SD-H Series

Honeycomb Dehumidifiers

Date: Nov. 2013

Version: Ver.D (English)

SHINI

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1. General Description

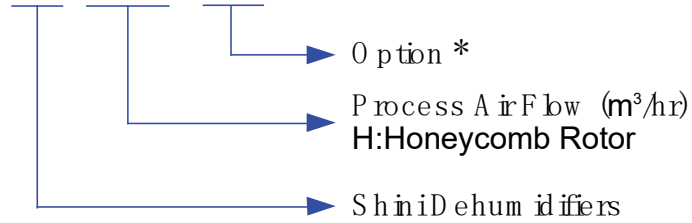
Please read through this operation manual before using the machine to prevent damages of the machine or personal injuries.

SD-H series honeycomb dehumidifiers are mainly used to dry hygroscopic engineering plastics. A honeycomb-rotor is used to offer effective drying, which under ideal conditions, can supply dehumidified dry air with a dew-point lower than -40℃.This series comprises 14 models of honeycomb dehumidifiers, the largest of which can provide dry air up to a quantity of 4,000 m^3/hr.

Model: SD-40H-D

1.1 Coding Principle

SD- xxxH - xxx



Note:*

LC=Touch Screen

PHC=Process Heater and Temperature Controller are Optional

D=Dew-point Monitor

C=Add Temperature Controller

CE=CE Conformity

1.2 Feature

1) Standard configuration

- Adopts P.I.D. temperature controller to accurately control regenerative temperature.
- The dehumidifying system of the SD-H series features two coolers to ensure a low return air temperature and low dew-point.
- Return air filter is mounted inside to ensure no contamination to the honeycomb.
- It is better to adopt molecular sieve structure honeycomb than silica gel adsorption one in dehumidifying.

2) Accessory option

- Centralized automatic control can be realized by optionally selected PLC touch screen controller.
- Optionally select dew-point monitor to realize dew-point real-time monitoring.
- Optionally select drying heater and its temp. controller to work with drying hopper for material dehumidifying and drying.
- Optional heat-resistant air pipe, cyclone dust separator with floor stand, oil filter are available.
- Dew-point -50℃ is optionally equipped.

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 Specifications

Table 1-1: Specifications

Model SD-	30H	50H	80H	120H	200H	400H	700H	1000H	1500H	2000H	3000H	4000H
Regen. Heater (kW)	4	3	3	3	4	7.2	10	15	28	28	32	56
Regen. Blower (kW, 50 / 60Hz)	0.2 / 0.2	0.2 / 0.2	0.2 / 0.2	0.2 / 0.2	0.4 / 0.5	0.75 / 0.9	1.5 / 1.8	2.4 / 3	5.5 / 6.3	5.5 / 6.3	7.5 / 8.6	5.5×2 / 6.3×2
Process Heater* (kW)	4	3.9	6	6	12	18	24	32	58	80	96	128
Process Blower (kW, 50 / 60Hz)	0.12 / 0.13	0.4 / 0.5	0.75 / 0.9	0.75 / 0.9	1.5 / 1.8	3.75 / 4.5	5.5 / 6.3	9 / 11	9×2 / 11×2	13×2 / 15×2	13×3 / 15×3	13×4 / 15×4
Dry Air Capacity (m^3 / hr, 50/60Hz)	40 / 50	50 / 60	80 / 95	120 / 130	200 / 220	400 / 450	700 / 780	1000 / 1150	1500 / 1750	2000 / 2300	3000 / 3400	4000 / 4500
Pipe Dia. (inch)	2	2	2	2	2.5	3	4	5	6	8	8	12
Cooling Water Quantity (L/min)	5	6	10	15	30	50	80	120	180	240	360	480
Dimensions												
H (mm)	1280	1260	1360	1360	1560	1475	1935	2145	2060	2060	2240	2060
W (mm)	510	480	530	530	660	700	900	1300	1410	1410	2035	2750
D (mm)	805	755	820	820	1050	1255	1380	1550	2150	2150	2160	2250
Weight (kg)	145	145	170	170	265	330	480	700	1010	1300	1600	2200

Note: 1) "*" means drying heater is an optional accessory for working with "Euro" hoppers.

2) Additionally mount temp. controller for drying heater on SD-30H~700H, plus "P" at model behind (For example: SD-XXH-P).

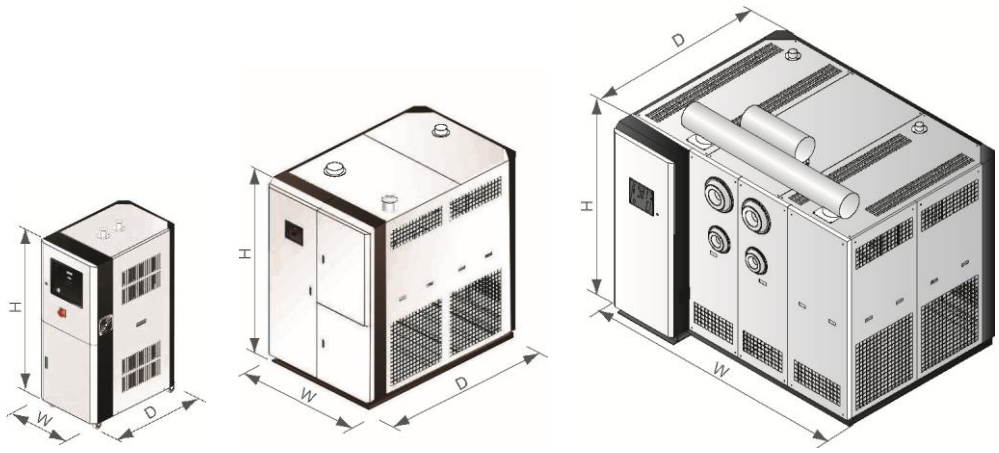
3) Additionally mount temp. controller for SD-1000H above models, plus "C" at model behind (For example: SD-XXH-C).

4) Dew-point monitor for random check, plus "D" at model behind.

5) Power 3Φ, 230 / 400 / 460 / 575V, 50 / 60Hz.

We reserve the right to change specifications without prior notice.

1.3.2 Durline Drawing



SD-30H~700H SD-1000H~2000H SD-3000H~4000H

Picture 1-1： Durline Drawing

1.3.3 Drying Capacity

Table 1-2：Specifications

Material	Drying temp. (℃)	Time (hr)	Specific Heat (J/kg.℃)	Material Specific Gravity (kg/dm^3)	Moisture Content Before Drying (%)	Moisture Content After Drying (%)	Drying capacity (kg/hr)											
							SD-30H	50H	80H	120H	200H	400H	700H	1000H	1500H	2000H	3000H	4000H
ABS	80	2-3	0.34	0.6	0.3	0.02	14	18	27	35	105	210	355	425	710	1065	1500	1600
CA	75	2-3	0.5	0.5	1	0.02	12	15	22	30	90	180	295	355	590	885	1200	1330
CAB	75	2-3	0.5	0.5	0.8	0.02	12	15	22	30	90	180	295	355	590	885	1200	1330
CP	75	2-3	0.6	0.6	1	0.02	14	18	27	35	106	210	355	425	710	1060	1500	1600
LCP	150	4	0.6	0.6	0.04	0.02	10	13	20	27	80	160	265	320	530	800	1150	1200
POM	100	2	0.35	0.6	0.2	0.02	21	27	40	53	160	320	530	640	1060	1600	1800	2400
PMMA	80	3	0.35	0.65	0.5	0.02	15	19	29	38	115	230	383	460	767	1150	1530	1730
IONOMER	90	3-4	0.55	0.5	0.1	0.04	9	11	17	22	66	133	220	265	442	663	750	1000
PA 6/6.6/6.10	75	4-6	0.4	0.65	1	0.05	8	10	14	19	58	115	192	230	383	575	960	1040
PA11	75	4-5	0.58	0.65	1	0.05	9	12	17	23	69	138	230	275	460	690	780	1150
PA12	75	4-5	0.28	0.65	1	0.05	9	12	17	23	69	138	230	275	460	690	780	1150
PC	120	2-3	0.28	0.7	0.3	0.01	17	21	31	41	124	250	413	495	826	1238	1400	1860
PU	90	2-3	0.45	0.65	0.3	0.02	15	19	29	38	115	230	383	460	767	1150	1530	2080
PBT	130	3-4	0.3-0.5	0.7	0.2	0.02	12	15	23	31	93	186	310	372	620	930	1100	1600
PE	90	1	0.55	0.6	0.01	< 0.01	42	53	80	106	318	637	1062	1275	2125	3185	3600	4800
PEI	150	3-4	0.6	0.6	0.25	0.02	10	13	20	27	80	160	265	320	530	800	1030	1370
PET	160	4-6	0.3-0.5	0.85	0.2	0.02	10	13	19	25	75	150	250	300	500	750	1150	1360
PETG	70	3-4	0.6	0.6	0.5	0.02	10	13	20	27	80	160	265	320	530	800	1030	1370
PEN	170	5	0.85	0.85	0.1	0.05	12	15	23	30	90	180	300	360	600	900	1150	1360
PES	150	4	0.7	0.7	0.8	0.02	12	15	23	30	90	180	300	360	600	900	1050	1400
PMMA	80	3	0.65	0.65	0.5	0.02	15	19	29	28	115	230	385	460	765	1150	1530	1730
PPO	110	1-2	0.4	0.5	0.1	0.04	17	22	33	44	133	265	440	530	885	1330	1730	2660
PPS	150	3-4	0.6	0.6	0.1	0.02	10	13	20	27	80	160	265	320	530	800	1030	1370
PI	120	2	0.27	0.6	0.4	0.02	21	27	40	53	160	320	530	640	1060	1600	1800	2400
PP	90	1	0.46	0.5	0.1	0.02	35	44	66	88	265	530	885	1060	1770	2655	3500	4000
PS(GP)	80	1	0.28	0.5	0.1	0.02	35	44	66	88	265	531	885	1062	1770	2655	3500	4000
PSU	120	3-4	0.31	0.65	0.3	0.02	11	14	22	29	85	173	290	345	575	865	1300	1485
PVC	70	1-2	0.2	0.5	0.1	0.02	17	22	33	44	135	265	442	530	885	1330	1730	2660
SAN(AS)	80	1-2	0.32	0.5	0.1	0.05	17	22	33	44	135	265	442	530	885	1330	1730	2660
TPE	110	3	0.7	0.7	0.1	0.02	16	20	30	40	125	250	413	495	826	1238	1650	1860

Notes: 1) Use separated drying hopper.

2) Moisture content lower than 0.005% after drying when in 20℃ ambient temperature and 65% relative humidity.

3) Specific model selection, please consult the letter easy service personnel.

1.4 Safety Regulations

Note!
Electrical installation of the machine should be done by qualified electricians.

Before connect through power supply, make sure that power switch specifications and security ratings are suitable and reliable, and also the main switch is turned to OFF. Turn off main switch and auto-start switch before service and maintenance.

1.4.1 Safety Signs and Labels

Danger!
High voltage danger!
This label is stuck on the electrical boxes.

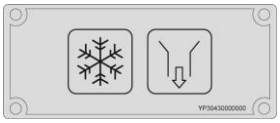
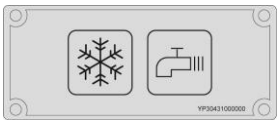
Attention!
This label means that this area should be taken care!

Warning!
High temperature, take care of hands!
This label should be stick to the shell of heater.

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

Picture 1-2：Safety Signs and Labels

1.4.2 Signs and Labels

	Water inlet: inlet for replenishing water and cooling water.
	Water outlet: drainage outlet.

1.4.3 Transportation and Storage of the Machine

Transportation

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

Storage

1) SD-H series honeycomb dehumidifiers should be stored indoors with temperature kept from 5℃ to 40℃ and humidity below 80%.
2) Disconnect all power supply and turn off main switch and control switch.
3) Keep the whole machine, especially the electrical components away from water to avoid potential troubles caused by the water.
4) Plastic film should be used to protect the machine from dust and rains.

Working environment

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

Do not use the machine

1) If it is with a damaged cord.
2) On a wet floor or when it is exposed to rain to avoid electrical shock.
3) If it has been dropped or damaged until it is checked or fixed by a qualified serviceman.

4) This equipment works normally in the environment with altitude within 3000m.
5) At least a clearance of 1m surrounding the equipment is required during operation. Keep this equipment away from flammable sources at least two meters.
6) Avoid vibration, magnetic disturbance at the operation area.

Rejected parts disposal

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

Fire hazard

 In case of fire, CO_2 dry powder fire extinguisher should be applied.

1.4.4 Safety Regulations for the Blowers

1) Under normal operation, the blowers will generate high temperature. Do not touch blower's case to avoid any physical injury.
2) Under normal operation, the blower motor's current loading will increase or reduce according to air pressure's change accordingly. While installation, an adequate motor overload protection switch should be installed with full loading test, to ensure operating safely under full-loading to avoid motor's damage.
3) To avoid any block materials, dust, powder, fiber particles and water drops entering the blower, and hence cause the deficiency of its performance. This machine is well designed with air filters, so please clean up the filter with any foreign particles (recommended to clean up this filter weekly).
4) Clean the blowers both internal and external parts (especially for the fan cooling path), and remove surface dust if necessary. If more dusts are accumulated, it will cause deficiency for ventilation, temperature rising, vacuum power reduced, vibration increased and so it will cause machine broke down.
5) Ball bearing, oil seal and soundproof are belonging to consumable parts and so it has a life period and requires regular replacement. Meanwhile, blade, external case, and metallic screen etc. should be replaced regularly for best performance.
6) Under normal operation, if the blowers are not running smoothly or abnormal noise appeared. Please immediately shut down the machine for repair.

Picture 1-3：Safety Regulations for the Blowers

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 Working Principle

The moisture contained in the air which is waited for treating) will be absorbed by hygroscopic materials, hereafter, be de-absorbed by the regenerated hot air. And the two airstream work together in the rotation wheel. So, with the rotation of the wheel, moisture will be absorbed and de-absorbed continuously, and drain out via de-absorbing by regenerated air to form a steady low dew point airstream for using.

2.2 Relative Humidity and Dew-point

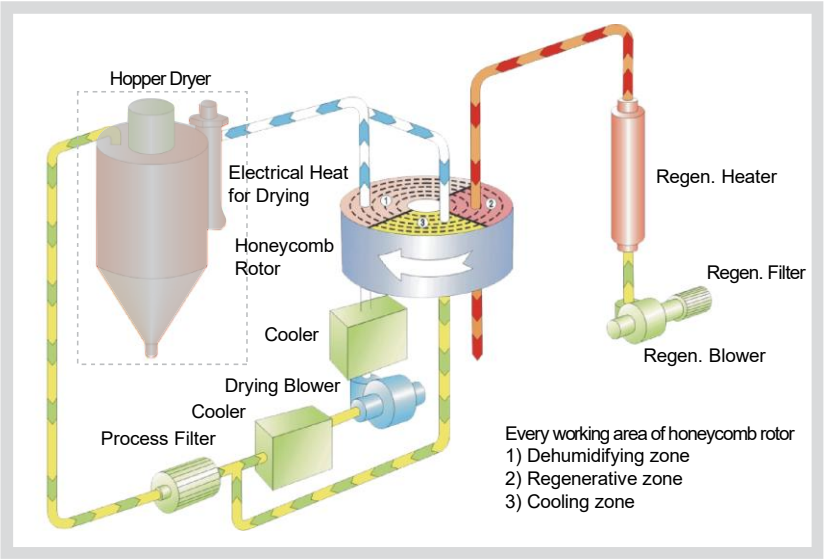
Relative humidity: Relative air humidity means real vapor content to saturated vapor at the same temperature in percentage.

Dew point: it means that temperature when the saturation vapor begins to dew. When the relative humidity is 100%, the ambient temperature is the dew point temperature. The more lower of dew point temperature (than the ambient temperature) is, the more less possible to dew, that also means the more drier the air is. The dew point will not be influenced by temperature, but influenced by pressure.

2.3 Why Choose SD-H

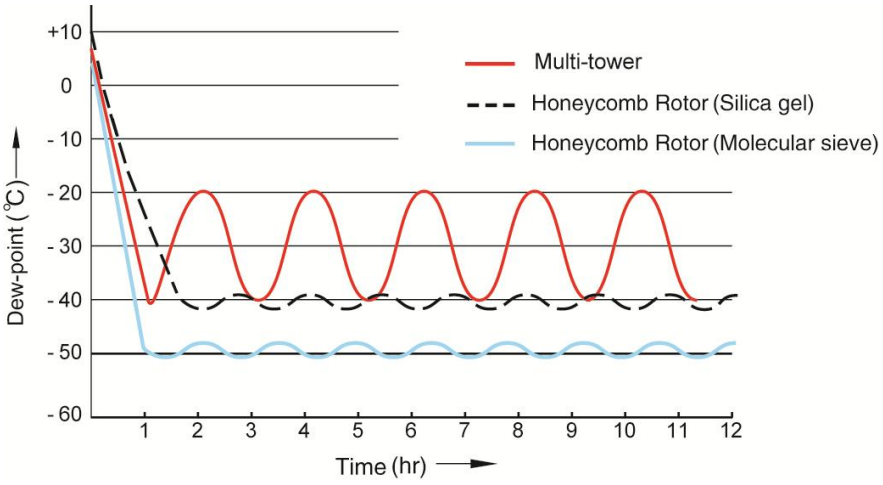
The main reason for the defects of plastic products, such as bubbles, silver lines, flaws, poor transparency, etc. is that plastic raw materials are not completely dried before moulding. Hygroscopic plastics, such as PA, PC, PBT, PET, NYLON and so on, can not be thoroughly dried through traditional methods. It is proved that heated and dehumidified air with low dew-point down to -40℃ can make moisture content of such materials over than 0.02% before moulding. SD-H honeycomb dehumidifiers, utilizing honeycomb-rotor in a full-closed system to dehumidify process air, can meet such requirements. Hot air with low dew-point produced by this unit is quickly and continuously blowed to plastic particles to completely absorb the moisture, thus to gain a good drying and dehumidifying effect.

2.4 Working Principle Illustration



Picture 2-1: Working Principle Illustration

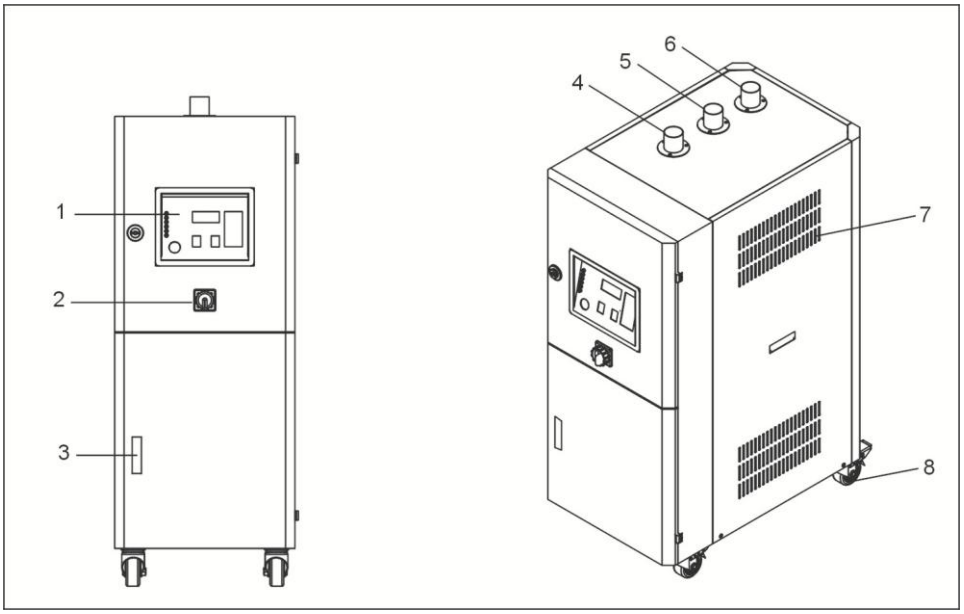
2.5 Dew-point Comparison



Picture 2-2: Dew-point Comparison

2.6 Drawing and Parts List

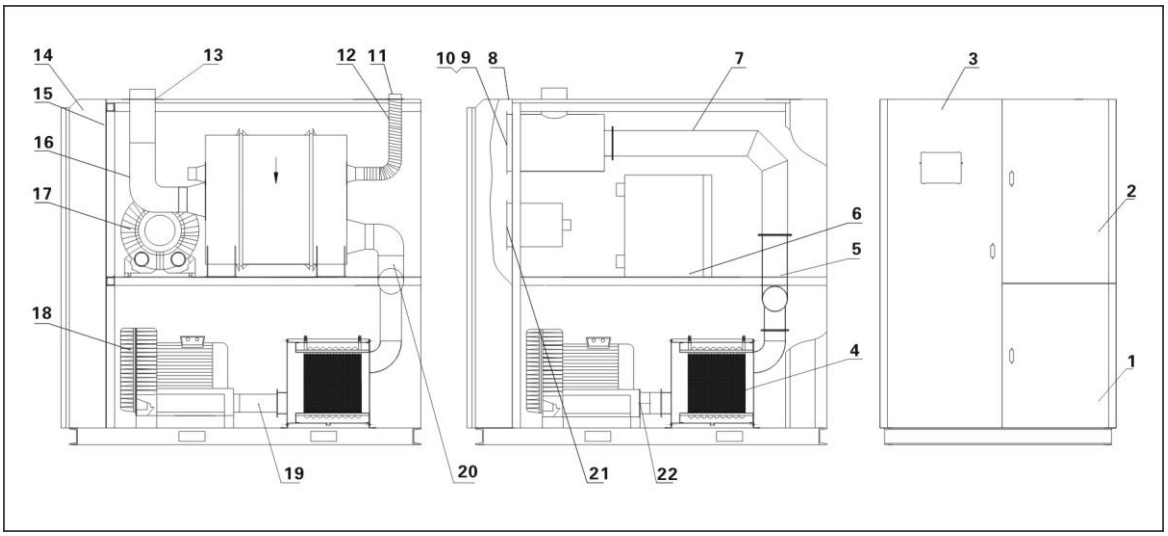
2.6.1 Structural Drawing



Parts name:

1. Control panel	2. Main switch	3. Lock	4. Air inlet
5. Air outlet	6. Wet air outlet	7. Cooling window	8. Castor

Picture 2-3：Structural Drawing (SD-30H~700H)

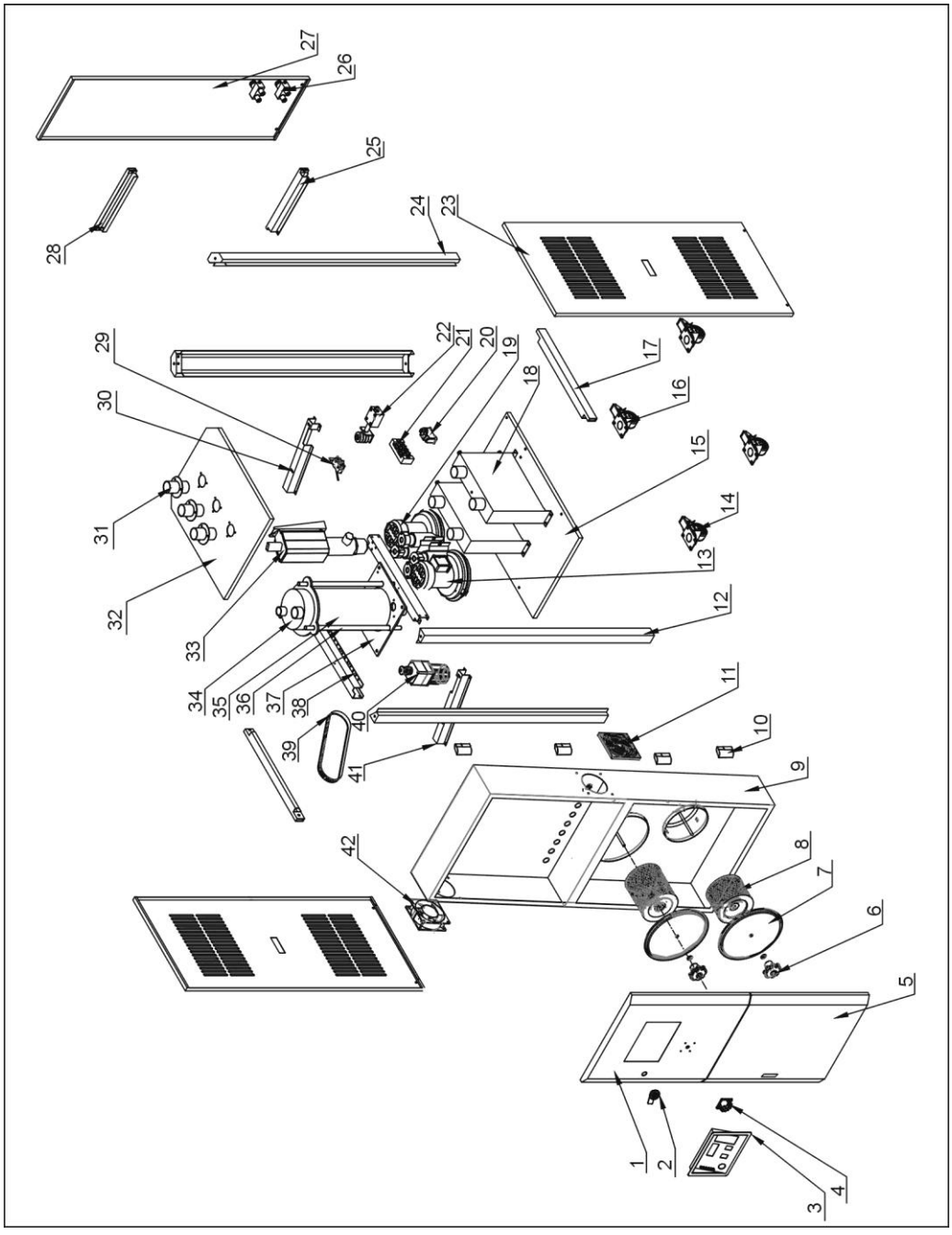


Parts name:

1. Right lower door	2. Right upper door	3. Right front door
4. Cooler	5. Air inlet pipe	6. Heating case components
7. Return air pipe	8. Filter component cabinet	9. Circulation filter barrel lid
10. Circulation filter barrel flange	11. Cooling flange	12. Heat-resistant air pipe
13. Outlet flange	14. Electrical control box	
15. Electrical component installation plate		16. Heat-resistant air pipe
17. Regenerative blower	18. Drying blower	19. Cooler connection flange 2
20. Air outlet pipe	21. Regenerative filter tank cover	22. Cooler connection flange 1

Picture 2-4：Structural Drawing (SD-1000H~4000H)

2.6.2 Assembly Drawing (SD-30H~700H)



Remarks: Please refer to material list 2.7.3 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-5：Assembly Drawing (SD-30H~700H)

