

SMD-H Series

Mould Sweat Dehumidifier

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Version: Ver.B (English)



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1. General Description



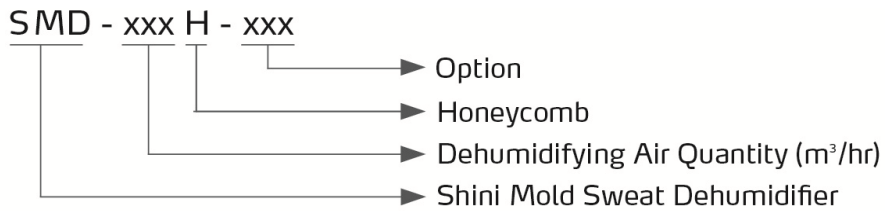
Read this manual carefully before operation to prevent damage of the machine or personal injuries.

SMD-H series mould sweat dehumidifiers are designed to remove the moisture sweat from condensing on the mould surface. Forming of moisture sweat on the mould surface is due to the use of chilled water for reducing the moulding cycle time, particularly while moulding of the PET preforms. To bring about the moisture sweat on the mould surface is because the mould surface temperature is lower than the dew-point temperature of surrounding air, thus the water vapor comes into being, then causes corrosion of mould and effects quality of moulding parts as well as production efficiencies. This series of machine uses honeycomb rotor to carry out dehumidifying function, which generates a dry airflow with dew-point ranging from $+5^{\circ}\text{C}$ ~ -10°C , and ensures the surrounding air of mould remaining in a low dew-point temperature. It provides constant low dewpoint surrounding air to the mould surface all year round without being influenced by the change of seasons.



Picture 1-1: Mould Sweat Dehumidifier SMD-500H

1.1 Coding Principle



1.2 Feature

- Adopt 4.3" color touch panel for easy and direct operation;
- Honeycomb rotor is used to ensure constant air dehumidifying effect.
- With main power switch, it ensures safety of operation and maintenance.
- Motor overload and phase reverse alarm functions are included.
- Under normal state and atmospheric conditions, the humidity content of air can be controlled exactly all year round.
- Inhibits corrosion and prolongs service life of the mould, and yet reduces moulding cycle time.
- Equipped with cooler at air outlet to adjust the temperature, it ensures low temperature outlet air when there's no condensation of the mould.

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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+86 (0)23 6431 0898

1.3 Safety Regulations



Note!

Electrical installation should be done by qualified technician only.

Before connecting of AC Power Source, turn power switch to OFF position, check the specifications of power switch and whether the rated current is appropriate. Before machine maintenance, turn both power switch and automatic operation switch to off.

1.3.1 Safety Signs and Labels



Danger!

High voltage danger!

This label is attached on the control box.



Attention!

This label means that this area should be taken care!



Attention!

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

1.3.2 Safety Regulations for the Blower

- 1) The blower cover will be heated up during operation. Keep hands away the high temperature blower cover to avoid any hurts.
- 2) Motor under load current will be varied with air pressure of the blower. Overload relay should be used and keep motor working current within full-load current to avoid motor burnt out.
- 3) Air filter is used to keep off dirts, particles, fibres, and water drops. Clean the filter about once a week.
- 4) Clear up inside and outside of the blower regularly. If there are too much dirt accumulated on the blower, the function of the blower will be affected, such as temperature rising, reduced air volume and higher noise level due to vibration. All the above factors are liable to cause mechanical problems.

- 5) The bearing, seal ring and silencer are all consumable parts. They should be replaced after a period of time. And also the fans, covers, and metal grids need to be changed when necessary.
- 6) If the blower can not work properly or makes loud noises, please turn off the power supply to have a check.

1.3.3 Transportation and Storage of the Machine

Transportation

- 1) SMD-H series Mold Dehumidifiers are packed in crates or plywood cases with wooden pallet at the bottom, suitable for quick positioning by fork lift.
- 2) Optional floor stand with castors 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 in case of dropping.
- 5) The machine and its attached parts can be kept at a temperature from -25°C to $+55^{\circ}\text{C}$ for long distance transportation. For a short distance, it can be transported in temperature under $+70^{\circ}\text{C}$.

Storage

- 1) SMD-H series Mold Dehumidifier should be stored indoors with temperature kept from 5°C to 40°C 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

The machine should be operated

- 1) Indoors in a dry environment with max. temperature $+45^{\circ}\text{C}$ 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, CO₂ dry powder fire extinguisher should be applied.

1.4 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).

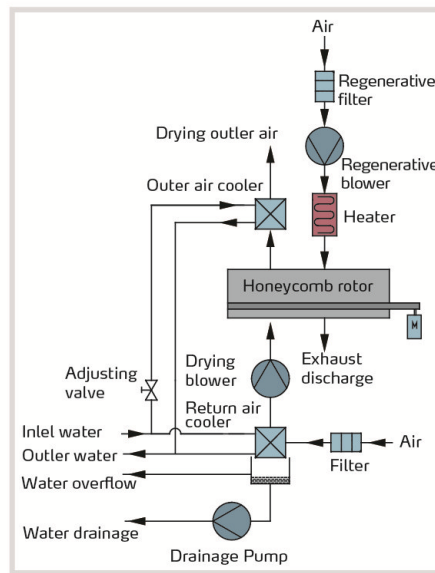
Shini is exempted from liability for any costs, fees, claims and losses caused by reasons below:

- 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

A large amount of air generated by drying blower passes through honeycomb rotor and air-outlet cooler which forms the low temperature, low dew-point drying air. The drying air gets into the hermetic space around the mould to lower the dew-point of ambient air, it ensures mould surface free from condensation during the cooling to guarantee product quality and prolong mould life span.



