SCD Series

"All-in-One" Compact Dryer

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SHINI

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1. General Description

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

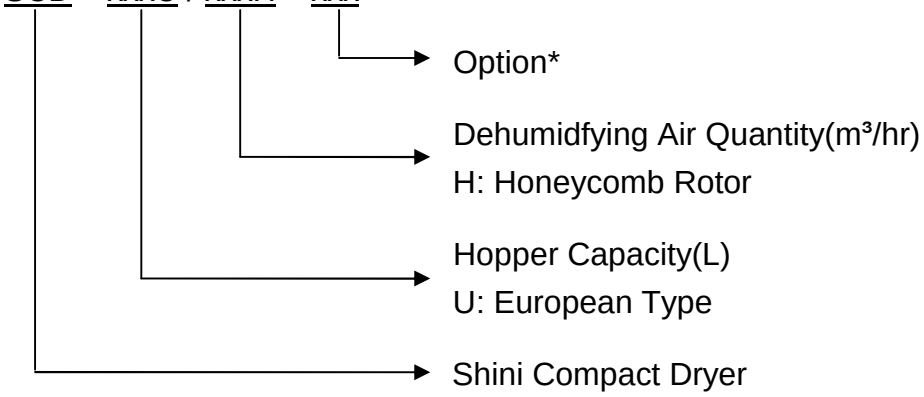
SCD series dehumidifying dryer possesses three functions of dehumidification, drying and two-stage conveying. It is very suitable for drying engineering plastics materials with hygroscopicity such as PA, PC, PBT, PET. Among them, optics SCD-OP could be used in processing application of lens, LCD backlight board and discs, it has dew-point of below -40℃under ideal condition.

SCD-160U/120H

SCD-450U/300H-LC-D

1.1 Coding Principle

SCD – xxxU / xxxH – xxx



Notes: *

LC=PLC+HMI D=Dew-point Monitor P=Polished Hopper Inside
OP=Optical Class M2=Three-stage Conveying ES=Energy-saving
CE=CE Conformity HE=Drying Plate Heat Exchanger

1.2 The main features

1) Standard configuration

- Combine the function of dehumidifying, drying and two-stage conveying into a single unit.
- SCD Dryer Loaders are equipped with honeycomb rotor to obtain stable low dew-point drying air. It have two models: semi-open and hermetic.
- Feeding system is equipped with shut-off valve to ensure no surplus raw material in hopper tubes.
- Microprocessor is available as standard equipment.
- Optical SCD-OP series together with powder-removing hopper which can help avoid stain in the production of optical products.
- Optical-class SCD-OP material contact surfaces are all mirror polished and collocates conveying system with closed loop to avoid contamination and moisture regain.
- Optical-class SCD-OP system has standard configuration high efficiency particulate absorbing filter, which can filter tiny ion of 0.3μm with filter ratio of 99.995%.
- Heat preserved drying hopper barrel adopts down blowpipe design and collocates with cyclone air exhaust to avoid heat lost and improve drying efficiency.
- This dehumidifying series adopts double cooler structure to ensure lower

return air temperature and dew-point.

2) Accessory option

- PLC control and touch HMI LCD are optional, which makes operation convenient for machine's automatic running.
- Highly efficient filter and optical storage hopper are optional to ensure no air contamination to raw material.
- SCD-ES series is equipped with regenerative plate heat exchanger, which can save 3~6% of total power consumption.
- SCD series is equipped with drying plate heat exchanger, which can save 0~19% of total power consumption.
- For SCD-ES series, dew-point value is adjustable. The dew-point temperature can be set between -40℃ to +10℃ according to actual need of plastics material. 0~10% of total power consumption can be saved.
- SCD-ES is equipped with the function of controllable drying capacity. Once the name of dried plastics material and material consumption in each hour are set, the system will automatically adjust air volume and consumption. Material consumption in each hour is 40~100% of drying capacity, which saves 35~0% of the total power consumption. In this way, it achieves maximum of resources collocation and avoids over-drying which affects physical and mechanical capacity of plastics material.

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 (Fully-integral Design)

Model SCD-	20U/30H (-OP)	40U/30H (-OP)	40U/50H	80U/50H (-OP)	120U/80H (-OP)	160U/80H	160U/120H	230U/120H	300U/200H	450U/200H
Drying System										
Dying Heater Power (kW)	3	3	3.9	3.9	6	6	6	6	12	12
Dying Blower Power (kW, 50/60Hz)	0.2	0.2	0.4	0.4	0.75	0.75	0.75	0.75	1.5	1.5
Hopper Capacity (L)	20	40	40	80	120	160	160	230	300	450
Dehumidifying System										
Regenerating Heater Power (kW)	3	3	3	3	3	3	3	3	4	4
Regenerating Blower Power (kW, 50/60Hz)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4
Dehumidifying Air quantity (m^3/hr, 50/60Hz)	30	30	50	50	80	80	120	120	200	200
Feeding System										
Feeding Blower Power (kW, 50/60Hz)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Dia. of Material Pipe (inch)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
SHR-U-E Hopper (L)	3(3*)	3(3*)	3	6(3*)	6(3*)	6	6	12	12	12
SHR-U Hopper (L)	3	3	3	6	6	6	6	12	12	12
Dimensions										
H(mm)	1490(1400)	1550(1500)	1550	1800(1670)	1990(1710)	1860	1860	2070	2160	2570
W(mm)	1000(1050)	1040(1050)	1040	1105(1240)	1105(1240)	1190	1190	1190	1460	1460
D(mm)	875(900)	875(900)	875	875(1000)	875(1000)	875	875	875	1020	1020
Weight (kg)	280(235)	295(280)	297	325(330)	340(385)	385	505	515	565	595

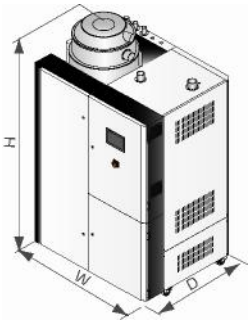
Table 1-2: Specifications (Semi-integral Design)

Model SCD-	600U/400H	750U/400H	900U/700H	1200U/700H
Drying System				
Drying Heater Power (kW)	18	18	24	24
Drying Blower Power (kW, 50/60Hz)	3.75 / 4.5	3.75 / 4.5	5.5 / 6.3	5.5 / 6.3
Hopper Capacity (L)	600	750	900	1200
Dehumidifying System				
Regenerating Heater Power (kW)	7.2	7.2	10	10
Regenerating Blower Power (kW, 50/60Hz)	0.75 / 0.9	0.75 / 0.9	1.5 / 1.8	1.5 / 1.8
Dehumidifying Air quantity (m^3/hr, 50/60Hz)	400 / 450	400 / 450	700 / 780	700 / 780
Feeding System				
Feeding Blower Power (kW)	1.5	1.5	2.4	2.4
Dia. of Material Pipe (inch)	1.5	1.5	2	2
SHR-U-E Hopper Receiver (L)	12	12	24	24
SHR-U Hopper Receiver (L)	12	12	24	24
Dimensions				
H(mm)	2380	2610	2640	3070
W(mm)	1745	1745	2140	2140
D(mm)	1255	1255	1380	1380
Weight (kg)	640	690	850	900

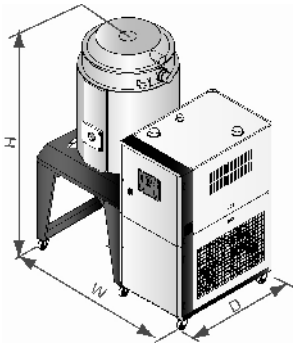
Note: 1) For models that are equipped with dew-point monitor, add "D" at model behind.
2) For models with the polished hopper inside, add "P" at model behind.
3) For models of providing material for two IMMs with three-stage conveying function and adopt PLC control plus LCD touch screen, add "LC" at model behind.
4) Power: 3Φ, 230/400/460/575VAC, 50/60Hz.
5) “*”stands for hopper receiver SHR-CP-U.

We reserve the right to change specifications without prior notice.

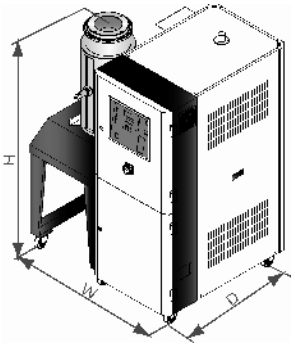
1.3.2 Technical Specifications



SCD Hermetic



SCD Semi-open



SCD-OP

Picture 1-1: Technical Specifications

1.3.3 Drying Capacity

Table 1-3: Drying Capacity 1

Material	Drying Temp. (℃)	Drying Time (hr)	Drying Capacity (kg/hr)									
			20U /30H	40U /30H	40U /50H	80U /50H	120U /80H	160U /80H	160U /120H	230U /120H	300U /200H	450U /200H
ABS	80	2-3	11		18		27		35		106	
CA	75	2-3	9		15		22		29		88	
CAB	75	2-3	9		15		22		29		88	
CP	75	2-3	11		18		27		35		106	
LCP	150	4	8		13		40		27		80	
POM	100	2	16		27		40		53		159	
PMMA	80	3	11		19		29		38		115	
IONOMER	90	3-4	7		11		17		22		66	
PA6/6.6/6.10	75	4-6	6		10		14		19		58	
PA11	75	4-5	7		12		17		23		69	
PA12	75	4-5	7		12		17		23		69	
PC	120	2-3	13		21		31		41		124	
PU	90	2-3	11		19		29		38		115	
PBT	130	3-4	9		15		23		31		93	
PE	90	1	32		53		80		106		318	
PEI	150	3-4	8		13		20		27		80	
PET	160	4-6	8		13		19		25		75	
PETG	70	3-4	8		13		20		27		80	
PEN	170	5	9		15		23		30		90	
PES	150	4	9		15		23		30		90	
PMMA	80	3	11		19		29		38		115	
PPO	110	1-2	13		22		33		44		133	
PPS	150	3-4	8		13		20		27		80	
PI	120	2	16		27		40		53		159	
PP	90	1	26		44		66		88		265	
PS(GP)	80	1	26		44		66		88		265	
PSU	120	3-4	8		14		22		29		86	
PVC	70	1-2	13		22		33		44		133	
SAN(AS)	80	1-2	13		22		33		44		133	
TPE	110	3	13		21		31		41		124	

Note: 1. Please refer to above drying capacity of SCD machine, select the right model according to material usage of processing machine.

2. Please consult Shini service staff for model selection.

Table 1-4: Drying Capacity 2

Material	Drying Temp. (℃)	Drying Time (hr)	Drying Capacity (kg/hr)			
			600U /400H	750U /400H	900U /700H	1200U /700H
ABS	80	2-3	210		355	
CA	75	2-3	180		295	
CAB	75	2-3	180		295	
CP	75	2-3	210		355	
LCP	150	4	160		365	
POM	100	2	320		530	
PMMA	80	3	230		383	
IONOMER	90	3-4	133		220	
PA6/6.6/6.10	75	4-6	115		192	
PA11	75	4-5	138		230	
PA12	75	4-5	138		230	
PC	120	2-3	250		413	
PU	90	2-3	230		383	
PBT	130	3-4	186		310	
PE	90	1	637		1062	
PEI	150	3-4	160		265	
PET	160	4-6	150		250	
PETG	70	3-4	160		265	
PEN	170	5	180		300	
PES	150	4	180		300	
PMMA	80	3	230		385	
PPO	110	1-2	265		440	
PPS	150	3-4	160		265	
PI	120	2	320		530	
PP	90	1	530		885	
PS(GP)	80	1	531		885	
PSU	120	3-4	173		290	
PVC	70	1-2	265		442	
SAN(AS)	80	1-2	265		442	
TPE	110	3	250		413	

Note: 1. Please refer to above drying capacity of SCD machine, select the right model according to material usage of processing machine.

2. Please consult Shini service staff for model selection.

1.4 Safety Regulations

1.4.1 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 equires 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 1-2: Safety Regulations for the Blowers

1.4.2 Notes of using material storage bin of optional grade (MST-80U-OP)

1) Check whether internal bin and connecting pipe are clean or not before using.

2) Using equipped with HEPA and model of optional grade series.
3) If customer do not equip with HEPA, filter with accuracy of 5um is available, which is installed inside storage bin.

Picture 1-3: Material Stage Bin of Optical Grade MST-80U-OP

1.4.3 Notes of using HEPA

1) Take note of air flow direction of plate filter, avoiding reversing side.
2) Take note of sequence of installation of the two plate filter, that is installed above with accuracy of 5um and below with accuracy of 0.3um.
3) The two plate filters are installed tightly to align locating device and keep the detection location of upper and lower pressure on the same side.
4) The upper low efficient filter should be cleaned timely (once a week is suggested). When air supply is lacked obviously and cleaning efficiency of cylinder type filter is not obvious, we suggest cleaning middle-efficiency filter with accuracy of 5um, or replace high-efficiency filter with accuracy of 0.3um.
5) It is not available for high-efficiency filter with accuracy of 0.3um to recycle for use because of vulnerability.
6) Differential pressure indicator optionally connects to the pressure detection location of upper and lower plate cover. When pressure difference is above 1000Pa, we suggest cleaning middle-efficiency filter with accuracy of 5um. And if the efficiency is not good, we suggest replacing high-efficiency filter with accuracy of 0.3um.

Picture 1-4: High-efficiency filter

1.4.4 Important notices for using SHR-CP-3U

1) Check whether the feed-in pipes are clean before using.
2) The screener needs regular cleaning, once a week is recommended.
3) The glass tube and the packing are consumables. Be careful when using and back up is necessary.
4) Location of the level sensor can be adjusted according to user's requirement.

Picture 1-5: Important notices for using

1.4.5 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!

Note!

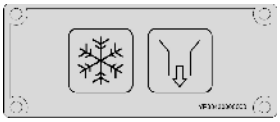
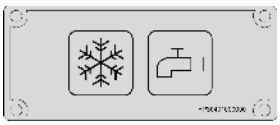
The EGO over-temperature protection is only for process heater protection, not for material protection usage, the default setting should not be changed.

Note!

To prevent over-temperature alarm from causing machine shutdown, don’t randomly adjust EGO setting temp.

Picture 1-6: Safety Signs and Labels

1.4.6 Signs and Labels

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

1.4.7 Transportation and Storage of the Machine

Transportation

1) SCD series "All-in-one" compact dryer 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) SCD series "All-in-One" compact dryer 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.

1.5 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.

1.6 Maintenance Schedule

Maintenance Schedule

Item	CT
Check the temperature controller.	Daily
Clean the filter.	Daily
Check whether overheat protection is normal.	Daily
Check whether dew-point is normal.	Daily
Check whether the contactor is normal.	One year
Check whether air pipe is shed, leaked and loose.	Weekly
Check whether cooling water circulation and Y-type fitter are normal.	Daily
Check whether honey-comb rotor belt is damaged.	Semiyearly
Clean the cooler.	Semiyearly
PCB renewal.	Every 3 year exchange
No fuse breaker.	Every 3 year exchange

Note: Please refer to the Manual for detailed operations.

YP31115800100

Picture 1-7: Maintenance Schedule

2. Structure Characteristics and Working Principle

2.1 Working Principle

Dehumidifying: damp and hot air from dry material barrel is blown into rotor after cooled. Moisture from the air is absorbed by rotor and is then adsorbed by regeneration heating air. Two strands of airflow function on the rotor. And with the rotation, moisture from the air is absorbed and expelled after absorbed regeneration air to form stable low dew-point air, which is dried to the drying temperature and then is blown into material barrel to closed circle to dry material.

Suction: material is absorbed into barrel from storage barrel or other storage containers. When the magnetic reed switch detects no material, suction motor runs to produce vacuum inside vacuum hopper. Raw material in storage barrels is absorbed into suction hopper due to air pressure difference. When the time is completed, suction motor stops. Raw materials drop into drying hopper barrel due to gravity. The dried raw material after dried from is taken out to the hopper with photosensor installed on moulding machine or other hopper form

drying hopper barrel.