2.6.3 Parts List (SD-30H~700H)

Table 2-1： Parts List (SD-30H~80H)

No.	Description	Part No.		
		SD-30H	SD-50H	SD-80H
1	Upper door	-	-	-
2	Short bolt door lock	YW00000600000	YW00000600000	YW00000600000
3	Control panel	YR40000400500	YR40000400500	YR40000400500
4	Main switch*	YE10200300000	YE10200300000	YE10200300000
5	Lower door	-	-	-
6	Cross-head nut	YW09675100000	YW09675100000	YW09675100000
7	Filtering bucket lid	YL21000300000	YL21000300000	YL21000300000
8	Filter**	YR50128300000	YR50128300000	YW09000100000
9	Control box	-	-	-
10	Hinge	YW06203100200	YW06203100200	YW06203100200
11	Dust-proof net**	YR40120300000	YR40120300000	YR40120300000
12	Front pole	-	-	-
13	Regenerated fan*	BM30012500050	BM30012500050	BM30012500050
14	Movable truckle	YW03000300200	YW03000300200	YW03000300200
15	Bottom plate	-	-	-
16	Brake truckle	YW03000300000	YW03000300000	YW03000300000
17	Side fixed beam	-	-	-
18	Cooler	BW88030500020	BW88030500020	BW88081200020
19	Dry fan*	-	-	-
20	Capacitance	YE25001500000	YE25001500000	YE25001500000
21	Terminals strip	YE61250000000	YE61250000000	YE61250000000
22	Belt adjustor	BH10005000040	BH10005000040	BH10005000040
23	Side board	-	-	-
24	Rear pole	-	-	-
25	Middle beam	-	-	-
26	Water distributor	-	-	-
27	Rear board	-	-	-
28	Rear beam	-	-	-
29	Minitrim switch*	YE14152400000	YE14152400000	YE14152400000
30	Rear middle beam	-	-	-
31	2 inch flange	-	-	-
32	Cover board	-	-	-
33	Regenerated heater*	BH70300300050	BH70500300050	BH70800300050
34	Honey comb upper lid	BA40003000110	BA40508000110	BA40508000110

35	Honeycomb-rotor	YW71152000100	YW71182000100	YW71183000100
36	Double end studs	BH10533000040	BH10533000040	BH10543000040
No.	Description	Part No.		
		SD-30H	SD-50H	SD-80H
37	Honey comb lower lid	BA40003000010	BA40508000030	BA40508000030
38	Side middle beam	-	-	-
39	Synchronized belt**	YR00202200000	YR00202500000	YR00202500000
40	Motor	YM50102600000	YM50102600000	YM50102600000
41	Front middle beam	-	-	-
42	Exhausting fan**	YM60121200400	YM60121200400	YM60121200400

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

Table 2-2：Parts List (SD-120H~200H)

No.	Description	Part No.	
		SD-120H	SD-200H
1	Upper door	-	-
2	Short bolt door lock	YW00000600000	YW00000600000
3	Control panel	YR40000400500	YR40000400500
4	Main switch*	YE10200300000	YE10210300000
5	Lower door	-	-
6	Cross-head nut	YW09675100000	YW09675100000
7	Filtering bucket lid	YL21000300000	YL21000300000
8	Filter**	YR50708000100	YR50203000100
9	Control box	-	-
10	Hinge	YW06203100200	YW06203100200
11	Dust-proof net**	YR40120300000	YR40120300000
12	Front pole	-	-
13	Regenerated fan*	BM30012500050	BM30012500050
14	Movable truckle	YW03000300200	YW03000300200
15	Bottom plate	-	-
16	Brake truckle	YW03000300000	YW03000300000
17	Side fixed beam	-	-
18	Cooler	BW88081200020	BW88152000020
19	Dry fan*	BM30031000050	BM30042000050
20	Capacitance	YE25001500000	YE25001500000
21	Terminals strip	YE61250000000	YE61250000000
22	Belt adjustor	BH10005000040	BH10005000040
23	Side board	-	-
24	Rear pole	-	-
25	Middle beam	-	-
26	Water distributor	-	-
27	Rear board	-	-
28	Rear beam	-	-
29	Minitrim switch*	YE14152400000	YE14152400000
30	Rear middle beam	-	-
31	2 inch flange	-	-
32	Cover board	-	-
33	Regenerated heater*	BH70800300050	BH70200400050
34	Honey comb upper lid	BA40508000110	BA40152000110
35	Honeycomb-rotor	YW71184000100	YW71254000100
36	Double end studs	BH10543000040	BH10554500040
37	Honey comb lower lid	BA40508000010	BA40152000010

38	Side middle beam	-	-
No.	Description	Part No.	
		SD-120H	SD-200H
39	Synchronized belt**	YR00202500000	YR00203400000
40	Motor	YM50102600000	YM50102600000
41	Front middle beam	-	-
42	Exhausting fan**	YM60121200400	YM60121200400

* 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.

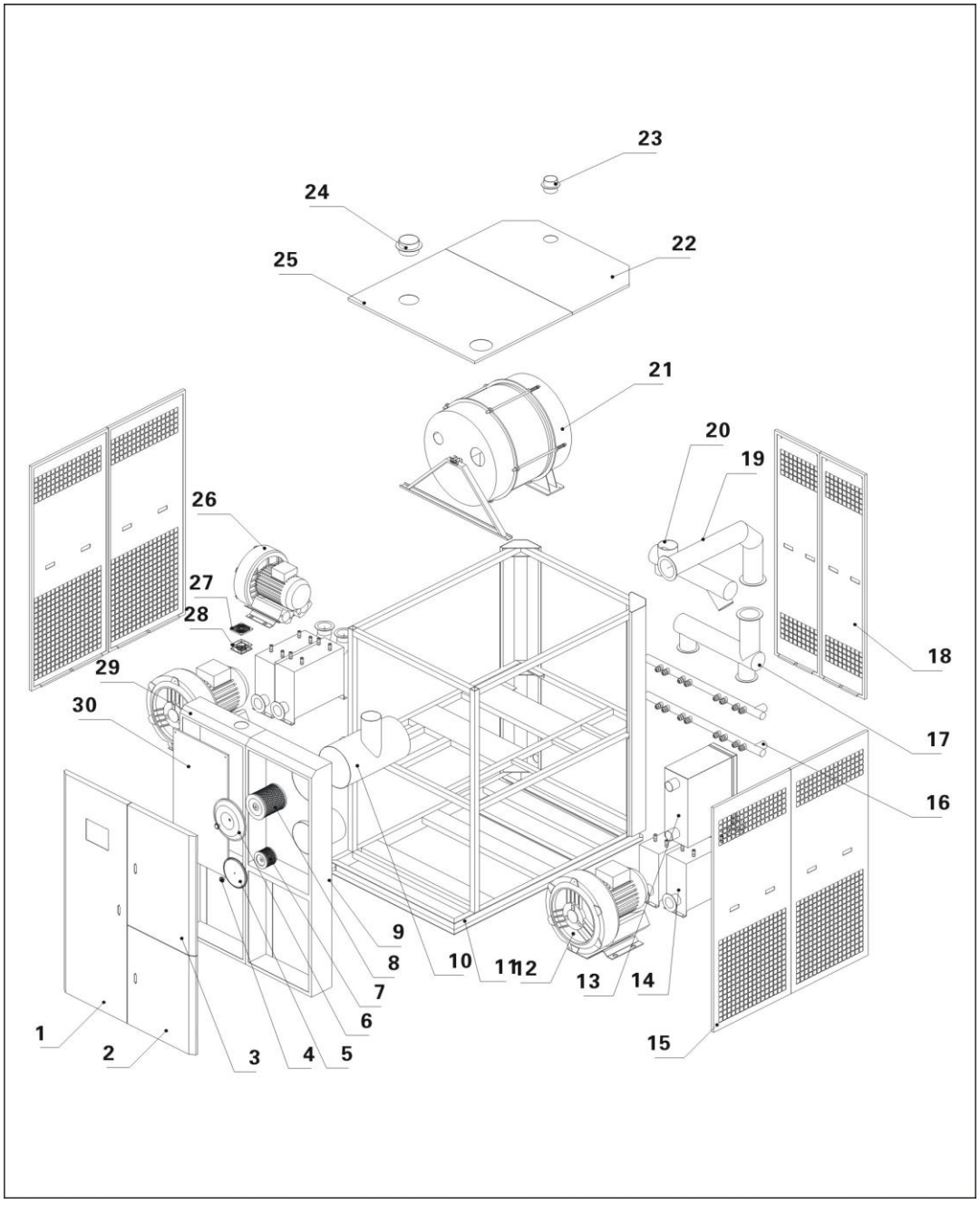
Table 2-3：Parts List (SD-400H~700H)

No.	Description	Part No.	
		SD-400H	SD-700H
1	Upper door	-	-
2	Short bolt door lock	YW00000600000	YW00000600000
3	Control panel	YR40000400500	YR40000400500
4	Main switch*	YE10220300000	YE40635000000
5	Lower door	-	-
6	Cross-head nut	YW09675100000	YW09675100000
7	Filtering bucket lid	YL21000300000	YL21000300000
8	Filter**	YR5024140000	YR5024140000
9	Control box	-	-
10	Hinge	YW06203100200	YW06203100200
11	Dust-proof net**	YR40120300000	YR40120300000
12	Front pole	-	-
13	Regenerated fan*	BM30031000150	BM30042000050
14	Movable truckle	YW03000400200	YW03000400200
15	Bottom plate	-	-
16	Brake truckle	YW03000400000	YW03000400000
17	Side fixed beam	-	-
18	Cooler	BW88304000020	YR30010400000
19	Dry fan*	YM30062900000	YM30072900000
20	Capacitance	YE25001500000	YE25001500000
21	Terminals strip	YE61250000000	YE61250000000
22	Belt adjustor	BH10005000040	BH10005000040
23	Side board	-	-
24	Rear pole	-	-
25	Middle beam	-	-
26	Water distributor	-	-
27	Rear board	-	-
28	Rear beam	-	-
29	Minitrim switch*	YE14152400000	YE14152400000
30	Rear middle beam	-	-
31	2 inch flange	-	-
32	Cover board	-	-
33	Regenerated heater*	BH70407200050	BH70501000050
34	Honey comb upper lid	BA40304000110	-
35	Honeycomb-rotor	YW71354000100	YW71444000100
36	Double end studs	BH10554500040	BH10554500040

No.	Description	Part No.	
		SD-400H	SD-700H
37	Honey comb lower lid	BA40304000010	-
38	Side middle beam	-	-
39	Synchronized belt**	YR00204700000	-
40	Motor	YM50512600000	-
41	Front middle beam	-	-
42	Exhausting fan**	YM60121200400	YM60121200400

* 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.

2.6.4 Assembly Drawing (SD-1500H)



Remarks: Please refer to material list 2.7.5 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-6: Assembly Drawing (SD-1500H)

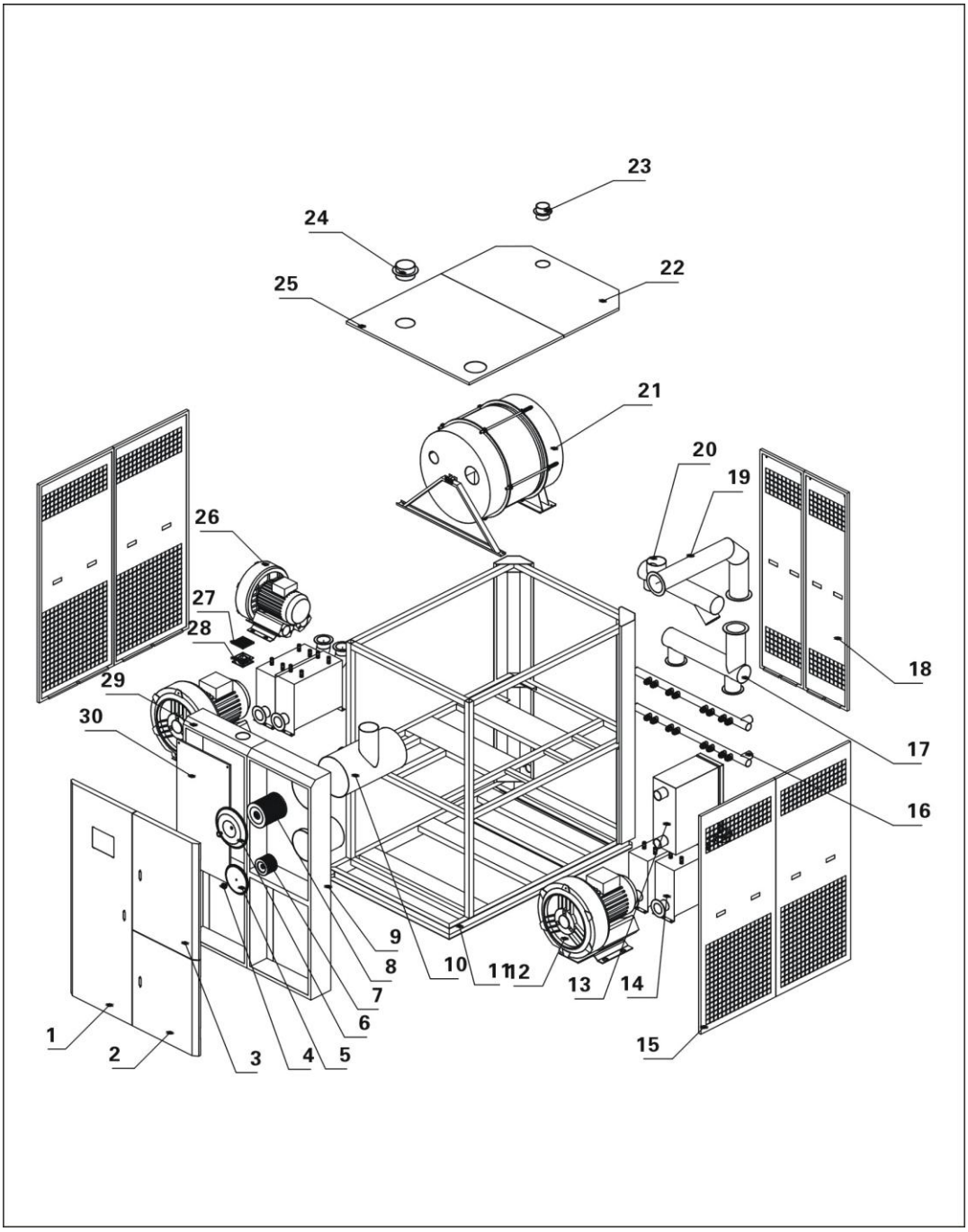
2.6.5 Parts List (SD-1500H)

Table 2-4：Parts List (SD-1500H)

No.	Description	Part No.	No.	Description	Part No.
1	Front plate left	-	16	Water flow regulator	-
2	Right lower door	-	17	Return air pipe	-
3	Right upper door	-	18	Rear plate	-
4	Star nut	YW09675100000	19	Return air pipe	-
5	Vacuum hopper cover 12l	YL21001200100	20	Air outlet pipe	-
6	Circulation filter barrel lid	-	21	Honeycomb components	YW71773000000
7	Filter Adc3	YR50241400000	22	Rear cover plate	-
8	Filter	YR50277500000	23	Air inlet flange	-
9	Filter component cabinet	-	24	Air outlet flange	-
10	Circulation filter barrel	-	25	Front cover board	-
11	Outer rest	-	26	High-pressure blower HB-729	YM30072900000
12	High-pressure blower HB-919	BH70407200050	27	Dust screen	YR40120300000
13	Heating case components	-	28	Exhaust fan	YM60121200400
14	Cooler	-	29	Electrical control box	-
15	Side plate	-	30	Board of electric components cabinet	-

* 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.

2.6.6 Assembly Drawing (SD-3000H)



Remarks: Please refer to material list 2.7.7 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-7：Assembly Drawing (SD-3000H)

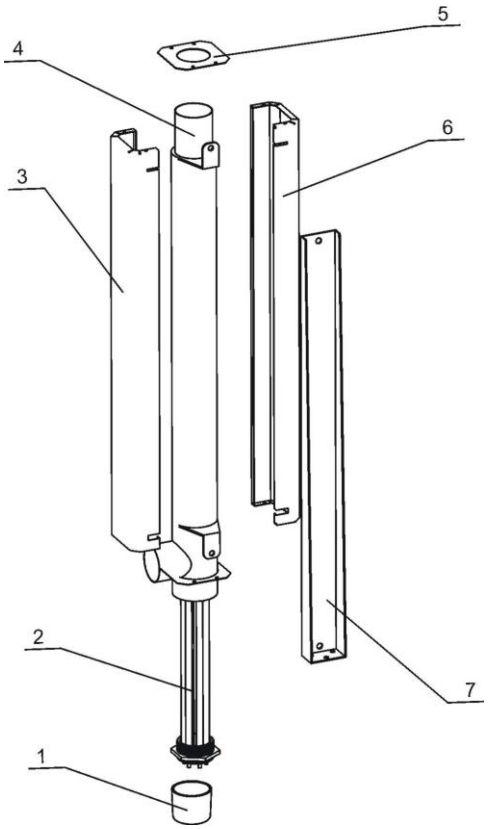
2.6.7 Parts List (SD-3000H)

Table 2-5：Parts List (SD-3000H)

No.	Description	Part No.	No.	Description	Part No.
1	Front plate left	-	16	Water flow regulator	-
2	Right lower door	-	17	Return air pipe	-
3	Right upper door	-	18	Rear plate	-
4	Star nut	YW09675100000	19	Return air pipe	-
5	Vacuum hopper cover 12l	YL21001200100	20	Air outlet pipe	-
6	Circulation filter barrel lid	-	21	Honeycomb components	YW71965400000
7	Filter Adc3	YR50241400000	22		-
8	Filter	YR50277500000	23	Air inlet flange	-
9	-	-	24	Air outlet flange	-
10	Circulation filter barrel	-	25		-
11	Outer rest	-	26	High-pressure blower HB-919	YM30091900000
12	High-pressure blower HB-929	YM30092900000	27	Dust screen	YR40120300000
13	Heating case components	-	28	Exhaust fan	YM60121200400
14	Cooler	-	29	Electrical control box	-
15	Side plate	-	30	Board of electric components cabinet	-

* 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.

2.6.8 Pipe Heaters

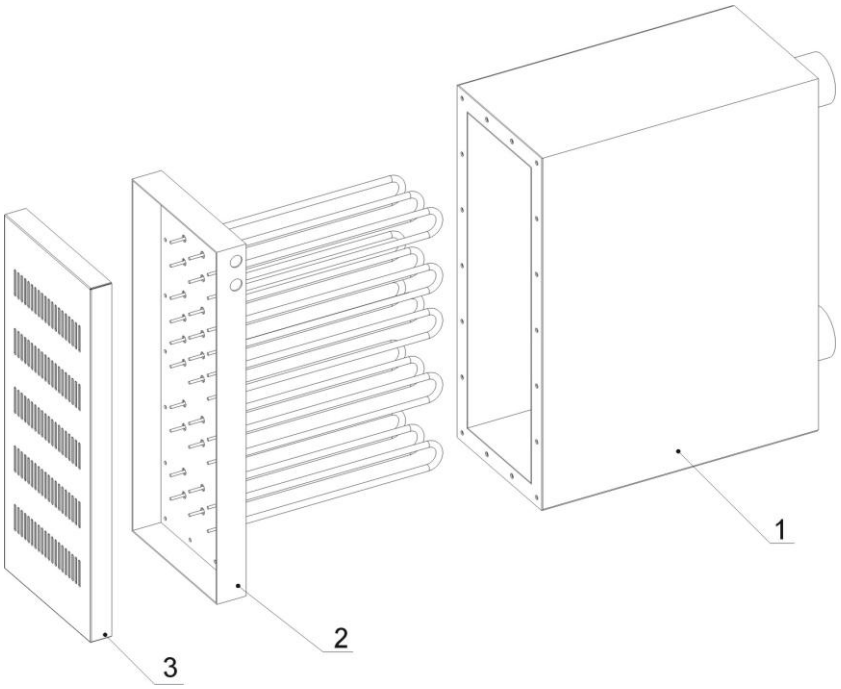


Parts name:

1. Electric wood cover	2. Pipe heater	3. Heater wrapper sheet 1
4. Heating tank	5. Heater cover plate	6. Heater wrapper sheet 2
7. Heater fixed seat		

Picture 2-8：Pipe Heaters

2.6.9 Heating Case

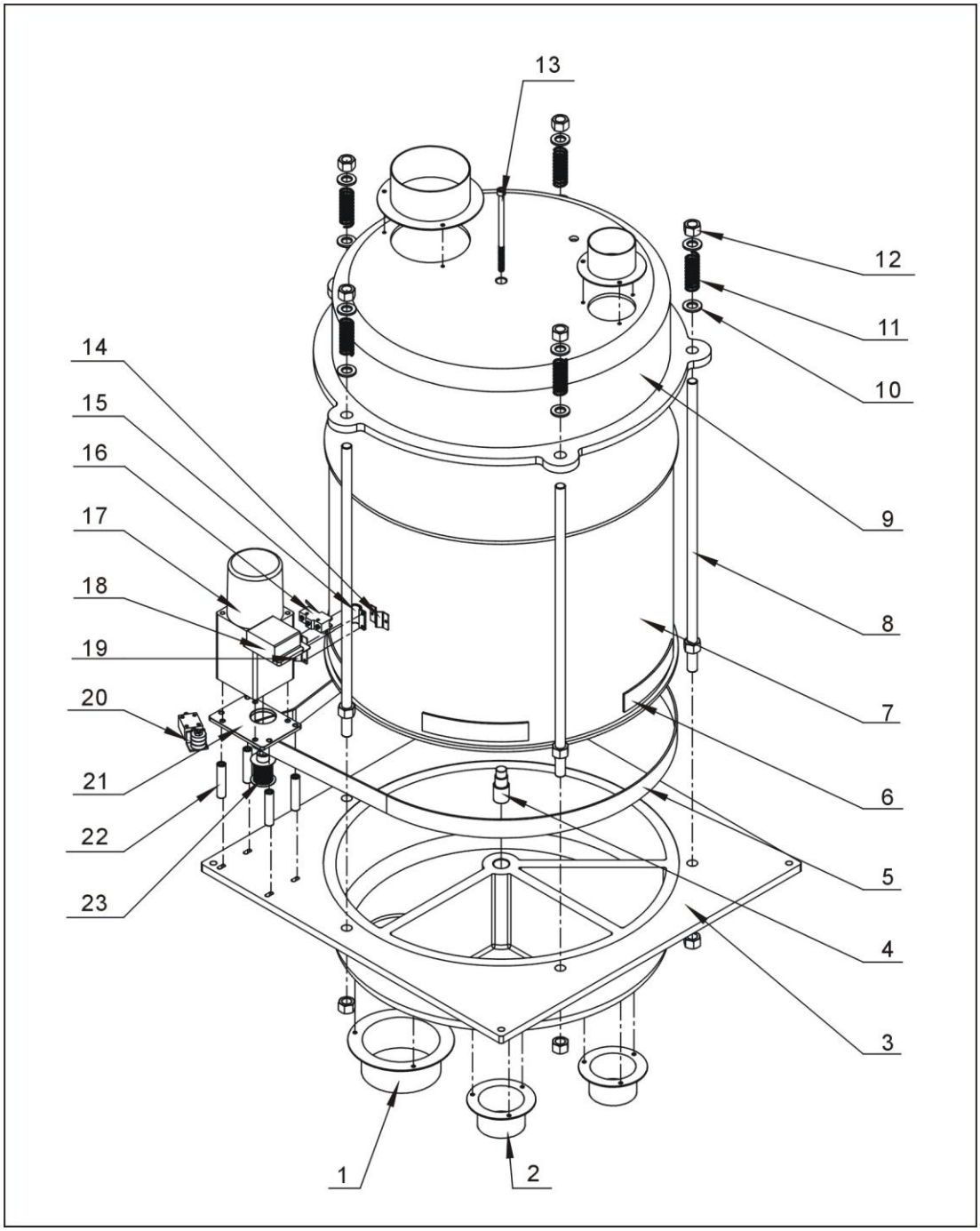


Names of Parts:

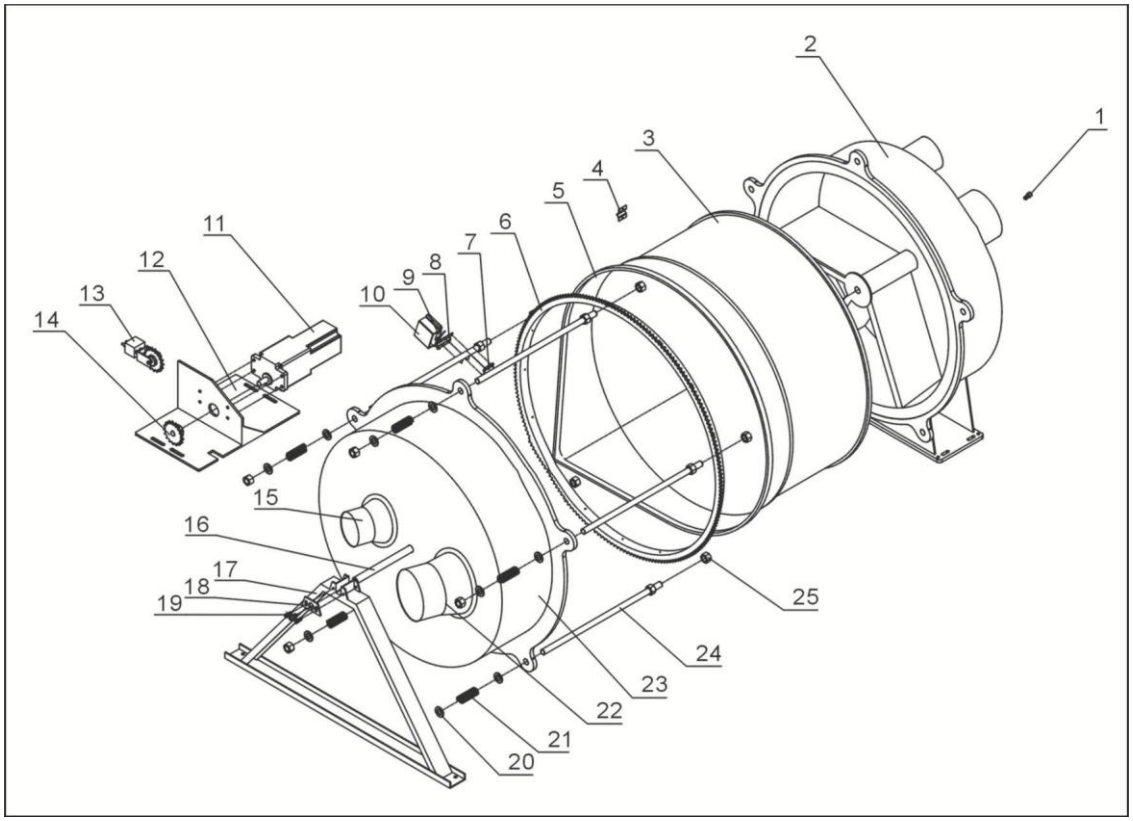
1. Heating case 2. Pipe heater 3. Heating case cover

