

# **SHD-U Series**

## **Hopper Dryer**

Date: Dec., 2020

Version: Ver.F (English)





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## 1. General Description



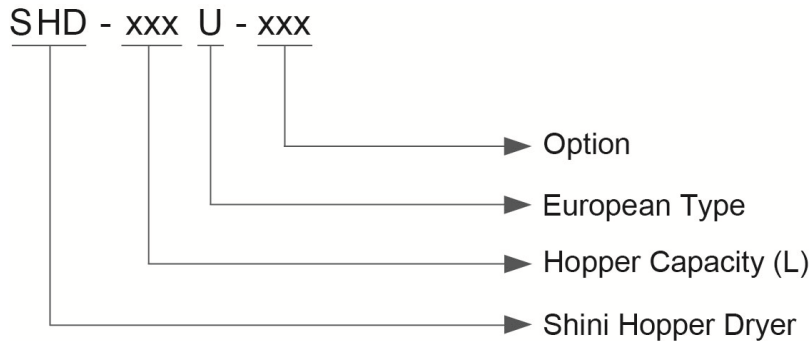
Read this manual carefully before operation to prevent damage of the machine or personal injuries.

SHD-U series hopper dryer adopt hot air down-blowing design and use stainless steel made material hoppers to avoid contamination. With this design, they are also ideally suitable for use with honeycomb dehumidifiers to dry engineering plastics. There are 25 models available, ranging from 20 to 8,000 liters.



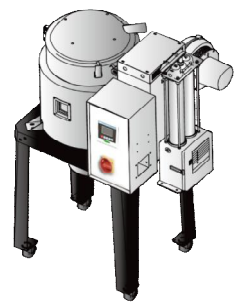
Model: SHD-300U

## 1.1 Coding Principle



## 1.2 Feature

- I Adopt P.I.D temperature control and LCD display,
- I With RS485 communication function.
- I Overheat protection to ensure reliable operation.
- I 7-day automatic start/stop timer to improve energy saving.
- I Unique design of downblow air pipe can spread hot air evenly, keeping plastics dry and stable temp. to raise drying efficiency;
- I Models SHD-80U and above have material clearance door to make the clean more convenient and effective.
- I SHD-450U and models below are equipped with the Aluminum base. SHD-600U-750U are equipped with Aluminum magnetic base, and SHD-900U and model above are equipped with manual butterfly valves.
- I For SHD-900U models and above, floor stand is standard equipment.



SHD-40U-HD  
& Floor Stand (optional)

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.

Headquarter and Taipei factory:

Tel: (886) 2 2680 9119

Shini Plastics Technologies (Dongguan), Inc:

Tel: (86) 769 8111 6600

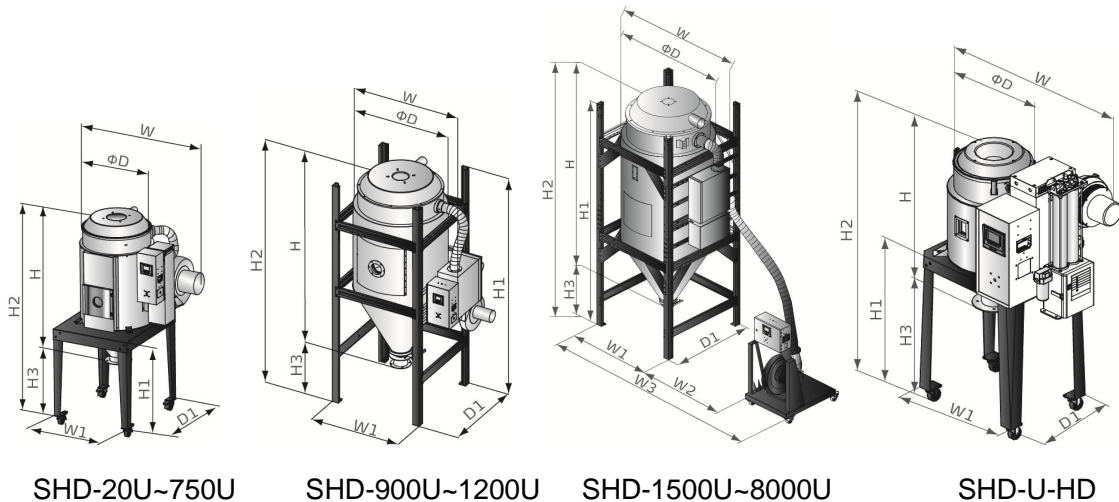
Shini Plastics Technologies India Pvt.Ltd. :