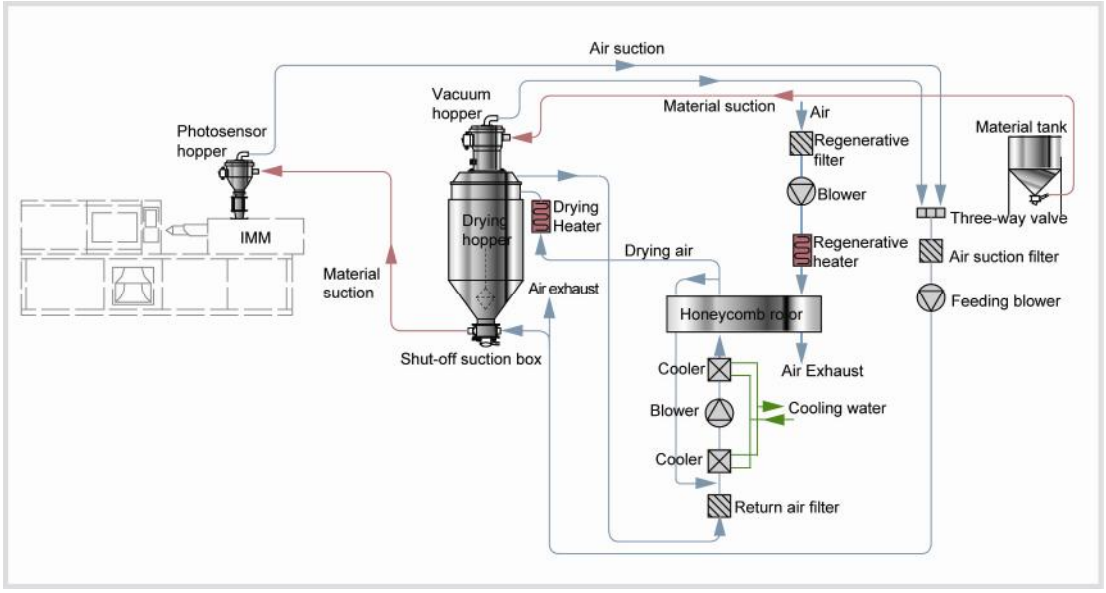
2.2 Relative Humidity and Dew-point

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 "All-in-One" Compact Dryer

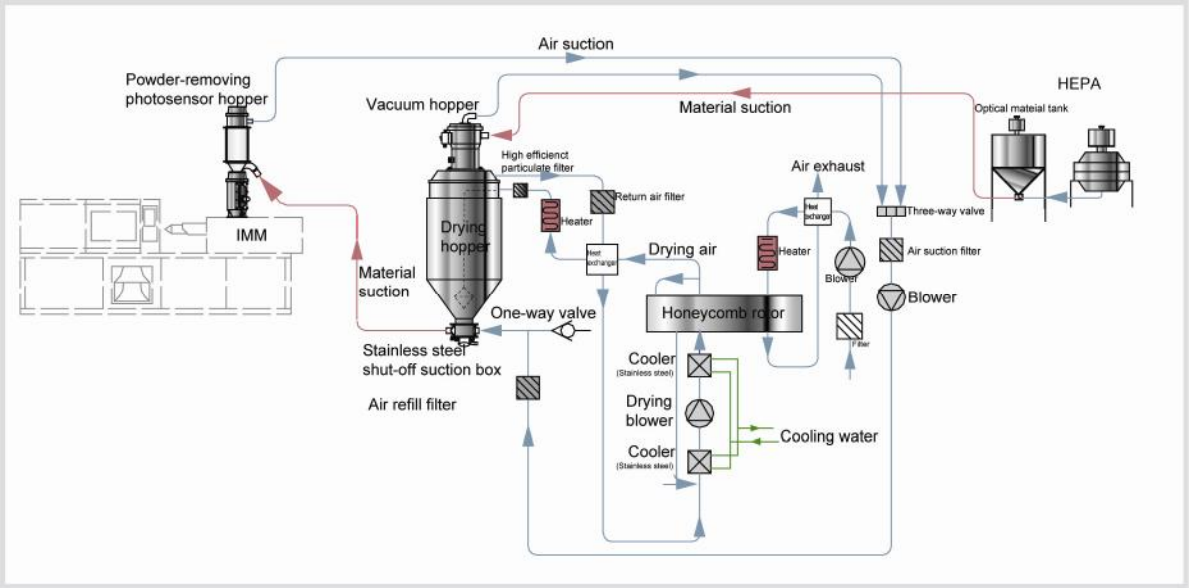
It is proved that the hygroscopic materials used in the plastics industry such as PC, PA, PBT, PET, Nylon, etc. cannot be dried effectively by conventional hot air drying systems because those systems depend on ambient conditions and are relatively inefficient in reducing moisture contents. These materials demand a steady low dew point dry air and a constant drying temperature, which guarantee final moisture content of 0.02% or even less. The SCD provides a closed-loop system with the dew-point of the dried air being down to -40℃ or even lower which accelerates moisture transferring from the plastic granules to the dry air.

2.4 Working Principle

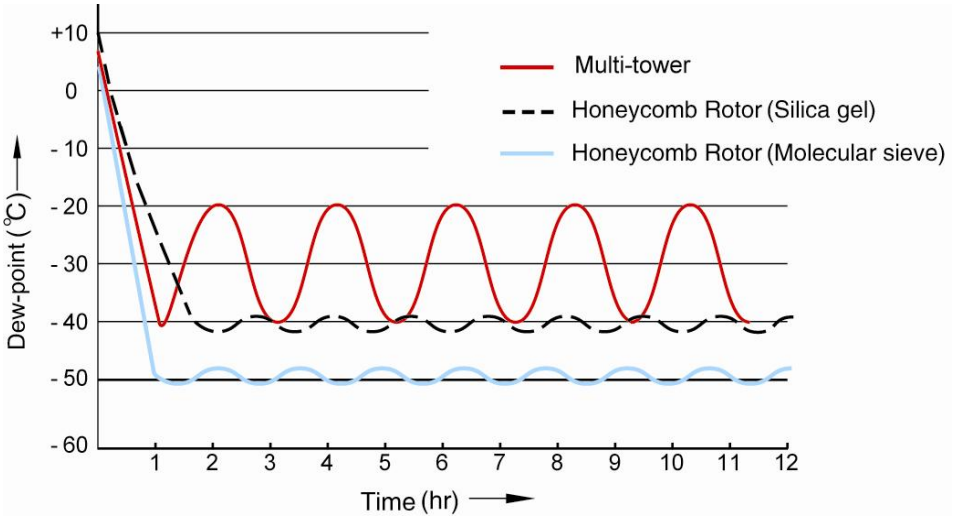


Picture 2-1: SCD Working Principle

Picture 2-2: SCD-OP Working Principle (With plate heat exchanger) (Option)



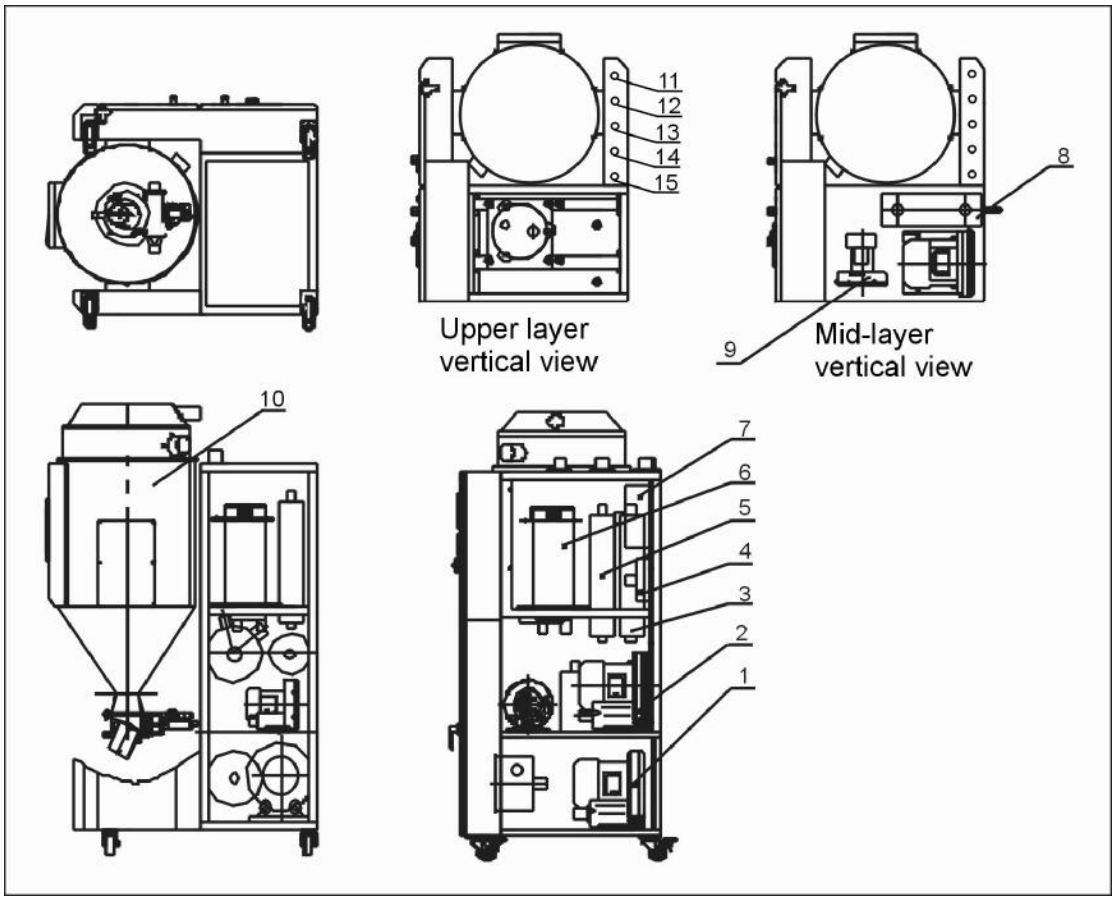
2.5 Dew-point Comparison



Picture 2-3: Dew-point Comparison

2.6 Drawing and Parts List

2.6.1 Structural Drawing

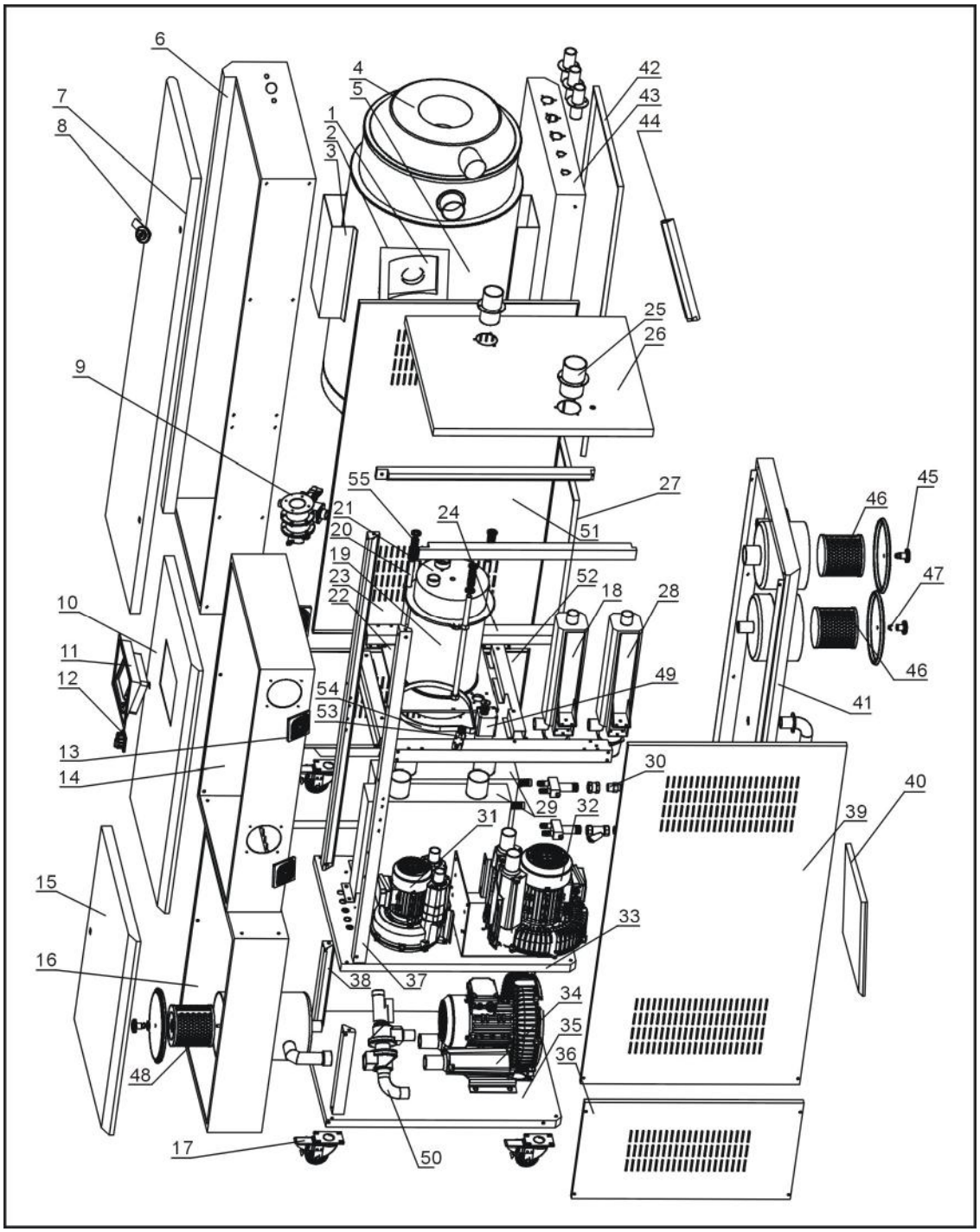


Names of Parts:

1. Conveying blower 2. Process blower 3. Process heater 4. Return-air filter
5. Regenerating heater 6. Honeycomb-rotor 7. Regenerating filter 8. After cooler
9. Regenerating blower 10. Drying hopper 11. Material line 12. Vacuum line 1
13. Vacuum line 2 14. Material line (option for three-stage conveying)
15. Vacuum line (option for three-stage conveying)

Picture 2-4: Structural Drawing

2.6.2 Assembly Drawing (Fully-integral design) (SCD-20U/30H~40U/50H)



Remarks: Please refer to material list 2.6.3 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-5: Assembly Drawing (Fully-integral design)(SCD-20U/30H~40U/50H)

2.6.3 Parts List (Fully-integral design)(SCD-20U/30H~40U/50H)

Table 2-1: Parts List (Fully-integral design)(SCD-20U/30H~40U/50H)

No.	Description	Part No.		
		20U/30H	40U/30H	40U/50H
1	Sight-glass window	-	-	-
2	Sight-glass window fixing plate	-	-	-
3	Hopper fixing plate	-	-	-
4	Hopper top cover	-	-	-
5	Insulated hopper	-	-	-
6	Front door frame	BY10203800050	BY10203800050	BY10203800050
7	Front door plate			
8	An electric cabinet door lock	YW00717100000	YW00717100000	YW00717100000
9	Cut-off valve type suction box	BY10203800050	BY10203800050	BY10203800050
10	Control box door	-	-	-
11	Touch screen	YE80350100000	YE80350100000	YE80350100000
12	Main switch*	YE10200300000	YE10200300000	YE10200300000
13	Exhaust fan**	YM60121200400	YM60121200400	YM60121200400
14	Control box	-	-	-
15	Front door plate (left)	-	-	-
16	Front plate (left)	-	-	-
17	Castor	YW03000300200	YW03000300200	YW03000300200
		YW03000300000	YW03000300000	YW03000300000
18	Process heater*	BH70200300050	BH70400300050	BH70803900050
19	Honeycomb	YW71182000000	YW71182000000	YW71182000000
20	Double-head screw	BH10533000010	BH10533000010	BH10533000010
21	Honeycomb upper cover	BA40508000130	BA40508000130	BA40508000130
22	Honeycomb bottom cover	BA40508000030	BA40508000030	BA40508000030
23	Right side plate	-	-	-
24	Honeycomb mounting bracket	-	-	-
25	Flange	-	-	-
26	Top plate	-	-	-
27	Rear plate lower cover	-	-	-
28	Regen. heater*	BH70300300050	BH70300300050	BH70500300050
29	Cooler	BW88080000020	BW88080000020	BW88080000020
		BW88008000020	BW88008000020	BW88008000020
30	Copper insert core	BH12223400010	BH12223400010	BH12223400010
31	Regen. blower*	BM30012500050	BM30012500050	BM30012500050