Picture 2-9: Heating Case

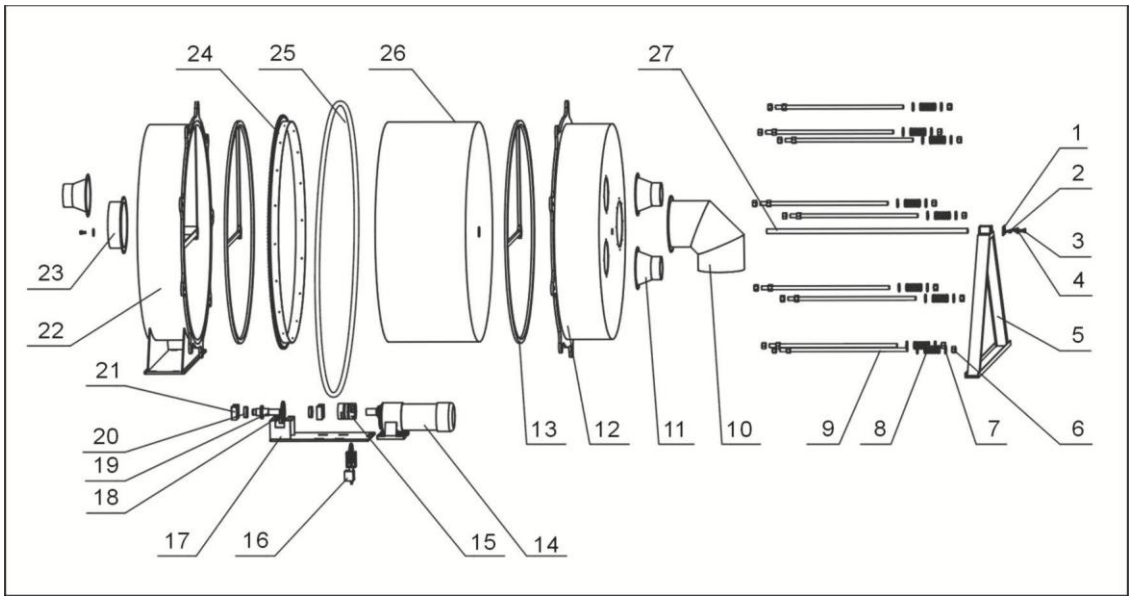
2.6.10 Honeycomb



Picture 2-10：Honeycomb Parts Drawing (SD-700H/1000H/2000H)



Picture 2-11：Honeycomb Parts Drawing(SD-1500H)



Picture 2-12：Honeycomb Parts Drawing (SD-3000H)

2.6.11 Parts List of Honeycomb (SD-700H/1000H/2000H/3000H)

Table 2-6: Parts List (SD-700H)

No.	Description	Part No.	No.	Description	Part No.
1	4” Honeycom flange	-	13	Hexgon socket head cap screw M8	-
2	2.5” honeycomb flange	-	14	Honeycomb stator	-
3	Lower cover	-	15	Microswitch stator	-
4	Honeycomb shaft	-	16	Microswitch	YE14152400000
5	Sychronous belt	YR00305800000	17	Gear motor	YM50512600000
6	Synchronous pulley	YR00003000000	18	Microswitch box	-
7	Honeycomb	YW71440400000	19	Microswitch stator 2	-
8	Double-end screw	BH10554500040	20	Belt adjustor	-
9	Upper cover	-	21	Mounting plate of gear motor	-
10	Flat washer 16	-	22	Locating tube	-
11	Spring	YW01201800000	23	Synchronous pulley	-
12	Hex nut M16	-			

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

Table 2-7: Parts List (SD-1000H/2000H)

No.	Description	Part No.	No.	Description	Part No.
1	5” Honeycom flange	-	13	Hexgon socket head cap screw M8	-
2	3” honeycomb flange	-	14	Honeycomb stator	-
3	Lower cover	-	15	Microswitch stator	-
4	Honeycomb shaft	-	16	Microswitch	YE14152400000
5	Sychronous belt	YR00357300000	17	Gear motor	YM10940000200
6	Synchronous pulley	YR00003800000	18	Microswitch box	-
7	Honeycomb	YW71554000100	19	Microswitch stator 2	-
8	Double-end screw	BH10554500040	20	Belt adjustor	-
9	Upper cover	-	21	Mounting plate of gear motor	-
10	Flat washer 16	-	22	Locating tube	-
11	Spring	YW01201800000	23	Synchronous pulley	-
12	Hex nut M16	-			

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

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

Table 2-8：Parts List (SD-1500H)

No.	Description	Part No.	No.	Description	Part No.
1	Hexgon socket head cap screw M8×20	YW61082000000	14	Drive sprocket	-
2	Fixed honeycomb	-	15	3” honeycomb flange	-
3	Honeycomb	YW71773000100	16	Honeycomb shaft	-
4	Honeycomb stator	-	17	Honeycomb support	-
5	Roller chain	YW09085100000	18	Lag	-
6	Driven sprocket	-	19	Hexgon socket head cap screw M6×10	YW61061000100
7	Microswitch stator	-	20	Flat washer 16	YW66163000000
8	Microswitch stator 2	-	21	Spring	YW01318365000
9	Microswitch	YE14152400000	22	6” honeycomb flange	
10	Microswitch box	-	23	Movable honeycomb cover	-
11	Gear motor	YM10916000000	24	Double-end screw	BH10543000040
12	Motor base	-	25	Hex nut M16	YW64001600000
13	Tensioner	-			

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

Table 2-9：Parts List (SD-3000H)

No.	Description	Part No.	No.	Description	Part No.
1	Cleading	-	15	Shaft coupler	YW90263700000
2	Hexgon socket head cap screw M6×10	YW61061000100	16	Tensioner	-
3	Hexgon socket head cap screw M8×35	YW61083500000	17	Motor cabinet	-
4	Flat gasket 8×19	YW66081900000	18	Drive sprocket	-
5	Honeycomb frame	-	19	Bearing	-
6	Nut M16	YW61083500000	20	Bearing	YW11600500000
7	Flat gasket 16×30	YW66163000000	21	Bearing block	-
8	Spring	YW01140400000	22	Set honeycomb cover	-
9	Double-headed screw bolt	-	23	Temperature reducing flange	-
10	Air inlet bend	-	24	Driven sprocket	-
11	Reproduce flange	-	25	Roller chain	YW09121600000
12	Flexible honeycomb cover	-	26	Honeycomb	YW71965400100
13	Seal washer	-	27	Honeycomb shaft	-
14	Gearmotor	YM10281500000			

* 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.

2.7 Electrical Diagram

2.7.1 Electrical Diagram (400V)

Table 2-10：Electrical Diagram (400V)

No. / Model	ⓐ	ⓑ	ⓒ	ⓓ1	ⓓ2	ⓓ3	ⓔ	ⓕ	ⓖ	ⓗ	ⓘ	ⓙ	ⓚ	ⓛ	ⓜ	ⓝ	ⓞ
SD-30H	6.9	2.5	16	10	5	5	1.4	1.0	0.2	1.2	1.4	1.0	0.2	1.2	1.5	3.0	4.5
SD-50H	7.1	2.5	16	10	5	5	1.6	1.0	0.4	1.4	1.4	1.0	0.2	1.2	1.5	3.0	4.5
SD-80H	8.9	2.5	16	10	5	5	2.5	1.0	0.75	2.2	1.4	1.0	0.2	1.2	1.5	3.0	4.5
SD-120H	8.9	2.5	16	10	5	5	2.5	1.0	0.75	2.2	1.4	1.0	0.2	1.2	1.5	3.0	4.5
SD-200H	10.7	2.5	16	10	10	5	3.6	1.5	1.5	3.3	1.6	1.0	0.4	1.4	1.5	4.0	6.0
SD-400H	21.1	4.0	25	15	20	5	9.0	1.5	3.4	8.1	2.5	1.0	0.75	2.2	2.5	7.2	10.8
SD-700H	30.3	6.0	60	20	32	10	13.2	2.5	5.5	12	3.6	1.5	1.5	3.3	2.5	10	15
SD-1000H	47	16.0	90	32	40	15	21	4.0	9.0	19	6.0	1.5	2.4	5.5	6.0	15	22.5

ⓐImport current　ⓑMain power wire dia.　ⓒSwitch rated current

ⓓ1Regenerative breakers rated current　ⓓ2Blower breakers rated current

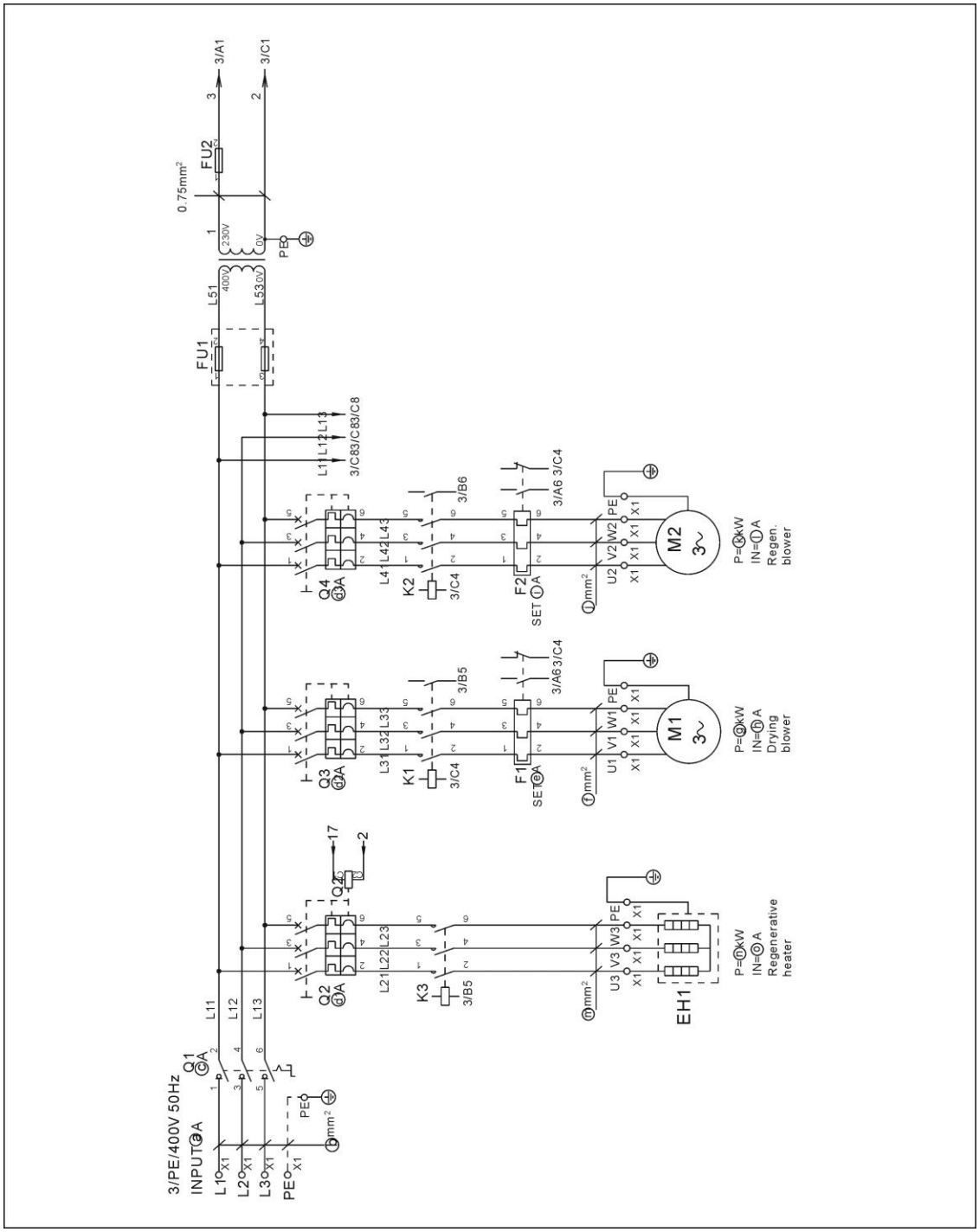
ⓓ3Circuit breakers　ⓔDrying blower loader　ⓕ Drying blower wire dia.

ⓖDrying blower power　ⓗ Drying blower current　ⓘ Regenerative blower loader

ⓙRegenerative blower wire dia.　ⓚRegenerative blower power　ⓛRegenerative blower current

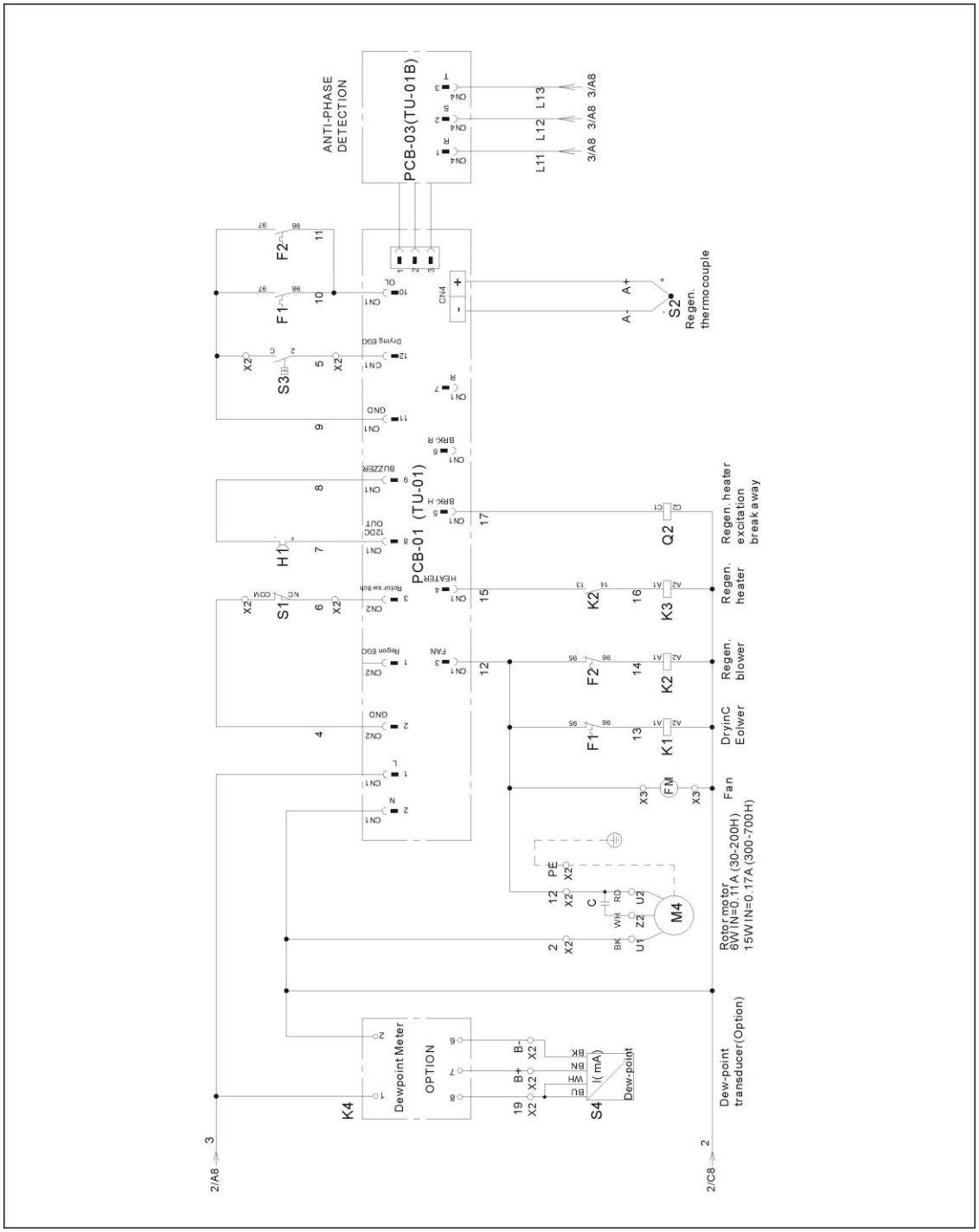
ⓜ Regenerative heater wire dia.　ⓝRegenerative heater power　ⓞRegenerative heater current

2.7.2 Main Circuit (PCB) (400V)



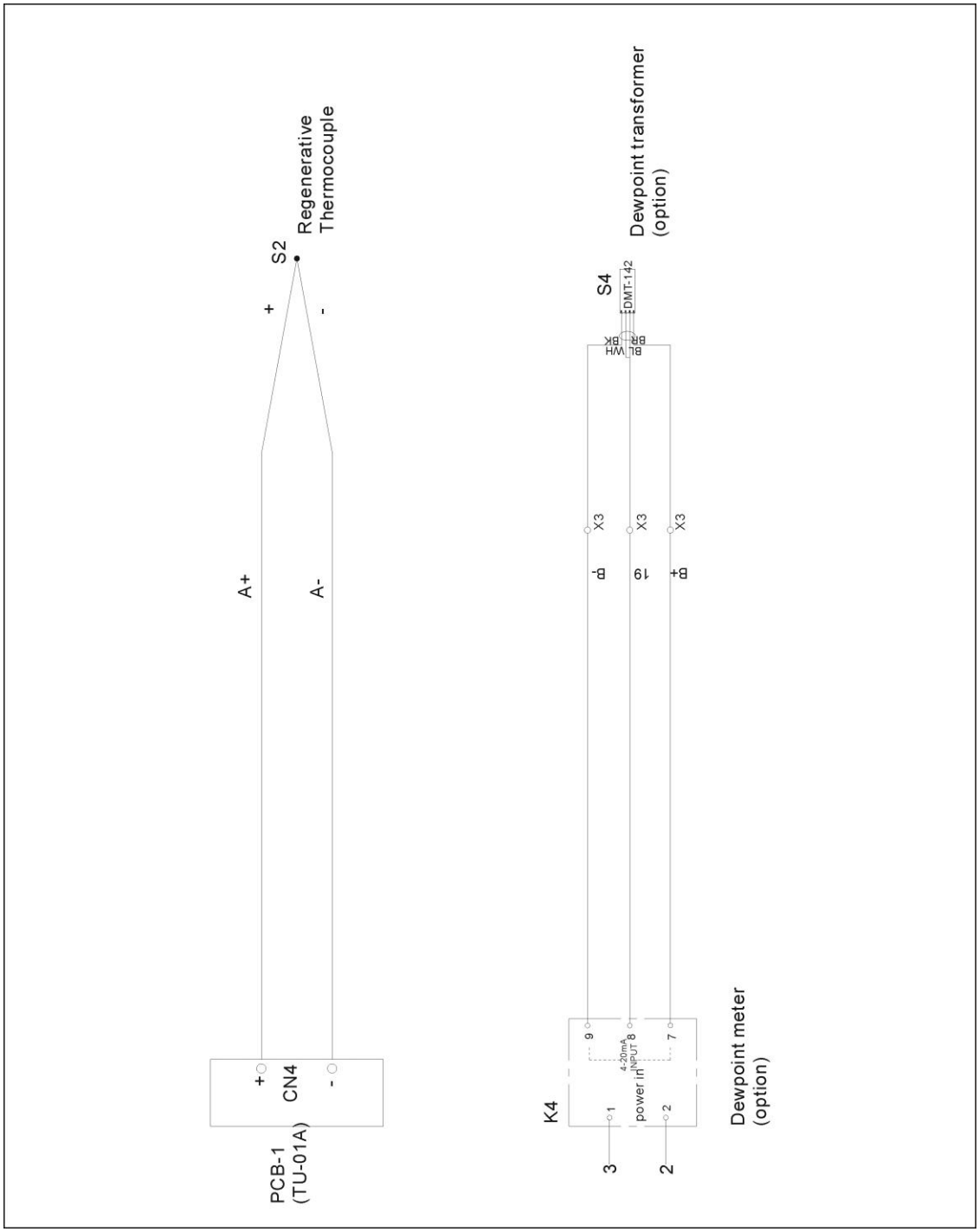
Picture 2-13: Main Circuit (PCB) (400V)

2.7.3 Control Circuit (PCB) (400V)



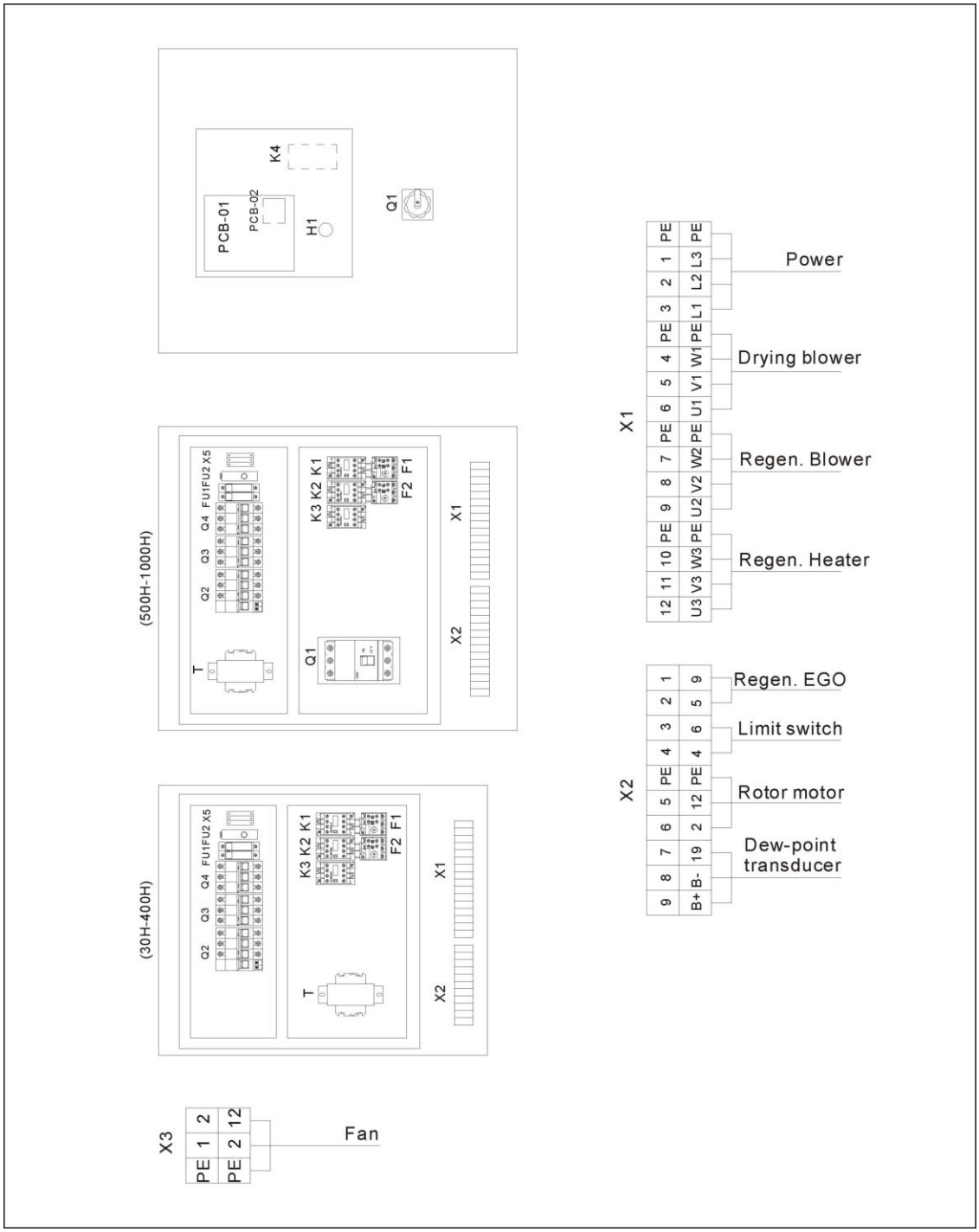
Picture 2-14： Control Circuit (PCB) (400V)

2.7.4 Thermocouple Wiring Diagram (PCB) (400V)



Picture 2-15: Thermocouple Wiring Diagram (PCB) (400V)

2.7.5 Components Layout (PCB) (400V)



Picture 2-16: Components Layout (PCB) (400V)

2.7.6 Electrical Components List (PCB) (400V)

Table 2-11： Electrical Components List (PCB)(SD-30H) (400V)

No.	Symbol	Name	SD-30H	
			Specifications	Part No.
1	Q1	Main switch	16A	YE10200300000
2	Q2	Circuit breakers*	10A	YE40631000000
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	5A	YE40603000000
5	Q4	Circuit breakers*	5A	YE40603000000
6	K1	Contactors*	230V 50/60Hz	YE00301000000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00300000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	1~1.6A	YE01011600000
11	F2	Overload relay*	1~1.6A	YE01011600000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	500mA	YE70402300800
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	32A	YE61250040000
25	-	-	-	YE61253500000
26	-	Terminal board	32A	YE61250040000
27	-	-	-	YE61253500000
28	X2	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X3	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	M1	Blower*	0.2kW 400V	-
33	M2	Blower*	0.2kW 400V	-
34	M3	Rotor motor*	6W 230V 50/60Hz	-
35	EH1	Heater**	3kW 400V	-

* 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 2-12：Electrical Components List (PCB) (SD-50H) (400V)

No.	Symbol	Name	SD-50H	
			Specifications	Part No.
1	Q1	Main switch	16A	YE10200300000
2	Q2	Circuit breakers*	10A	YE40631000000
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	5A	YE40603000000
5	Q4	Circuit breakers*	5A	YE40603000000
6	K1	Contactors*	230V 50/60Hz	YE00301000000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00300000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	1.25~2A	YE01125200000
11	F2	Overload relay*	1~1.6A	YE01011600000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	500mA	YE70402300800
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	32A	YE61250040000
25	-	-	-	YE61253500000
26	-	Terminal board	32A	YE61250040000
27	-	-	-	YE61253500000
28	X2	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X3	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	M1	Blower*	0.4kW 400V	-
33	M2	Blower*	0.2kW 400V	-
34	M3	Rotor motor*	6W 230V 50/60Hz	-
35	EH1	Heater**	3kW 400V	-

* means possible broken parts.
** means easy broken part. and spare backup is suggested.
Please confirm the version of manual before placing the purchase order to guarantee that the

item number of the spare part is in accordance with the real object.