Picture 2-1: Working Principle

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 lower of dew point temperature (than the ambient temperature) is, the 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 Operation Procedures

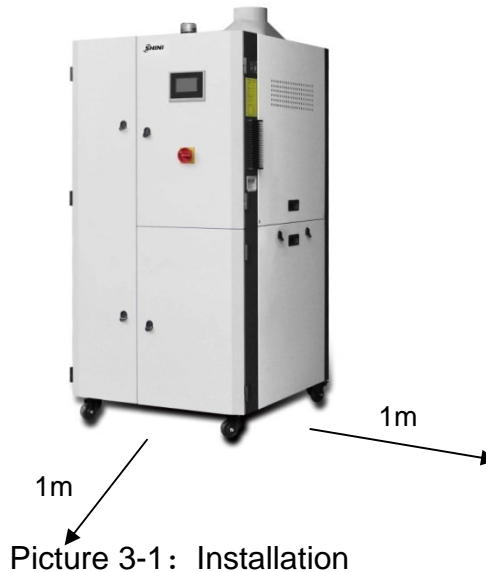
Built-in dew point meter, and add “D” at the end of the model code.

3. Installation Testing

3.1 Installation Notice

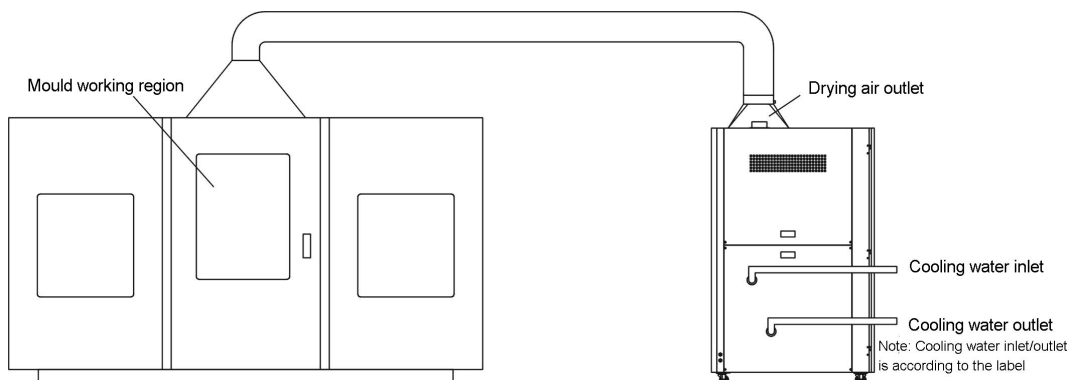
This series of models only could be applied in working environment with good ventilation.

3.2 Installation Requirement



Note: Keep the machine 1m from the combustibile distance.

3.3 Pipeline Connection



- 1) For the requirements of cooling water inlet and installation dimensions, please refer to the assembly drawing of the manual.

- 2) High alkaline water would increase copper pipe corrosion, cut down cooler service life, so the PH value of water should be within 7.0~8.5.
- 3) When cooling water pressure and water flow is too low, it would affect drying air temperature. When cooling water temperature is higher than 7°C, it would affect the drying air temperature, and reduce the dehumidifying effect. That means the lower the cooling water and drying air temperature, the better the dehumidifying effect.

3.4 Power Connection

- 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 to your local regulations.
- 3) Use independent power cable and ON/OFF switch. The cable's size should not smaller than those wired in the electrical requirement of control panel.
- 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: $\pm 5\%$
Main power frequency: $\pm 2\%$
- 7) ***Refer to the pipe connection diagram to complete the installation.***

4. Operating

4.1 Control Panel



Picture 4-1: Touch Panel

Operation Notice:

- 1) Please avoid strong collision when operating the touch screen.
- 2) In a dry environment, the touch screen will generate static electricity. Therefore, use a grounded metal to release static electricity before touching it.
- 3) Use economical alcohol or light oil to scrub the touch screen. Other solvents may discolor the touch screen.
- 4) Don't disassemble the touch screen unauthorizedly, and don't take away any printed circuit board on the touch screen, otherwise the components may be damaged.