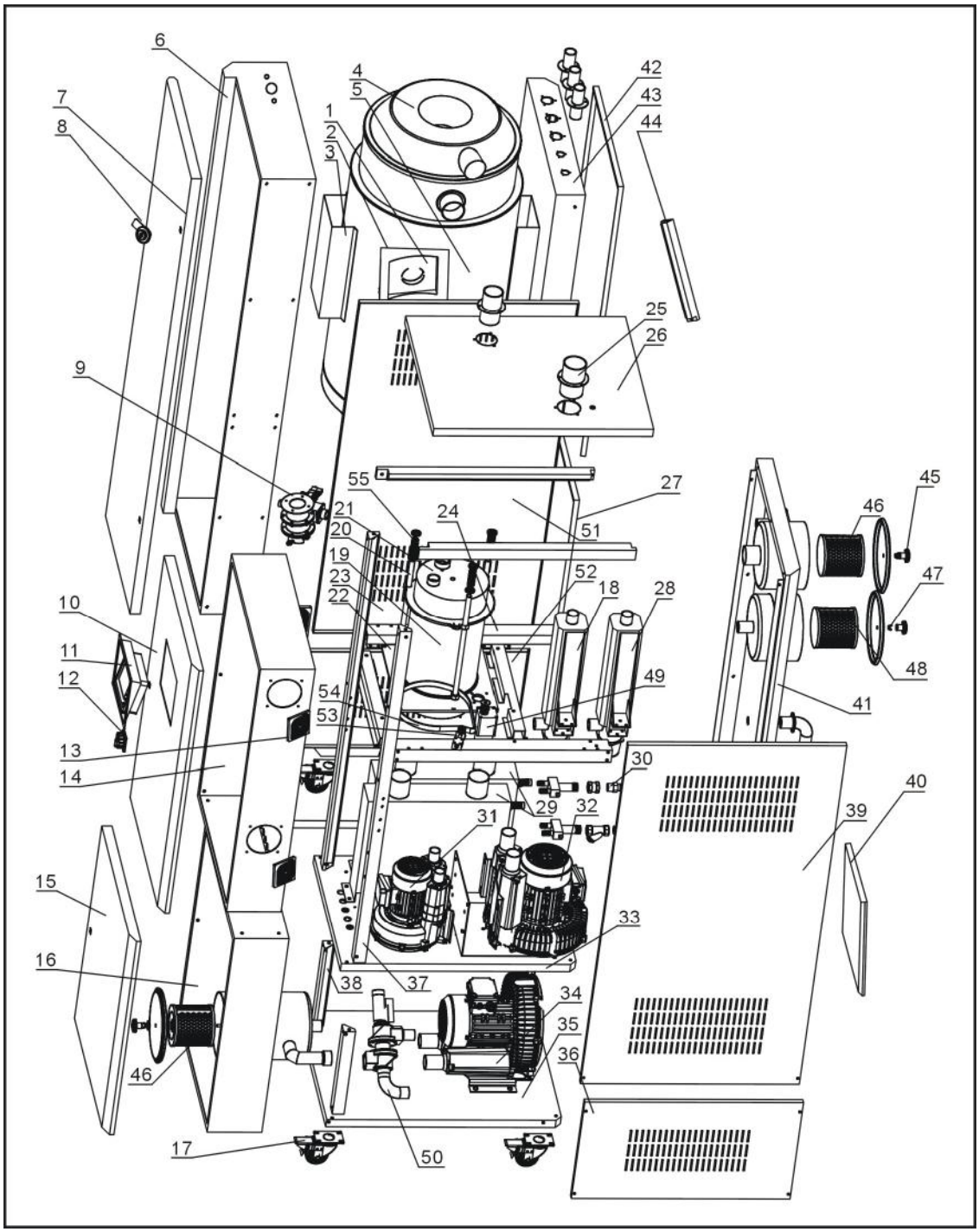
No.	Description	Part No.		
		20U/30H	40U/30H	40U/50H
32	Process blower*	BM30012500050	BM30012500050	BM30020500050
33	Middle separating plate	-	-	-
34	Conveying blower*	BM30042000050	BM30042000050	BM30042000050
35	Bottom plate	-	-	-
36	Right bottom side plate	-	-	-
37	Top standing pole	-	-	-
38	Bottom standing pole	-	-	-
39	Right upper side plate	-	-	-
40	Rear plate at the bottom	-	-	-
41	Rear plate at the top	-	-	-
42	Rear plate cover	-	-	-
43	Rear plate	-	-	-
44	Rear plate bar	-	-	-
45	Star knob	YW09675100000	YW09675100000	YW09675100000
46	Filter ADC18 **	YR50128300000	YR50128300000	YR50128300000
47	Butterfly nut	YW69000800000	YW69000800000	YW69000800000
48	Filter 700/800G **	YR50708000200	YR50708000200	YR50708000200
49	Gear motor	YM50102600000	YM50102600000	YM50102600000
50	Three-way valve	BY20001500050	BY20001500050	BY20001500050
51	Left upper side plate	-	-	-
52	Inner side plate	-	-	-
53	Belt regulator	BH10005000040	BH10005000040	BH10005000040
54	Transmission belt **	YR00202500000	YR00202500000	YR00202500000
55	Spring	YW01201800000	YW01201800000	YW01201800000

* 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 (Fully-integral design) (SCD-80U/50H~230U/120H)



Remarks: Please refer to material list 2.6.5 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-6: Assembly Drawing (Fully-integral design) (SCD-80U/50H~230U/120H)

2.6.5 Parts List (Fully-integral design)(SCD-80U/50H~230U/120H)

Table 2-2: Parts List (Fully-integral design)(SCD-80U/50H~230U/120H)

No.	Description	Part No.			
		80U/50H	120U/80H	160U/120H	230U/120H
1	Sight-glass window	-	-	-	-
2	Sight-glass window fixing plate	-	-	-	-
3	Hopper fixing plate	-	-	-	-
4	Hopper top cover	-	-	-	-
5	Insulated hopper	-	-	-	-
6	Front door frame	-	-	-	-
7	Front door plate	-	-	-	-
8	An electric cabinet door lock	-	-	-	-
9	Cut-off valve type suction box	YW00717100000	YW00717100000	YW00717100000	YW00717100000
10	Control box door	-	-	-	-
11	Touch screen	YE80350100000	YE80350100000	YE80350100000	YE80350100000
12	Main switch*	YE10200300000	YE10200300000	YE10200300000	YE10220300000
13	Exhaust fan**	YM60121200400	YM60121200400	YM60121200400	YM60121200400
14	Control box	-	-	-	BH36023000350
15	Front door plate (left)	-	-	-	-
16	Front plate (left)	-	-	-	-
17	Castor	YW03000300200	YW03000300200	YW03000300200	YW03000300200
		YW03000300000	YW03000300000	YW03000300000	YW03000300000
18	Process heater*	BH70803900050	BH70160600150	BH70160600150	BH70160600150
19	Honeycomb	YW71182000100	YW71183000100	YW71184000100	YW71184000100
20	Double-head screw	BH10533000040	BH10543000040	BH10554500040	BH10554500010
21	Honeycomb upper cover	BA40508000130	BA40508000130	BA40508000130	BA40508000130
22	Honeycomb bottom cover	BA40508000030	BA40508000030	BA40508000030	BA40508000030
23	Right side plate	-	-	-	-
24	Honeycomb mounting bracket	-	-	-	YW72253600000
25	Flange	-	-	-	-
26	Top plate	-	-	-	-
27	Rear plate lower cover	-	-	-	YE31325000200
28	Regen. heater*	BH70500300050	BH70800300050	BH70800300050	BH70800300050
29	Cooler	BW88080000020	BW88080000020	BW88080000020	BW88080000020
		BW88008000020	BW88008000020	BW88008000020	BW88008000020
30	Copper insert core	BH12223400010	BH12223400010	BH12223400010	BH12223400010

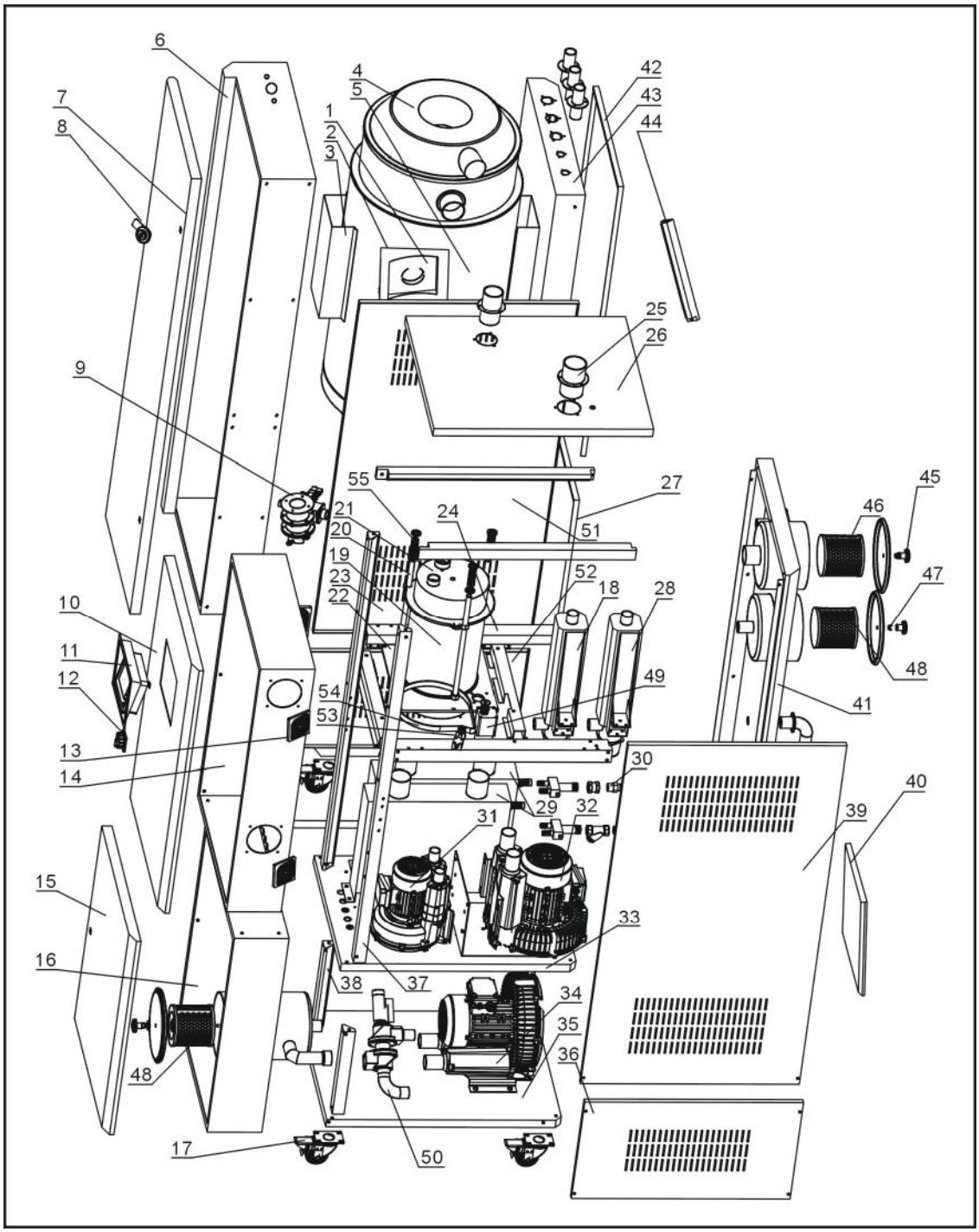
No.	Description	Part No.			
		80U/50H	120U/80H	160U/120H	230U/120H
31	Regen. blower*	BM30012500050	BM30012500050	BM30012500050	BM30012500050
32	Process blower*	BM30020500050	BM30031000150	BM30031000150	BM30031000150
33	Middle separating plate	-	-	-	-
34	Conveying blower*	BM30042000050	BM30042000050	BM30042000050	BM30042000050
35	Bottom plate	-	-	-	-
36	Right bottom side plate	-	-	-	-
37	Top standing pole	-	-	-	-
38	Bottom standing pole	-	-	-	-
39	Right upper side plate	-	-	-	-
40	Rear plate at the bottom	-	-	-	-
41	Rear plate at the top	-	-	-	-
42	Rear plate cover	-	-	-	-
43	Rear plate	-	-	-	YM50616400100
44	Rear plate bar	-	-	-	YE32051800300
45	Star knob	YW09675100000	YW09675100000	YW09675100000	YW09675100000
46	Filter 700/800G **	YR50708000100	YR50708000100	YR50708000100	YR50708000100
47	Butterfly nut	YW69000800000	YW69000800000	YW69000800000	YW69000800000
48	Filter ADC18 **	YR50128300000	YR50128300000	YR50128300000	YR50128300000
49	Gear motor	YM50102600000	YM50102600000	YM50102600000	YM50102600000
50	Three-way valve	BY20001500050	BY20001500050	BY20001500050	BY20001500050
51	Left upper side plate	-	-	-	-
52	Inner side plate	-	-	-	-
53	Belt regulator	BH10005000040	BH10005000040	BH10005000040	BH10005000040
54	Transmission belt **	YR00202500000	YR00202500000	YR00202500000	YR00202500000
55	Spring	YW01201800000	YW01201800000	YW01201800000	YW01201800000

* 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 (Fully-integral design) (SCD-300U/200H~450U/200H)



Remarks: Please refer to material list 2.6.7 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-7: Assembly Drawing (Fully-integral design) (SCD-300U/200H~450U/200H)

2.6.7 Parts List (Fully-integral design)(SCD-300U/200H~450U/200H)

Table 2-3: Parts List (Fully-integral design) (SCD-300U/200H~450U/200H)

No.	Description	Part No.	
		300U/200H	450U/200H
1	Sight-glass window	-	-
2	Sight-glass window fixing plate	-	-
3	Hopper fixing plate	-	-
4	Hopper top cover	-	-
5	Insulated hopper	-	-
6	Front door frame	-	-
7	Front door plate	-	-
8	An electric cabinet door lock	YW00717100000	YW00717100000
9	Cut-off valve type suction box	-	-
10	Control box door	-	-
11	Touch screen	YE80350100000	YE80350100000
12	Main switch*	YE10220300000	YE10220300000
13	Exhaust fan**	YM60121200400	YM60121200400
14	Control box	BH36302000150	BH36452000150
15	Front door plate (left)	-	-
16	Front plate (left)	-	-
17	Castor	YW03000300200	YW03000300200
		YW03000300000	YW03000300000
18	Process heater*	BH70124000550	BH70124000550
19	Honeycomb	YW71184000100	YW71184000100
20	Double-head screw	BH10554500010	BH10554500010
21	Honeycomb upper cover	YA40152000100	YA40152000100
22	Honeycomb bottom cover	YA40152000000	YA40152000000
23	Right side plate	-	-
24	Honeycomb mounting bracket	-	-
25	Flange	-	-
26	Top plate	-	-
27	Rear plate lower cover	YE31325000200	-
28	Regen. heater*	BH70150400050	BH70150400050
29	Cooler	BL03154040120	BL03154040120
		YW88152000020	YW88152000020
30	Copper insert core	BH12223400010	BH12223400010
31	Regen. blower*	BM3002050050	BM30020500050
32	Process blower*	BM30042000050	BM30042000050
33	Middle separating plate	-	-