Table 2-13: Electrical Components List (PCB) (SD-80H/120H) (400V)

No.	Symbol	Name	SD-80H/120H	
			Specifications	Part No.
1	Q1	Main switch	16A	YE10200300000
2	Q2	Circuit breakers*	10A	YE40631000000
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	5A	YE40603000000
5	Q4	Circuit breakers*	5A	YE40603000000
6	K1	Contactors*	230V 50/60Hz	YE00301000000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00300000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	2~3.2A	YE01023200000
11	F2	Overload relay*	1~1.6A	YE01011600000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	500mA	YE70402300800
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	32A	YE61250040000
25	-	-	-	YE61253500000
26	-	Terminal board	32A	YE61250040000
27	-	-	-	YE61253500000
28	X2	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X3	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	M1	Blower*	0.75kW 400V	-
33	M2	Blower*	0.2kW 400V	-
34	M3	Rotor motor*	6W 230V 50/60Hz	-
35	EH1	Heater**	3kW 400V	-

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

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

Table 2-14：Electrical Components List (PCB) (SD-200H) (400V)

No.	Symbol	Name	SD-200H	
			Specifications	Part No.
1	Q1	Main switch	16A	YE10200300000
2	Q2	Circuit breakers*	10A	YE40631000000
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	10A	YE40600300000
5	Q4	Circuit breakers*	5A	YE40603000000
6	K1	Contactors*	230V 50/60Hz	YE00301000000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00310000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	3.2~5A	YE01032500000
11	F2	Overload relay*	1.25~2A	YE01125200000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	500mA	YE70402300800
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	32A	YE61250040000
25	-	-	-	YE61253500000
26	-	Terminal board	32A	YE61250040000
27	-	-	-	YE61253500000
28	X2	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X3	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	M1	Blower*	1.5kW 400V	-
33	M2	Blower*	0.4kW 400V	-
34	M3	Rotor motor*	6W 230V 50/60Hz	-
35	EH1	Heater**	4kW 400V	-

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

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

Table 2-15：Electrical Components List (PCB) (SD-400H) (400V)

No.	Symbol	Name	SD-400H	
			Specifications	Part No.
1	Q1	Main switch	25A	YE10210300000
2	Q2	Circuit breakers*	16A	YE40601600000
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	20A	YE40603000000
5	Q4	Circuit breakers*	5A	YE40603000000
6	K1	Contactors*	230V 50/60Hz	YE00301000000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00320000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	6.3~10A	YE01631000000
11	F2	Overload relay*	2~3.2A	YE01232000000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	500mA	YE70402300800
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	41A	YE61040000000
25	-	-	-	YE61043500000
26	-	Terminal board	32A	YE61250040000
27	-	-	-	YE61253500000
28	X2	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X3	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	M1	Blower*	3.4kW 400V	-
33	M2	Blower*	0.75kW 400V	-
34	M3	Rotor motor*	15W 230V 50/60Hz	-
35	EH1	Heater**	7.2kW 400V	-

* means possible broken parts.

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

Please confirm the version of manual before placing the purchase order to guarantee that the

item number of the spare part is in accordance with the real object.

Table 2-16：Electrical Components List (PCB) (SD-700H) (400V)

No.	Symbol	Name	SD-700H	
			Specifications	Part No.
1	Q1	Main switch	60A	YE41106000000
2	Q2	Circuit breakers*	20A	YE40602000100
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	32A	YE40603200000
5	Q4	Circuit breakers*	10A	YE40600300000
6	K1	Contactors*	230V 50/60Hz	YE00321100000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00340000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	10~16A	YE01101600100
11	F2	Overload relay*	3.2~5A	YE01032500000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	500mA	YE70402300800
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	57A	YE61060000000
25	-	-	-	YE61063500000
26	-	Terminal board	32A	YE61250040000
27	-	-	-	YE61253500000
28	X2	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X3	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	M1	Blower*	5.5kW 400V	-
33	M2	Blower*	1.5kW 400V	-
34	M3	Rotor motor*	15W 230V 50/60Hz	-
35	EH1	Heater**	10kW 400V	-

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

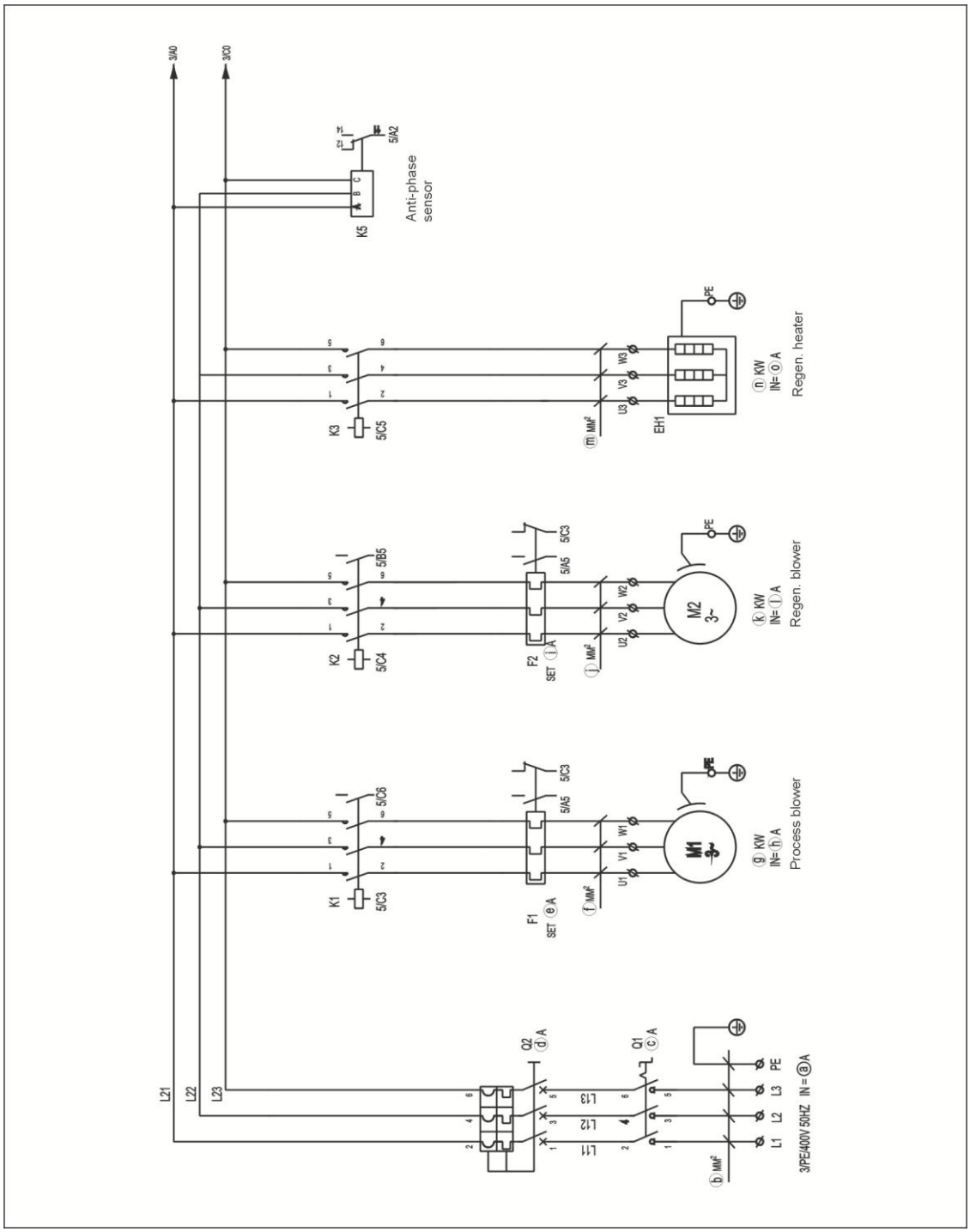
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

Table 2-17: Electrical Components List (PCB) (SD-1000H) (400V)

No.	Symbol	Name	SD-1000H	
			Specifications	Part No.
1	Q1	Main switch	90A	YE41109000000
2	Q2	Circuit breakers*	32A	YE40633200000
3	-	Excitation break away	S9	YE40000900000
4	Q3	Circuit breakers*	40A	YE40604000000
5	Q4	Circuit breakers*	15A	YE40601500000
6	K1	Contactors*	230V 50/60Hz	YE00331100000
7	K2	Contactors*	230V 50/60Hz	YE00301000000
8	K3	Contactors*	230V 50/60Hz	YE00350000000
9	K4	Dew-point meter	230V 50/60Hz	YE85122000100
10	F1	Overload relay*	16~25A	YE01162500100
11	F2	Overload relay*	5~8A	YE01050800000
12	FU1	Fuse box**	2P	YE41032200000
13		Fuse core**	1A	YE46001000100
14	FU2	Fuse**	2A	YE41001000000
15	T	Transformer*	800mA	YE70402300900
16	PCB-01	PCB*	230V 50/60Hz	YE80001100000
17	PCB-02	PCB	-	YE80001100100
18	S1	Limit switch*	10A 250V	YE14152400000
19	S2	Thermocouple	K	-
20	S3	Overheat protector*	250V 300℃	YE21503000100
21	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
22	H1	Buzzer	24VDC	YE84002700000
23	FM	Fan*	230V 50/60Hz	YM60121200400
24	X1	Terminal board	-	YE61160000000
25	-	-	-	YE61135000000
26	-	Terminal board	57A	YE61060000000
27	-	-	-	YE61063500000
28	-	Terminal board	32A	YE61250040000
29	-	-	-	YE61253500000
30	X2	Terminal board	32A	YE61250040000
31	-	-	-	YE61253500000
32	X3	Terminal board	32A	YE61250040000
33	-	-	-	YE61253500000
34	M1	Blower*	9kW 400V	-
35	M2	Blower*	2.4kW 400V	-
36	M3	Rotor motor*	40W 230V 50/60Hz	-
37	EH1	Heater**	15kW 400V	-

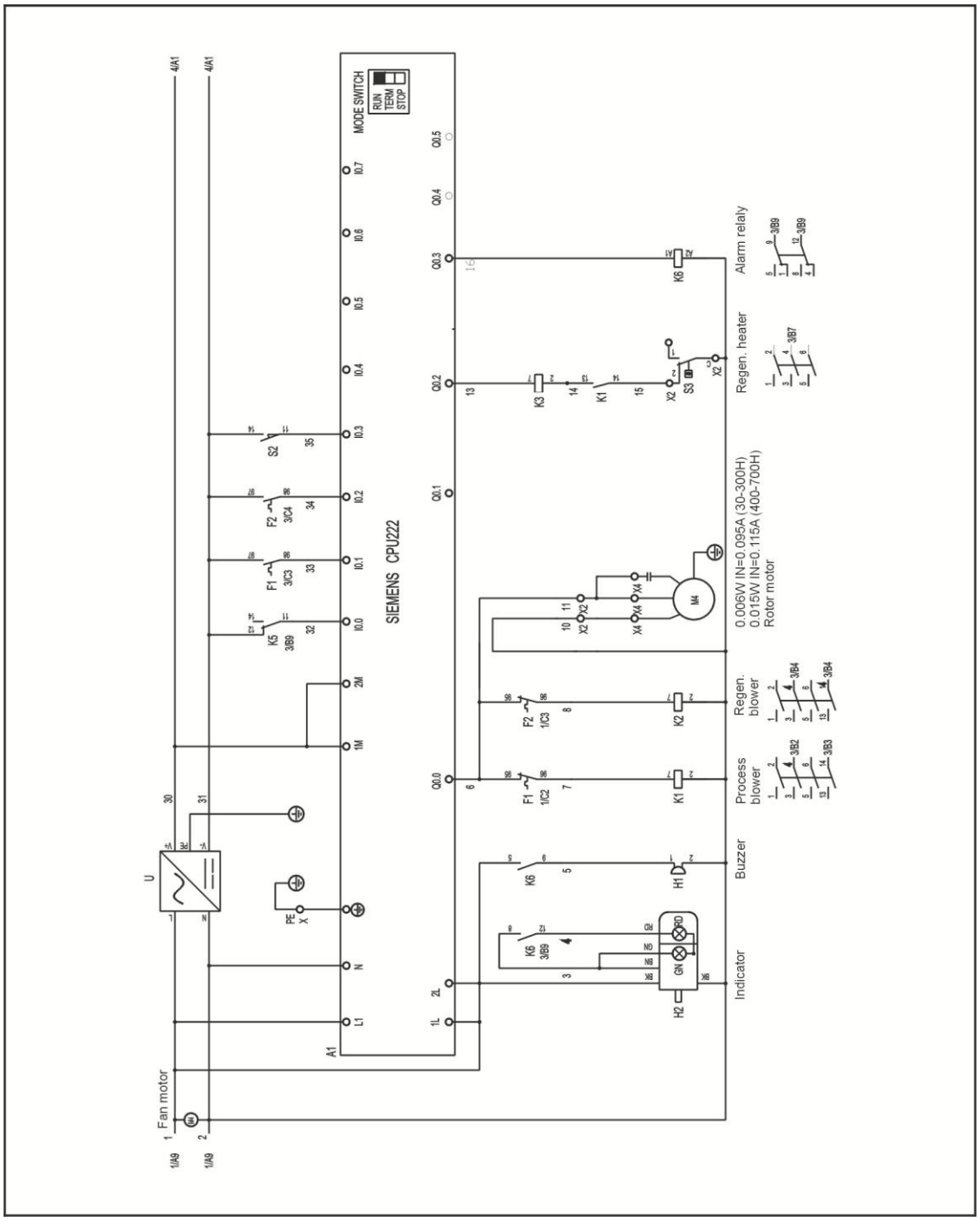
* means possible broken parts.
** means easy broken part. and spare backup is suggested.
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

2.7.7 Main Circuit (PLC) (400V)



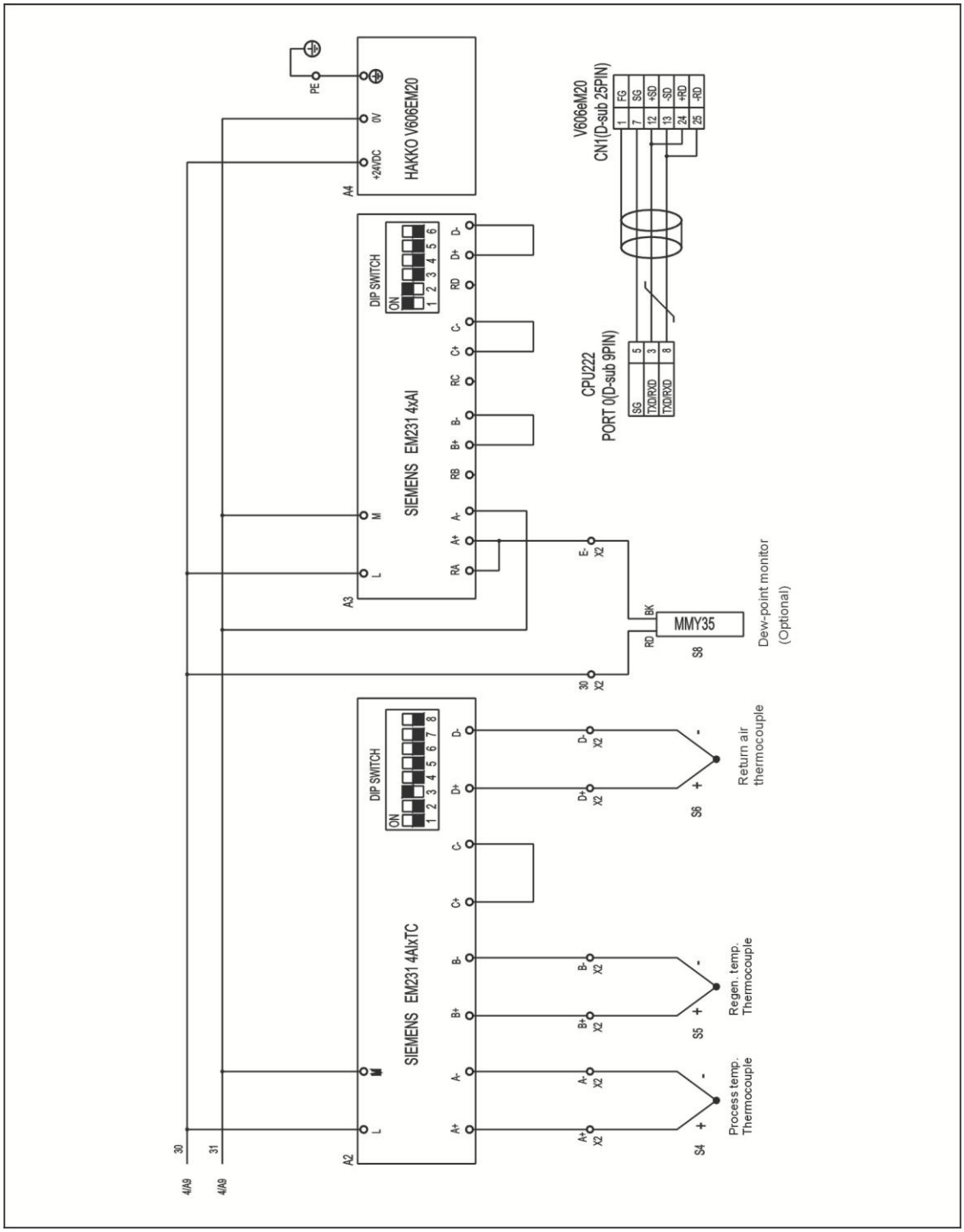
Picture 2-17： Main Circuit (PLC) (400V)

2.7.8 Control Circuit (PLC) (400V)



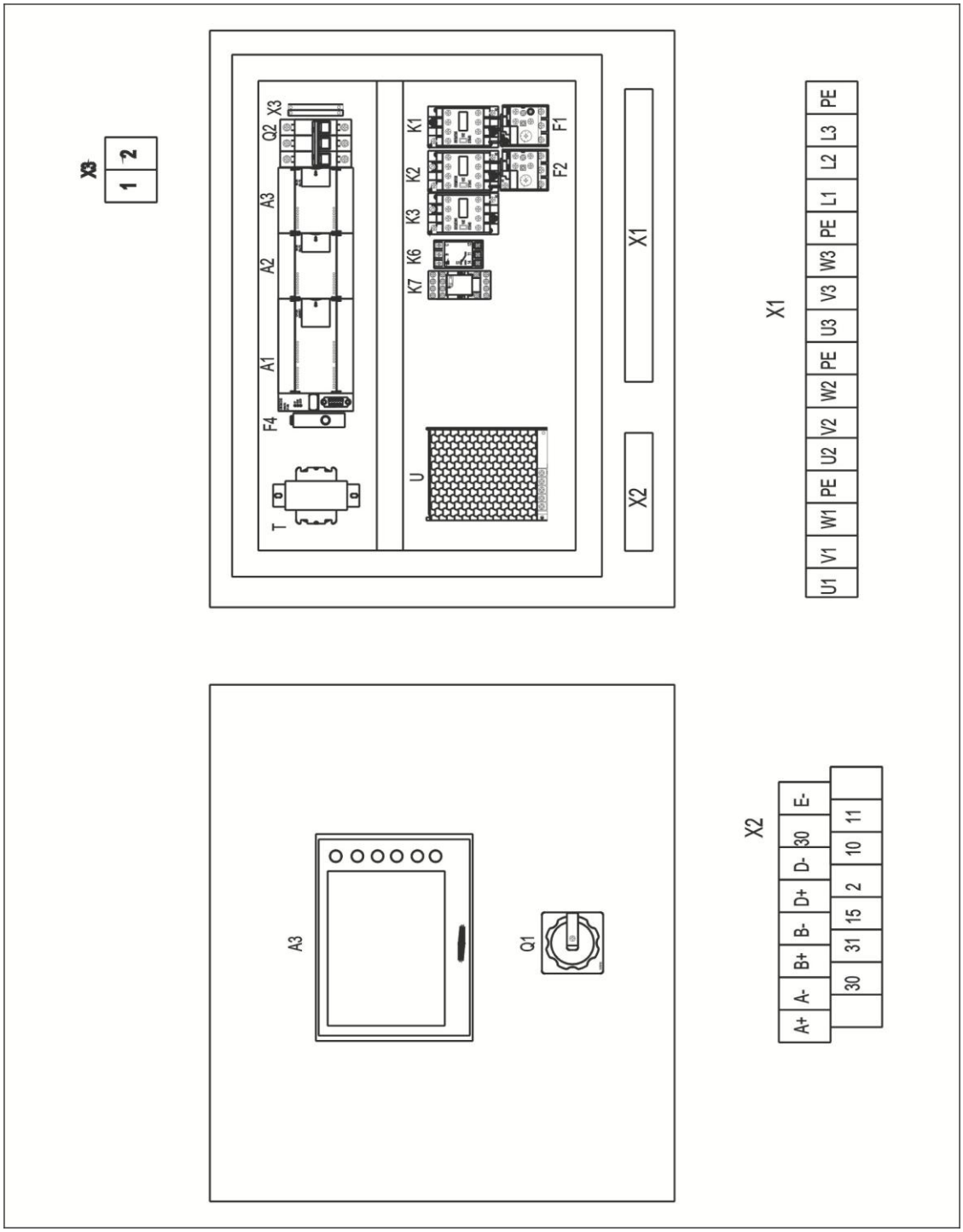
Picture 2-18： Control Circuit (PLC) (400V)

2.7.9 Thermocouple Wiring Diagram (PLC) (400V)



Picture 2-19：Thermocouple Wiring Diagram (PLC) (400V)

2.7.10 Components Layout (PLC) (400V)



Picture 2-20：Components Layout (PLC) (400V)

2.7.11 Electrical Components List (PLC) (400V)

Table 2-18：Electrical Components List (PLC) (SD-30H) (400V)

No.	Symbol	Name	SD-30H	
			Specifications	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230VAC 50Hz	YE00401000100
4	K2	Contactors**	230VAC 50Hz	YE00401000100
5	K3	Contactors**	230VAC 50Hz	YE00401000100
6	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
7	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
8	A1	PLC	100-230VAC 50/60Hz	YE81022400100
9	A2	PLC extension module	-	YE82023100100
10	A3	PLC extension module	-	YE82023100000
11	A4	Touch screen	24VDC 0.4A	YE80350100000
12	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
13	F1	Overheat relay	0.63~1A	YE01063100000
14	F2	Overheat relay	0.63~1A	YE01063100000
15	F3	Fuse**	2A Fuse	YR20816200000
16	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
17	S2	Micro switch	250V~5(4A)	YE14511100000
18	S3	Limit switch	250V~5(4A)	YE14511200000
19	S4	Thermocouple	K	BE90802000050
20	S5	Thermocouple	K	BE90802000050
21	S6	Thermocouple	K	BE90802000050
22	U	DC power	OUT=D24V 1.5A	YE71352400000
23	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
24	H2	Double section alarm	230 50Hz	YE83305100300
25	T	Transformer **	400V/230V/20V 500mA	YE70402300800
26	X1	Terminal block	19P 25A	YE61001900000
27	X2	Two layer terminal block	10P 10A	YE61101000000
28	X3	Terminal	32A	YE61040000000
29	X4	Terminal block	4P 20A	YE61000400000
30	FM	Cooling fan	220~240VAC 40W	YM60121200400
31	M1	Blower **	220~240V 380~415VAC 0.2kW	BM30012500050
32	M2	Blower **	220~240V 380~415VAC 0.2kW	BM30012500050
33	M3	Motor *	220~240V 0.006kW	YM50616400100
34	EH1	Heater **	220~240V 380~415VAC 2.0kW	BH70300300050

* 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：Electrical Components List (PLC) (SD-50H) (400V)

No.	Symbol	Name	SD-50H	
			Specifications	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230VAC 50Hz	YE00401000100
4	K2	Contactors**	230VAC 50Hz	YE00401000100
5	K3	Contactors**	230VAC 50Hz	YE00401000100
6	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
7	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
8	A1	PLC	100-230VAC 50/60Hz	YE81022400100
9	A2	PLC extension module	-	YE82023100100
10	A3	PLC extension module	-	YE82023100000
11	A4	Touch screen	24VDC 0.4A	YE80350100000
12	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
13	F1	Overheat relay	0.63~1A	YE01063100000
14	F2	Overheat relay	0.63~1A	YE01063100000
15	F3	Fuse**	2A Fuse	YR20816200000
16	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
17	S2	Micro switch	250V~5(4A)	YE14511100000
18	S3	Limit switch	250V~5(4A)	YE14511200000
19	S4	Thermocouple	K	BE90802000050
20	S5	Thermocouple	K	BE90802000050
21	S6	Thermocouple	K	BE90802000050
22	U	DC power	OUT=D24V 1.5A	YE71352400000
23	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
24	H2	Double section alarm	230 50Hz	YE83305100300
25	T	Transformer **	400V/230V/20V 500mA	YE70402300800
26	X1	Terminal block	19P 25A	YE61001900000
27	X2	Two layer terminal block	10P 10A	YE61101000000
28	X3	Terminal	32A	YE61040000000
29	X4	Terminal block	4P 20A	YE61000400000
30	FM	Cooling fan	220~240VAC 40W	YM60121200400
31	M1	Blower **	220~240V 380~415VAC 0.4kW	BM30020500050
32	M2	Blower **	220~240V 380~415VAC 0.2kW	BM30012500050
33	M3	Motor *	220~240V 0.006kW	YM50616400100
34	EH1	Heater **	220~240V 380~415VAC 2.8kW	BH70500300050

* 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：Electrical Components List (PLC) (SD-80H) (400V)

No.	Symbol	Name	SD-80H	
			Specifications	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230VAC 50Hz	YE00401000100
4	K2	Contactors**	230VAC 50Hz	YE00401000100
5	K3	Contactors**	230VAC 50Hz	YE00401000100
6	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
7	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
8	A1	PLC	100-230VAC 50/60Hz	YE81022400100
9	A2	PLC extension module	-	YE82023100100
10	A3	PLC extension module	-	YE82023100000
11	A4	Touch screen	24VDC 0.4A	YE80350100000
12	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
13	F1	Overheat relay	0.63~1A	YE01063100000
14	F2	Overheat relay	0.63~1A	YE01063100000
15	F3	Fuse**	2A Fuse	YR20816200000
16	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
17	S2	Micro switch	250V~5(4A)	YE14511100000
18	S3	Limit switch	250V~5(4A)	YE14511200000
19	S4	Thermocouple	K	BE90802000050
20	S5	Thermocouple	K	BE90802000050
21	S6	Thermocouple	K	BE90802000050
22	U	DC power	OUT=D24V 1.5A	YE71352400000
23	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
24	H2	Double section alarm	230 50Hz	YE83305100300
25	T	Transformer **	400V/230V/20V 500mA	YE70402300800
26	X1	Terminal block	19P 25A	YE61001900000
27	X2	Two layer terminal block	10P 10A	YE61101000000
28	X3	Terminal	32A	YE61040000000
29	X4	Terminal block	4P 20A	YE61000400000
30	FM	Cooling fan	220~240VAC 40W	YM60121200400
31	M1	Blower **	220~240V 380~415VAC 0.75kW	BM30031000150
32	M2	Blower **	220~240V 380~415VAC 0.2kW	BM30012500050
33	M3	Motor *	220~240V 0.006kW	YM50616400100