4.1.1 System Initial Screen

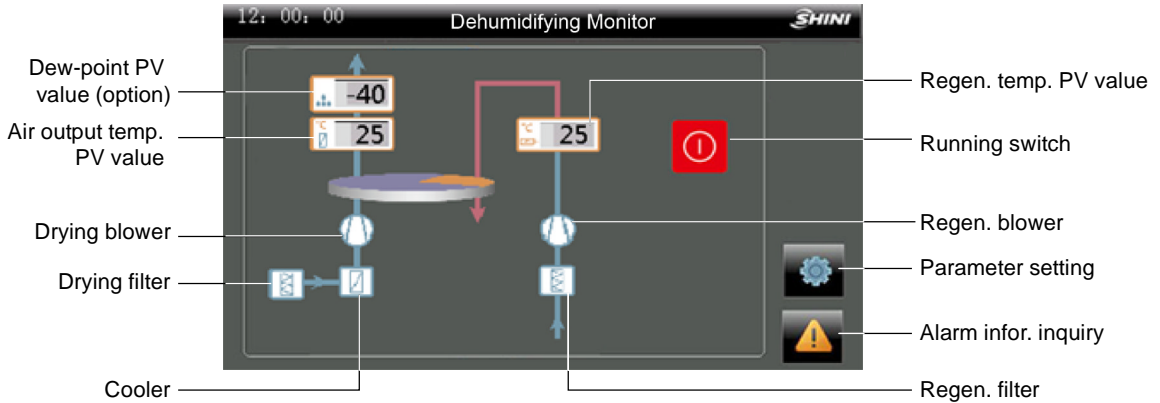
After powering on the system, the touch screen displays the initial screen, as shown below:



Picture 4-2: Initial Screen

4.1.2 Dehumidifying & Monitoring Screen

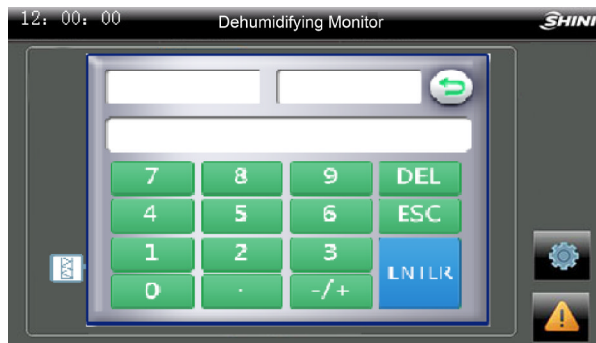
After the system initial screen counts down for a few secs., it enters the dehumidifying & monitoring screen as shown below:



Picture 4-3: Dehumidifying and Monitoring Screen

4.1.2.1 Drying Temperature and Regeneration Temperature Modification

Click the <Regen. Temp. Display Value PV >, and it pops up the digital input screen, enter the required temp., click < ENTER > to confirm, and finally enter the password 3588 to modify the set temperature.

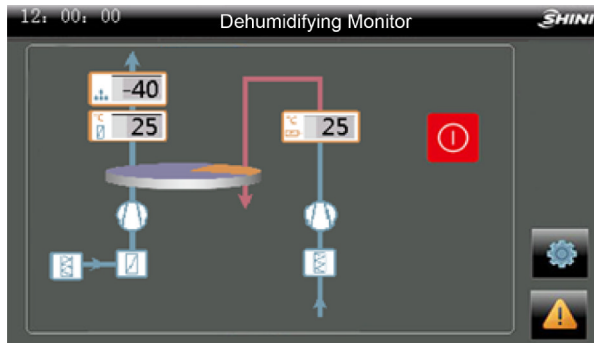


Picture 4-4: Drying Temp. and Regen. Temp. Modification Screen

4.1.2.2 Machine ON/OFF

Click the < ON/OFF button > to turn it green. At this time, the system starts to run automatically. Click the < ON/OFF Button > again to make it turns red. The pipe heater stops immediately, and the blower stops running after a delay of 3 minutes.

Important: In order to improve the honeycomb's service life, don't shut it down directly through the main power switch, but click the < ON/OFF Button > to stop. The latter can ensure that the honeycomb rotor continues to operate for a delayed shutdown cooling time to prolong the service life, which is generally set as 3 mins. After it reaches the delay time, the main power switch can be turned off.



Picture 4-5: ON/OFF Screen

4.1.3 Menu Screen

Click the < Function Button > on the dehumidifying & monitoring screen or conveying monitoring screen to enter the menu screen. The screen contains three function options: time setting, version information and multi-languages.



Picture 4-6: Menu Screen

4.1.3.1 Time Setting

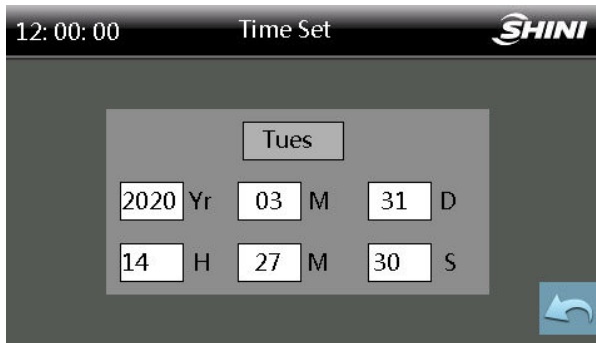
Click < Time Setting > on the menu screen to enter the time setting screen where can set the options of system time and one week timer.



