ways of clearing the alarm: 1. The alarm will be clear when the material tank receives material again. . 2. Press ENT will clear the alarm. 3. Restart the equipement. Action code: A.01	3	1-9	-
F.10	Halt equipement for no material discharge Set times of no material falling into the material tank after which the machine sounds an alarm and stop working. Ways of clearing the alarm: 1. Press ENT toclear the alarm. 2. Restart the equipement. Deafult 99: disable this function. Action code: A.04	99	[F.09]-99	-
F.11	Delay setting after auto cleaning If set it to be 0, it means no delay after auto cleaning.	30 times	999	-
F.12	Second layer password If [F.12] is not set as 0, then the display will switch to [F.98] to require input of the correct password [F.05]. If the password is incorrect, the screen will return to the initial display. If set it to be 0, it means to turn off the password setting.	0	999	-

The password can be set by youself.

Please contact us, if the equipment is lockup by password.

4.5 Function Setting: Special Process

4.5.1 Enter special process setting Mode

Enter setting mode according to the steps descripped in 6.4. Press SET to choose [F.11]; then keep holding SET and then press ENT for about 1 sec. to enter into the setting of [F.13]. The screen will alternately display [F.13] and the setting value respectively for 0.8 sec.

4.5.2 Edit Parameters

Press ▲ to increase parameter value. Hold ▲ for about 1 second to quickly increase value to the maximum input.

Press ▼ to decrease parameter value. Hold ▼ for about 1 second to quickly decrease value to the minimum input.

Press ENT to confirm input setting and save input setting into the memory. It will switch to next item. If you did not change anything, press ENT to enter the next item.

Press SET to cancel input values and return to the setting screen. If you did not change anything, press SET to enter into next setting item.

4.5.3 Exit

Hold SET for 1 second to return to default display.

If no input for 20 seconds, it will return to default display without saving changes.

4.5.4 Special Process Function List

Para. code	Functions	Value Default/Range		Note
F.13	Buzzer Tone Set buzzer tone 0: uninterrupted sounding 1: Slow, interrupted sounding 2: Quick, interrupted sounding	0	0-2	-
F.14	Buzzer Time Deafult 999: Unlimited time	999	999	-
F.15	First carbon brush alarm When the carbon brush use [F.17] for a certain while, [F.14] will sound an alarm. Please replace carbon brush ASAP. The alarm will last 5 minutes, and will repeat every 15 minutes until it become 0. Set 0 to cancel this function. Action code: A.05	80	0-999	1Unit= 10Hours
F.16	Second carbon brush alarm When the carbon brush use [F.17] for a certain while, [F.15] will sound an alarm. Please replace carbon brush. The alarm will last 5 minutes, and will repeat every 15 minutes until [F.18] become 0. Set 0 to cancel this function. Action code: A.06	90	[F.14]-999	1Unit= 10Hours
F.17	Third carbon brush alarm When the carbon brush use [F.17] for a certain while, [F.16] will sound an alarm. Please replace carbon brush. The alarm will last 5 minutes, and will repeat every 15 minutes until [F.18] become 0. Set 0 to cancel this function. Action code: A.07	100	[F.15]-999	1Unit= 10Hours
F.18	Carbon brush service record Check and clear the working hours of carbon brush. Clear carbon brush working hours: set its value to be 0 and then press ENT to confirm.	0	0-999	Set"0":clear the value
F.19	Blower soft start On and off of blower soft start function. 0 : means blower soft start is on, which means the blower is protected when starting. 1 : means blower soft start is off, which means the blower starts with full speed.	0	0:soft start on 1:soft start off	-
F.20	Blower stop delay The vacuum breaking valve opens to suction air from the outside while the blower delays stopping, which cools the material suction blower and prevent it from frequent stop and start. Only suitable for SAL-UG/UGP Not suitable for SAL-U which must be set to be 0.	0	0~999 Seconds	-

The password can be set by youself.

Please contact us, if the equipment is lockup by password.

4.6 Description of Operation Procedures

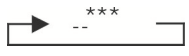
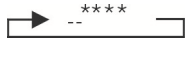
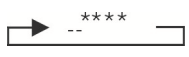
4.6.1 Operation Procedures

The equipment is capable of working without keypad connected. The following is about action codes.