34	EH1	Heater **	220~240V 380~415VAC 3.5kW	BH70800300050

* 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： Electrical Components List (PLC) (SD-120H) (400V)

No.	Symbol	Name	SD-120H	
			Specifications	Part No.
1	Q1	Main switch*	16A	YE10200300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	K1	Contactors**	230VAC 50Hz	YE00401000100
4	K2	Contactors**	230VAC 50Hz	YE00401000100
5	K3	Contactors**	230VAC 50Hz	YE00401000100
6	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
7	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
8	A1	PLC	100-230VAC 50/60Hz	YE81022400100
9	A2	PLC extension module	-	YE82023100100
10	A3	PLC extension module	-	YE82023100000
11	A4	Touch screen	24VDC 0.4A	YE80350100000
12	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
13	F1	Overheat relay	2.5~4A	YE01025400000
14	F2	Overheat relay	0.63~1A	YE01063100000
15	F3	Fuse**	2A Fuse	YR20816200000
16	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
17	S2	Micro switch	250V~5(4A)	YE14511100000
18	S3	Limit switch	250V~5(4A)	YE14511200000
19	S4	Thermocouple	K	BE90802000050
20	S5	Thermocouple	K	BE90802000050
21	S6	Thermocouple	K	BE90802000050
22	U	DC power	OUT=D24V 1.5A	YE71352400000
23	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
24	H2	Double section alarm	230 50Hz	YE83305100300
25	T	Transformer **	400V/230V/20V 500mA	YE70402300800
26	X1	Terminal block	19P 25A	YE61001900000
27	X2	Two layer terminal block	10P 10A	YE61101000000
28	X3	Terminal	32A	YE61040000000
29	X4	Terminal block	4P 20A	YE61000400000
30	FM	Cooling fan	220~240VAC 40W	YM60121200400
31	M1	Blower **	220~240V 380~415VAC 0.9kW	BM30031000150
32	M2	Blower **	220~240V 380~415VAC 0.2kW	BM30012500050

33	M3	Motor *	220~240V 0.006kW	YM50616400100
34	EH1	Heater **	220~240V 380~415VAC 2.0kW	BH70800300050

* 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：Electrical Components List (PLC) (SD-200H) (400V)

No.	Symbol	Name	SD-200H	
			Specifications	Part No.
1	Q1	Main switch*	25A	YE10210300000
2	Q2	Circuit breakers*	20A	YE40602000000
3	K1	Contactors**	230VAC 50Hz	YE00401000100
4	K2	Contactors**	230VAC 50Hz	YE00401000100
5	K3	Contactors**	230VAC 50Hz	YE00401000100
6	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
7	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
8	A1	PLC	100-230VAC 50/60Hz	YE81022400100
9	A2	PLC extension module	-	YE82023100100
10	A3	PLC extension module	-	YE82023100000
11	A4	Touch screen	24VDC 0.4A	YE80350100000
12	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
13	F1	Overheat relay	4~6.3A	YE01046300100
14	F2	Overheat relay	0.63~1A	YE01063100000
15	F3	Fuse**	2A Fuse	YR20816200000
16	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
17	S2	Micro switch	250V~5(4A)	YE14511100000
18	S3	Limit switch	250V~5(4A)	YE14511200000
19	S4	Thermocouple	K	BE90802000050
20	S5	Thermocouple	K	BE90802000050
21	S6	Thermocouple	K	BE90802000050
22	U	DC power	OUT=D24V 1.5A	YE71352400000
23	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
24	H2	Double section alarm	230 50Hz	YE83305100300
25	T	Transformer **	400V/230V/20V 500mA	YE70402300800
26	X1	Terminal block	19P 25A	YE61001900000
27	X2	Two layer terminal block	10P 10A	YE61101000000
28	X3	Terminal	32A	YE61040000000
29	X4	Terminal block	4P 20A	YE61000400000
30	FM	Cooling fan	220~240VAC 40W	YM60121200400
31	M1	Blower **	220~240V 380~415VAC 2.6kW	BM30042000050

32	M2	Blower **	220~240V 380~415VAC 0.75kW	BM30020500050
33	M3	Motor *	220~240V 0.006kW	YM50616400100
34	EH1	Heater **	220~240V 380~415VAC 3.5kW	BH70200400050

* 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 2-23：Electrical Components List (PLC) (SD-400H) (400V)

No.	Symbol	Name	SD-400H	
			Specifications	Part No.
1	Q1	Main switch*	32A	YE10220300000
2	Q2	Circuit breakers*	32A	YE10220300000
3	K1	Contactors**	230VAC 50Hz	YE00401000100
4	K2	Contactors**	230VAC 50Hz	YE00401000100
5	K3	Contactors**	230VAC 50Hz	YE00401000100
6	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
7	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
8	A1	PLC	100-230VAC 50/60Hz	YE81022400100
9	A2	PLC extension module	-	YE82023100100
10	A3	PLC extension module	-	YE82023100000
11	A4	Touch screen	24VDC 0.4A	YE80350100000
12	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
13	F1	Overheat relay	6.3~10A	YE01631000000
14	F2	Overheat relay	2~3.2A	YE01023200000
15	F3	Fuse**	2A Fuse	YR20816200000
16	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
17	S2	Micro switch	250V~5(4A)	YE14511100000
18	S3	Limit switch	250V~5(4A)	YE14511200000
19	S4	Thermocouple	K	BE90802000050
20	S5	Thermocouple	K	BE90802000050
21	S6	Thermocouple	K	BE90802000050
22	U	DC power	OUT=D24V 1.5A	YE71352400000
23	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
24	H2	Double section alarm	230 50Hz	YE83305100300
25	T	Transformer **	400V/230V/20V 500mA	YE70402300800
26	X1	Terminal block	19P 25A	YE61001900000
27	X2	Two layer terminal block	10P 10A	YE61101000000
28	X3	Terminal	32A	YE61040000000
29	X4	Terminal block	4P 20A	YE61000400000
30	FM	Cooling fan	220~240VAC 40W	YM60121200400

31	M1	Blower **	220~240V 380~415VAC 3.7kW	YM30062900000
32	M2	Blower **	220~240V 380~415VAC 0.75kW	BM30031000150
33	M3	Motor *	220~240V 0.015kW	YM50616400100
34	EH1	Heater **	220~240V 380~415VAC 7.2kW	BH70407200050

* 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 2-24：Electrical Components List (PLC) (SD-700H) (400V)

No.	Symbol	Name	SD-700H	
			Specifications	Part No.
1	Q1	Main switch*	50A	YE40635000000
2	K1	Contactors**	230VAC 50Hz	YE00401000100
3	K2	Contactors**	230VAC 50Hz	YE00401000100
4	K3	Contactors**	230VAC 50Hz	YE00401000100
5	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
6	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
7	A1	PLC	100-230VAC 50/60Hz	YE81022400100
8	A2	PLC extension module	-	YE82023100100
9	A3	PLC extension module	-	YE82023100000
10	A4	Touch screen	24VDC 0.4A	YE80350100000
11	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
12	F1	Overheat relay	10~16A	YE01101600100
13	F2	Overheat relay	4~6.3A	YE01046300100
14	F3	Fuse**	2A Fuse	YR20816200000
15	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
16	S2	Micro switch	250V~5(4A)	YE14511100000
17	S3	Limit switch	250V~5(4A)	YE14511200000
18	S4	Thermocouple	K	BE90802000050
19	S5	Thermocouple	K	BE90802000050
20	S6	Thermocouple	K	BE90802000050
21	U	DC power	OUT=D24V 1.5A	YE71352400000
22	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
23	H2	Double section alarm	230 50Hz	YE83305100300
24	T	Transformer **	400V/230V/20V 500mA	YE70402300800
25	X1	Terminal block	19P 25A	YE61001900000
26	X2	Two layer terminal block	10P 10A	YE61101000000
27	X3	Terminal	32A	YE61040000000
28	X4	Terminal block	4P 20A	YE61000400000
29	FM	Cooling fan	220~240VAC 40W	YM60121200400

30	M1	Blower **	220~240V 380~415VAC 5.5kW	YM30072900000
31	M2	Blower **	220~240V 380~415VAC 1.9kW	BM30042000050
32	M3	Motor *	220~240V 0.015kW	YM50616400100
33	EH1	Heater **	220~240V 380~415VAC 10.0kW	BH70501000050

* 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 2-25：Electrical Components List (PLC) (SD-1000H) (400V)

No.	Symbol	Name	SD-1000H	
			Specifications	Part No.
1	Q1	Main switch*	63A	YE40636300000
2	K1	Contactors**	230VAC 50Hz	YE00401000100
3	K2	Contactors**	230VAC 50Hz	YE00401000100
4	K3	Contactors**	230VAC 50Hz	YE00401000100
5	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
6	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
7	A1	PLC	100-230VAC 50/60Hz	YE81022400100
8	A2	PLC extension module	-	YE82023100100
9	A3	PLC extension module	-	YE82023100000
10	A4	Touch screen	24VDC 0.4A	YE80350100000
11	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
12	F1	Overheat relay	20~32A	YE01203200100
13	F2	Overheat relay	4~6.3A	YE01046300100
14	F3	Fuse**	2A Fuse	YR20816200000
15	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
16	S2	Micro switch	250V~5(4A)	YE14511100000
17	S3	Limit switch	250V~5(4A)	YE14511200000
18	S4	Thermocouple	K	BE90802000050
19	S5	Thermocouple	K	BE90802000050
20	S6	Thermocouple	K	BE90802000050
21	U	DC power	OUT=D24V 1.5A	YE71352400000
22	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
23	H2	Double section alarm	230 50Hz	YE83305100300
24	T	Transformer **	400V/230V/20V 500mA	YE70402300800
25	X1	Terminal block	19P 25A	YE61001900000
26	X2	Two layer terminal block	10P 10A	YE61101000000
27	X3	Terminal	32A	YE61040000000
28	X4	Terminal block	4P 20A	YE61000400000
29	FM	Cooling fan	220~240VAC 40W	YM60121200400

30	M1	Blower **	220~240V 380~415VAC 9.0kW	BH70407200050
31	M2	Blower **	220~240V 380~415VAC 2.6kW	YM30052900000
32	M3	Motor *	220~240V 0.015kW	YM50616400100
33	EH1	Heater **	220~240V 380~415VAC 15kW	BH70101500050

* 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 2-26：Electrical Components List (PLC) (SD-1500H)(400V)

No.	Symbol	Name	SD-1500H	
			Specifications	Part No.
1	Q1	Main switch*	100A	YE40601500000
2	K1	Contactors**	230VAC 50Hz	YE00401000100
3	K2	Contactors**	230VAC 50Hz	YE00401000100
4	K3	Contactors**	230VAC 50Hz	YE00401000100
5	K5	Anti-phrase detector	230VAC 50/60Hz	YE03103800000
6	K6	Middle relay	230VAC 50/60Hz 12A	YE03270700000
7	A1	PLC	100-230VAC 50/60Hz	YE81022400100
8	A2	PLC extension module	-	YE82023100100
9	A3	PLC extension module	-	YE82023100000
10	A4	Touch screen	24VDC 0.4A	YE80350100000
11	S8	Dew-point monitor	POWER=24VDC OUT=4~20mA	YE15041200000
12	F1	Overheat relay	20~32A	YE01203200100
13	F2	Overheat relay	6.3~10A	YE01631000000
14	F3	Fuse**	2A Fuse	YR20816200000
15	S1	Alternative switch	250V 10(5)A 4P WH	YE10210400000
16	S2	Micro switch	250V~5(4A)	YE14511100000
17	S3	Limit switch	250V~5(4A)	YE14511200000
18	S4	Thermocouple	K	BE90802000050
19	S5	Thermocouple	K	BE90802000050
20	S6	Thermocouple	K	BE90802000050
21	U	DC power	OUT=D24V 1.5A	YE71352400000
22	H1	Buzzer	60~250VAC/DC 5~35mA	YE84003500200
23	H2	Double section alarm	230 50Hz	YE83305100300
24	T	Transformer **	400V/230V/20V 500mA	YE70402300800
25	X1	Terminal block	19P 25A	YE61001900000
26	X2	Two layer terminal block	10P 10A	YE61101000000
27	X3	Terminal	32A	YE61040000000
28	X4	Terminal block	4P 20A	YE61000400000
29	FM	Cooling fan	220~240VAC 40W	YM60121200400

30	M1	Blower **	220~240V 380~415VAC 18kW	BH70407200050
31	M2	Blower **	220~240V 380~415VAC 3.75kW	YM30062900000
32	M3	Motor *	220~240V 0.015kW	YM50616400100
33	EH1	Heater **	220~240V 380~415VAC 28kW	BH70202000050

* 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.

2.7.12 Electrical Diagram (230V)

Table 2-27: Electrical Diagram (230V)

No. / Model	ⓐ	ⓑ	ⓒ	ⓓ	ⓔ	ⓕ	ⓖ	ⓗ	ⓘ	ⓙ	ⓚ	ⓛ	ⓜ	ⓝ	ⓞ	ⓟ
SD-30H	12.6	2.5	16	10	2.0	1.0	0.2	1.81	2.0	1.0	0.2	1.81	16	2.5	3.0	8.9
SD-50H	13	2.5	16	10	2.42	1.5	0.4	2.21	2.0	1.0	0.2	1.81	16	2.5	3.0	8.9
SD-80H	18	4.0	25	15	6.1	1.5	0.75	5.56	2.0	1.0	0.2	1.81	16	2.5	3.5	10.6
SD-120H	18	4.0	25	15	6.1	1.5	0.75	5.56	2.0	1.0	0.2	1.81	16	2.5	3.5	10.6
SD-200H	28	6.0	63	-	11	2.5	1.5	9.95	2.42	1.5	0.4	2.21	20	4.0	5.4	15.8
SD-400H	44.6	10.0	63	-	19.6	4.0	3.4	17.82	6.1	1.5	0.75	5.56	32	4.0	7.2	21.2
SD-700H	61	16.0	100	-	24.2	4.0	5.5	22	11	2.5	1.5	9.95	40	6.0	10.0	29
SD-1000H	95.2	35.0	160	-	45	10	9.0	41.2	13.2	2.5	2.4	12.0	63	10.0	15.0	42

ⓐImport current ⓑLead ⓒSwitch ⓓBlower Circuit breakers

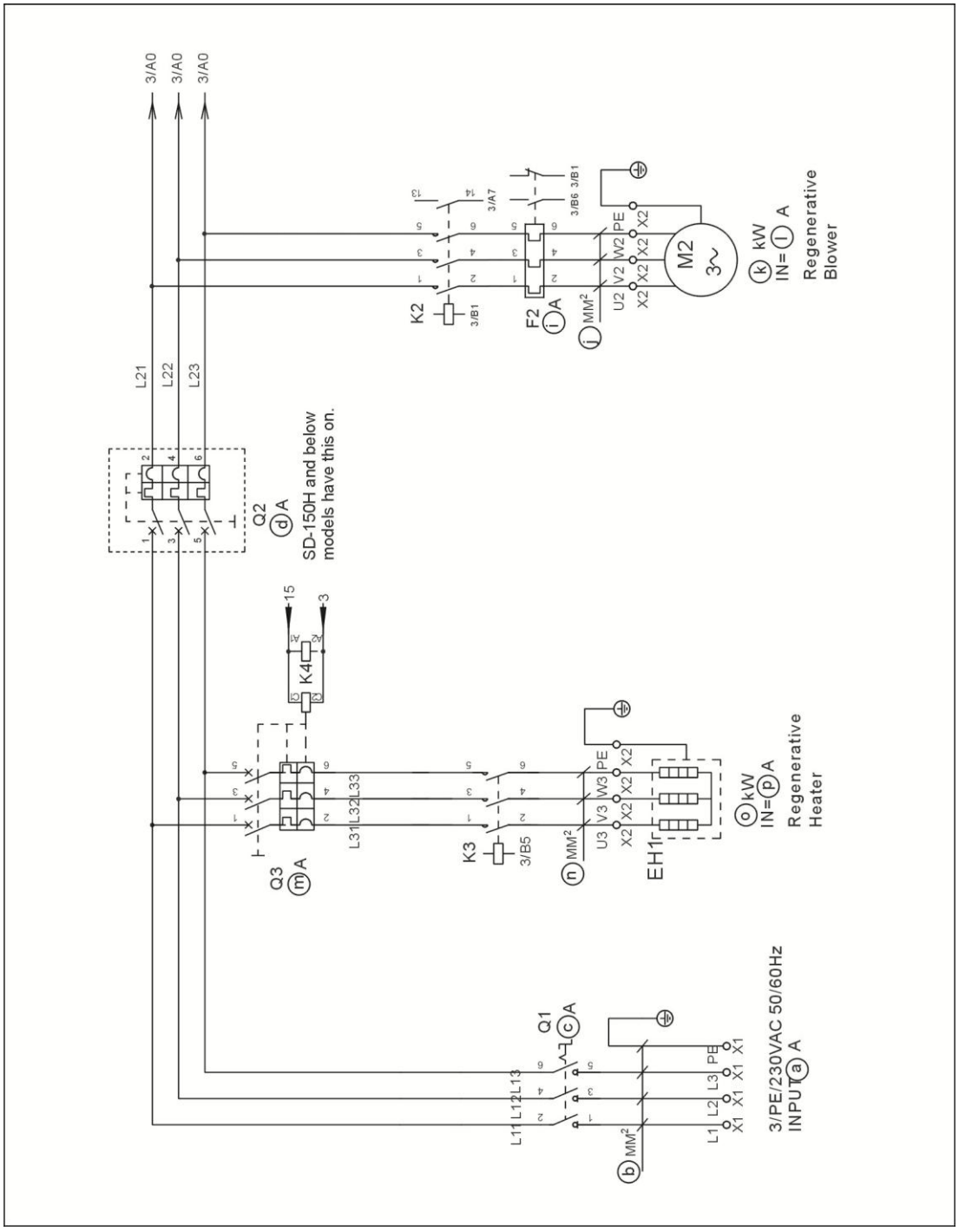
ⓔDrying blower loader ⓕDrying blower wire dia. ⓖDrying blower power ⓗDrying blower current

ⓘRegenerative blower loader ⓙRegenerative blower wire dia.

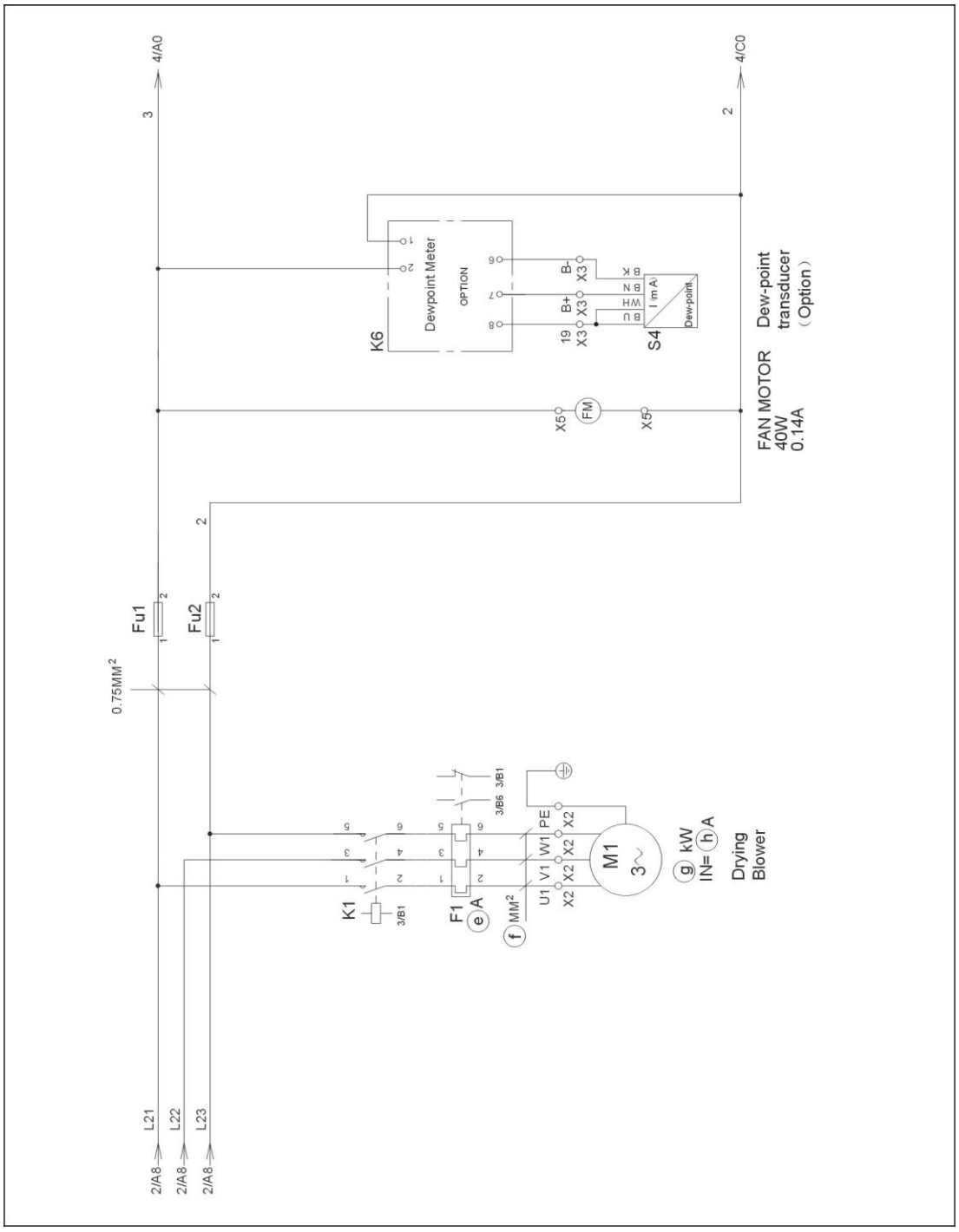
ⓚRegenerative blower power ⓛBlower current ⓜHeater fuse

ⓝHeater lead ⓞHeater power ⓟHeater current

2.7.13 Main Circuit (230V)

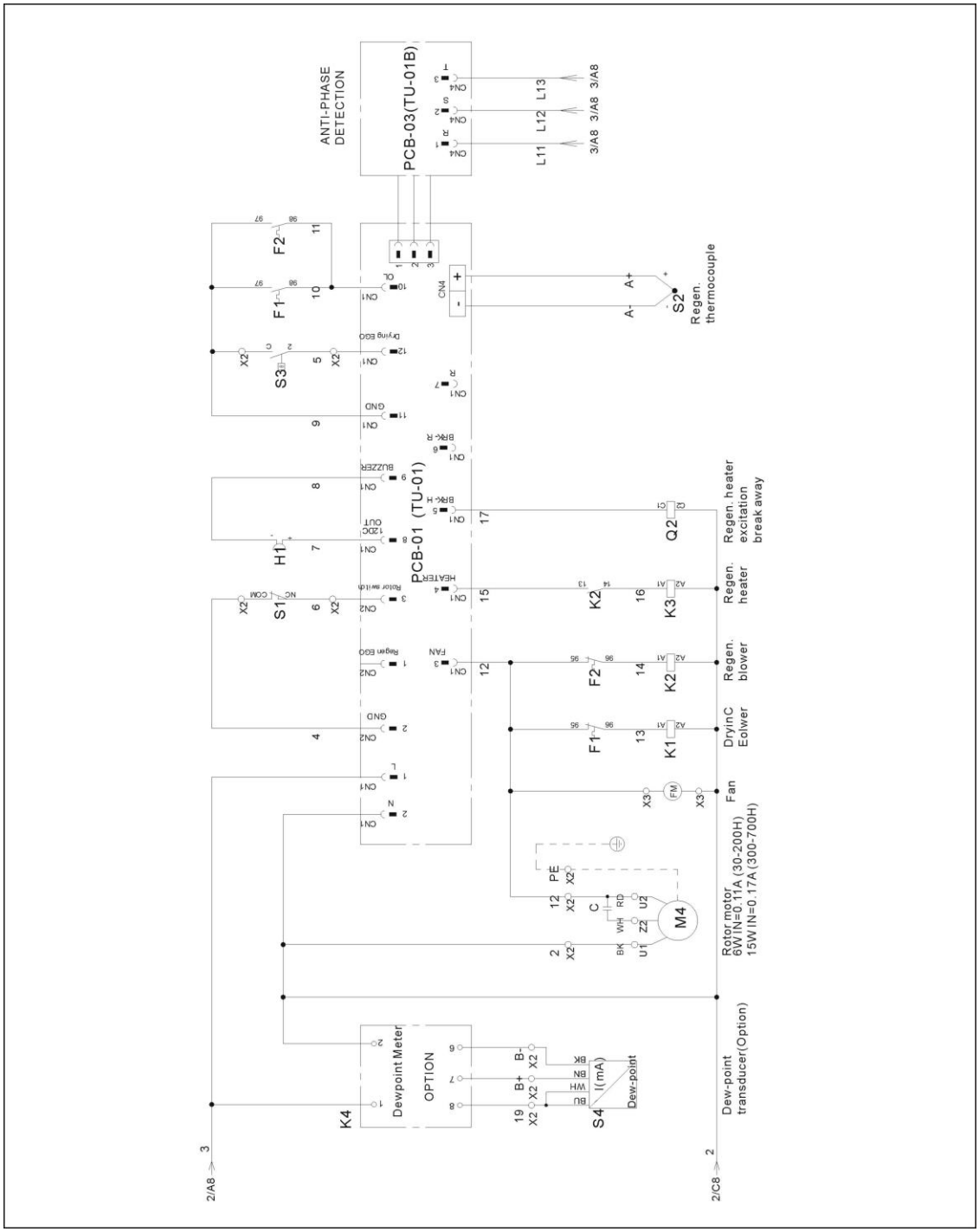


Picture 2-21： Main Circuit 1(230V)