Picture 4-7: Time Setting Screen

1. System Time Setting

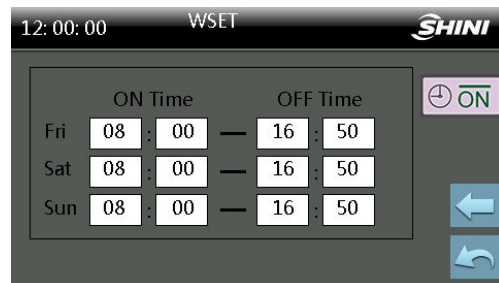
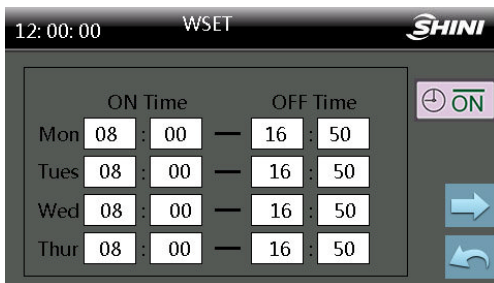
Click < System Time Setting > in the time setting screen to enter the time setting screen where can set the system current date and time.

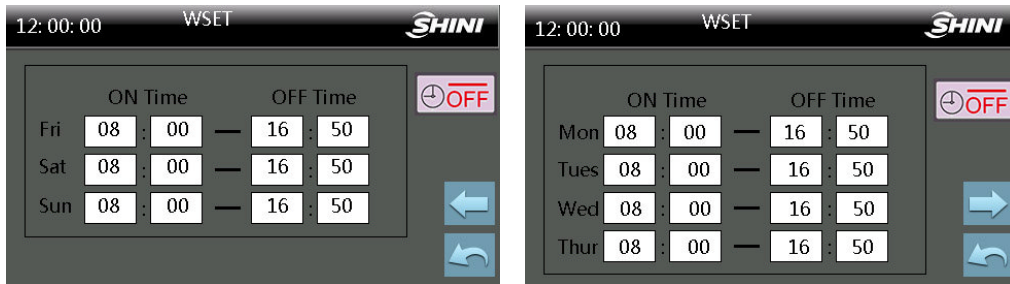


Picture 4-8: System Time Setting

2. One-week Timer Setting

Click < One Week Timer > in the time setting screen to enter the one week timer setting screen. After setting the one week timer ON/OFF, click <OFF> to start the timer function, and the machine will run according to the set time.





Picture 4-9: One-week Timer Setting Screen

Important: In order to ensure the normal operation of the one week timer ON/OFF function, it must ensure the system time is set completely correct. Otherwise, the timing function will be wrong.

4.1.3.2 Multilingual Settings

Five languages, such as Chinese, English, Turkish, traditional Chinese and Spanish are available.



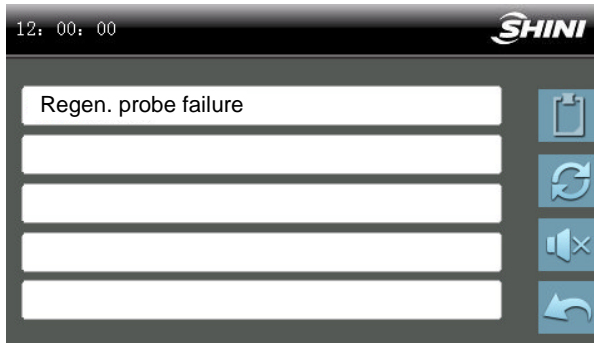
Picture 4-10: Multilingual Setting Screen

4.1.4 Fault Information Inquiry

Click the < Fault Inquiry Button > at the bottom right of the dehumidifying and drying monitoring screen or conveying monitoring screen to enter the fault information screen where can query historical faults, fault reset and mute.



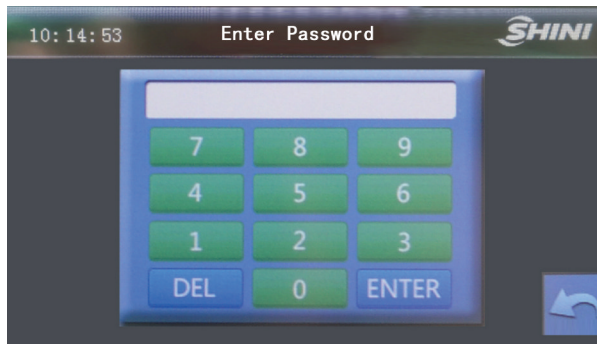
Picture 4-11: Fault Information Screen



Picture 4-12: Historical Fault Screen

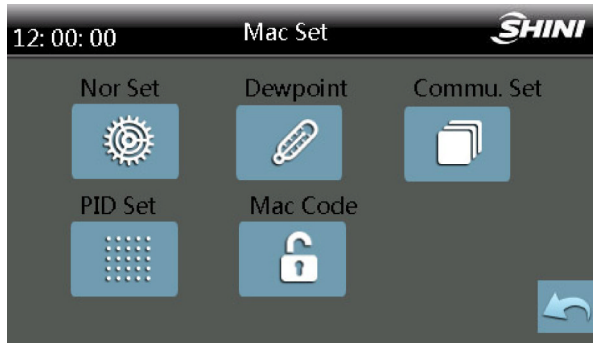
4.1.5 Project Setting

Quickly click the upper and left corner of the drying monitoring screen four times continuously, it will pop up the password input box, and enter the correct password (project parameter password: 3588) to enter the project setting screen. The project setting includes six options: general setting, hopper setting, comm. setting, detection time, PID setting and project password.