Indicators	Action code	Operation procedures	Relative parameter	Parameter description	
				Default	Range
Red light on	S. 01	Auto cleaning of filter screen	F. 06	3 seconds	0-99 seconds
	S. 02	Material suction	F. 01	10 seconds	5-127 seconds
		Master batch suction	F.02	0%	0-100%
			F. 03	3	1-9 times
	S. 03	Auto cleaning of filter screen; Material starts to fall into the material tank.	F. 07	3 seconds	0-99 seconds
	S. 04	Wait for all materials to fall into the material tank.	F. 08	10 seconds	0-99 seconds
	S. 05	Check alarm information (instantly completed, no display on control panel.)	-	-	-
	S. 06	Delay material suction.	F. 05	0 seconds	0-999 seconds
Green light on	-	Stand by	-	-	-

4.6.2 Alarms

Alarm display and trouble shooting.

Alarm light symbol	Code	Possible reasons	Solutions	Remarks
	[A.01]	Material shortage alarm [F.9] 1. The setting material suction time is too short. 2. Unable to suck any material.. 3.Material suction pipe is blocked, 4. No enough suction power.	1. Add material. 2. Increase material suction time. 3. Turn off the equipment and check the pipes. The alarm will be cleared when the machine receives material again, or by pressing ENT on the control panel or by cutting off power supply.	
	[A.03]	Filter alarm Filter blocked.	1. Turn off the equipment for cleaning filter screen or replace it. The alarm will be cleared by cutting off the power or press ENT on the control panel.	
	[A.04]	Alarm for no material [F.10] After the material shortage alarm is up to certain times, the stop alarm will be given out.	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.	
	[A.05]	First carbon brush alarm After the carbon brush has been used for a certain while, [F.14] will sound an alarm.	Please replace the carbon brush. This alarm will last for 5 minutes, and will repeat every 15 minutes until the service time record of the carbon brush becomes 0.	
	[A.06]	Second carbon brush alarm After the carbon brush has been used for a certain while, [F.15] will sound an alarm.	Please replace the carbon brush and reset the service time record of the carbon brush to be 0. This alarm will last for 5 minutes, and will repeat every 15 minutes.	
	[A.07]	Third carbon brush alarm After the carbon brush has been used for a certain while, [F.16] will sound an alarm.	Please replace the carbon brush and reset the service time record of the carbon brush to be 0. This alarm won't stop until the service time record of the carbon brush becomes 0.	
	[A.08]	Data can not be stored into EEPROM.	Please contact us to replace the PCB.	

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

5. Trouble-shooting

5.1 Trouble Shooting of single phase SAL-U.

Failures	Possible reasons	Solutions
Lacking material for a long time; blower does not work	1. Failures caused by blower or magnetic proximity switch.	1. Replace or repair
	2. Magnetic proximity switch/ photoelectric switch is in poor contact or broken.	2. Adjust or replace.
	3. Signal wire is broken.	3. Reconnect the signal wire.
Blower can not fully load material hopper for several times, or machine sounds material shortage alarm.	1. No material left for conveying.	1. Add material.
	2. Air pipe leakage.	2. Firmly lock the air pipe or replace it.
	3. Filter is blocked.	3. Clean the filter.
Blower can not work.	Blower is burn out.	Replace.
Fuse melts after turning on the machine.	Short circuit.	Check electrical circuit.
Blower keeps working after material hopper is full-loaded.	1. Failures of circuit board 2. The touch spots of the solenoid valve contact with each other. 3. The sensor is in poor induction.	Repair or replace.
Poor material liquidityin the pipe	Over or lack of air quantity	Adjust air inlet location of the suction box. Avoid small bending of the elbow.

5.2 Trouble Shooting of 3-phase SAL-U

Failures	Possible reasons	Solutions
Lacking material for a long time; blower does not work	1. Failures caused by blower or magnetic proximity switch.	1. Replace or repair
	2. Magnetic proximity switch is in poor contact or broken.	2. Adjust or replace.
	3. Signal wire is broken.	3. Reconnect the signal wire.
Blower keeps working after material hopper is full-loaded.	Contactor malfunction.	Repair or replace it.
Blower can not fully load material hopper for several times, or machine sounds material shortage alarm.	1. No material left for conveying.	1. Add material.
	2. Air pipe leakage.	2. Firmly lock the air pipe or replace it.
	3. Filter is blocked.	3. Clean the filter.
Blower can not work.	Blower is burn out.	Replace.
Fuse melts after turning on the machine.	Short circuit	Check electrical circuit.
Blower overload alarm	1. Filter is blocked.	Clean the filter and press Reset on the overload relay.
	2. Phase shortage	Check the electrical circuit and press Reset on the overload relay.
Poor material liquidityin the pipe	Over or lack of air quantity	Adjust air inlet location of the suction box. Avoid small bending of the elbow.