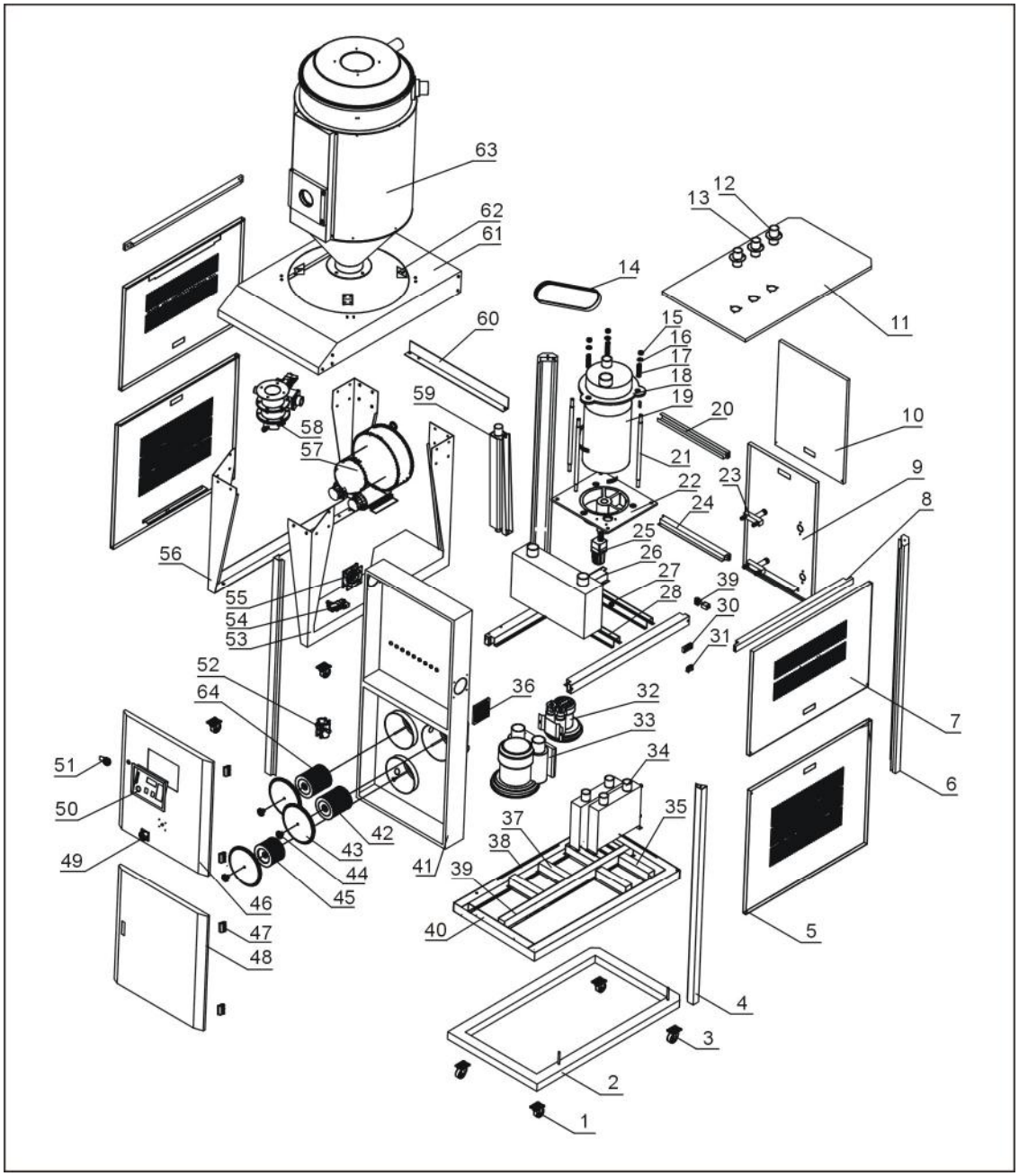
No.	Description	Part No.	
		300U/200H	450U/200H
34	Conveying blower*	BM30042000050	BM30042000050
35	Bottom plate	-	-
36	Right bottom side plate	-	-
37	Top standing pole	-	-
38	Bottom standing pole	-	-
39	Right upper side plate	-	-
40	Rear plate at the bottom	-	-
41	Rear plate at the top	-	-
42	Rear plate cover	-	-
43	Rear plate	YM50616400100	-
44	Rear plate bar	YE32051800300	-
45	Star knob	YW09675100000	YW09675100000
46	Filter 700/800G **	YR50708000100	YR50708000100
47	Butterfly nut	YW69000800000	YW69000800000
48	Filter **	YR50203000000	YR50203000000
49	Gear motor	YM50102600000	YM50102600000
50	Three-way valve	BY20001500050	BY20001500050
51	Left upper side plate	-	-
52	Inner side plate	-	-
53	Belt regulator	BH10005000040	BH10005000040
54	Transmission belt **	YR00203400000	YR00203400000
55	Spring	YW01201800000	YW01201800000

* 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 Assembly Drawing (Semi-integral design)



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

Picture 2-8: Assembly Drawing (Semi-integral design)

2.6.9 Parts List (Semi-integral Design)

Table 2-4: Parts List (Semi-integral Design)(SCD-600U/400H~750U/400H)

No.	Description	Part No.	
		600U/400H	750U/400H
1	Castor	YW03000400200	YW03000400200
2	Base frame welding ring	-	-
3	Castor brake	YW03000400000	YW03000400000
4	Front pole	-	-
5	Right lower side plate	-	-
6	Rear pole	-	-
7	Upper side plate	-	-
8	Side fixing beam	-	-
9	Rear bottom plate	-	-
10	Rear top plate	-	-
11	Cover board	-	-
12	Moisture outlet flange	-	-
13	Air outlet flange	-	-
14	Transmission belt**	YR00204700000	YR00204700000
15	M16 Screw	YW64001600000	YW64001600000
16	Washer	YW66163000000	YW66163000000
17	Spring	YW01180300000	YW01180300000
18	Honeycomb upper cover	BA40304000110	BA40304000110
19	Honeycomb	YW71353000100	YW71353000100
20	Rear fixing beam	-	-
21	Two-head screw	BH10554500010	BH10554500010
22	Honeycomb bottom cover	BA40304000010	BA40304000010
23	Water distributor	-	-
24	Rear middle beam	-	-
25	Gear motor	YM50512600000	YM50512600000
26	Side middle beam	-	-
27	Rear middle beam	-	-
28	Front middle beam	-	-
29	Belt regulator pad	BH10005000040	BH10005000040
30	Terminal block	YE61250040000	YE61250040000
31	Capacitor	YE25001500000	YE25001500000
32	Motor*	BM30042000050	BM30042000050
33	Blower*	YM30062900000	YM30062900000
34	Cooler	BW88304000020	BW88304000020
35	Regenerated fan fixed beam	-	-

No.	Description	Part No.	
		600U/400H	750U/400H
36	Cooler *	YR40120300000	YR40120300000
37	Fixed beam of cooler	-	-
38	Erect beam of base frame	-	-
39	Bottom mounting beam	-	-
40	Cross-beam of base frame	-	-
41	Control trunk	BH36604000050	BH36754000050
42	Filter**	YR50203000000	YR50203000000
43	Filter cover	-	-
44	Butterfly nut	YW09675100000	YW09000600000
45	Filter**	YR50708000100	YR50708000100
46	Upper door plate	-	-
47	Hinge	YW06203100200	YW06203100200
48	Bottom door plate	-	-
49	Door interlock switch	YE40636300000	YE40636300000
50	Control panel	YR01008000100	YR01008000100
51	Short door bolt	YW00000600000	YW00000600000
52	Pipe connector	YR10001500100	YR10001500100
53	Right fixed leg	-	-
54	Solenoid valve*	YE32421600000	YE32421600000
55	Exhaust heater**	YM60121200400	YM60121200400
56	Left fixed leg	-	-
57	Feeding fan *	BM30031000150	BM30031000150
58	EURO-material absorption box	BY10163801150	BY10163801150
59	Regenerated heater*	BH70307200250	BH70407200050
60	Leg reinforcement beam	-	-
61	Cover board of housing	-	-
62	Outer fixer	-	-
63	Dry hopper drum	-	-
64	Filter**	YR50241400100	YR50241400100

* means possible broken parts.

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

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

Table 2-5: Parts List (Semi-integral Design) (SCD-900U/700H~1200U/700H)

No.	Description	Part No.	
		900U/700H	1200U/700H
1	Castor	YW03000400900	YW03000400900
2	Base frame welding ring	-	-
3	Castor brake	YW03000400000	YW03000400000
4	Front pole	-	-
5	Right lower side plate	-	-
6	Rear pole	-	-
7	Upper side plate	-	-
8	Side fixing beam	-	-
9	Rear bottom plate	-	-
10	Rear top plate	-	-
11	Cover board	-	-
12	Moisture outlet flange	-	-
13	Air outlet flange	-	-
14	Transmission belt**	YR00205800000	YR00205800000
15	M16 Screw	-	-
16	Washer	-	-
17	Spring	YW01180300000	YW01180300000
18	Honeycomb upper cover	BA40304000110	BA40304000110
19	Honeycomb	YW71444000100	YW71444000000
20	Rear fixing beam	-	-
21	Two-head screw	BH10554500010	BH10554500010
22	Honeycomb bottom cover	BA40507000010	BA40507000010
23	Water distributor	-	-
24	Rear middle beam	-	-
25	Gear motor	YM50512600000	YM50512600000
26	Side middle beam	-	-
27	Rear middle beam	-	-
28	Front middle beam	-	-
29	Belt regulator pad	BH10005000040	BH10005000040
30	Terminal block	YE61250040000	YE61250040000
31	Capacitor	YE25001500000	YE25001500000
32	Motor*	BM30042000050	BM30042000050
33	Blower*	YM30072900000	YM30072900000
34	Cooler	YR30010400000	YR30010400000
35	Regenerated fan fixed beam	-	-
36	Cooler *	YR40120300000	YR40120300000

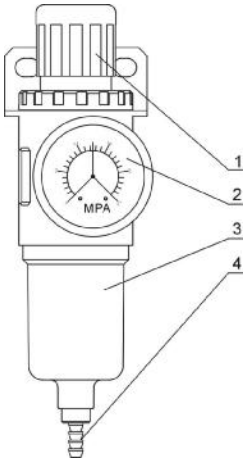
No.	Description	Part No.	
		900U/700H	1200U/700H
37	Fixed beam of cooler	-	-
38	Erect beam of base frame	-	-
39	Bottom mounting beam	-	-
40	Cross-beam of base frame	-	-
41	Control trunk	BH36900700050	BH36120000350
42	Filter**	YR50203000000	YR50203000000
43	Filter cover	-	-
44	Butterfly nut	YW09675100000	YW09051600000
45	Filter**	YR50181100000	YR50181100000
46	Upper door plate	-	-
47	Hinge	YW06203100200	YW06203100200
48	Bottom door plate	-	-
49	Door interlock switch	YE40601500000	YE40601500000
50	Control panel	YR01008000100	YR01008000100
51	Short door bolt	YW00000600000	YW00000600000
52	Pipe connector	YR10002000100	YR10002000100
53	Right fixed leg	-	-
54	Solenoid valve*	YE32421600000	YE32421600000
55	Exhaust heater**	YM60121200400	YM60121200400
56	Left fixed leg	-	-
57	Feeding fan *	BM30053500050	BM30053500050
58	EURO-material absorption box	BY10163801150	BY10163801150
59	Regenerated heater*	BH70501000050	BH70501000050
60	Leg reinforcement beam	-	-
61	Cover board of housing	-	-
62	Outer fixer	-	-
63	Dry hopper drum	-	-
64	Filter**	YR50241400100	YR50241400100

* 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.

2.6.10 Filter & Pressure Regulating Valve Drawing

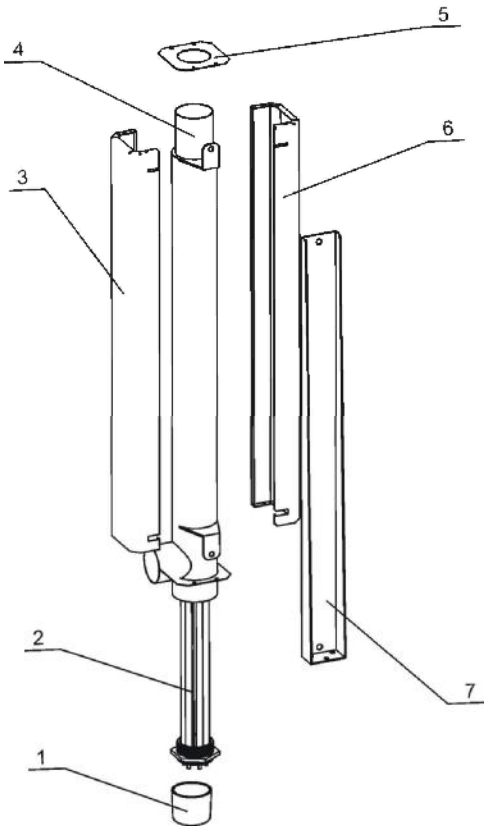


Parts list:

1. Pressure adjusting knob 2. Pressure gauge 3. Cup 4. Water outlet

Picture 2-9: Filter & Pressure Regulating Valve Drawing

2.6.11 Heater

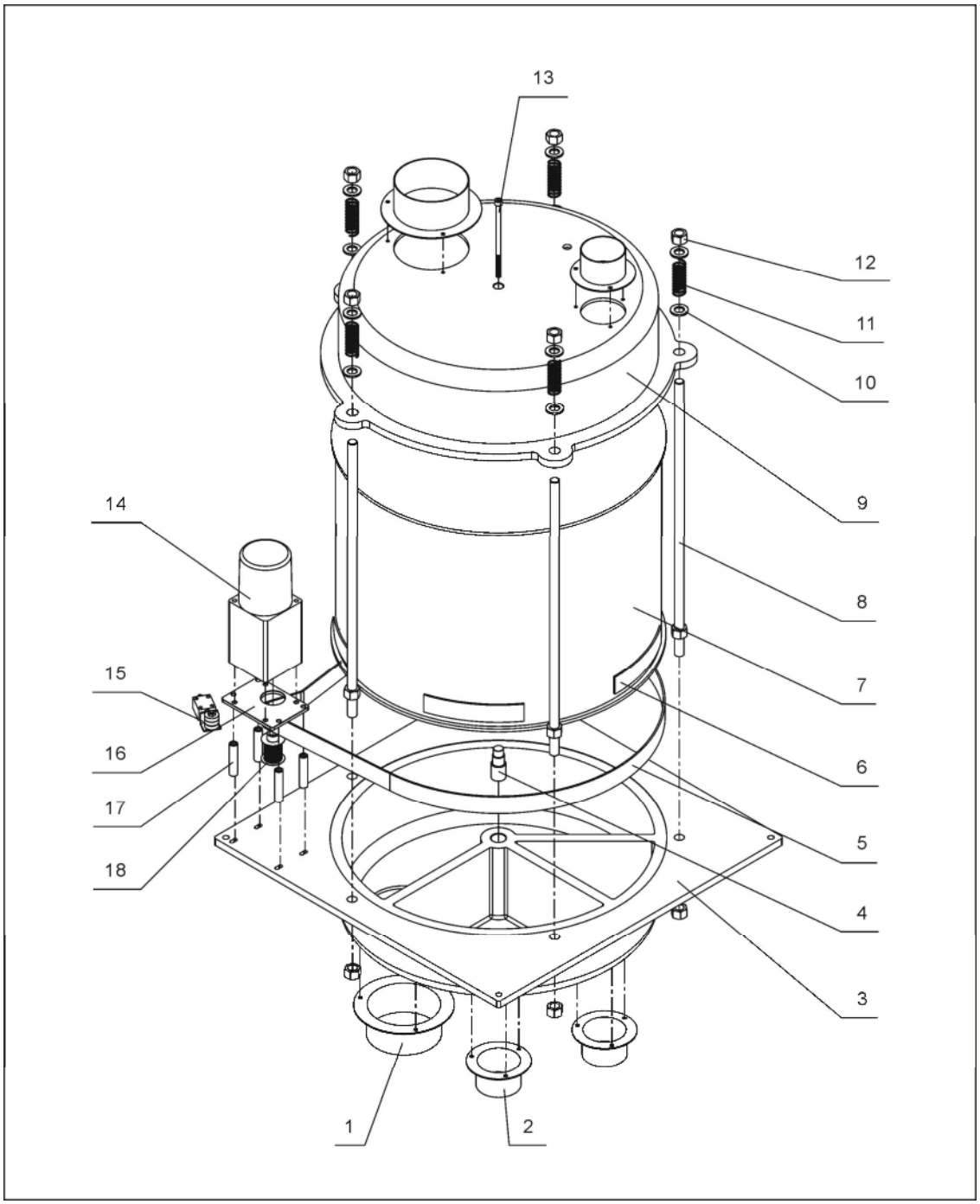


Parts name:

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 2-10: Heater

2.6.12 Honeycomb



Picture 2-11: Honeycomb Parts Drawing (SCD-900U/700H 1200U/700H)

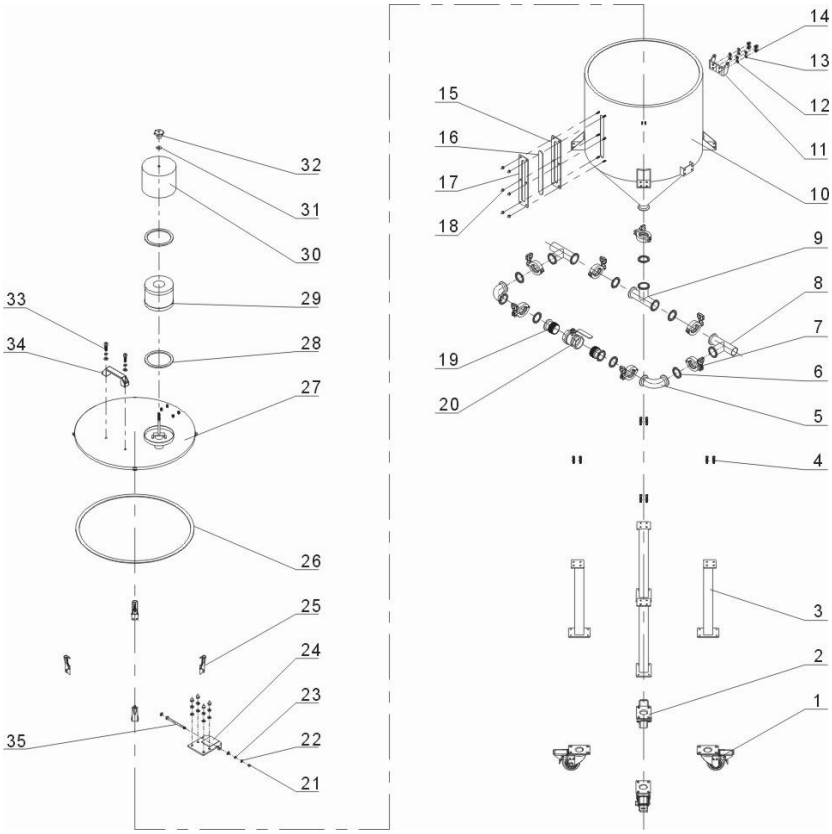
2.6.13 Parts List of Honeycomb (SCD-900U/700H 1200U/700H)

Table 2-6: Parts List

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

* 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.

2.6.14 Material Stage Bin of Optical Grade MST-80U-OP

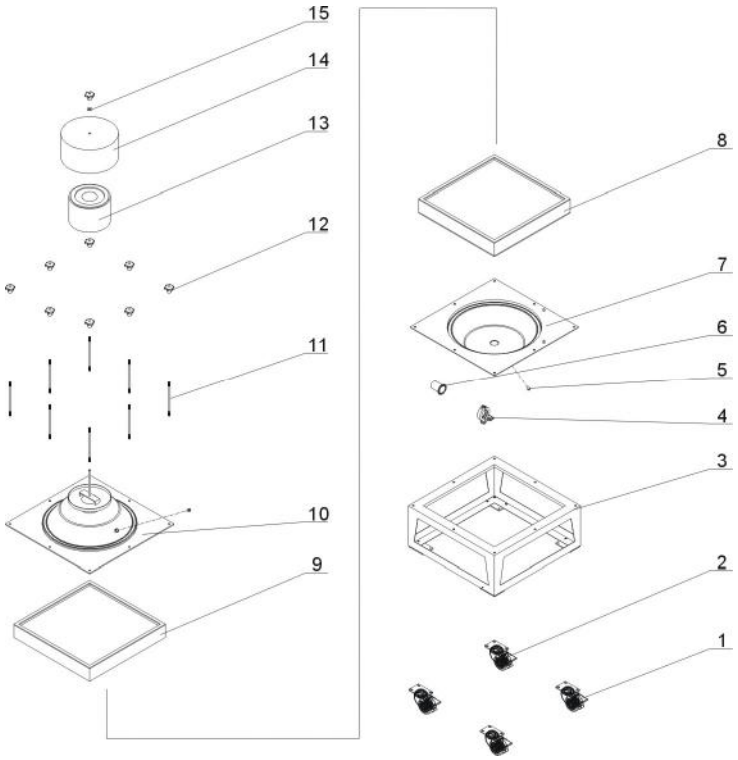


Name of components:

1. Brake-type universal floor stand	2. Free-style universal floor stand	3. Floor stand
4. Inner hexagonal screw column	5. 1.5” Elbow	6. Seal ring 1.5”
7. 1.5” Fast pipe connector	8. Feed port	9. 1.5” Three way
10. Material storage tank	11. Cover back button 2	12. Flat gasket
13. Spring gasket	14. Acorn nut 8	15. Fastener for sight glass window
16. Acryl	17. Fastener for sight glass window	
18. Nut	19. Connection pipe	20. 1.5” Ball valve
21. Acorn nut	22. Spring gasket	23. Flat gasket
24. Cover back button 1	25. Snap hook	26. Material storage tank fastener
27. Material storage tank top	28. Filter 1 fastener	29. Filter 1
30. Filter cover 1	31. Flat gasket	32. Star nut
33. Inner hexagonal screw column	34. Square aluminum handle	35. Pin

Picture 2-12: Material Stage Bin of Optical Grade MST-80U-OP

2.6.15 High-efficiency Filter HEPA

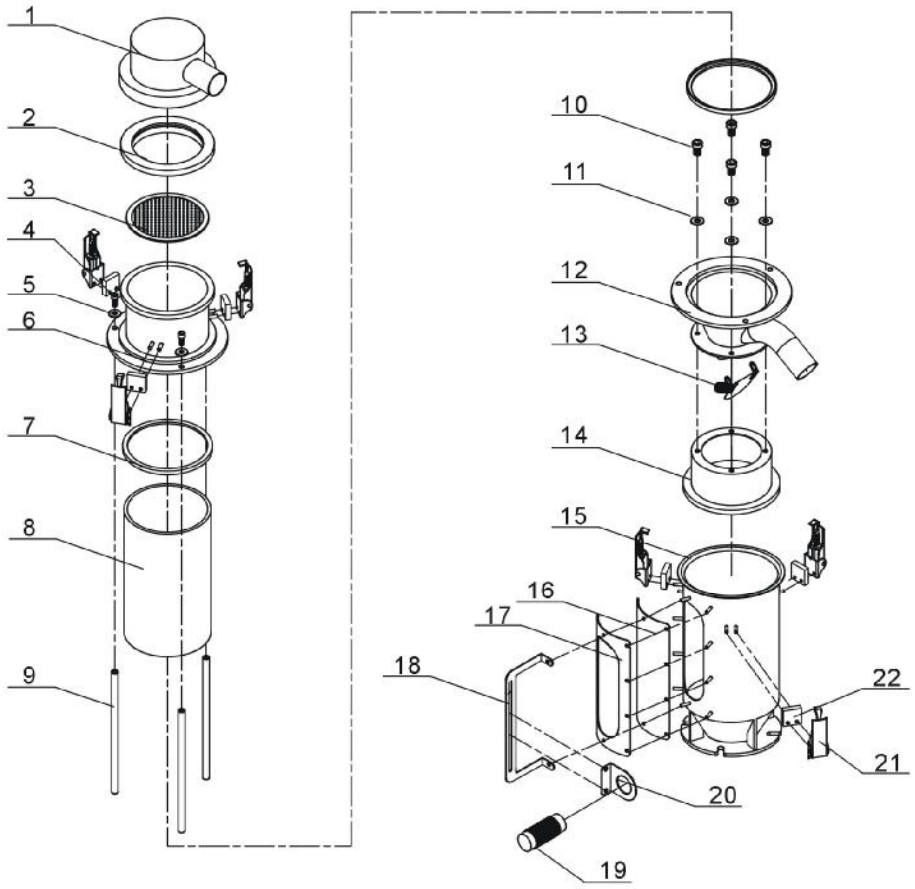


Name of components:

1. Brake-type universal floor stand
2. Free-style universal floor stand
3. Floor stand
4. Clamp tube
5. Metric taper thread
6. Connector
7. Bottom cover of filter
8. High-efficiency filter
9. Middle-efficiency filter
10. Top cover of filter
11. Screw shaft
12. Star screw
13. Low-efficiency filter
14. Filter cover
15. Stainless steel washer

Picture 2-13: High-efficiency Filter HEPA

2.6.16 Important notices for using SHR-CP-3U



Name of components:

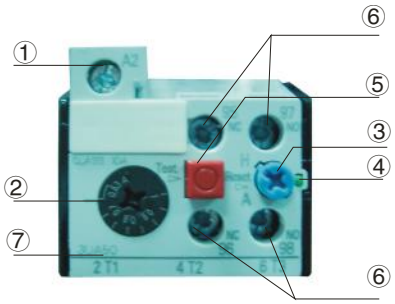
1. Top cover	2. Screener fastener	3. Screener	4. Flat gasket M6
5. Inner hexagon column screw M6×15		6. Glass pipe upper flange	
7. Glass pipe packing	8. Glass tube	9. Flange connection shaft	
10. Inner hexagon column screw M5×15		11. Flat gasket	
12. Glass tube lower flange	13. Non-return flap	14. Bottom cover board	
15. Base	16. Sight-glass	17. Sight-glass iron sheet	
18. Supporting frame	19. Sensor fixing plate	20. Sensor	
21. Snap hook	22. Snap hook fixing plate		

Picture 2-14: Important notices for using SHR-CP-3U

2.6.17 Main Electrical Components Description

Overload Relay

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



Picture 2-15: 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.

2.7 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.

2.7.1 Operation Regulations

Picture 2-16: 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.

2.7.2 Description of touch screen

Picture 2-17: Description of touch screen

A: Display
B: Touch panel
C: LED status indicator

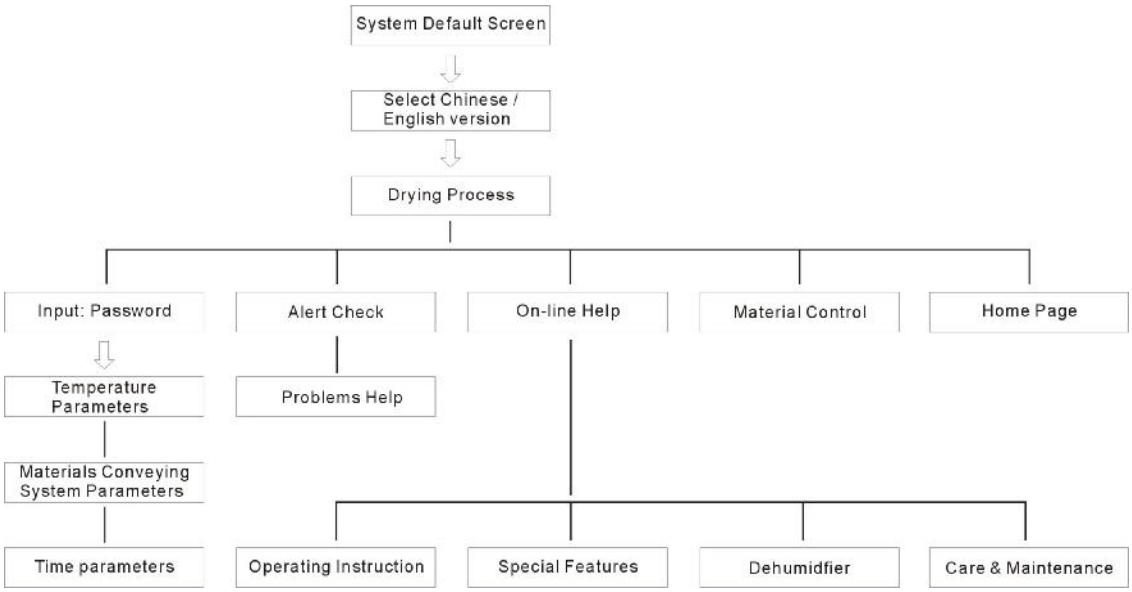
2.7.3 Touch panel appear error

Table 2-7: 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

2.7.4 Screen operation flow Table

This operation system consists of eight (8) main screens: Drying Monitoring, Conveying Monitoring, Temperature Parameter, Conveying Parameter, Time Setting, Alarm Fault Records, and On-line Help. They are shown as below:



Picture 2-18: Screen operation flow Table

2.7.5 Menu particular

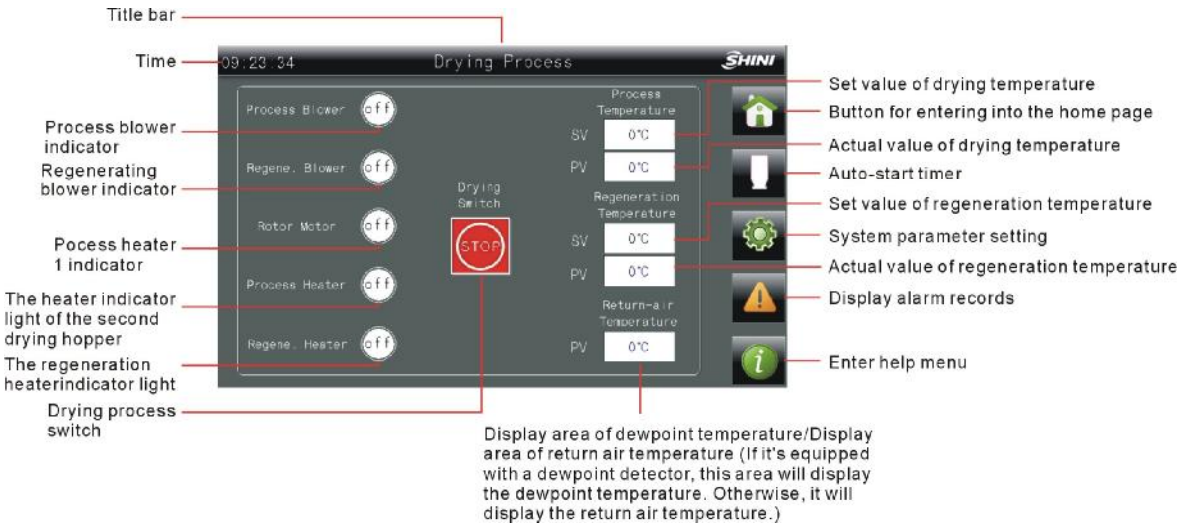
1) System Default System

When the system is connected with power source, the initial default screen will display as shown below. By touching the button of "English" or "Chinese" to select either English or Chinese languages in order to login "Drying Monitoring" screen.

Picture 2-19: System Default System

2) Drying MonitoringScreen

Drying Monitoring screen is shown as below:



Picture 2-20: Drying Process Screen

A. Operation of the menu

Start the system:

Touch the start switch to make it show ON, then the system starts.

Stop the system:

Touch the start switch again to make it show OFF, then the system stops running.

(Attention: In order to prolong the life of honeycomb-rotor, it's necessary to delay the stop time of the rotor for cooling. Set the delayed time at about 2~3 minutes. Please see more details of setting on the time parameter setting screen.)

Set drying temp.

Touch the preset value of process temp. A numerical keypad will appear. Use the keypad to input temperature values.