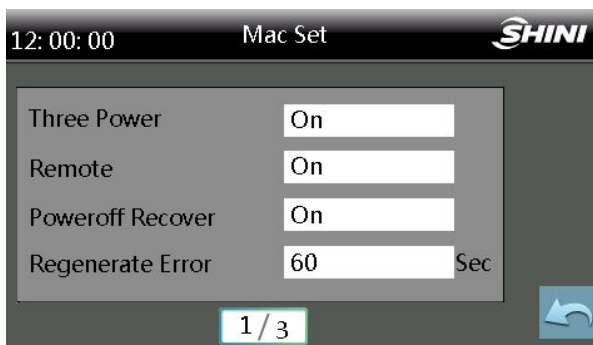


Picture 4-13: Password Input Screen

Important: Please keep this password properly. Once forgotten, it is unable to enter the project parameter setting screen! It had better to let the administrator or senior operator know this password only.



Picture 4-14: Project Setting Screen



Picture 4-15: General Setting Screen of Project Setting

12:00:00 Mac Set

| | |
|----------------|-------------------------------------|
| Dew Point (DP) | <input type="text" value="On"/> |
| DP Max LMT | <input type="text" value="20"/> °C |
| DP Min LMT | <input type="text" value="-80"/> °C |
| Max DP Display | <input type="text" value="20"/> °C |

1 / 2

12:00:00 Mac Set

| | |
|----------------|-------------------------------------|
| Min DP Display | <input type="text" value="-80"/> °C |
| Dew Point Temp | <input type="text" value="-20"/> °C |
| Dew Point Dly | <input type="text" value="60"/> Min |

2 / 2

Picture 4-16: Project Setting-Dew Point Setting Screen

12:00:00 Mac Set

| | |
|---------------|---------------------------------------|
| Reg Auto Tune | <input type="text" value="Disabled"/> |
| Reg P | <input type="text" value="42"/> °C |
| Reg Ti | <input type="text" value="145"/> Sec |
| Reg Td | <input type="text" value="36"/> Sec |

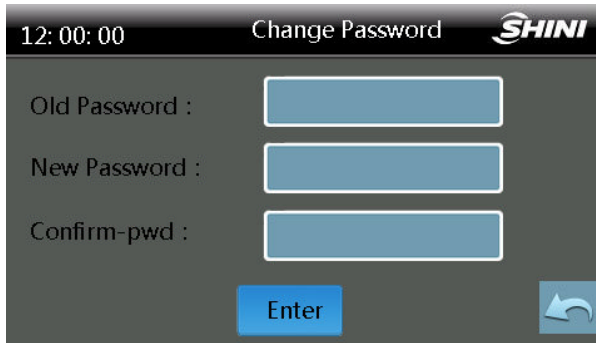
1 / 2

12:00:00 Mac Set

| | |
|-------------|-------------------------------------|
| Reg SSR CYC | <input type="text" value="5"/> Sec |
| Reg CYC | <input type="text" value="20"/> Sec |