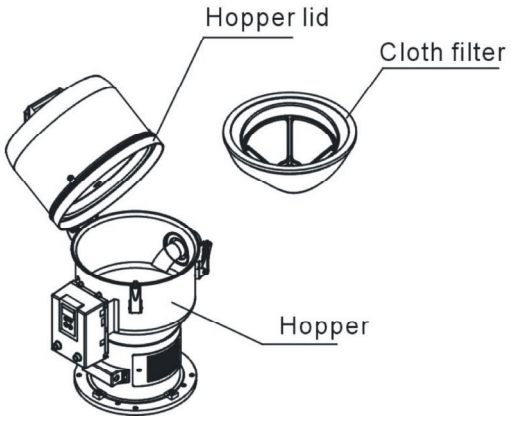
6. Maintenance and Repair

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

6.1 Cloth Filter

Cloth Filter SAL-U

1. Loosen the snap hooks on the loader,uplift the hopper cover and externally rotate it along the axis, take out the filter bag and clear away the dust on it.
2. Filter bag cleaning period:Daily.



6.2 Material Hopper

After a period time of operation, materials will adhere to the inner surface of material hopper. Please clean material hopper in time to ensure the optimal performance of equipement.

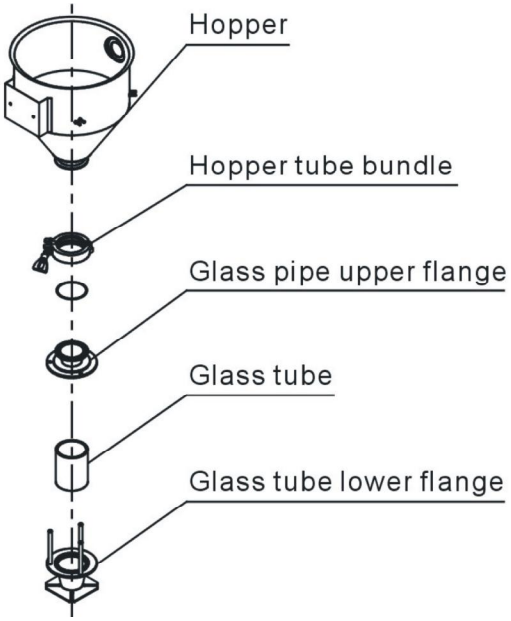
(1) Loosen the snap hooks on the loader and open the hopper cover to take out the filter bag.

(2) Put it back.

6.3 Glass Pipe

Glass Tube

Loosen the pipe clamp and take down the hopper; unscrew the screws of upper flange on the glass pipe. Then take out and clean the glass pipe.



Note!

Be careful not to break the glass pipe when cleaning.

6.4 Magentic Proximity Switch, Photoelectric Switch

Magentic proximity switch

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

1) Loosen the set screws of the outer box of the sensor.
2) Adjust the depth of the sensor going into the sensor shell or move it up and down until the indicator lights up. It means magnet is detected. By then, just tighten all screws.
3) If put a magnet close to the sensor, the indicator still doesn’t light up, please check the connection.

Photoelectric Switch

When the indicator of the photoelectric switch doesn't work, check the switch

contact. If it's in poor contact, please adjust or replace it.

1) Check if it's in poor contact

2) Please replace a new switch if it's damaged.

6.5 Maintenance Schedule

6.5.1 About the Machine

Model _____ SN _____ Manufacture date _____

Voltage_____Φ_____V Frequency _____ Hz Power _____ kW

6.5.2 Installation & Inspection

☐Check if the suction pipe has been correctly connected.

☐Check if that pipe clips is secured.

☐Check if mounting base is secured.

Electrical Installation

☐Voltage: _____ V _____ Hz

☐Fuse: One-phase: _____ A Three-phase:_____ A

☐Check power phase.

6.5.3 Daily Checking

☐Check main power switch.

☐Check filter

☐Check working status of the blower.

6.5.4 Weekly Checking

☐Check all the electrical cables.

☐Check if there are loose connections of electrical components.

☐Check the screw of the base is secured.

☐Check the air filter.

6.5.5 Monthly Checking

☐Check the spring lock on the hopper cover is loosed or not.

☐Check the hopper flap is deformed or not.

☐Check the performance of magnetic proximity switch/photoelectrical sensor.