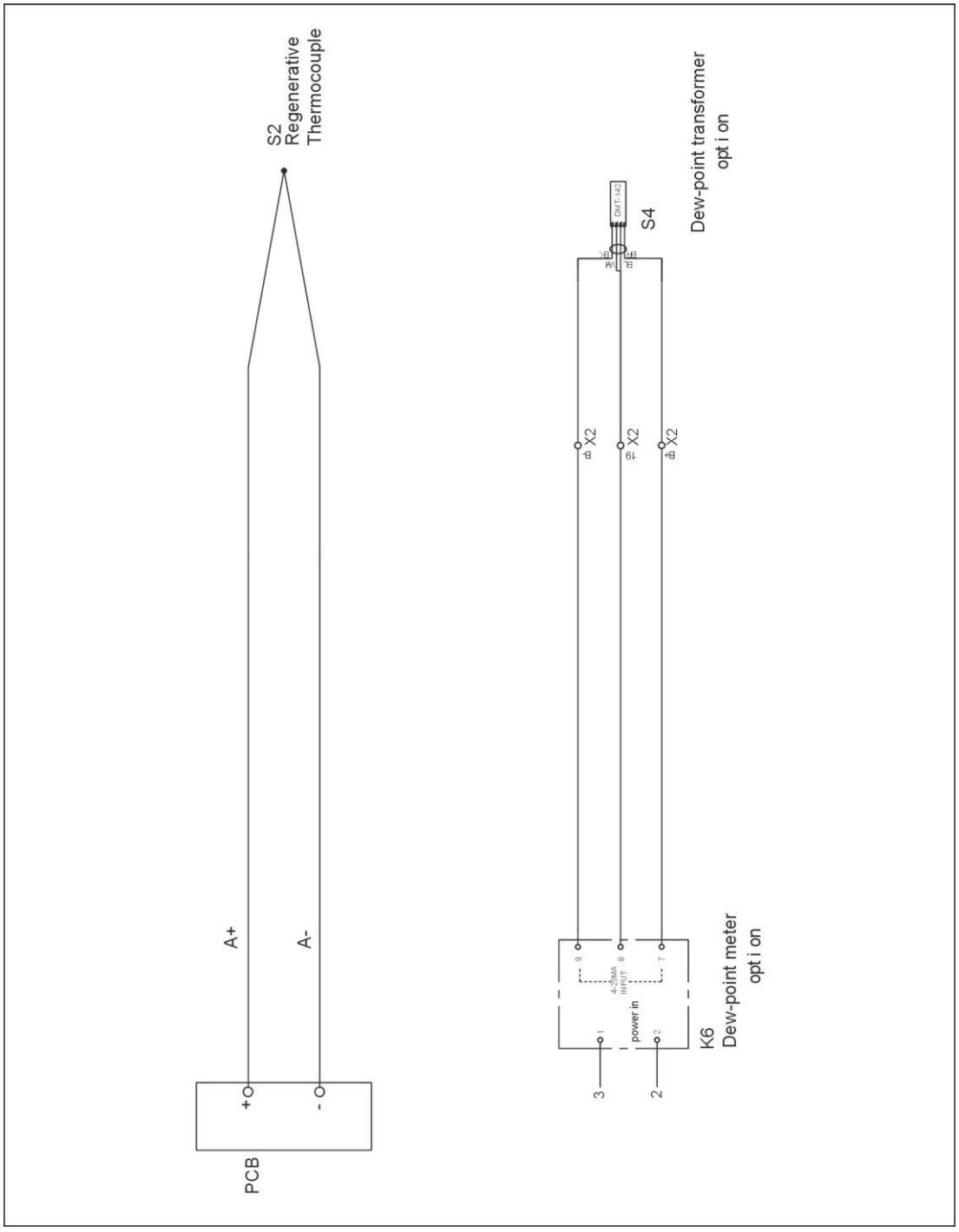
Picture 2-22：Main Circuit 2 (230V)

2.7.14 Control Circuit (230V)



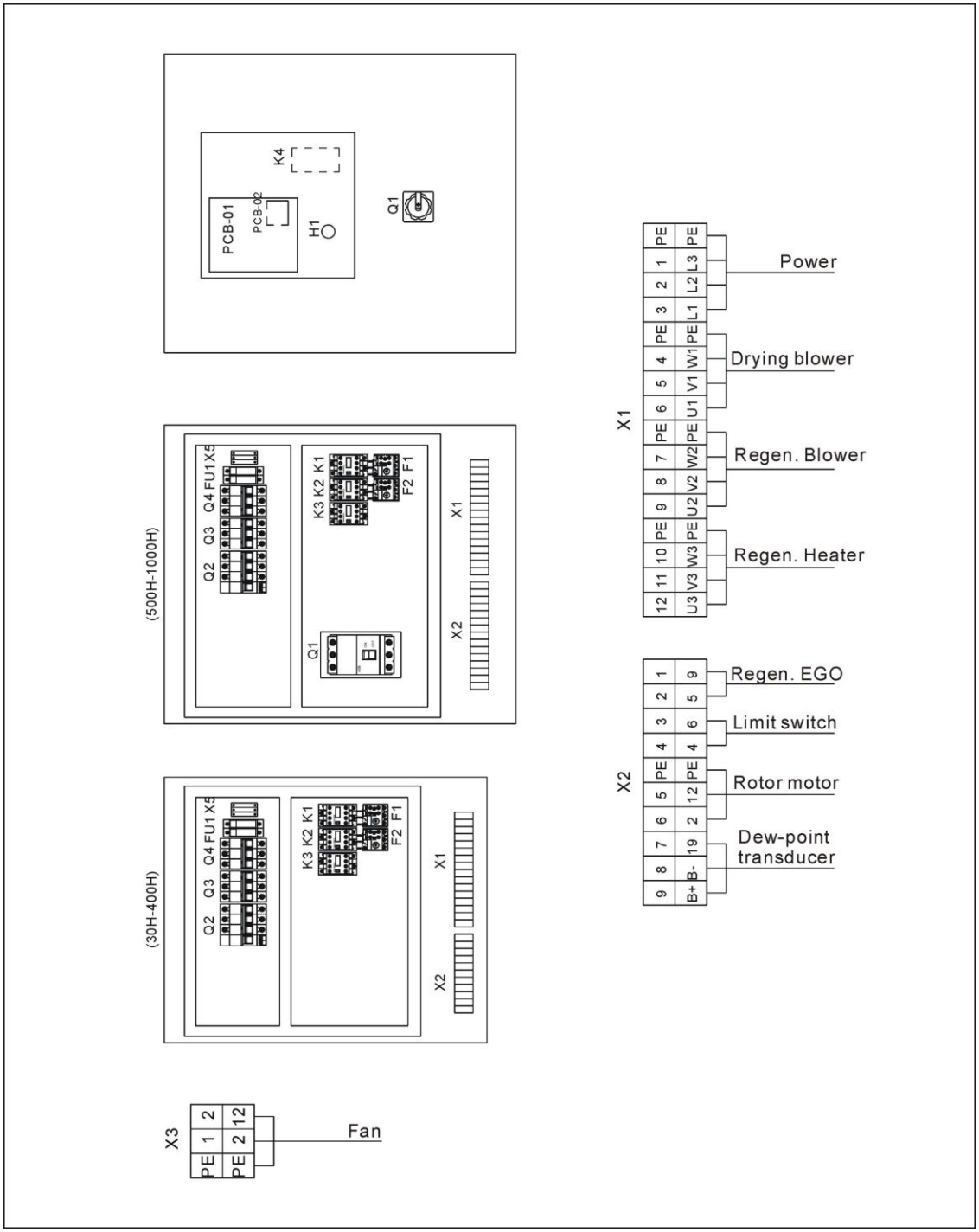
Picture 2-23：Control Circuit (230V)

2.7.15 Thermocouple Wiring Diagram (230V)



Picture 2-24：Thermocouple Wiring Diagram (230V)

2.7.16 Components Layout (230V)



Picture 2-25：Components Layout (230V)

2.7.17 Electrical Components List (230V)

Table 2-28: Electrical Components List (SD-30H) (230V)

No.	Symbol	Name	SD-30H	
			Specifications	Part No.
1	Q1	Main switch	16A	YE10200300000
2	Q2	Circuit breakers*	10A	YE40600300000
3	Q3	Circuit breakers*	16A	YE40601600000
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	YE00301000000
6	K2	Contactors*	230V 50/60Hz	YE00301000000
7	K3	Contactors*	230V 50/60Hz	YE00310000000
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	1.6~2.5A	YE01162500000
12	F2	Overload relays*	1.6~2.5A	YE01162500000
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	32A 800V	YE61250000000
23	-	Terminal	-	YE61253500000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X3	Terminal	32A 800V	YE61250000000
27	-	Terminal	-	YE61253500000
28	X3	Terminal	32A 800V	YE61250000000
29	X5	Terminal	32A 800V	YE61250000000
30	-	Terminal	-	YE61253500000
31	X4	Terminal	32A 800V	YE61250000000
32	-	Terminal	-	YE61253500000
33	M1	Blown*	0.2kW	-
34	M2	Blown*	0.2kW	-
35	M3	Motor*	0.006kW	YM50616400100

36	EH1	Heater**	3Φ 230V 3kW	-

Table 2-29：Electrical Components List (SD-50H) (230V)

No.	Symbol	Name	SD-50H	
			Specifications	Part No.
1	Q1	Main switch	16A	YE10200300000
2	Q2	Circuit breakers*	10A	YE40600300000
3	Q3	Circuit breakers*	16A	YE40601600000
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	YE00301000000
6	K2	Contactors*	230V 50/60Hz	YE00301000000
7	K3	Contactors*	230V 50/60Hz	YE00310000000
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	1.6~2.5A	YE01162500000
12	F2	Overload relays*	1.6~2.5A	YE01162500000
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	32A 800V	YE61250000000
23	-	Terminal	-	YE61253500000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X3	Terminal	32A 800V	YE61250000000
27	-	Terminal	-	YE61253500000
28	X3	Terminal	32A 800V	YE61250000000
29	X5	Terminal	32A 800V	YE61250000000
30	-	Terminal	-	YE61253500000
31	X4	Terminal	32A 800V	YE61250000000
32	-	Terminal	-	YE61253500000
33	M1	Blown*	0.4kW	-
34	M2	Blown*	0.2kW	-
35	M3	Motor*	0.006kW	YM50616400100
36	EH1	Heater**	3Φ 230V 3kW	-

* 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 2-30：Electrical Components List (SD-80H/120H) (230V)

No.	Symbol	Name	SD-80H/120H	
			Specifications	Part No.
1	Q1	Main switch	25A	YE10210300000
2	Q2	Circuit breakers*	15A	YE40601500000
3	Q3	Circuit breakers*	16A	YE40601600000
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	YE00301000000
6	K2	Contactors*	230V 50/60Hz	YE00301000000
7	K3	Contactors*	230V 50/60Hz	YE00320000000
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	4~6.3A	YE01046300100
12	F2	Overload relays*	1.6~2.5A	YE01162500000
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	41A 800V	YE61040000000
23	-	Terminal	-	YE61043500000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X3	Terminal	32A 800V	YE61250000000
27	-	Terminal	-	YE61253500000
28	X3	Terminal	32A 800V	YE61250000000
29	X5	Terminal	32A 800V	YE61250000000
30	-	Terminal	-	YE61253500000
31	X4	Terminal	32A 800V	YE61250000000
32	-	Terminal	-	YE61253500000
33	M1	Blown*	0.75kW	-
34	M2	Blown*	0.2kW	-
35	M3	Motor*	0.006kW	YM50616400100
36	EH1	Heater**	3Φ 230V 3.5kW	-

* 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 2-31： Electrical Components List (SD-200H) (230V)

No.	Symbol	Name	SD-200H	
			Specifications	Part No.
1	Q1	Gate circuit breakers	63A	YE40636300000
2	Q2	-	-	-
3	Q3	Circuit breakers*	20A	YE40602000100
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	YE00311000000
6	K2	Contactors*	230V 50/60Hz	YE00301000000
7	K3	Contactors*	230V 50/60Hz	YE00330000000
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	8~12.5A	YE01812500000
12	F2	Overload relays*	1.6~2.5A	YE01162500000
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	57A 800V	YE61000600300
23	-	Terminal	-	YE61060000000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X2	Terminal	41A 800V	YE61040000000
27	-	Terminal	-	YE61043500000
28	X3	Terminal	32A 800V	YE61250000000
29	-	Terminal	-	YE61253500000
30	X3	Terminal	32A 800V	YE61250000000
31	X5	Terminal	32A 800V	YE61250000000
32	-	Terminal	-	YE61253500000
33	X4	Terminal	32A 800V	YE61250000000
34	-	Terminal	-	YE61253500000
35	M1	Blown*	1.5kW	-

36	M2	Blown*	0.4kW	-
37	M3	Motor*	0.006kW	YM50616400100
38	EH1	Heater**	3Φ 230V 5.4kW	-

Table 2-32：Electrical Components List (SD-400H) (230V)

No.	Symbol	Name	SD-400H	
			Specifications	Part No.
1	Q1	Gate circuit breakers	63A	YE40636300000
2	Q2	-	-	-
3	Q3	Circuit breakers*	32A	YE40633200000
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	YE00311000000
6	K2	Contactors*	230V 50/60Hz	YE00301000000
7	K3	Contactors*	230V 50/60Hz	YE00340000000
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	12.5~20A	YE01125200100
12	F2	Overload relays*	4~6.3A	YE01046300100
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	76A 800V	YE61100000000
23	-	Terminal	-	YE61103500000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X2	Terminal	41A 800V	YE61040000000
27	-	Terminal	-	YE61043500000
28	X3	Terminal	32A 800V	YE61250000000
29	-	Terminal	-	YE61253500000
30	X3	Terminal	32A 800V	YE61250000000
31	X5	Terminal	32A 800V	YE61250000000
32	-	Terminal	-	YE61253500000
33	X4	Terminal	32A 800V	YE61250000000

34	-	Terminal	-	YE61253500000
35	M1	Blown*	3.4kW	-
36	M2	Blown*	0.75kW	-
37	M3	Motor*	0.015kW	YM50715400100
38	EH1	Heater**	3Φ 230V 7.2kW	-

Table 2-33：Electrical Components List (SD-700H) (230V)

No.	Symbol	Name	SD-700H	
			Specifications	Part No.
1	Q1	Gate circuit breakers	100A	YE40301600000
2	Q2	-	-	-
3	Q3	Circuit breakers*	40A	YE40634000000
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	-
6	K2	Contactors*	230V 50/60Hz	YE00311000000
7	K3	Contactors*	230V 50/60Hz	YE00462200100
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	16~25A	YE01162500300
12	F2	Overload relays*	8~12.5A	YE01812500000
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	76A 800V	-
23	-	Terminal	-	YE61063500000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X2	Terminal	41A 800V	YE61040000000
27	-	Terminal	-	YE61043500000
28	X2	Terminal	57A 800V	YE61060000000
29	-	Terminal	-	YE61063500000
30	X3	Terminal	32A 800V	YE61250000000
31	-	Terminal	-	YE61253500000

32	X3	Terminal	32A 800V	YE61250000000
33	X5	Terminal	32A 800V	YE61250000000
34	-	Terminal	-	YE61253500000
35	X4	Terminal	32A 800V	YE61250000000
36	-	Terminal	-	YE61253500000
37	M1	Blown*	5.5kW	-
38	M2	Blown*	1.5kW	-
NO.	Symbol	Name	SD-700H	
			Specifications	Part No.
39	M3	Motor*	0.015kW	YM50715400100
40	EH1	Heater**	3Φ 230V 10kW	-

* 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 2-34：Electrical Components List (SD-1000H) (230V)

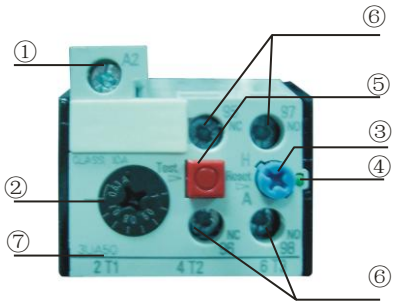
No.	Symbol	Name	SD-1000H	
			Specifications	Part No.
1	Q1	Gate circuit breakers	160A	YE40633200000
2	Q2	-	-	-
3	Q3	Circuit breakers*	63A	YE40636300000
4	-	Excitation break away	S9	YE40000900000
5	K1	Contactors*	230V 50/60Hz	YE00462200100
6	K2	Contactors*	230V 50/60Hz	YE00321100000
7	K3	Contactors*	230V 50/60Hz	YE00482200000
8	K5	Timer	230VAC 50/60Hz	YE86300300000
9	K4	Middle relay*	230VAC 50/60Hz	YE03270700000
10	K6	Dew-point meter	100~240VAC 50/60Hz	-
11	F1	Overload relays*	32~50A	YE01325000000
12	F2	Overload relays*	10~16A	YE01101600100
13	F11	Fuse**	2A	YE41001000000
14	S1	Micro switch*	10A	YE14511200000
15	S2	Thermocouple	-	-
16	S3	Overheat protector*	250V 5(4)A	YE21503000100
17	S4	Dew-point transducer	POWER=24VDC OUT=4-20mA	YE15041200000
18	PCB-01	PCB*	PTC43/44	YE80001500000
19	PCB-02	PCB	SFD-102	YE80010200000
20	FM	Fan*	220-240 50/60Hz 0.14A	YM60121200400
21	H1	Buzzer	24VDC	YE84002700000
22	X1	Terminal	232A 800V	YE61350000000
23	-	Terminal	-	YE61353500000
24	X2	Terminal	32A 800V	YE61250000000
25	-	Terminal	-	YE61253500000
26	X2	Terminal	76A 800V	YE61100000000
27	-	Terminal	-	YE61103500000
30	X3	Terminal	32A 800V	YE61250000000
31	-	Terminal	-	YE61253500000
32	X3	Terminal	32A 800V	YE61250000000
33	X5	Terminal	32A 800V	YE61250000000
34	-	Terminal	-	YE61253500000
35	X4	Terminal	32A 800V	YE61250000000
36	-	Terminal	-	YE61253500000
37	M1	Blown*	9.0kW	-
38	M2	Blown*	2.4kW	-

39	M3	Motor*	0.015kW	YM50715400100
40	EH1	Heater**	3Φ 230V 15kW	-

2.7.18 Main Electrical Components Description

Overload Relay

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



Picture 2-26：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.

2.8 Operation Procedures

Before connecting electrical power source, the main power switch must be turned to OFF position. After the machine connected with power source, turn the main power switch to ON position. According to your applications, operate drying and loading system respectively.

2.8.1 Operation Regulations

Picture 2-27：Operation Regulations

1) Do not use keen-edged object instead of hands to operate the touch screen, and prevent violent collision of it.
2) In a dry environment, static electricity may accumulated on the touch screen. Use a metal wire to discharge it before operating.
3) Use alcohol or eleoptene to wipe off the pollutants on the screen. Other solvent may cause the color of the screen to fade out.
4) Do not tear down any parts of the touch screen or take away any PCBs attached to it.

2.8.2 Description of Touch Screen

Picture 2-28：Description of Touch Screen

A：Display

B：Touch panel

C：LED status indicator

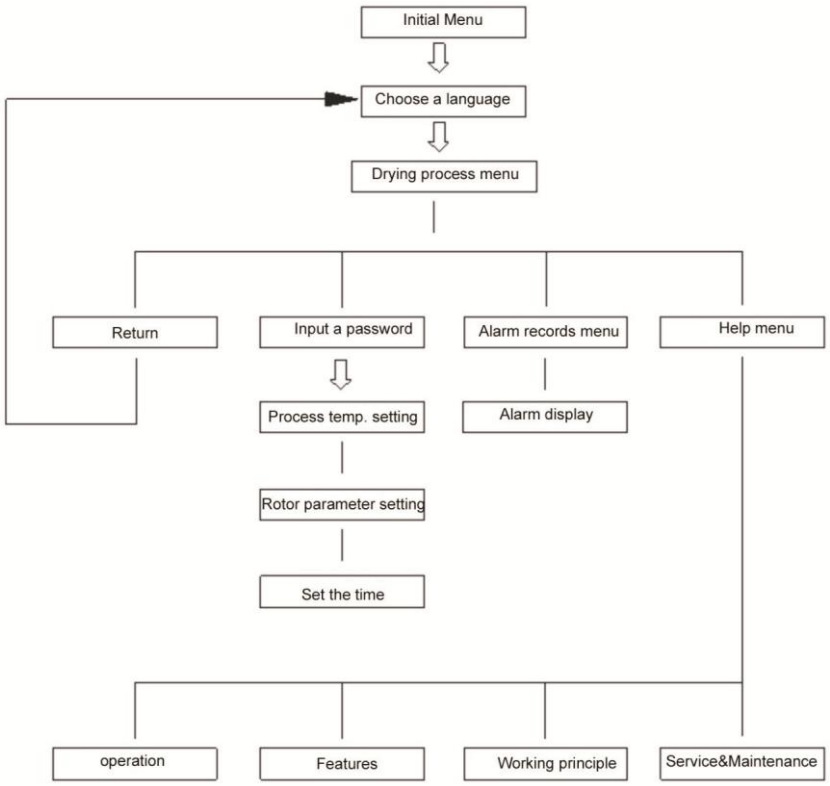
2.8.3 Touch Panel Appear Error

Table 2-35：Touch Panel Information

LED indicator light	XBT GT State
Green (light)	Work welled
Orange (light)	Backlight lamp burning
Orange (shine)	During software startup
Red (light)	Power status
No shine	Power break off

3. Operation of the Menus

The system consists of six main menus. They are: drying process, temperature parameters, rotor parameters, time setting, alarm records and help menu. Please refer to following flow Table.



Picture 2-29：Screen Operation Flow Table

4. Explanation of the Menus

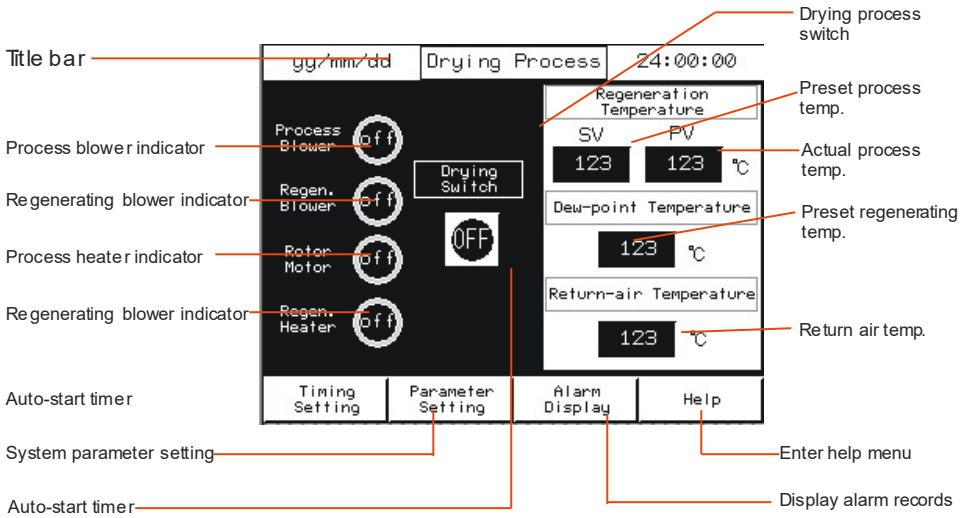
1) Initial menu

Please refer to the following initial menu. Press “English” or “Chinese” to select a language. Then enter drying process menu.

Picture 2-30：System Default System

2) Drying process menu.

Drying process menu as shown below:



Picture 2-31：Drying Process Screen

A. Operation of the menu

Start drying process:

Touch drying switch to make it show ON, then the system starts. If preheat is required, set delayed time first.

Stop drying process:

Touch the drying switch again to make it show OFF, then the system stops

running. (Attention: In order to prolong the life of honeycomb-rotor, extended cooling time is needed to cool the rotor. Set the delayed time at about 2 to 3 minutes. Please refer to time parameters setting menu to set the time.)

Set process temp.

Touch the preset value of process temp. A numerical keypad will appear. Use the keypad to enter temp. value. For 1 to 2 system (two or more drying hopper match with one dehumidifier), the process temp. is set by relative temp. controller right below each drying hopper. (Turn on the switch of temp. controller beside of it first.)

Set regenerating temp.

Touch the preset value of regenerating temp. A keypad will appear.

Use the keypad to enter regenerating temp. value.

Note!

Regenerating temp. value are set between a certain limits. The systen has set its regenerating temp in the ranges of 130--180℃ and 00--130℃! The Factuary Default is130℃ or 180 ℃. Do not reset except in special circumstances.

B. Four functional keys

Return:

press this button to return back to previous menu.

Parameter setting:

To enter parameter setting menu. (Password is needed)

Alarm Display:

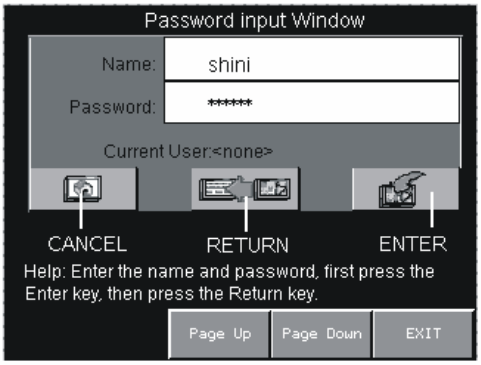
When the alarm of the system is activated, press this button to display alarm records.

Help:

Press this button to enter help menu.

3) Temperature parameters menu

Touch parameter setting button. Input user name: Shini, Input passwords 3588 Press "ENTER" button to confirm, and then "RETURN" key Return " dry monitor screen." Again by "parameter settings" button, you can enter the parameter settings.

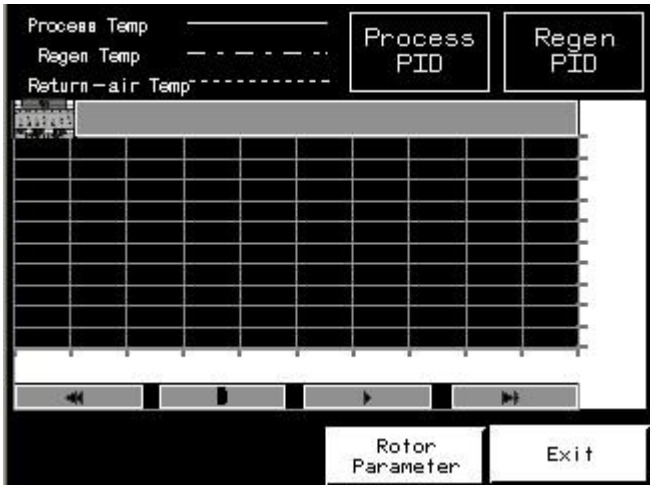


Picture 2-32：Temperature Parameters Setting 1

Note!

Please keep this password securely and safely. If the password is missing, then the operator won't be able to log into the system parameter setup screen. It is better to preserve this password either by system administrator or senior operator.

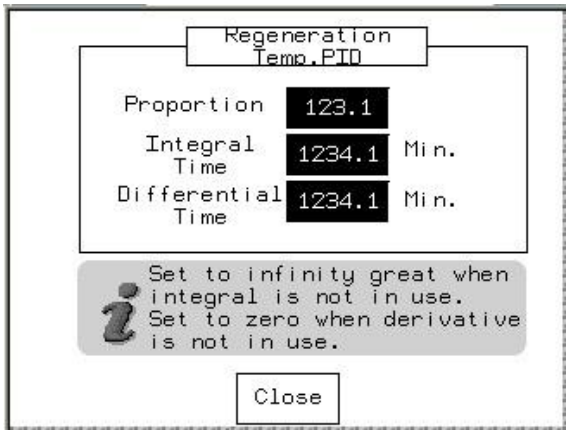
After input correct password, the following menu appears.