2 / 2

Picture 4-17: Project Setting-PID Setting Screen



Picture 4-18: Project Setting -Password Modification Screen

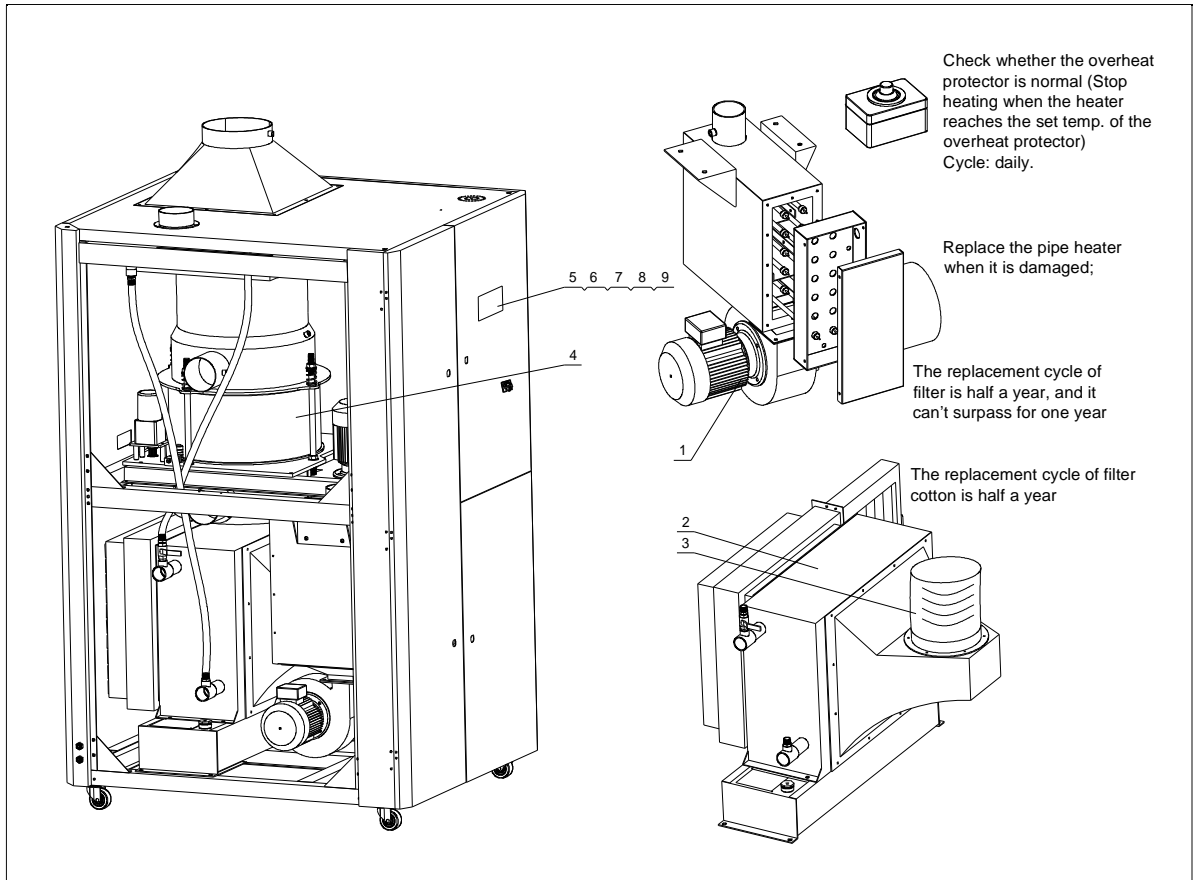
5. Trouble-shooting

| Failures | Possible Reasons | Solutions |
|------------------------|--|---|
| EPROM | <ol style="list-style-type: none"> When the alarm sounds, the machine stops running. After trouble-shooting, reset manually. It occurs when the ROM can not read correct data after power-on detection. | Power on again. If the alarm occurs again, it is the cause of XXX controller failure. Please contact us or replace the controller. |
| 3-phase power failure | <ol style="list-style-type: none"> When the alarm sounds, the machine stops running. After trouble-shooting, reset manually. It occurs when the power line has anti-phase connected or phase loss after power-on detection. | Turn off the main power switch, change the connection of 3-phase AC power line and set it to positive phase. After power on again, observe whether the fault prompt disappears. |
| Regen. blower overload | <ol style="list-style-type: none"> When alarm sounds, the drying blower/regen. blower (rotor motor) and all the heating actions will stop. After trouble-shooting, reset manually. After power-on detection, if the regen. blower' s overload input signal is valid and delays for 2 secs., it displays abnormality. | Open the control box and press the reset button of the thermal relay.If there are any other problems, please check the machine. |
| Drying blower overload | <ol style="list-style-type: none"> When alarm sounds, the drying blower/regen. blower (rotor motor) and all the heating actions will stop. After trouble-shooting, reset manually. After power-on detection, if the drying blower' s overload input signal is valid and delays for 2 secs., it displays abnormality. | <p>Open the control box and press the reset button of the thermal relay.</p> <p>If there are any other problems, please check the machine.</p> |
| Regen. EGO overheat | <ol style="list-style-type: none"> When alarm sounds, stop the regen. heating, and the regen. overheat alarm sounds. After trouble-shooting, reset manually. | Check the parameter input 【regen. EGO overheat】 setting, and check whether the normally open and normally closed of the pipe heater overheat signal are correct. |

| | | |
|---------------------------|--|---|
| | <p>2. After power-on detection, if the regen. EGO overheat input signal is valid and delays for 2 secs., it displays abnormality.</p> | <p>Check whether the regen. blower body is normal, filter is blocked, each air pipe is blocked and the air door has been adjusted improperly.</p> |
| Rotor error | <p>1. When alarm sounds, it will automatically enter the "timed cooling" state. After trouble-shooting, reset manually.</p> <p>2. During the operation detection, if it hasn't been detected within the [Rotor Monitoring Time], and the rotor input signal or the rotor input signal's effective time exceeds 10 secs, it displays abnormality.</p> | <p>Please set the parameters according to the rotor running condition: the time 【 rotor monitoring time 】 that the rotor running for one week, and reserve a certain margin.</p> <p>If it has to disable this alarm, set the parameter [rotor monitoring time] to 0.</p> <p>After the problem is solved, press the 『 reset 』 key or power on again for reset.</p> |
| Regen. pipe heater breaks | <p>When the alarm sounds, the regen. heating will stop. After trouble-shooting, reset manually.</p> <p>2. Detection during drying and dehumidifying process, if it doesn't reach the set regen. temp. after the regen. heating fully speeds up during the [regen. heating abnormal monitoring] time, it displays abnormality.</p> | <p>Check whether the regen. heating pipe and its control circuit are disconnected and whether the heating contactor can be closed normally.</p> <p>If this alarm function is not used, it can set the regen. heating disconnected detection time 【regen. heating abnormal monitoring】 to 0.</p> <p>After the problem is solved, press the 『 reset 』 button or power on again for reset.</p> |
| Regen. probe fault | <p>1. When the alarm sounds, the regen. heating will stop. After trouble-shooting, reset manually.</p> <p>2. After the power-on detection, when the regen. probe fails, it displays abnormality.</p> | <p>Check whether the probe used matches the controller and check the wiring.</p> |
| Return air probe fault | <p>1. When the alarm sounds, the drying heating will stop. After trouble-shooting, reset manually.</p> <p>2. After the power-on detection, when the return air probe fails, it displays</p> | <p>Check whether the probe used matches the controller and check the wiring.</p> <p>Check the machine, and after the problem is solved, press the 『 reset 』 button.</p> |