Tel: (91) 250 3021 166



## 1.3 Technical Specifications

### 1.3.1 Outline Drawing



Picture 1-1: Outline Drawing

### 1.3.2 Specifications

Table 1-1: Specifications 1

Model SHD-U	20U	40U(-HD)	80U(-HD)	120U(-HD)	160U	230U(-HD)
Ver.	D	E	E	E	D	D
Loading Capacity (L)	20	40	80	120	160	230
Drying Heater (Kw)	2.2	3	3.9	3.9	6	6
Blower (Kw)	0.05	0.12	0.12	0.12	0.12	0.12
Dimensions (mm)H×W×D	680×575×325	770×770×394	940×860×472	1190×860×472	1200×875×575	1470×875×575
Floor Stand (mm) H1×W1×D1	790×450×550	790×580×450	840×730×560	840×730×560	920×652×795	920×652×795
W2(mm)	-	-	-	-	-	-
W3(mm)	-	-	-	-	-	-
Whole Height (mm)H2	1260	1300	1480	1740	1825	2105
Height of discharge port (mm)H3	570	540	550	550	570	570
Air Inlet PipeDia.(inch)	2	2	2.5	2.5	3	3
Air Outlet PipeDia.(inch)	1.5	1.5	2	2	2.5	2.5
Weight (kg)	40	70	85	100	90	115

Table 1-2: Specifications 2

Model SHD-U	300U	450U	600U	750U	900U	1200U
Ver.	D	D	D	D	E	E
Loading Capacity (L)	300	450	600	750	900	1200
Heater Power (Kw)	12	12	18	18	18	24
Blower(Kw)	0.18	0.18	0.55	0.55	0.55	1.1
Dimensions (mm)H×W×D	1430×1005 ×695	1840×1005 ×695	1830×1250 ×915	2080×1250 ×915	2330×1410 ×1050	2765×1410 ×1050
Floor Stand (mm) H1×W1×D1	970×790 ×930	970×790 ×930	1130×1000 ×1200	1130×1000 ×1200	2760×1130 ×1130	2990×1145 ×1145
W2(mm)	-	-	-	-	-	-
W3(mm)	-	-	-	-	-	-
Whole Height (mm) H2	2085	2435	2470	2780	2765	3190
Height of discharge port (mm)H3	550	550	605	605	425	425
Air Inlet PipeDia.(inch)	3	3	4	4	4	4
Air Outlet ipeDia.(inch)	2.5	2.5	3	3	4	4
Weight (kg)	130	160	200	220	410	560

Table 1-3: Specifications 3

Model SHD-U	1500U	2000U	2500U	3000U	3500U	4000U
Ver.	D	D	E	E	F	E
Loading Capacity (L)	1500	2000	2500	3000	3500	4000
Heater Power (Kw)	32	32	58	58	64	64
Blower(Kw)	3.7	3.7	5.5	5.5	7.5	7.5
Dimensions (mm) H×W×D	3095×1640 ×1250	3685×1542 ×1250	3735×1798 ×1400	4135×1798 ×1400	4535×1798 ×1400	4180×2010 ×1600
Floor Stand(mm) H1×W1×D1	3470×1340 ×1340	3870×1340 ×1340	4000×1482 ×1482	4400×1482 ×1482	4800×1482 ×1482	4550×1680 ×1680
W2(mm)	400	400	400	400	400	400
W3(mm)	2000	2000	2260	2260	2260	2460
Whole Height (mm) H2	3470	3870	4000	4400	4800	4635
Height of discharge port (mm)H3	360	360	295	295	295	405
Air Inlet PipeDia.(inch)	5	5	8	8	8	8
Air Outlet ipeDia.(inch)	5	5	8	8	8	8
Weight (kg)	685	770	800	900	1010	1160