Picture 2-33：Temperature Parameters Setting 2

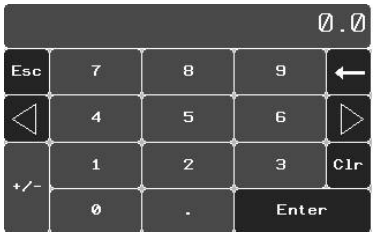
A. Process temp. Parameters setting

Touch Process PID. , then the following menu appears. It includes proportion, integral, and derivative time.



Picture 2-34：Process temp. Parameters Setting 1

When need to change one of the parameters, touch corresponding area, then a keypad appears. Input a value, press ENTER to confirm.



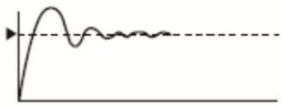
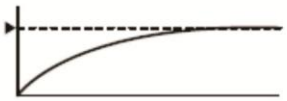
Picture 2-35：Process temp. Parameters Setting 2

Max. and Min. on the key-pad shows the Max. and Min. value of current parameter. If it is out of the limits, input value could not be confirmed by pressing ENTER.

If the system can not control the temp. Accurately, reset P.I.D. parameters to gain more accurate temperature control.

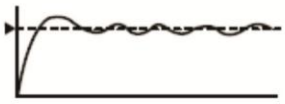
Adjustment of Proportion (P)

Table 2-36：Adjustment of Proportion (P)

P increases		After the oscillation, the curve will be settled and back to setup point.
P decrease		The curve increases gradually in order to maintain a long reliable period against over oscillation.

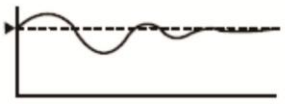
Adjustment of Integral Time (I)

Table 2-37：Adjustment of Integral Time (I)

I increases		For default value requires a longer time for steady status. But, it still has over pulse/under pulse and oscillation occurs.
I decrease		After the occurrence of over pulse/under pulse and oscillation, but the curve tends to rise rapidly.

Adjustment of Differential Time (D)

Table 2-38：Adjustment of Differential Time (D)

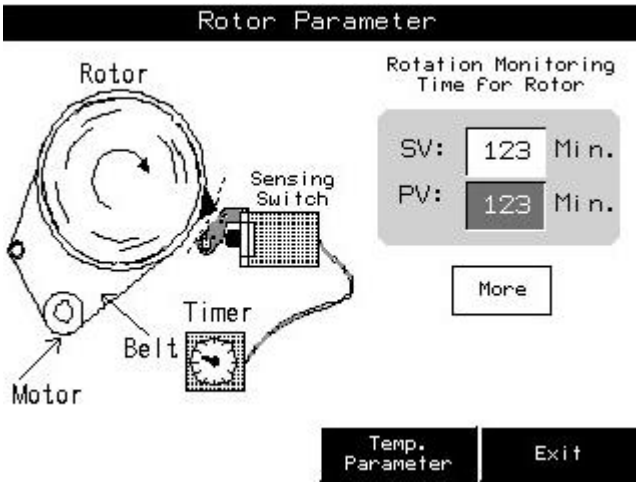
D increases		Over pulse/under pulse and steady time become less, but the curve has small oscillation.
D decrease		Over pulse/under pulse increases, the duration for setup value requires certain time.

B. Regenerating temp. Setting

Refer to the same setting procedures as for the "Process Temperature Control Parameter" by touching the Regen. P.I.D.

4) Rotor Speed Setting

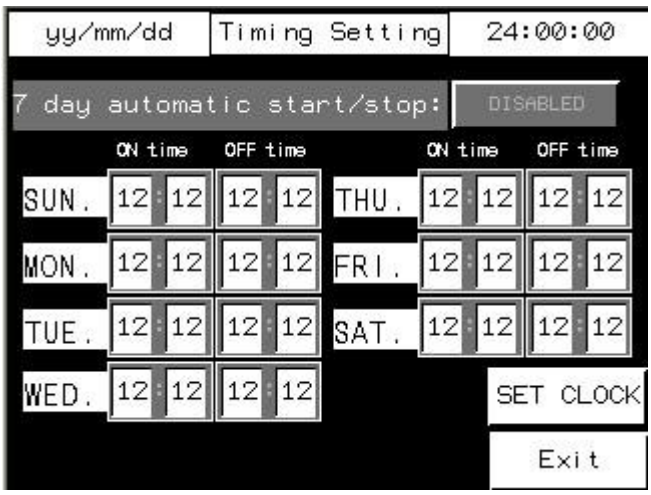
By touching Rotor Parameter button at the button of Parameter Setting screen. The rotor speed parameter setting screen prompts as shown below: In SV field, can set "Rotor Speed Motoring Time". IN PV field, displays the cycle time for each rotation. When PV value is greater than SV value, the system will send out rotor speed error alarm message. Touching "More" button to retrieve details about rotor speed monitor help menu.



Picture 2-36：Rotor Parameter Setting

5) Time Setting

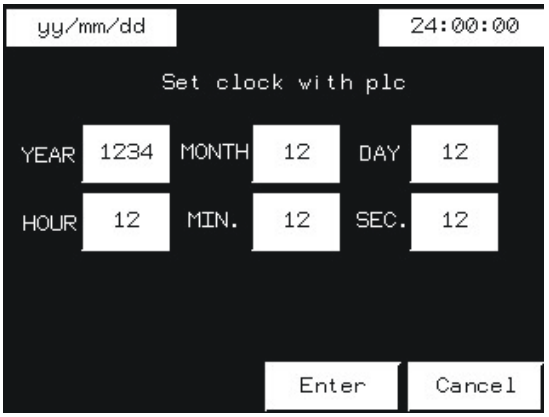
By touching "Time Setting" button at the bottom of Parameter Setting screen in order to enter into Time Setting screen as shown below:



Picture 2-37：Time Setting

Note!

The screen shows time 1 auto-start time only when delayed start-up function is enabled, and the screen shows time 2 extended cooling time only when the system is turned off.

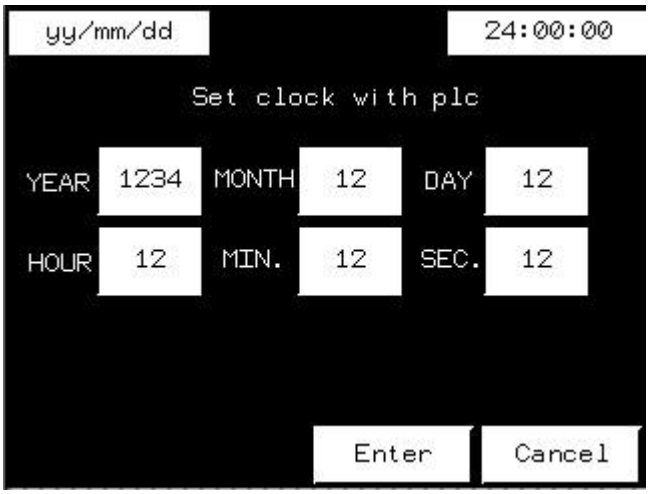


Picture 2-38：Time Setting 2

Touch parameter setting menu. A numeric keypad will appears. Input each parameter and then press OK, a new setting come into effect. Press cancel to remove the setting.

6) Alarm Fault Records

By touching "Alarm Display" button under the bottom of "Drying Process" screen or Conveying Process" screen in order to enter into Alarm Fault Records screen as shown below:



Picture 2-39：Alarm Fault Records

1. When alarm fault records are more than displaying space, by touching "Up" or "Down" keys to review more records.
2. Touching record content, a help message is prompted. According to help message, the operator could get the troubleshooting information.
3. Press "EXIT" button to exit from this screen.
4. System Alarm Records Display

Table 2-39：System Alarm Records Display

Alarm message	Results	Possible reasons
System reversed phase	The system can not be started, and flickering of red alarm light.	Voltage of power supply is too low, or phase shortage, or mistakes of phase sequence
Process blower overload	Dryer and dehumidifier stop working, and flickering of red alarm light.	Voltage of power supply is too low, or blower problems, or mistakes of setting current.
Regenerating blower overload	Dryer and dehumidifier stop working, and flickering of red alarm light.	Voltage of power supply is too low, or blower problems, or mistakes of setting current.
Process over-heat	Dryer and dehumidifier stop working, and flickering of red alarm light.	Temp. control parameters mistakes, or contactor failures, or regenerating thermocouple problems.
Regenerating over-heat	Dryer and dehumidifier stop working, and flickering of red alarm light.	Temp. control parameters mistakes, or contactor failures, or

		regenerating thermocouple problems.
Return air over-heat	Dryer and dehumidifier stop working, and flickering of red alarm light.	Cooling water circulation problems
Drying thermocouple break	Dryer and dehumidifier stop working, and flickering of red alarm light.	Thermocouple is not connected or poor connection or wrongly connected.
Regeneration thermocouple break	Dryer and dehumidifier stop working, and flickering of red alarm light.	Thermocouple is not connected or poor connection or wrongly connected.
Return air thermocouple break	Dryer and dehumidifier stop working, and flickering of red alarm light.	Thermocouple is not connected or poor connection or wrongly connected.
Rotor has no action.	Dryer and dehumidifier stop working, and flickering of red alarm light.	Motor is halted or burned out. Belt broken or damage of speed controller or parameter mistakes or rotor.
PLC is not in running mode.	The system can not work.	PLC was not set to RUN mode

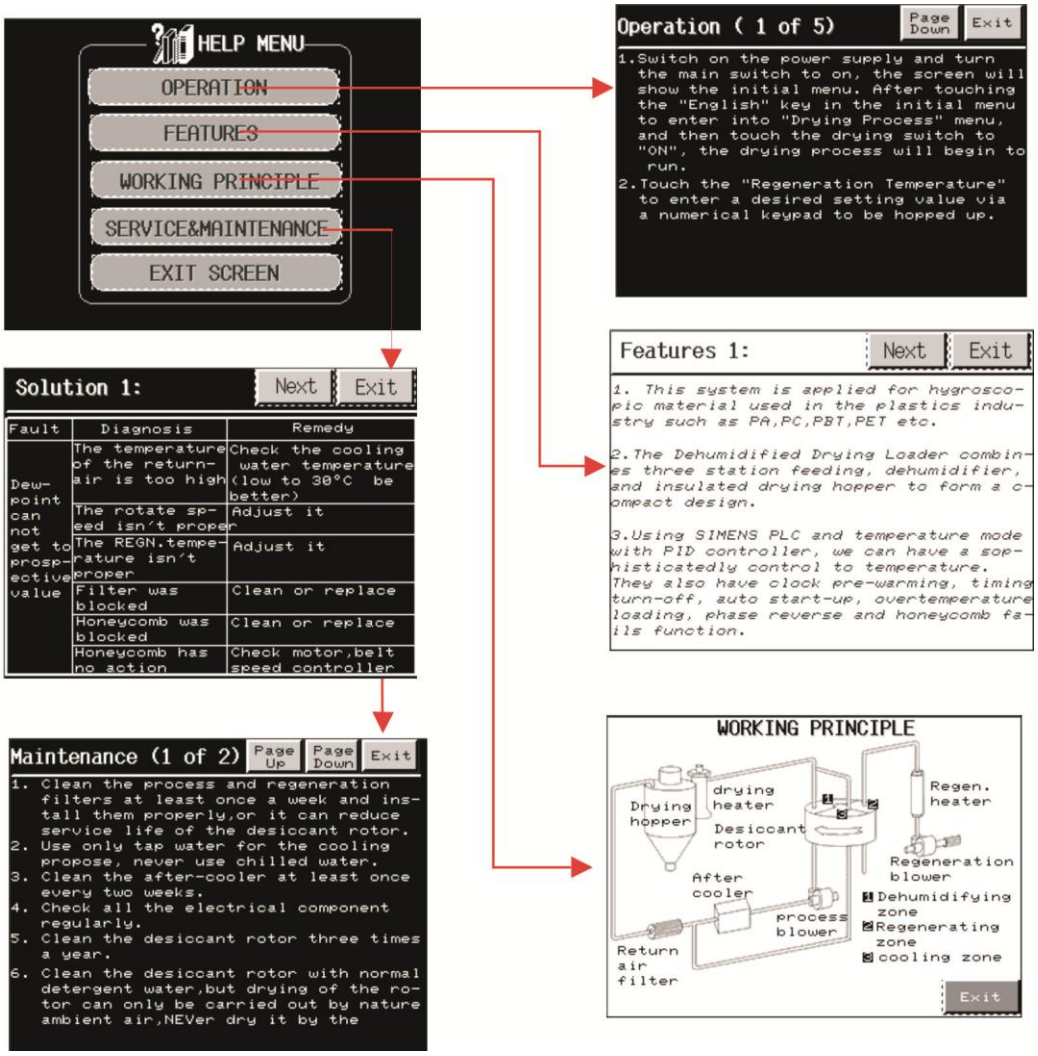
Note: 1) Overload Relay reset: Open control box, press "RESET" button on the corresponding overload relay.

2) Material Suction Alarm reset: Touch to turn the corresponding Hopper Receiver Selection switch into "OFF" and then turn it to "ON" again.

3) Rotor Speed Alarm reset: Touch to turn the Drying Switch to "OFF" and then turn it to "ON" again.

7) Help menu

Touch the help button to enter help menu. Press relative button to display details of each item.



Picture 2-40：Help Menu

2.8.4 Dew-point Monitor

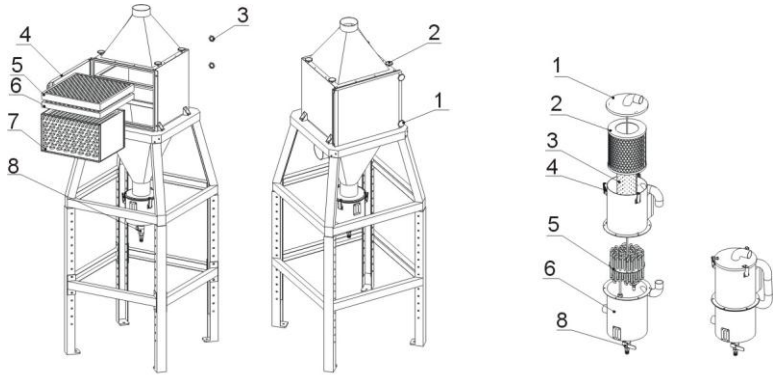
1. Embedded Dew-point Monitor

Picture 2-41：Embedded Dew-point Monitor

2. Portable Dew-point Monitor

Picture 2-42：Portable Dew-point Monitor

2.8.5 Oil Filter



EOF-1000~4000 EOF-30~500

Picture 2-43：Oil Filter

Type	Applicable Model
EOF-30	SD-30H~120H
EOF-150	SD-150H/200H
EOF-300	SD-300H/400H
EOF-500	SD-700H
EOF-1000	SD-1000H
EOF-1500	SD-1500H
EOF-2000	SD-2000H
EOF-3000	SD-3000H
EOF-4000	SD-4000H

1. Selection Aim:

There is much oil in dehumidifying air return, oil filter is selected to ensure dehumidifying function and prolong service life of honeycomb.

Note:

Please clean oil filter every week, can increase or decrease cleaning frequency according to oil quantity of return air. Oil filter equip with material clearance door, oil is discharged from ball valve 8 when full. The service life of activated carbon and middle efficient filter is generally two months. Service life can be adjusted

properly according to oil quantity in return air.

2. Filter cleaning steps of EOP-30~500:

1) Open snap hook 4, take out tank cover 1, stainless steel filter 2 and activated carbon filter 3.
2) Loose butterfly nut, take out stainless steel filter 2, and remove away dust and oil from it by pressured air.
3) Loose butterfly nut, take out activated carbon filter 3 and replace activated carbon.
4) Open oil storage bin 6, take out cooler 5 and remove away dust and oil from it by pressured air.
5) Install oil filter after cleaning.

3. Filter cleaning steps of EOF-1000~4000:

1) Loose hexagon nut 1 and open material clearance door 4.
2) Loose hexagon nut 2, take out stainless steel filter 6 and middle efficient filter 5, remove away dust and oil from stainless steel filter and middle efficient filter by pressured air.
3) Loose fixed nut 3, take out cooler 7 and remove away dust and oil from it by pressured air.
4) Install oil filter after cleaning.

3. Installation Testing

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

Power supply of the machine should be handled by qualified electricians!

Notes!

Keep the machine 2m from the combustible distance.

3.1 Attention

1) Make sure voltage and frequency of the power source comply with those indicated on the manufacturer nameplate, which is attached to the machine.
2) Power cable and earth connections should conform with your local regulations.
3) Use independent electrical wires and power switch. Diameter of the wire should not smaller than those used in the control box.
4) The electrical wire connection terminals should be tightened securely.
5) The machine requires a 3-phase 4-wire power source, connect the power lead (L1, L2, L3) to the live wires, and the earth (PE) to the ground.
6) Power supply requirements:
   Main power voltage: ± 5%
   Main power frequency: ± 2%
7) The cooling water pressure is 3~5 kgf/cm^2 ,the pressure gap between the inlet water and the outlet water is 3~5 kgf/cm^2, and the cooling water temperature is 10~30℃.

Power Supply

Make sure that the power supply conforms with required specifications before installation. SD-H honeycomb Dehumidifiers are generally set to be used with 3Φ400V 50Hz power supply or other specifications if required.

3.2 Honeycomb-rotor

3.2.1 What is Honeycomb-rotor?

The main body of the honeycomb-rotor is a honeycomb, made by ceramic fibre and organic additives, sintered under high temperature with molecular sieve and silica gel, to be strongly bonded together and form a solid and hard surface. Not like common molecular sieve, which will produce dusts and fines to pollute raw materials when aging or become saturated requiring regular replacement, honeycomb-rotor offer unlimited long life and can be cleaned when it is polluted. The moisture of return air is quickly absorbed by numerous tunnels before coming out of the rotor to form low dew-point air. At the same time, regenerating blower takes dry air into the honeycomb-rotor from an opposite direction to regenerate the rotor.

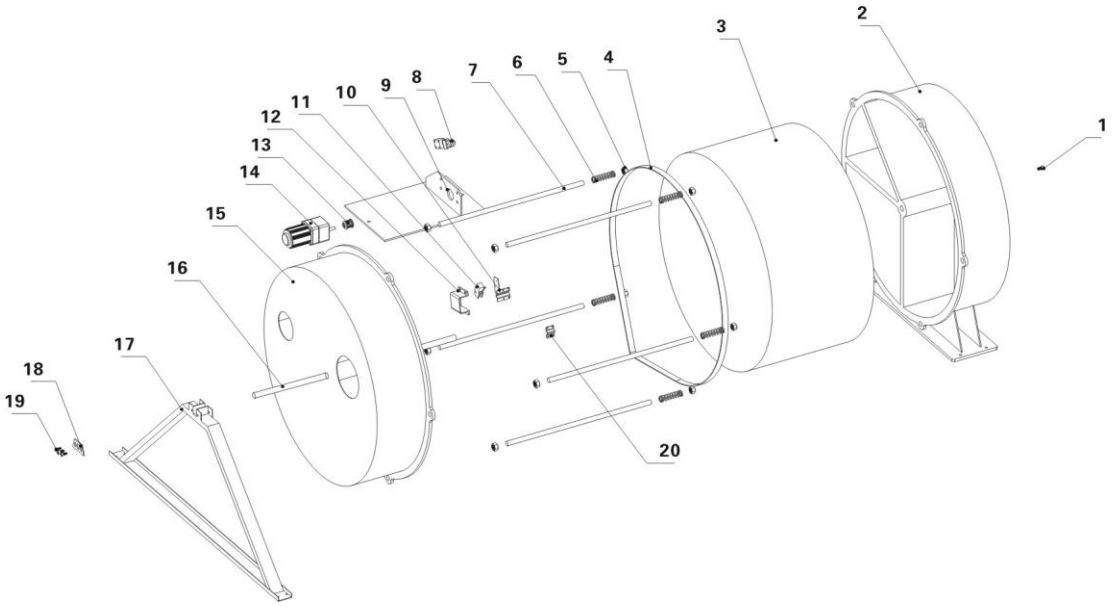
Picture 3-1： Honeycomb Rotor

3.2.2 Installation of the Rotor (SD-30H~700H)

Picture 3-2: Installation of the Rotor (SD-30H~700H)

1) The upper and lower lid of honey-comb should install Teflon gasket (Fig. 1).
2) Use 4 screws to fix the rotor base on the machine frame firmly, and then install the shaft accordingly (Fig. 2).
3) Install the gearmotor and transmission gear (Fig. 4).
4) Install and fix the main support screws (Fig. 3).
5) Fit the transmission belt in proper position (Fig. 6).
6) Install the honeycomb-rotor (Fig. 9) and transmission belt (Fig. 12).
7) Fix the rotor top cover (Fig. 8).
8) Fit all springs and tighten the screws (Fig. 7).
9) Install both the transmission belt (Fig. 13) and belt tension regulator (Fig. 14).
10) Install micro-switch and fixed board firmly (Fig. 10).

3.2.3 Installation of the Rotor (SD-1000H~4000H)



Picture 3-3：Installation of the Rotor (SD-1000H~4000H)

1) Use one solid strap or applicable washer to lifted or block up to the wheel 3 to align the wheel bearing bore and fixed honeycomb lid 2 center hole.
2) Use honeycomb shaft 16 to penetrate the wheel 3 and fixed honeycomb lid 2, and install synchronic belt 4 on the rotor 3.
3) Install removable lid 15 on the honeycomb shaft 16, and use honeycomb mounting bracket 17 to sustain the shaft.
4) Use inner hexagonal screw 1 to fix the plate 18 on the shaft 16.
5) Use hexagonal nut 5、double-headed screw bolt 7 and spring 6 to fix the removable lid 15, which ensures good seal at the ends of the honeycomb-rotor.
6) Use fixed iron sheet 20、fixed iron sheet 10 to fix microswitch 10, this ensures that the direction of shell fragment of microswitch 10 is the same as rotating rotor 3, and then install the box of microswitch 12.
7) Use two solid straps to fix honeycomb lid 2 and honeycomb mounting bracket 17, then install components on the bracket.
8) Install motor cabinet 9 on the bracket, then install gearmotor 14 and

synchronic wheel 13 and synchronic belt 4.

9) Install belt tightener on the motor cabinet to make belt tightener rotate without slipping.

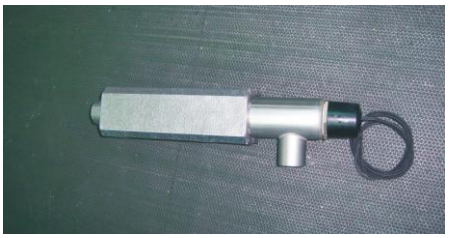
3.3 Heater Assemblies

1) Install the heating pipe in the heater.

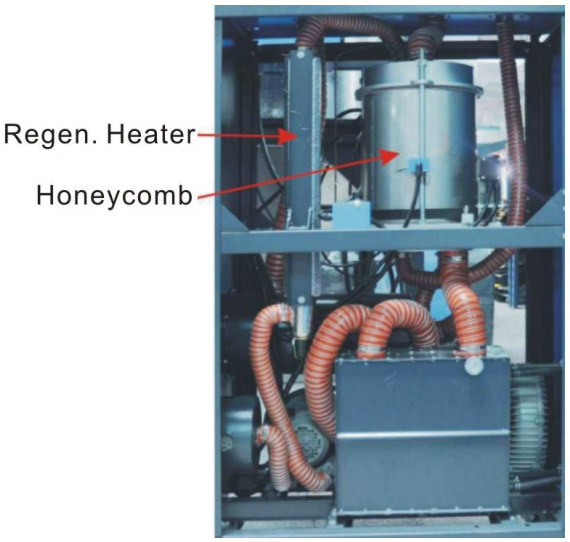
2) Fix the heater into the housing. (See right picture)

Warning!
Hot surfaces could burn hands. Take care of high temperature!
This label should be stick to the shell of heater.

1



2



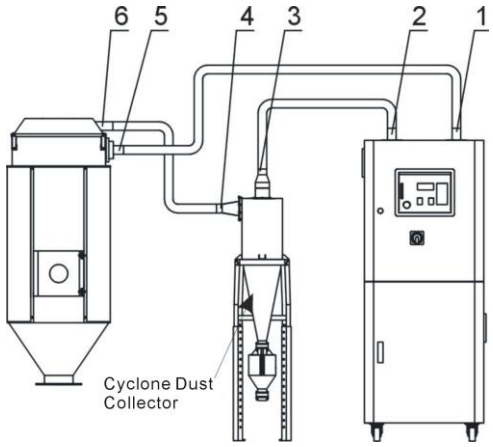
Picture 3-4：Heater Assemblies

3.4 EGO

The EGO value has been setting before out factory, Don't modify it.

Picture 3-5：EGO

3.5 Cyclone Dust Collector

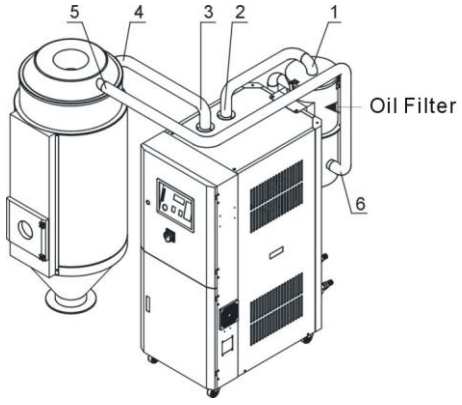


Picture 3-6：Installation Diagram of Cyclone Dust Collector

Cyclone Dust Collector Installation steps:

1. Connect 1 and 5 with a heat-resistant duct and fixed both the ends with stainless steel tube.
2. Connect 2 and 3 with a heat-resistant duct and fixed both the ends with stainless steel tube.
3. Connect 4 and 6 with a heat-resistant duct and fixed both the ends with stainless steel tube.