If it's the system above model "one-to-two" (consists of a dehumidifier and more than two drying tanks), the drying temperature is independently controlled by each temperature controller under the drying tank. By then, the drying temperature for each drying tank is set via corresponding temperature controller. In addition, turn on the switch besides the temperature controller first.

These parameters only take effect when it's equipped with drying heater.

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

Use the keypad to input temperature values.

Note!

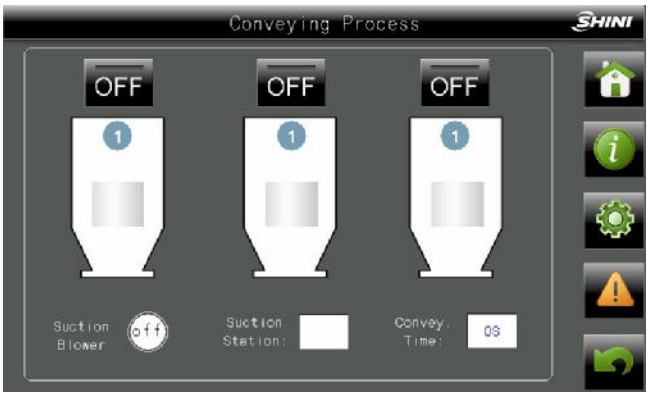
Drying temp. and regenerating temp. value are set within certain limits. Drying temp. should be set between 0℃~200℃ and regenerating temp.should be set between 130~180℃! The regenerating temp. value is already set to be 130℃ or 180℃ when produced. Please don't reset it if no special occasion.

B.Five Functional Keys:

Home page: Press this button to enter into the home page screen.
Conveying Monitoring: Press this button to enter into "Conveying Monitoring " screen.
Parameter Setting: Press this button to enter into "Parameters Setting" screen. (Input correct password to log-in.)
Alarm Display: When system appears warning message, press this button to check the details and related help message.
Help: Press this button to enter into “Help Menu” screen.

3) Conveying Process Screen

By touching the "Conveying Monitoring" button at the bottom of "Drying Monitoring " screen, it will enter into Conveying Monitoring screen as shown below:

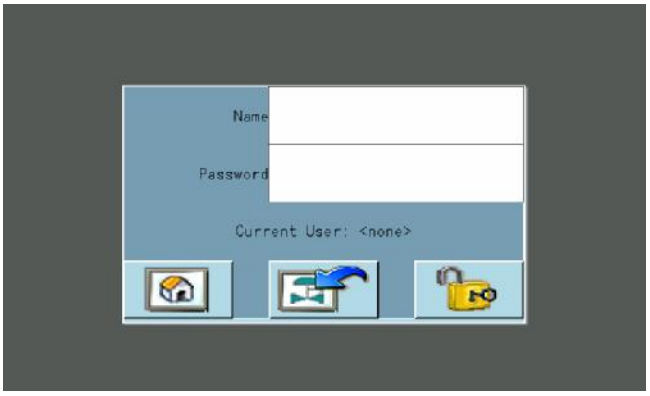


Picture 2-21: Conveying Monitoring Screen

4) Temperature Parameters Setting

Touch parameter setting button at the bottom part of Conveying Monitoring

Screen. Then, the system will pop out a password window for inputing user name: Shini, and passwords 3588. Press "ENTER" button to confirm. By then, the numeric keypad will turn off and return to the password window. After that, press “Sure” and "Return" key by turn to go back to the drying monitoring or conveying monitoring screen. By pressing the "parameter setting" button again, you can log in and change parameters.

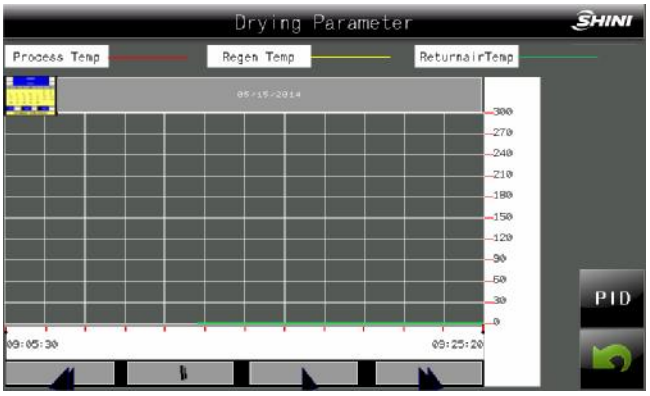


Picture 2-22: Temperature Parameters Setting 1

Warning!

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 let this password known only by system administrator or senior operator.

After input correct password, the screen will show the following "temperature parameter setting" screen. Shown as below:

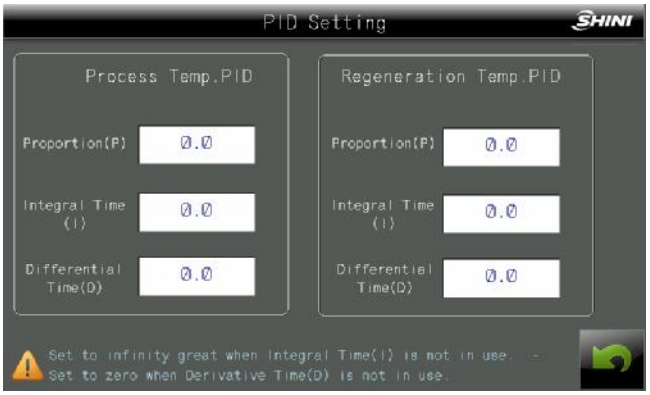


Picture 2-23: Temperature Parameters Setting 2

Drying and Regeneration Temperature Parameter Setting:

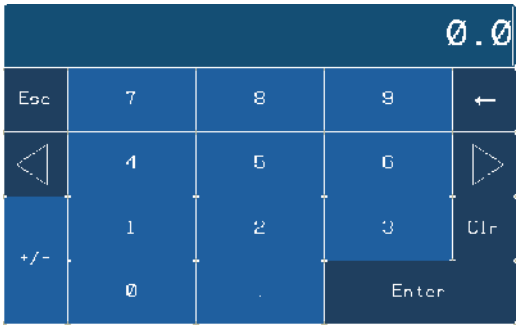
By touching "PID" button, the system will pop up the temperature control PID screen in which three parameters can be set, such as:

Proportion, Integral Time and Differential Time.



Picture 2-24: Drying & Regeneration Temperature Control Parameters

If to change any parameters, it's only need to touch the corresponding "input area" and then a numeric keypad will pop up. Input a new parameter and press "ENTER" to confirm the new parameter.

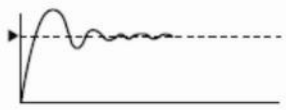
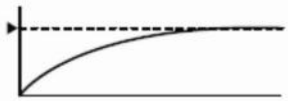


The max. and min. display area of the numeric keypad shows the present max. and min. setting value. If the setting value exceeds the limits, it would be invalid to press "ENTER".

P.I.D. control: When temperature control is inaccurate, users can manually adjust temp. control parameters to achieve the best temperature control effect.

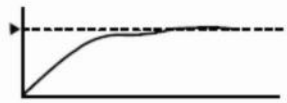
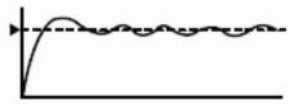
Adjustment of Proportion (P)

Table 2-8: 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.

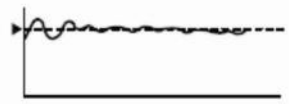
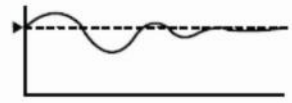
Adjustment of Integral Time (I)

Table 2-9: 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)

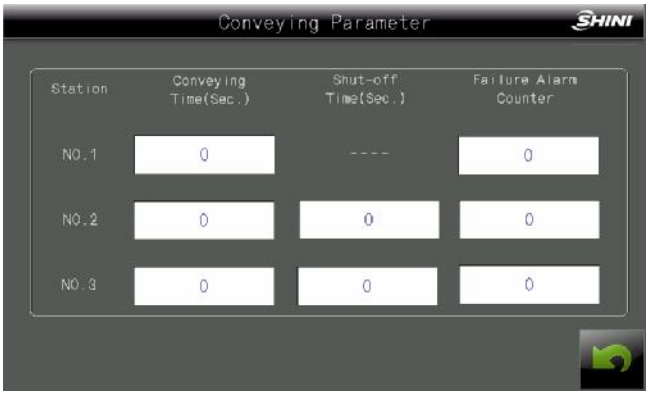
Table 2-10: Adjustment of Differential Time (D)

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.

5) Conveying Parameter Setting

Input the right user name and password to enter into the parameter setting screen. Then, touch the "Conveying Parameter" button to enter into the

parameter setting screen. Parameters include Conveying Time, Loading Failure Counter and Shut-Off time can be set according to actual requirements.



Picture 2-25: Conveying Parameter Setting

Warning!

All parameter default setting is done before delivery. Under normal condition, please DO NOT adjust the setting values, otherwise it could cause blockage of the material conveying line.

Material feeding time (Unit: Second)

When system detects material shortage, it will count down for 3 seconds. After that，PLC will send out signals to start the suction motor for feeding the molding machine. At the same time, it will time the loading time. When the loading time is up, it will stop loading and add 1 to material loading times.

Times of material shortage

For feeding the molding machine, it will limit the material loading times if there is still a material shortage signal. When it's up to the set loading times, the system will stop feeding the machine. Furthermore, it will send out an alarm signal of material loading fault to remind users to check whether the storage tank is lack of material or other faults caused loading failure.

Shut-off time (Unit: Second)

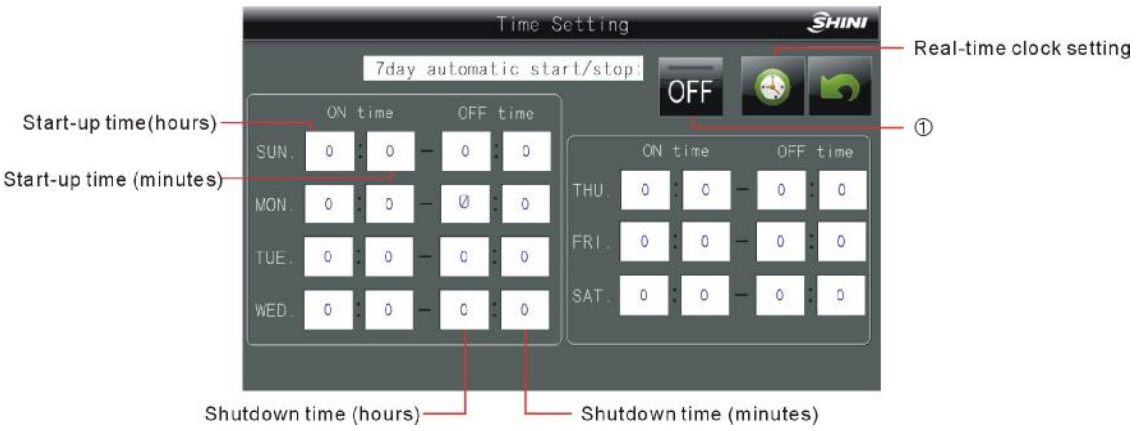
Shut-off time refers to opening time of relative shut-off valve. The longer the shut-off time, the more material will be discharged.

Warning!

Shut-off time should not be set for too long. Otherwise, some material will remain in the material line, which will affect the material drying effect.

6) Time Setting

A. Touch the "Time Setting" button to enter into Time Setting screen as shown below:

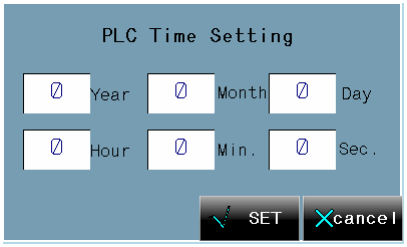


Picture 2-26: Time Setting 1

Note!

After setting the auto-start time, the button ① will be on. By then, the machine will run according to the set time.

B. If there are some deviations with the system date and time, touch the “Real-time clock setting” to enter into the time setting interface to modify the system time. The screen is as below:

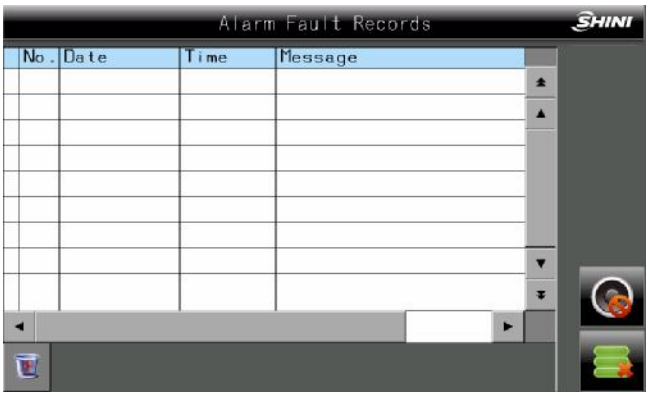


Picture 2-27: Time Setting 2

After touching any parameter setting menu, a numeric keypad will appear. Input each parameter and then press “SET”. Then, the new setting comes into effect. The setting can be cancelled by pressing “cancel”.

7) Alarm Fault Records

Touch "Alarm Display" button under the bottom of "Drying Process" screen or "Conveying Process" screen to enter into Alarm Fault Records screen. The screen is shown as below:



Picture 2-28: Alarm Fault Records

1. When alarm fault records cover more than displaying space, touch "Up" or "Down" keys to read more records.
2. According to the alarm information, the operator could get the troubleshooting information from the instruction book.
3. Press "EXIT" button to exit from this screen.
4. System Alarm Information List

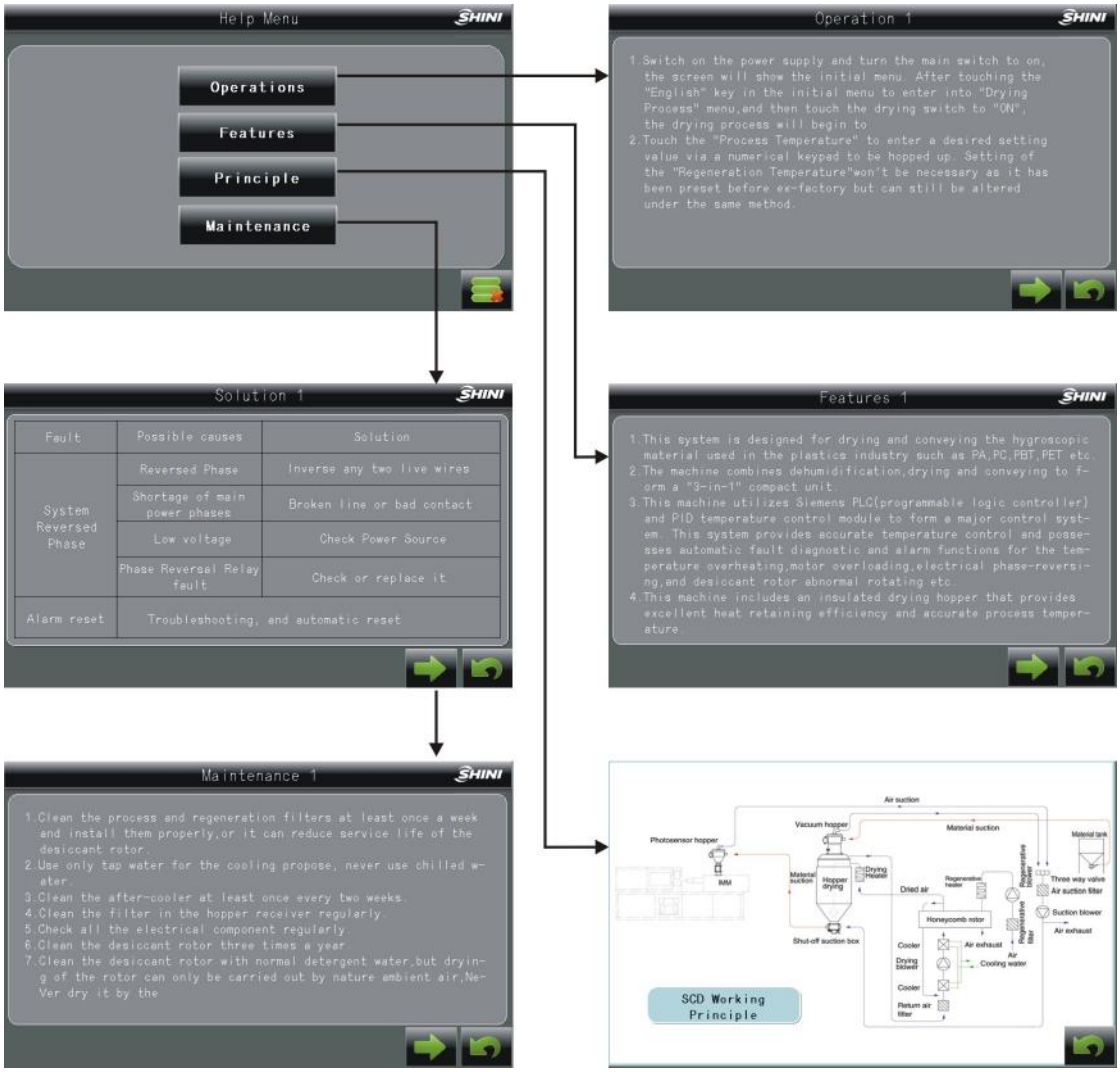
Table 2-11: System Alarm Information List