Table 1-4: Specifications 4

Model SHD-U	5000U	6000U	7000U	8000U
Ver.	D	D	-	D
Loading Capacity (L)	5000	6000	7000	8000
Heater Power(Kw)	80	96	112	128
Blower(Kw)	11	15	18.5	22
Dimensions (mm)H×W×D	4775×2010×1600	4520×2250×1800	5460×2250×1800	6030×2250×1800
Floor Stand (mm)H1×W1×D1	5150×1680×1680	4870×1930×1930	5805×1930×1930	5620×1930×1930
W2(mm)	400	400	400	400
W3(mm)	2530	2780	2830	2830
Whole Height (mm) H2	5235	4923	5840	6425
Height of discharge port (mm) H3	390	350	380	390
Air Inlet PipeDia.(inch)	8	8	8	10
Air Outlet ipeDia.(inch)	8	8	8	10
Weight (kg)	1390	1530	1735	1820

Power supply: 3Φ, 400, 50

We reserve the right to change specifications without prior notice.

## 1.4 Safety Regulations



Note!

Electrical installation should be done by qualified electrician only.

Before connecting to AC Power Source, turn power switch to OFF position. While AC power source is connected, make sure specifications and overload protection rating of the power switch are suitable and reliable. When the machine is under care or maintenance, turn off both power switch and automatic operation switch.

### 1.4.1 Safety Signs and Labels



Danger !

High Voltage!

It is attached to the control box.



Attention!

This mark reminds you to be more careful.



Warning!

High temperature surface may burn hands !

This label should be stick to the shell of electric heating box.



Warning!

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



Attention!

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



Attention!

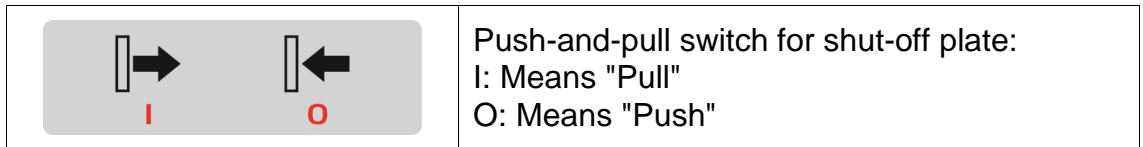
For test of SHD-2500U and above models, connect all hot air pipes to avoid damage of the blower.



Attention !

For test of SHD-2500U and above models, half-open the air-in valve of the blower to avoid damage of it.

## 1.4.2 Signs and Labels



## 1.5 Exemption Clause

The following statements clarify the responsibilities and regulations born by any buyer or user who purchases products and accessories from Shini (including employees and agents).

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

1. Any careless or man-made installations, operation and maintenances upon machines without referring to the Manual prior to machine using.
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon machine, including adding or replacing accessories, dismantling, delivering or repairing.
4. Employing consumables or oil media that are not appointed by Shini.

## 2. Structure Characteristics and Working Principle

### 2.1 Working Principle

In the drying process, constant high temperature air is blown into the double-layer insulated hopper by the blower of the SHD-U Hopper Dryer. After drying the materials, moisture will be taken away from the materials, thus to gain a satisfied drying effect.