3.6 Oil Filter

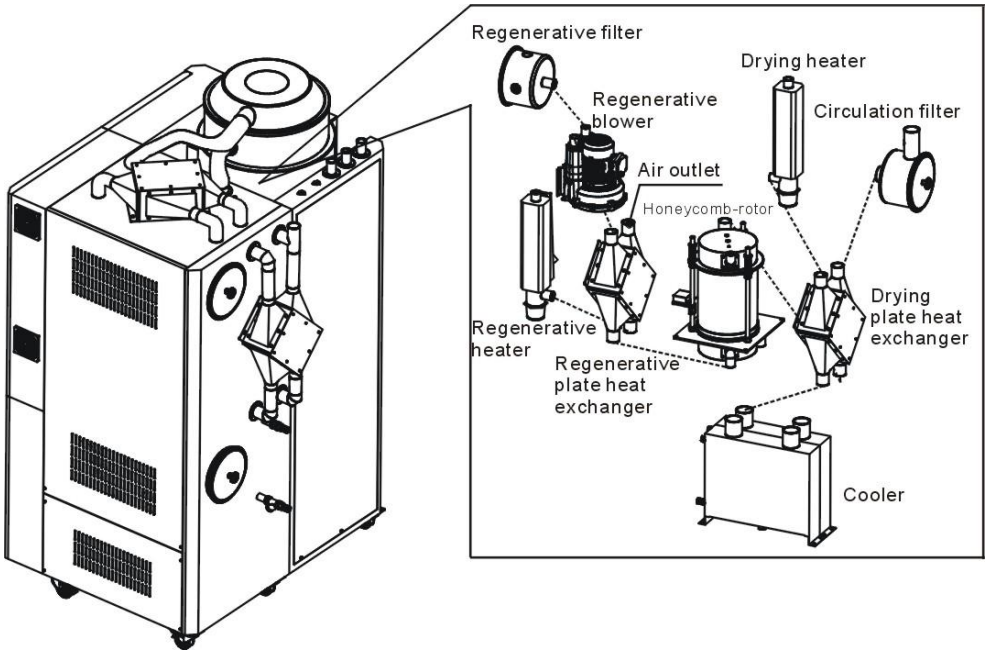


Picture 3-7：Installation Diagram of Oil Filter

Oil filter installation steps:

1. Screw the oil filter on the top plate of the honeycomb dehumidifier.
2. Connect 1 and 2 with a heat-resistant duct and fixed both the ends with stainless steel tube.
3. Connect 3 and 4 with a heat-resistant duct and fixed both the ends with stainless steel tube.
4. Connect 5 and 6 with a heat-resistant duct and fixed both the ends with stainless steel tube.

3.7 Plate Heat Exchanger

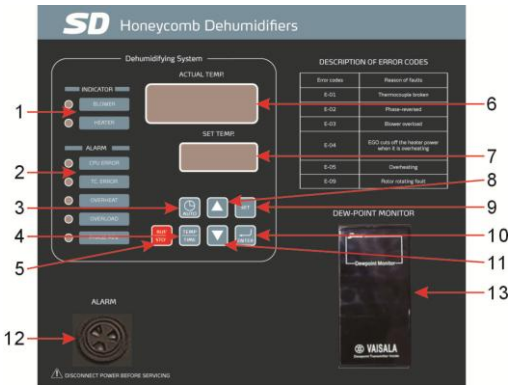


Picture 3-8：Plate Heat Exchanger over Figure

Each part is connected by heat-resistant air pipes and fixed by stainless steel pipes as shown in the diagram.

4. Operation

4.1 Control Panel



Picture 4-1：Control Panel

Table 4-1：Control Panel Table

No.	Name	Function description	Remarks
1	Running indicating	Indicates the working status of blower and heater	Green light on indicates working status Green light off indicates stop status
2	Fault indicating	Indicates current alarm message	Red light on indicates fault occurs
3	Time start	Set weekly start or intermittent start/stop	When time has been set, press this key to set time start mode
4	Temp/time shift key	Display alternatively in between temp. And time for temp or time set up	
5	Start/stop key	Control the start and stop of the machine	Press to start at stop status. Press to stop at working status.
6	Real value indicated by LED	Display real drying temperature or parameter code	
7	Set value indicated by LED	Display the set drying temperature	
8	Increase set value	Increase set value	
9	Set key	Enter or exit value setting	
10	Confirm key	Confirm the input of data	
11	Decrease set value	Decrease the set value	
12	Buzzer	Buzzer keeps on when fault exists	Buzzer only silence after trouble shooting

13	Dew-point	Dew-point display	Display real timely the moisture con within the material

4.2 Panel Operation

1) Open the main switch.

2) Press "RUN/STOP "key to start loading.

4.3 Temperature Setup

1) The setup number will flicker after pressing "SET" key, add or decrease temperature by pressing▲ ▼key.
2) Press "ENTER" key to confirm the input value.

4.4 PID Auto-tuning Setting

1) Press “SET” and the digits flash. At this time press “SET” and ”Enter” meanwhile for 1.5 seconds to enter auto-tuning mode. Then two values of “At” and “Present temperature” will display alternatively in PV and the set temperature value displays in SV till auto-tuning is finished. After that, system goes back to the normal operation directly.
2) If auto-tuning setting could not be finished within 1 hour, the parameters will not be altered and system goes back to normal operation.
3) Pressing “ON/OFF” to go back normal operation amid automatic calculation would not alter the original parameters.

4.5 Intermittent Running Setup

Drying periods(0-ON) ⇄ Stop periods(0-OFF)

1) Press "SET" key to change temp. setup value into time setup value， press "TEMP/TIMER" key to enter into setup mode, at this time "SV/setup value" flickers， "PV/setup value"displays"0-ON".

Picture 4-2：Intermittent running setup 1

2) PV displays "0-ON" to stand for drying periods. "0-OFF" stands for machine stop time. Press ▲▼ key to add or decrease time value of "SV/setup value". Each press of ▲▼ can add or decrease 15 mins set time.
3) Press "ENTER" to confirm the input time value and enter into "0-OFF" time setup items, then repeat step 2.

Picture 4-3：Intermittent running setup 2

Note：If set 0-ON as 04:00, 0-OFF as 05:00, which means drying periods is 4 hours stop time is 5 hours，then working for 4 hours and being stopped for 5 hours and repeat this so long.

4) Cancel intermittent running by entering 00.00 at "0-ON" or "0-OFF" press "ENTER" to confirm input value after time setup and enter into time setup items from "1-ON" "week-ON".

Picture 4-4：Intermittent running setup 3

4.6 Weekly Time Start Setup

1) Press ▲▼ key to add or decrease the time value in "SV/setup value " from "1-ON". Press "ENTER" to confirm the input value and comes into the time setup items of "1-OFF" "MON-OFF".

Picture 4-5：Weekly Time Start Setup 1

2) Press ▲▼ key to add or decrease the time value in "SV/setup value " from "1-OFF" . Press "ENTER" to confirm the input value and comes into the time setup items of "2-ON""TUE-ON".

Picture 4-6：Weekly Time Start Setup 2

3) Do the same setup again and again to setup the ON/OFF time from Monday to Sunday.

Picture 4-7：Weekly Time Start Setup 3

4) Press "SET" key to back to normal status, after finish all the setup.

5) Setup all the "ON" to 00:00 if it is not for time start/stop.

Note:

1. F-20 functions as an password lock，hold on"SET"till the"PV"displays F-20.

2. Press▲▼ key and only after input 0021 in the SV，can you press "ENTER"to come into F-03 and other settings，so F-20 functions as an passwordlock for entering into next parameters setup, which prevents the modification from unprofessionals.

Picture 4-8：Weekly Time Start Setup 4

3. F-03 stands for the selection of temperature unit. Press ▲▼ to shift between ℃/℉ then press “ENTER” to confirm.

4. F-04 is data lockup function, press ▲▼ key to shift between OFF / LOCK,

   LOCK is for locking up information, not able to input or change any data:

   OFF is for lockup cancellation.

Picture 4-9: Weekly Time Start Setup 5

5. F-05 stands for the function of temperature protection. Alarm will be launched if actual temperature were equal to or higher than the addition of setting temperature value and setting value. This temperature range is between 0 to 50, and default value is 15.

4.7 Present Time Modification

1) Repeat the above steps until PV displays "TIME" to stand for present time.

2) Press ▲▼ key to add or decrease time.

3) Press "ENTER" key and PV displays "DAY" to stand for week days.

4) Press ▲▼ key to add or decrease days.

5) Press "SET" key to back to normal status after finish all the setup.

4.8 Weekly Time Start

1) Activate the weekly time start after finish the time setup and the present time

setup.

2) Press "AUTO" key at working or stop status to preset the time start/stop, the "PV" will display the time and temp. alternatively.

3) Press "AUTO" again if want to cancel that weekly time setup.

4.9 Lock Setup Way

1) Press "SET" key down and release it till "PV" displays F-20.

2) Press ▲▼ key to make "SV" to 0021, then press "ENTER" key, the "PV" will display F-04.

3) F-04 are for LOCK function selection, press ▲▼ key to select LOCK or OFF.

4) Press ENTER or "SET" key after setup.

5) If select LOCK, the "SV" will display "LOCK" when pressing "SET" key, which means the parameters have been setup and not accessible to any change.

4.10 The Second level of Advanced Setting

1) Enter the first level of advanced setting and press “SET” and ”Enter” meanwhile for 3 seconds till F-06 displays in PV.

2) Press ▲▼ to set SV into 0003 and press “ENTER”, at this time F-06 displays in PV.

3) Now pressing ▲▼ can alter value, press “ENTER” to input after confirming then jump to F-07.

4) If you want to leave the function setting, just press “SET”.

1. F-06 stands for the passwords of second level.

2. F-07 stands for proportional band of heating side (P); it is a preset value before delivery.

3. F-08 stands for integration time of heating side (I); it is a preset value before delivery.

4. F-09 stands for differential time of heating side (D); it is a preset value before delivery.

5. F-10 stands for switch cycle of heating side; its preset value is 15 sec.

6. F-16 stands for power deliver delay time of heater, it is adjustable, the unit is Sec..

7. F-17 stands for blower power-off delay time, it is adjustable, the unit is Sec..

8. F-18 stands for the protection of maximum temperature. Its setting range is 140~250.

9. F-19 stands for microswitch timeset of honeycomb rotor. “OFF” functions as shut-off and “ON” functions as open. The setting range is 0~9999 with the unit is Sec..

4.11 Wrong Codes Remark

Table 4-2：Wrong Codes Remark

Wrong codes	Remark
E-01	Break of temperature-sensed line
E-02	Inverse phase
E-03	Overload input
E-04	Overheat input for regen. EGO
E-05	Maximum temperature protection
E-07	Thermal protection temperature
E-08	Memory errors
E-09	Rotor Microswitch input
E-11	Reversed-phase of temperature sensed line
E-12	Auto-tuning errors

4.12 Installation for Dewpoint Monitor

1) Use blade to cut off the film and outline the reserved hole site on the SCD control panel.

Picture 4-10：Hole Site

2) Check if there are complete parts for dewpoint monitor including:

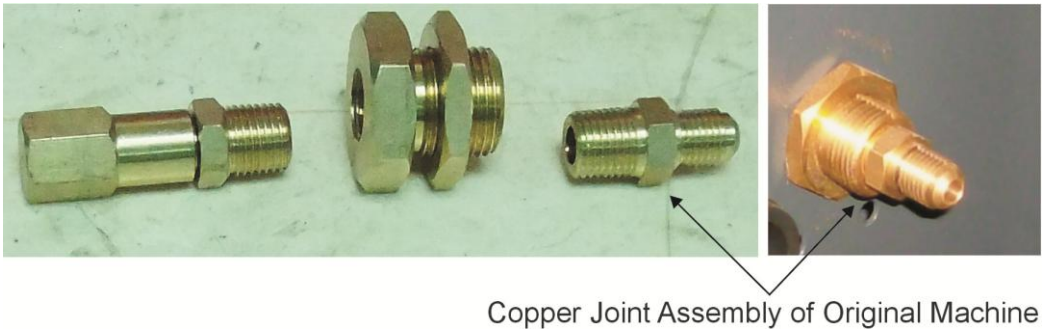
Dew-point monitor

Dew-point transmitter assembly (dew-point detector, detection cable, washer and installation guide)

Copper joint, installation seat for dew-point monitor

Picture 4-11：Parts of Dew-point Monitor

3) Dismantle the copper joint of original machine and replace it with installation seat for dew-point monitor. Then dismantle straight form bushing from copper joint of original machine and install it on the installation seat, and connect copper pipe with straight form bushing.



Picture 4-12：Copper Joint Assembly of Original Machine

Picture 4-13：Installation Seat

4) Install dew-point transmitter assembly to copper joint.

Picture 4-14：Installation for Transmitter

5) Connect signal wire. Particular shape of signal wire joint would avoid the wrong insert and connection.

Picture 4-15：Connection of Signal Wire

6) Match dew-point monitor with holes on the panel and fix the installation.

Picture 4-16：Installation for Dew-point Monitor

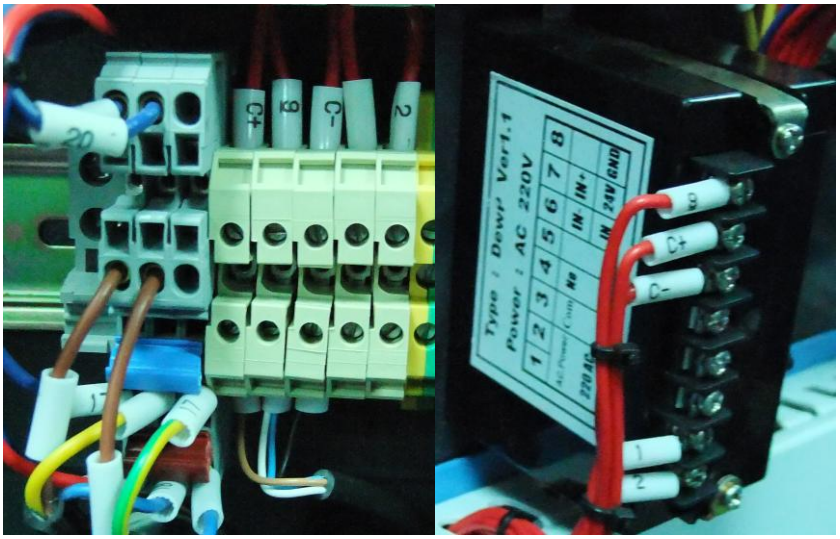
7) Connect signal wires of the transmitter and power lines of dew-point monitor with the according terminals.

Connet contact No.1 and No.2 with power, supply is 220VAC.

Contact No.3, No.4 and No.5 are idle.

Connect contact No.6, No.7 and No.8 with the signal of transmitter. (C- Connects contact No.6, C+ connects contact No.7 and wire No.9 connects contact No.8.

Transmitter conection (White and blue wire connect wire No9, black wire connect C- and gray wire connect C+)



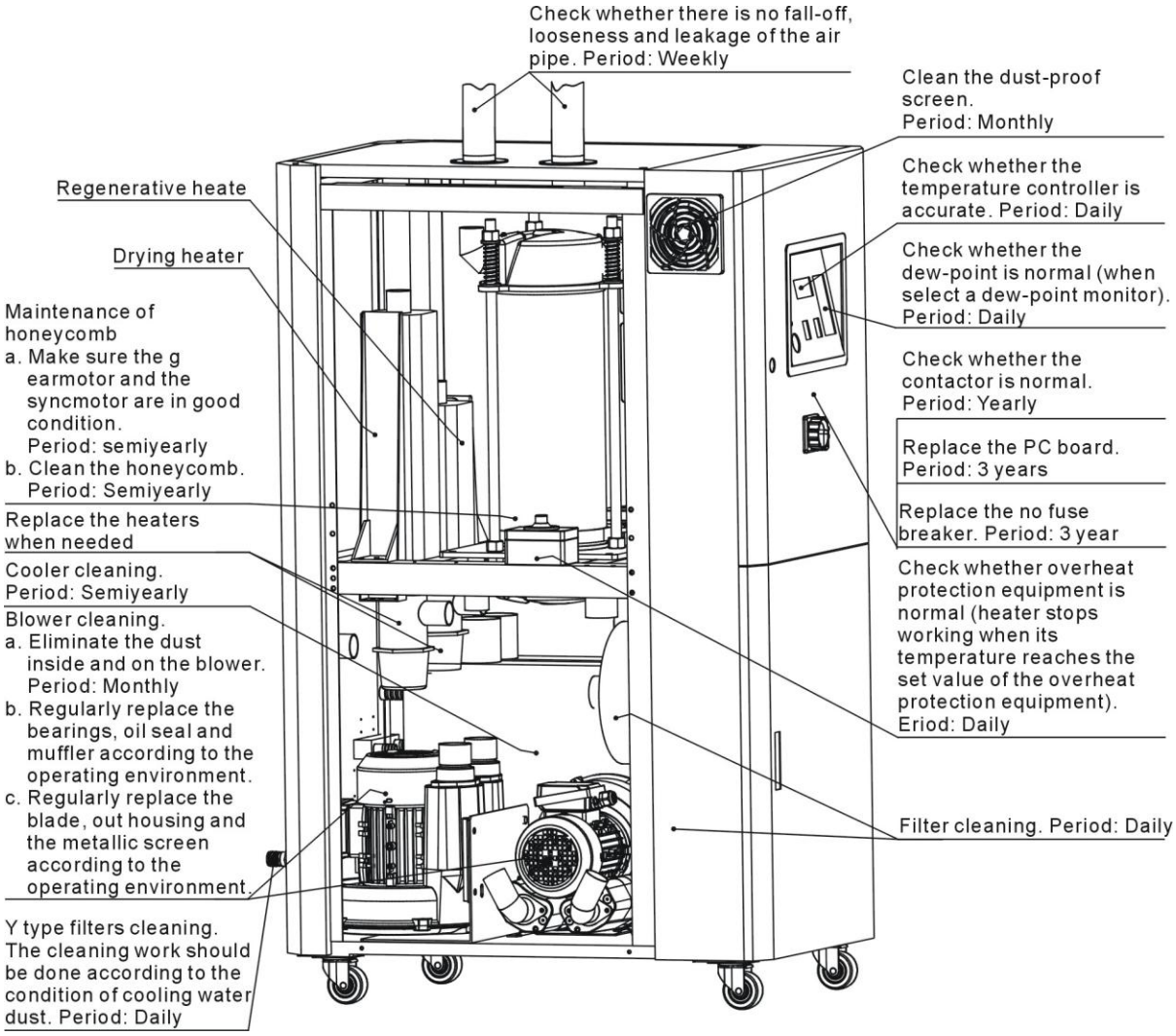
Picture 4-17：Connection of Dew-point Monitor

5. Trouble-shooting

Troubles	Possible causes	Solutions
Main power indicator does not light after turn on main power switch.	1. Does not connect through power supply.	1. Connect through power supply.
	2. Main power switch breakdown.	2. Replace main power switch.
	3. Problems of electrical wires.	3. Check electrical wires.
	4. Fuse of control circuit melted.	4. Check electrical wires and replace fuse.
	5. Transformer problems.	5. Replace the transformer.
E-02 is shown at PV, buzzer sounds and machine stops.	1. Voltage of power supply is too low.	1. Check the power supply.
	2. Phase shortage.	2. Check the power supply.
	3. Phase frequency mistakes.	3. Exchange the connection of two of the electrical wires.
Overload alarm of blower lit up, buzzer sounds and machine stops.	1. Abnormal fluctuation of voltage.	1. Check power supply.
	2. Blower being stalled.	2. Check the blower.
	3. Failures of blower motor.	3. Check the motor.
	4. Setting current of overload relay (F1) is too low.	4. Set the current of overload relay 1.1 times of rated current of the motor. Reset overload relay: Press down the blue button on the relay after 1 minutes.
Pipe heater overheat alarm is lit up, and the buzzer sounds and machine stops working.	1. Temperature setting mistakes.	1. Correctly set the parameters of temp.controller.
	2. Temp. measuring mistakes.	2. Replace thermocouple.
	3. Overheat relay of pipe heater failures.	3. Replace the contactor.
E-04 is shown at PV, buzzer sounds and machine stops	1. Heater contactor seized up.	1. Check or replace the heater contactor.
	2. EGO parameter setting wrong.	2. Set EGO parameter correctly.
	3. EGO fault.	3. Replace EGO.
	4. Circuit fault.	4. Check circuit.

Troubles	Possible causes	Solutions
E-09 is shown at PV, buzzer sounds and machine stops	1. Problems of rotor motor.	1. Check or replace the motor.
	2. Rotor belt broken.	2. Replace the belt.
	3. Problems of electrical circuit.	3. Check the electrical circuit.
	4. Micro switch of the rotor failures.	4. Replace.
	5. Parameter mistakes of timer for control of rotor.	5. Reset the timer. (Set time should be bigger than rotor rotating time in one turn and plus 1 minute.)
Abnormal temp. fluctuations.	1. Too short of time since start of the machine.	1. Wait for a while.
	2. Improper parameters for temp. controller.	2. Check the parameters of temp. Controller.
Heater temp. can not rise up.	1. Temp. Setting is too high.	1. Set heater temp. under 180℃.
	2. Contactor of heater is bad.	2. Replace contactor.
	3. Pipe heater is damaged.	3. Replace pipe heater.
	4. Problems of thermocouple.	4. Replace thermocouple.
	5. Parameter of temp. controller is set to STOP.	5. Set temp. controller under working mode.
	6. Temp. controller output problems.	6. Replace or repair temp. controller.
Breaker tripping off when connects with power supply.	1. Short circuits of main circuit.	1. Check the circuit.
	2. Short circuit of transformer.	2. Replace the breaker.
	3. Problems of breaker.	3. Replace the breaker.
Circuit breaker trips right after system switch on.	1. Short circuit of pipe heater.	4. Check the circuit.
	2. Problems of the breaker.	5. Replace the breaker.

6. Maintenance and Repair



Note!

1) Turn off the main switch and control switch and unplug the cord from power supply before service and maintenance.
2) Be sure not to modify electrical wiring or reassemble the electrical components inside of the control box.
3) Always refer to the electrical diagram of this manual to check and maintain the electrical wiring problems.
4) Service and maintenance of the electrical parts should only be carried out by qualified electricians.

6.1 Honeycomb

Honeycomb Rotor cleaning steps:

1) Use a vacuum-cleaner with brush to suck up the dust on rotor surface.
2) Blow off the dust in the rotor channels with compressed air.
3) If there is dirt sticking to the channel walls inside the rotor, cleaning steps as follows:
   a. Saturate the rotor by blowing humid air (higher than 60%RH) through the rotor without having regeneration circuit on. This can be done by just turning the regeneration heater off and still have the process blower running if process air has high humidity. If the process air is too dry try to put a humidifier in the air stream. Do this for one hour.
   b. Depending on the character of the dirt, sink the rotor into water with cleaning agent in it (PH value 3~2 liquid is applied to silica gel, PH value 7~10 applied to molecular valve). Greasy dirt should be put into a detergent solution with xylene. 15 minutes cleaning is suggested.
   c. Take the rotor out of the liquid and let it rest with the channels vertically for 5 minutes so the liquid can run out.
   d. Blow off the residual liquid in the channels with compressed air.
   e. Put the rotor back into the dehumidifier and run the unit with regeneration circuit (the regeneration temperature between 50℃ and 60℃) on for at least one hour.

Note:

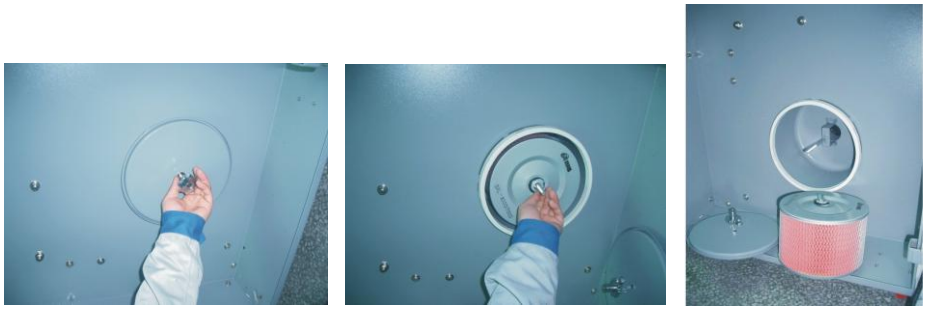
1. Note that in the dry air and wet air outlets, there will be high concentrations liquid out for some time. If a solvent has been used, there will be a residual smell for several days.
2. For some dirt which is greasy and sticky in the rotor, 100% elimination is impossible. The only one thing you can do is to replace the rotor for the cleaned rotor performance can only be recovered partly.

6.2 Filter

Please periodically clean the dust on the air filters, once per week.

Cleaning steps：

1) Take out the air filter carefully.
2) Blow off the dust on the air filter screen and the cover with pressure air.
3) Wipe off the barrel wall of air filter with dishcloth.
4) After cleaning, place all parts in reversed order carefully.



Picture 6-1： Filter

Note**!**

Do not let any impurities fall into filter container.

6.3 Cooler

1) Clean the cooler and eliminate the leakage regularly.
2) Please do the above-mentioned job once a month for cooling by chilled water. As for the cooling by normal water, do the same job once a quarter.

Cooler clear step

1) Disassemble the cooler's pipe and screw, and remove the cooler out of the chiller.
2) Release the fixed screw on the upper and lower cover of cooler and disassemble the cover.
3) Use brushes, compressed ed air or low pressure water to clean the dust and sundries on the cooler fan and copper pipe.
   Notes: water residue on the cooler fan and copper pipe should be dried with compressed air.
4) Make the cooler's upper and lower cover junction clean enough and smear the silica gel then fixed the covers with screws.
5) Put the cooler on the air at least 4 hours to make the silica gel drying enough then fix the cooler on the chiller and connect all pipes.

6.4 Clean of Y type strainer

The cleaning work should be done according to the condition of cooling water dust. Clean it in time in such situations, such as hot air and insufficient cooling water flow.

6.5 Maintenance Schedule

6.5.1 General Machine Information

Model _____ SN _____ Manufacture date _____

Voltage_____Φ_____V Frequency _____ Hz Power _____ kW

6.5.2 Check After Installation

☐Check that pipe connections are firmed locked by clips.

☐Check that the piping system is correct.

☐Check if the honeycomb-rotor is damaged or not.

Electrical Installation

☐Voltage: _____ V _____ Hz

☐Fuse melt current：1 Phase_____ A 3 Phases _____ A

☐Check phase sequence of the power supply.

☐Check the rotating direction of blower fans.

6.5.3 Daily Checking

☐Check power supply wires.
☐Check the start/stop function.
☐Check the temperature controller.
☐Clean the filter.
☐Check whether overheat protection is normal.
☐Check whether dew-point is normal.
☐Check whether cooling water circulation and Y-type fitter are normal[1].

6.5.4 Weekly Checking

☐Check if there are loose connections of electrical components.
☐Check and clean air filter.
☐Check the function of solenoid valve.
☐Check motor overload relay and anti-phase function.

☐Check whether air pipe is shed, leaked and loose.

6.5.5 Monthly Checking

☐Check if the transmission belt is loose or not.
☐Check the performance of gear motor.
☐Check if there are leakages in honeycomb-rotor.

6.5.6 Half-yearly Checking

☐Check if there are damages of heat-resistant hoses.
☐Check the pipe heaters.
☐Check regen./process blower and blower fans.
☐Check whether honey-comb rotor belt is damaged.
☐Clean the cooler.

6.5.7 Yearly Checking

☐Check whether the contactor is normal [2].

6.5.8 3 year Checking

☐PC board renewal.
☐No fuse breaker renewal.

Note: 1. Y-type filter has the function of filling water cooling protection effect, be sure the waterway are clear to avoid cooling failure.
2. Manufacturer laboratory data for AC contactor is two million times in life. we suggest service life for one million four hundred thousand times, if work eight hours per day, recommended replacing frequency is 1.5 years, if work day and night, replacement is suggested to be done every six months.