Alert message	Results	Possible causes
Power phases are storage.	System cannot operate, and the visible alarm is flickering.	Shortage of main power phases.
Process blower Overload.	Dehumidifier does not work and the visible alarm is flickering.	Incorrect motor overload setting, or motor burns out.
Regenerating blower overload.	Dehumidifier does not work and red alert light is flickering.	Incorrect motor overload setting, or motor burns out.
Conveying blower overload.	Material conveying stops and the visible alarm is flickering.	Incorrect motor overload setting, or motor burns out.
No.1 receiver suction problem	No.1 receiver stop suction function and the visible alarm is flickering.	Storage tank lacks material, suction probe problem, parameter wrongly setting, shut-off valve damaged.
No.2 receiver suction problem	No.2 receiver stop suction function and the visible alarm is flickering.	Drying hopper lacks material, suction box problem, parameter wrongly set, shut-off valve damaged.
No.3 receiver suction problem	No.3 receiver stop suction function and the visible alarm is flickering.	Drying hopper lacks material, suction box problem, parameter wrongly set, shut-off valve damaged
Process temperature overheat	Dehumidifier does not work and the visible alarm is flickering.	Temperature control parameter wrongly setup, touching pad is malfunction, process heating problem.
Regenerating temp. overheat	Dehumidifier does not work and the visible alarm is flickering.	Temperature control parameter wrongly set, touching pad is malfunction, regenerating heating problem.
Return air temp. overheat	Dehumidifier does not work and the visible alarm is flickering.	Insufficient cooling water.
Process temp. Thermople broken	Dehumidifier does not work and the visible alarm is flickering.	Thermocouple disconnected or bad contact.
Regenerating temp. Thermocouple broken	Dehumidifier does not work and the visible alarm is flickering.	Thermocouple disconnected or bad contact.
Return air temp. Thermocouple broken	Dehumidifier does not work and the visible alarm is flickering.	Thermocouple disconnected or bad contact.
Rotor speed is not proper	Dehumidifier does not work and the visible alarm is flickering.	Rotor driving motor burnt, belt broken, speed controller damaged, or incorrect rotor speed monitoring parameter setting.
PLC is not under operation mode	System does not work properly.	PLC on/off switch is not in RUN mode.

Note: 1) Overload Relay reset: Open control box, press "RESET" button on the corresponding overload relay.
2) Rotor Failure Alarm reset: Turn off the Drying Switch and then turn it "ON" again.
3) Over Temperature Alarm reset: Turn off the Drying Switch and then turn it "ON" again after the temperature drops down.

8) Help Screen

Touch "Help" button under the bottom of Drying Monitoring or Conveying Monitoring screen to enter into system help menu screen. Touch the menu button to get corresponding help message.



Picture 2-29: Help Screen

3. Installation Testing

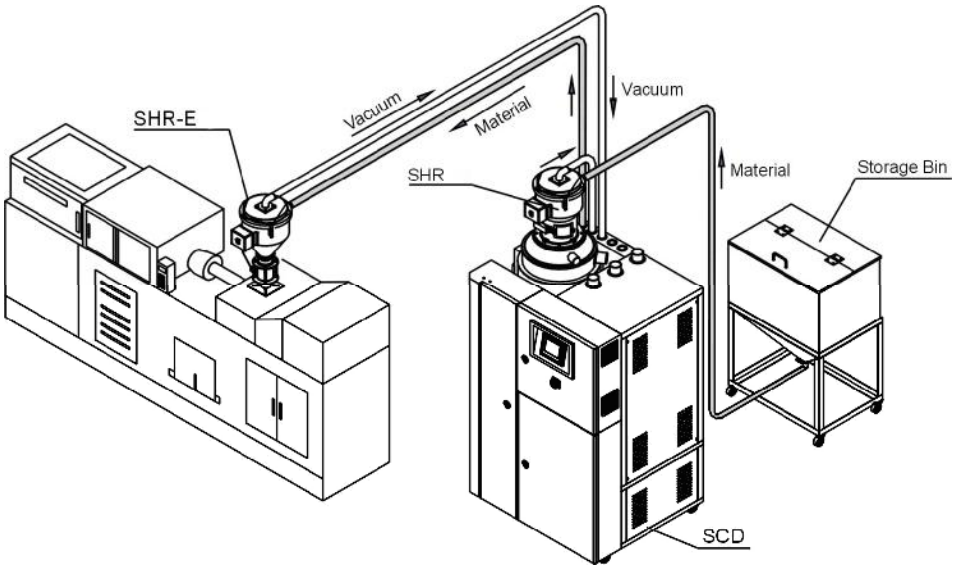
3.1 Attention

1) Make sure voltage and frequency of the power source comply with those indicated on the manufacturer nameplate, 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 electrical wire should not be less than those used in the control box.
4) The power cable 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: +/- 10%
   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℃.
8) Refer to the electrical wiring diagram to complete the electrical Installation.

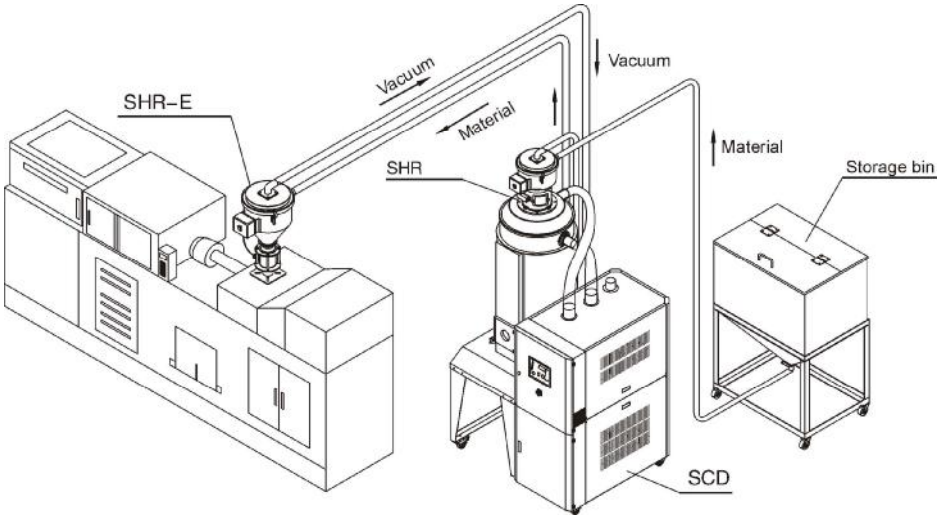
Picture 3-1: Installation drawing

Notes!

Keep the machine 2m from the combustible distance.



Picture 3-2: Schematic drawing of installation (Fully-integral design)

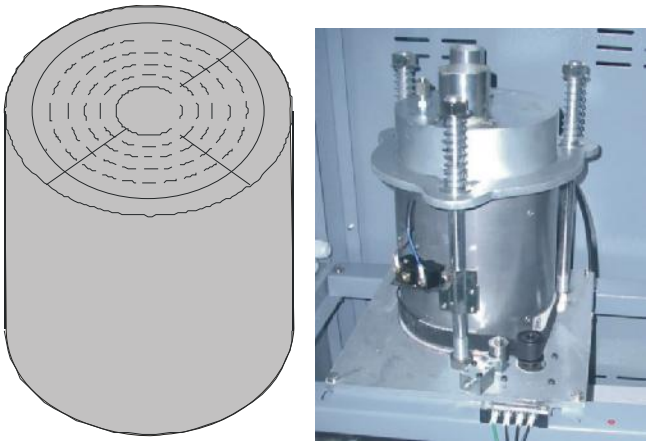


Picture 3-3: Schematic drawing of installation (semi-integral design)

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 3-4: Honeycomb rotor

3.2.2 Installation of the Rotor

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).

Picture 3-5: Installation of the Rotor

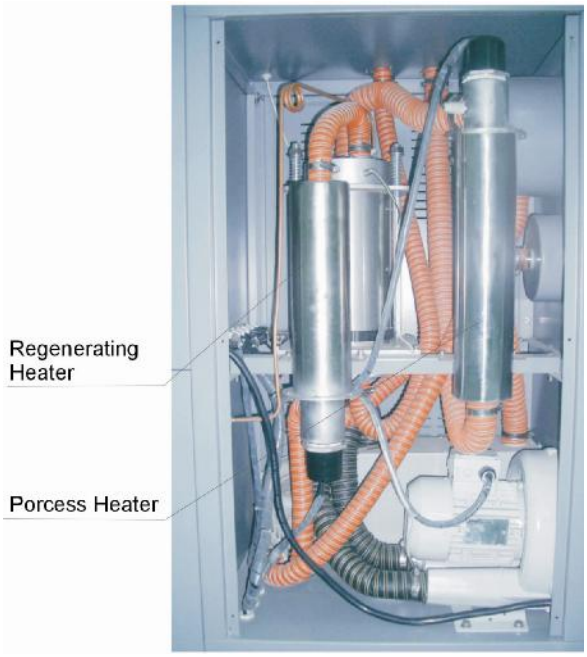
3.3 Heater Assemblies

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 3-6: Heater Assemblies

3.4 Installation of Blowers

3.4.1 Drying Blower

1) Fix inlet/outlet flange of blower, and tighten 4 screws securely.
2) Connect the blower with electrical source.
3) Install the blower on the Machine frame.

Picture 3-7: Installation of Blowers

3.4.2 Regeneration Blower

1) Fix inlet/outlet flange of blower, and tighten 4 screws securely.
2) Install the blower on the machine frame.
3) Connect the blower with electrical source.

3.4.3 Conveying Blower

1) Fix inlet/outlet flange of blower, and tighten 4 screws securely.
2) Connect the blower with electrical power source.
3) Install the blower on the machine frame.
4) Fix the three-way valve (See Figure. 1).
5) Install the solenoid valve, and then tighten 2 screws on the machine frame (See Figure. 2).

Picture 3-8: Conveying Blower

3.4.4 Installation of Drying Hopper

1) Install drying hopper on the machine frame.
2) Fix the shut-off valve adaptor on the suction box.
3) Install the shut-off valve on the suction box.

3.4.5 Filter & Pressure Regulating Valve

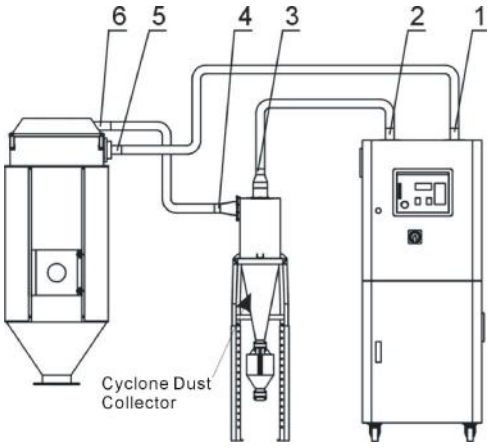
1) Switch on the air source.
2) Pull the black pressure adjusting knob 1 upward and rotate it, observe the pressure gauge 2, generally a 0.5 Mpa pressure is advisable.
3) Push back the black knob 1.

3.4.6 EGO

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

Picture 3-9: EGO

3.4.7 Cyclone Dust Collector

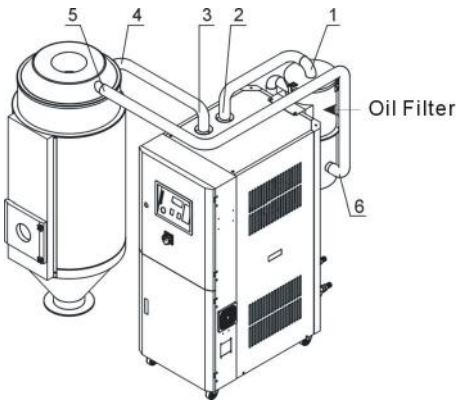


Picture 3-10: Installation Diagram of Cyclone Dust Collector

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.

3.4.8 Oil Filter

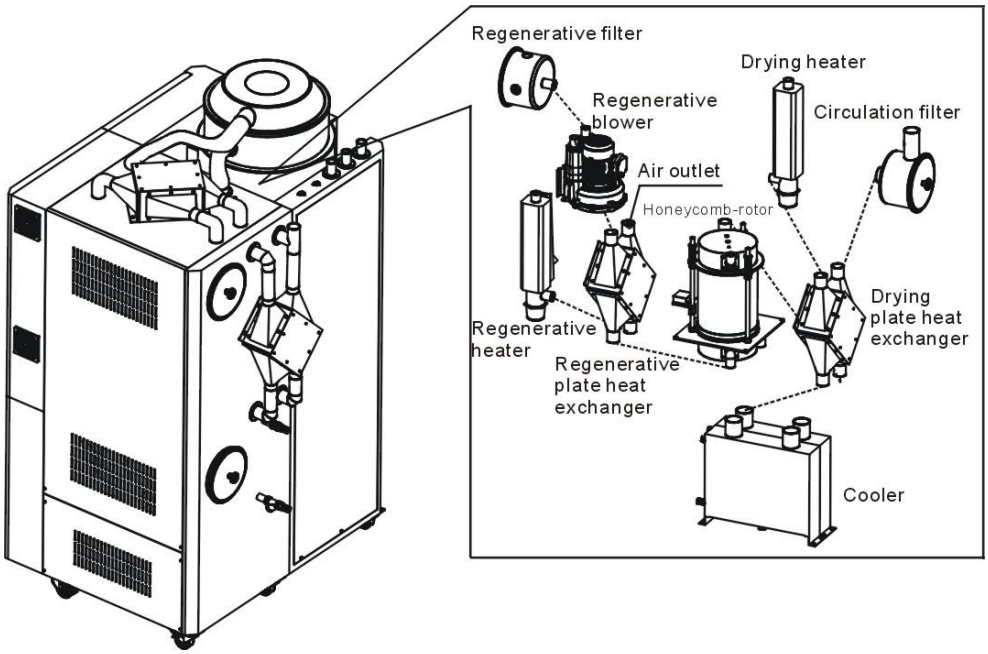


Picture 3-11: Installation Diagram of Oil Filter

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.

3.4.9 Plate Heat Exchanger



Picture 3-12: 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. Application and Operation

Turn on the main switch to connect power supply on the control panel.

4.1 Panel Operation

1) Open the main switch.

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

4.2 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.

4.3 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.

4.4 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 4-1: 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 4-2: 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 4-3: Intermittent Running Setup 3

4.5 Weekly Time Start Setup

1) After setting intermittent operation type, here comes Weekly Time. 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 4-4: 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 4-5: Weekly Time Start Setup 2

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

Picture 4-6: 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 weekly 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 4-7: 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 4-8: 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.

4.6 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.

4.7 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.

4.8 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.