| | | |
|--------------------------------|---|--|
| | abnormality. | |
| Regen. temp. overheat | <p>1. When the alarm sounds, stop the regen. heating, the regen. overheat alarm will output.</p> <p>When the regen. temp. is $< (\text{regen. set temp.} + [\text{regen. overheat deviation}] - 1^{\circ}\text{C})$, it will be reset automatically.</p> <p>2. Detection during unit operation: After the regen. temp. – regen. set temp. is $> [\text{regen. overheat deviation}]$ and it delayed the 【overheat alarm delay】 time, it will display abnormality.</p> | <p>Check whether the 【regen. overheat deviation】 parameters are set reasonable.</p> <p>If it is prohibited, set the 【regen. overheat deviation】 = 0.</p> |
| Low regen. temp. | <p>1. When the alarm sounds, the machine runs continuously. After the regen. temp. $> (\text{regen. set temp.} - [\text{regen. low temp. deviation}] + 1^{\circ}\text{C})$, it will be reset automatically.</p> <p>2: Detection during unit operation: After the regen. set temp. – regen. temp. is $> [\text{regen. low temp. deviation}]$ and it delayed the 【low temp. alarm delay】 time, it will display abnormality.</p> | <p>Check whether the 【regen. low temp. deviation】 parameters are set reasonable.</p> <p>If it is prohibited, set the 【regen. low temp. deviation】 = 0.</p> |
| Dew-point meter fault (option) | Dew point transmitter input failure. The machine continues to operate when it fails. | Please check whether the wiring of dew point transmitter is correct and the measuring range is 4 ~ 20mA. |
| High dew-point temp. (option) | <p>When the alarm sounds, the machine continusly runs. After trouble-shotting, it will be reset automatically.</p> <p>During detection, if the dew-point temp. is still higher than the 【dew-point alarm temp.】 after the dehumidifying & drying 【dew-point alarm monitoring delay】 time, it will alarm.</p> | If it has to disable this alarm, set 【dew point alarm temp.】 to 0. |

6. Maintenance and Repair



1. Clean the Blower

- 1) Clean the dust inside and outside the blower.
Every month;
- 2) Replace the bearing, oil seal and silencer
Replace regularly according to the service environment;
- 3) Replace the blade, shell and metal mesh
Replace regularly according to the service environment;

2. Clean the cooler, Every six months;

3. Check whether the air pipe are dropped, air leaked and loosen, Weekly

4. Honeycomb repair and maintenance

- 1) Confirm there is no damage between the gear and the synchronous gear belt every 6 months;
- 2) Clean the honeycome every six months;

5. Check whether the contactor is normal weekly;
6. Replace the PC board every three years;
7. Replace the fuse switch when it is damaged;
8. Check whether the temperature controller is accurate daily;
9. Check whether the dew point is normal (optional with dew point monitor) daily;

6.1 Honeycomb

6.1.1 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, 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.



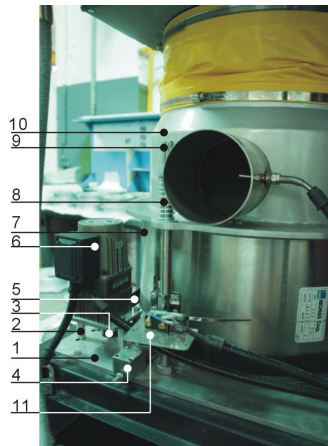
Picture 6-1: Honeycomb-rotor

6.1.2 Installation of Honeycomb-rotor

- 1) Fix the synchronous belt on the honeycomb;
- 2) Stick the silica gel Teflon pad on honeycomb upper and lower covers.
- 3) Fix the honeycomb lower cover inside the rack with screw, and mount the rotary shaft (as below No.1).
- 4) Fix the honeycomb rotor (as below No.7) on honeycomb lower cover, and mount the synchronous belt (as below No.5);

- 5) Mount honeycomb upper cover (as below No.10), and aim to the hole of honeycomb lower cover then fix it with double-thread screw (as below No.9).
- 6) Press honeycomb upper and lower covers tightly with pressure spring and nut to prevent air leakage (as below No.8).
- 7) Fix the synchronous wheel (as below No.3) on the gear motor (as below No.6), fasten the gear motor with long screw and fixing pipe (as below No.2), then mount the synchronous belt;
- 8) Mount belt regulator (as below No.4) to press synchronous belt tightly.
- 9) Mount microswitch and the fixing plate (as below No.11).

Attention : Install the honeycomb with special care to prevent damage.



Picture 6-2: Installation of Honeycomb-rotor

6.1.3 Disassembly of Honeycomb-rotor

Please refer to the installation.