4.9 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.. (Heating begins after blower activates Delay Setup Time)

7. F-17 stands for blower power-off delay time, it is adjustable, the unit is Sec.. (Press “ON/OFF” and heating stops. After blower starts delay setup time, machine stops running to avoid high-temp..)

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

140~250. (If drying temp. exceeds set value, machine halts and alarm sounds to avoid overheat caused by faults.)

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.. (Rotor starts running to monitor time and set time should be less than that of rotor rotation of one circle. Microswitch can be reset periodically to monitor if honeycomb runs normally.)

4.10 Wrong Codes Remark

Table 4-1: Wrong Codes Remark

Wrong codes	Remark
E-01	Break line of thermocouple
E-02	Power reverse phase, default phase
E-03	Overload of blower
E-04	Drying temp. exceeds EGO set value
E-05	Drying temp. exceeds max. set value
E-07	Overheat protection （PV≥SV plus set value, alarm sounds）
E-08	Memory errors
E-09	Running fault of honeycomb-rotor
E-10	Regenerative temp. exceeds EGO set value
E-11	Insert errors of thermocouple “+, -”
E-12	PID auto-tuning errors

4.11 Operation of Conveying System

1) Press ◷ once to set the suction time of the hopper 1.
   Press ◷ once to set the suction time of the hopper 2.
   Press ◷ three times to set the time for opening the valve.
2) Change the required time with ▲▼ key.
3) Press RUN/STOP once, hopper 1 turned on but hopper 2 turned off.
   Press RUN/STOP twice, both hopper 1 and 2 turned on.
   Press RUN/STOP three times, hopper 1 turned off but hopper 2 turned on.

Press RUN/STOP four times, both hopper 1 and 2 turned off.

4.12 Operation of Dehumidifying System

Open up the control box, and find the temperature controller, adjust the scale to set the regeneration temperature:

Picture 4-9: Temperature Controller

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-04 and other settings, so F-20 functions as an passwordlock for entering into next parameters setup, which prevents the modification from unprofessionals.

Picture 4-10: Password Lock 1

3. 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 4-11： Password Lock 2

4. Press "ENTER" key to confirm the input value and comes into next function item "F-05".

5. Because the first function key has two items，so jump into "F-04" after input "F-05", for exiting the function setting , press "SET" key.

4.13 Installation for Dewpoint Monitor

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

Picture 4-12： Hole Site

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

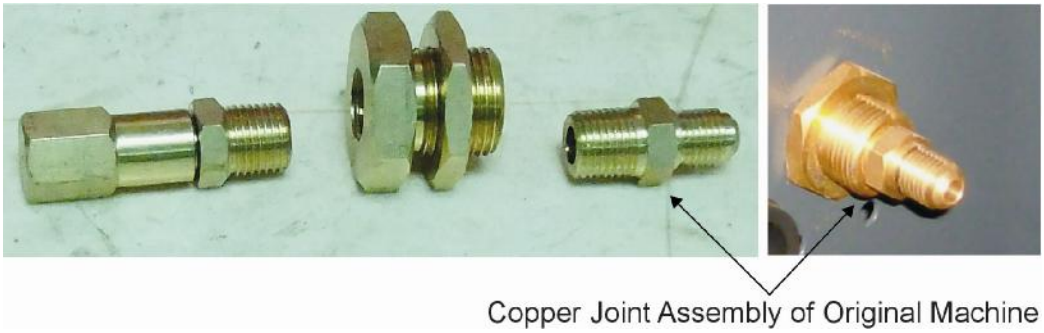
Dew-point monitor

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

Copper joint, installation seat for dew-point monitor

Picture 4-13: 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 4-14: Copper Joint Assembly of Original Machine

Picture 4-15: Installation Seat

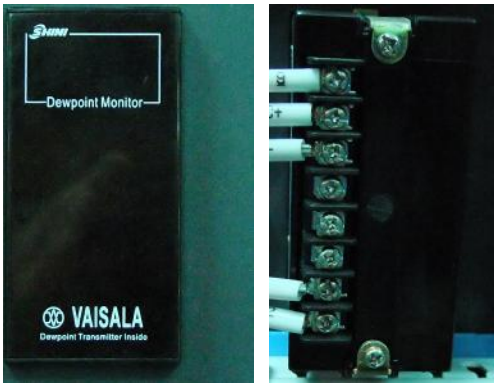
4) Install dew-point transmitter assembly to copper joint.

Picture 4-16: Installation for Transmitter

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

Picture 4-17: Connection of Signal Wire

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



Picture 4-18: Installation for Dew-point Monitor

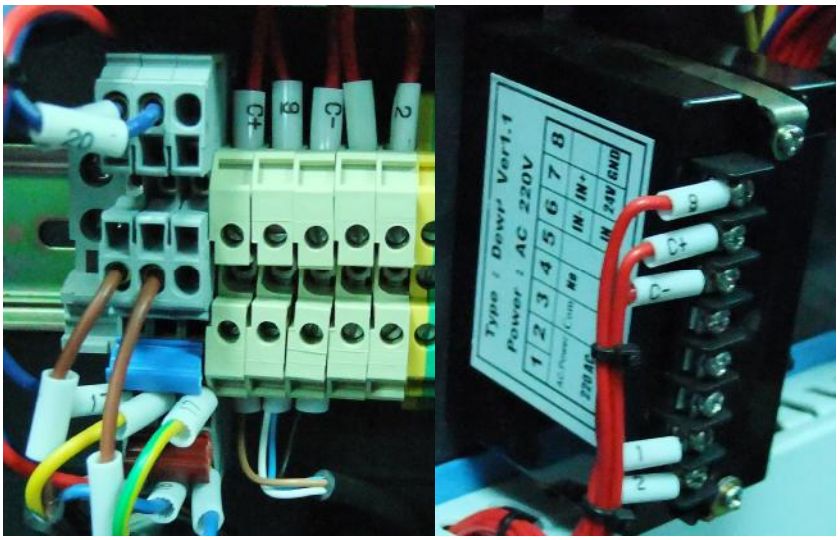
7) Connect signal wires of the transmitter and power lines of dew-point monitor with the according terminals.

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+)



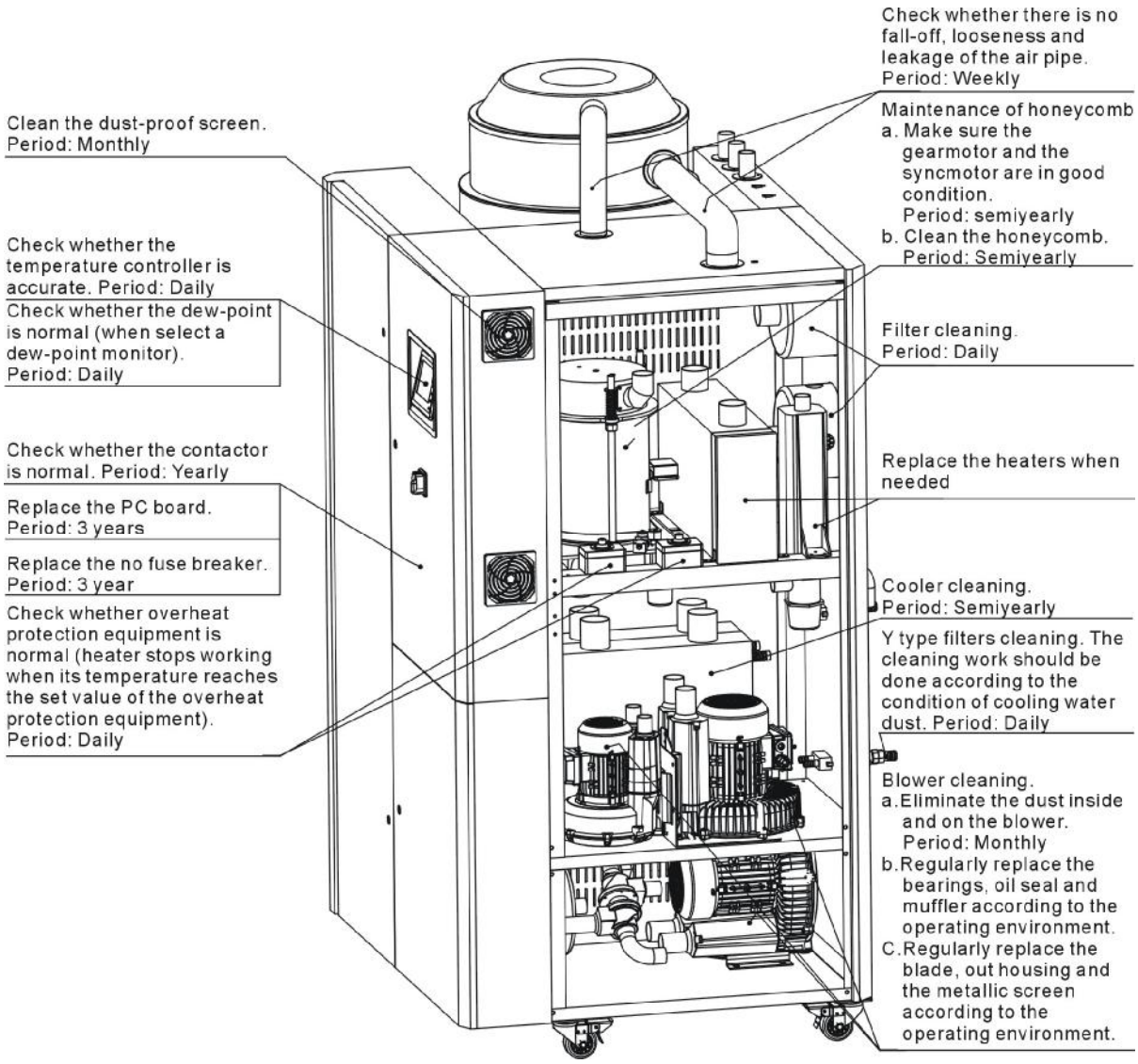
Picture 4-19: Connection of Dew-point Monitor

5. Trouble-shooting

Symptom	Possible causes	Actions taken
Alarm light for high dew point bleaks	1. Return air temperature too high	1. Check cooling water temperature (below 40℃)
	2. Abnormal rotation speed	2. Adjust electric conveyer (Default value is 4)
	3. Abnormal setting of regenerating temperature	3. Launch temperature setup screen, set regenerative temperature again
	4. Rotation wheel blocked	4. Clean or clean rotor
	5. Filter is blocked	5. Clean or replacement
	6. Leakage of heat-resistant hose	6. Check pipe and connector
	7. Operating time is less than 30 minutes	7. Wait until 30 minutes later for confirmation
	8. Rotation wheel is not working	8. Check motor, conveyer, belt is damage or not
	9. Motor's direction is wrong	9. Check motor's direction
	10. System drying capacity insufficient	10. Replace with a large system
	11. Honey-comb upper/lower lid is leaking	11. service or change the seal components
System cannot operate	1. Main AC power supply unconnected	1. Close main AC power supply
	2. Put timer switch into ON status	2. Reset timer button and restart again
	3. Motor overload or Phase reverse	3. Check close-loop, regenerative motor and AC power source are connected correctly
Long lack time but suction fan not work	1. Main AC power source unconnected or touch button is not in ON position	1. Close main AC power source
	2. Funnel's sensor, micro switch are bad contact	2. Adjust or replace
	3. Signal cable is broken	3. Re-connect or replace
Motor does not run	1. Heat relay off load	1. Check reason and reset
	2. Connector is not working	2. Check it is burnt out or not
	3. Power source lack of phase or motor is burnt out	3. Check and replace
Material is full but suction fan still working	1. LED sensor or micro switch is On status	1. Adjust or replace
	2. Signal's cable is broken	2. Check signal cable
	3. Mechanical problem or connector point is melt	3. Repair or Replace
	4. PLC problem	4. Check and replace

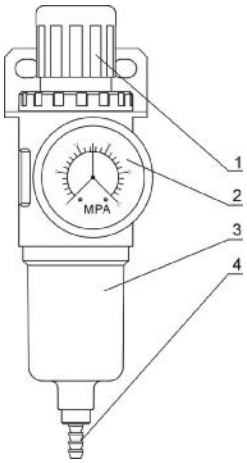
Symptom	Possible causes	Actions taken
Continuous running but cannot fill up funnel	1. Material is used up	1. To add more materials
	2. Pipe is leakage	2. Repair or replace
	3. Filter is blocked	3. Clean
	4. Diaphragm valve or shutoff valve is closed	4. Check diaphragm valve or shutoff valve's pressure, electric valve may be burnt out, circuit is well connected or not
	5. Motor's blade problem	5. Check and repair

6. Maintenance and Repair



6.1 Filter & Pressure Regulating Valve

6.1.1 Filter & Pressure Regulating Valve Drawing



Parts list:

1. Pressure adjusting knob 2. Pressure gauge 3. Cup 4. Water outlet

Picture 6-1: Filter & Pressure Regulating Valve Drawing

6.1.2 Filter & Pressure Regulating Valve Operation steps

1) Switch on the air source.
2) Pull the black pressure adjusting knob 1 upward and rotate it, observe the pressure gauge 2, generally a 0.5 Mpa pressure is advisable.
3) Push back the black knob 1.

6.2 Air Filters

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 cloth.
4) After cleaning, place all parts in reversed order carefully.

Picture 6-2: Air Filters

Note!

Don't let sundries fall into the barrel, when taking out the air filter.

6.3 Blower Motors

1) To clean blower both internal and external parts (especially the fan cooling path), by removing surface dust. If more dusts are accumulated, it will cause deficiency for ventilation, temperature rising up, blower power reduced, vibration increased and so it will cause machine broke down.

2) Ball bearing, oil seal and sound-proof are belonging to consumable parts and so it has a life period and requires regular replacement.

Picture 6-3: Blower Motors

6.3.1 The Useful Life of the Key Parts of the Product

Table 6-1: The Useful Life of the Key Parts of The Product

Name of the parts	Useful life
Blower	Above 5 years
Process heater	Above 1 year
Regen. herter	Above 1 year
Contactor	Above 100,000 act
Honeycomb	5~10 years

6.4 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.

6.5 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 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.

6.6 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.

Note!

Please note that some dirt, like oil mist or other types of sticky mist, is almost impossible to clean out effectively so the rotor may not be cleaned effectively and has to be replaced. Also note that by cleaning the rotor some of the initial capacity will come back but usually not all.

6.7 Maintenance Schedule

6.7.1 General Machine Information

Model _____ SN _____ Manufacture date _____

Voltage_____Φ_____V Frequency _____ Hz Power _____ kW

6.7.2 Installation & Inspection

☐Check if the air pipe are tightly connected.

☐Check if the material clearance door tightly closed.

☐Check if the air pipes are correctly connected.

☐Check if there are damages of the honeycle.

Inspection of electric components

☐Voltage _____ V _____ Hz

☐Fuse melt current: 1 Phase _____A 3 Phases _____ A

☐Check phase sequence of the power supply.

☐Check the rotating direction of regeneration blower.

☐Check the rotating direction of conveying blower.

Check air supply of compressor

☐Compressed air pressure _____ bar

☐Air flow _____ L/nun

☐Check if the compressed air purified or not

6.7.3 Daily Checking

☐Check the switch of the machine.
☐Check auto start-up of the machine.
☐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].

6.7.4 Weekly Checking

- ☐ Check all the electric wires.
- ☐ Check loose electric connections.
- ☐ Check and clean compressed air filter and regulator.
- ☐ Check magnetic valve.
- ☐ Check motor overload relay and phase-reversed prevention function.
- ☐ Check whether air pipe is shed, leaked and loose.

6.7.5 Monthly Checking

- ☐ Check if the belt is loose or not.
- ☐ Check gear box working conditions.
- ☐ Check if there are leakages in the honeycomb.

6.7.6 Half-yearly Checking

- ☐ Check if hot air pipe is broken or not.
- ☐ Check dehumidifier heater.
- ☐ Check regulation blower/material conveying blower/fans.
- ☐ Check whether honey-comb rotor belt is damaged.
- ☐ Clean the cooler.

6.7.7 Yearly Checking

- ☐ Check whether the contactor is normal [2].

6.7.8 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.