6.1.4 Cleaning of 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 are 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) According to the different nature of the dirt, put the runner into the water with cleaning agent (It also can use neutral soda). After cleaning, it is not allowed to be heated, and must be dried with a drying blower till the water evaporates, so as to prevent the rapid heating of the water molecules from expanding and squeezing the adsorption hole. If it is an oily pollutant, it should be put into the aqueous solution of xylene. Sink the rotor in the solution deeply for about 15 minutes and then take it out.
- 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°C and 60°C) 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.**

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. This may be happened if it is polluted by exhaust gas of machines driven by diesel oil. After cleaning, the dehumidifying capacity of the rotor may be as good as before, but usually it would be affected.

If you need special service for cleaning the rotor, feel free to contact us.

6.2 Clean the Cooler of Dehumidifier

- 1) Take apart the cooler pipe and fixed screw, then remove the cooler out from the machine.
- 2) Loosen the screw on upper/lower cover plate of the cooler, keep the upper/lower cover plate aside.
- 3) Clean the dusts and litters on the cooler fin and the copper pipe with brush, compressed air and low pressure water. Don't forget to blow-dry the water on the fin and copper pipe with compressed air after cleaning.
- 4) Clean the upper/lower cover-plate joint of the cooler and add the silica gel. Fasten the two cover plates with screws.
- 5) Lay the cooler aside for 4 hours and after the silica gel gets dried, fasten the cooler inside the machine and connect with pipe.

6.3 Heater Assemblies

6.3.1 Installation

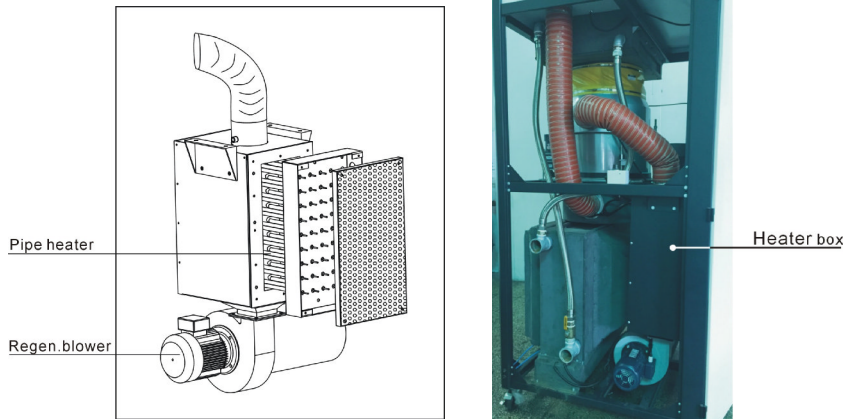
- 1) Fasten the pipe heater on the mounting plate, then it mount into the heating case.
- 2) Mount the heating case on the machine.

6.3.2 Disassembly

- 1) Open the left front door, loosen the screw on cover plate of the heating case, then take out the cover plate.
- 2) Loose the fixing screw on mounting plate of the pipe heater, and take out the mounting plate;
- 3) Disassemble the pipe heater from the mounting plate.

6.3.3 Wiring

The wiring method, please refer to the circuit diagram of each model.



Picture 6-3: Heater Assemblies

Warning: Hot surfaces could burn hands. Take care of high temperature!

This label should be stick to the shell of heater.

6.3.4 EGO

Note:

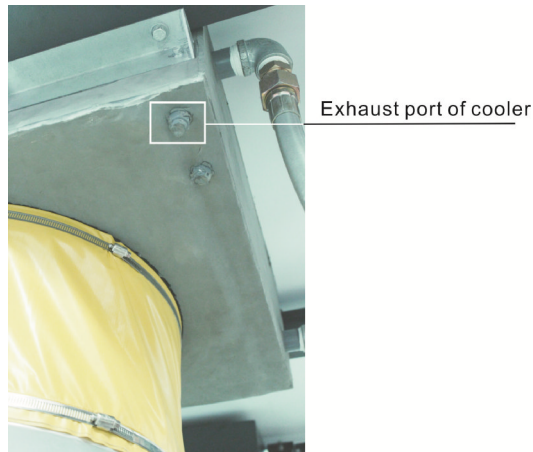
The EGO value has been setting before out factory, Don't modify it.



Picture 6-4: EGO

6.4 Cooler

Please exhaust air in the cooler when installing dehumidifier for the mold, otherwise its dehumidification performance would worsen and the outlet air temperature would be too high.



Picture 6-5: Exhaust Port of Cooler

6.5 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 | ≥ 5 years |
| Regen. heater | ≥ 1 year |
| Contactora | ≥ 2000,000 act |
| Honeycomb | 5 years |

6.6 Maintenance Schedule

6.6.1 General Information of the Machine

Model _____ SN _____ Manufacture date _____

Voltage _____ Φ _____ V Frequency _____ Hz Power _____ kW

6.6.2 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.

Electrical Installation

- Voltage _____ V _____ Hz
- Fuse melt current: 1 Phase _____ A 3 Phases _____ A
- Check phase sequence of the power supply.
- Check rotating direction of regenerating motor.

6.6.3 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 normal¹.

6.6.4 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.

6.6.5 Monthly Checking

- Check if the belt is loose or not.

- Check gear box working conditions.
- Check if there are leakages in the honeycomb.

6.6.6 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.

6.6.7 Yearly Checking

- Check whether the contactor is normal ².

6.6.8 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.