#### 2.1.1 Working Principle Illustration

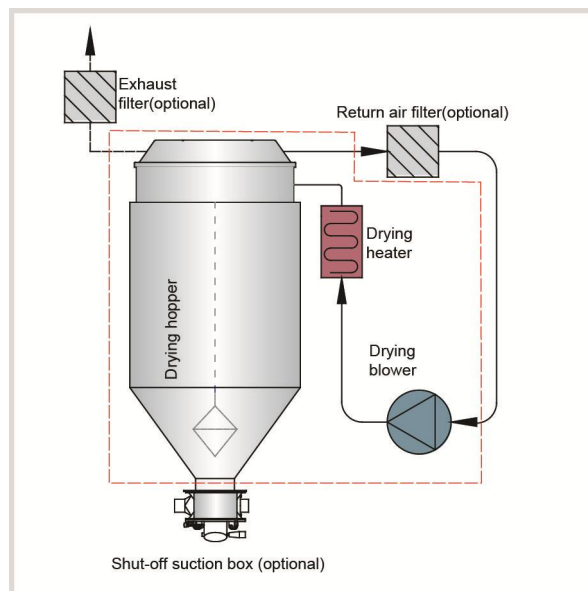
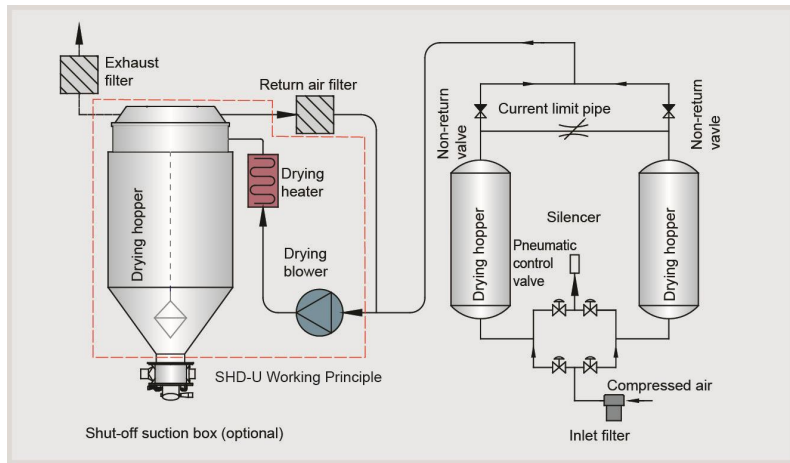


Fig. 2-1: Working Principle Illustration

Air blown out of drying blower becomes high temperature drying air after being heated. Through particular down-blowing air pipe, hot air can be equably dispersed in the material storage tank. Hot air recycler can be equipped to filter and recycle the air from the air outlet and form a closed loop circle.

## 2.2 Optional Accessories

### 2.2.1 Heatless Dehumidifying Hot-air Dryer



Picture 2-2: SHD-U-HD Working Principle

Optionally equipped with heatless regenerative air dryer, which could offer low dewpoint dry air without regenerative heating and speed up the drying of material, Add "HD" at the end of the mode code.

Model	SHD-40U-HD	SHD-80U-HD	SHD-120U-HD	SHD-230U-HD
Applied to				
HAD	-0106-06	-0106-06	-0206-06	-03506-06

### 2.2.2 Safety Ladder



Picture 2-3: Safety Ladder

For SHD-1500 and above models are available to option with safety ladder. Add "ML" at the end of the model code.



### 2.2.3 Floor Stand

European style floor stand can move the main body of drying hopper out of the injection molding room, which is suitable for workshop without enough height. It can move conveniently and replace other machines. Each model of machine has corresponding foot stand as shown in the picture:

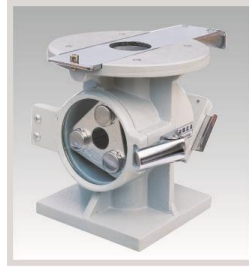


Suitable for SHD-20U-750U

Picture 2-4: Floor Stand

Model	Suitable machine model	Specifications (mm)		
		Length (mm)	Width (mm)	Height (mm)
FSU-20	SHD-20U	550	450	790
FSU-40	SHD-40U			
FSU-80	SHD-80U	722	552	840
	SHD-120U			
FSU-160	SHD-160U	795	652	920
	SHD-230U			
FSU-300	SHD-300U	930	790	970
	SHD-450U			
FSU-600	SHD-600U	1200	1000	1130
	SHD-750U			

## 2.2.4 Aluminum Magnetic Base



Picture 2-5: Aluminum Magnetic Base

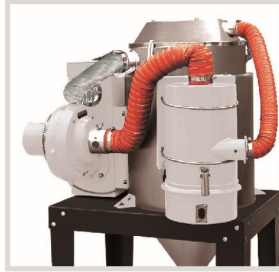
Made of aluminum with built-in hopper magnet, can effectively separate metal scraps out to avoid material contamination and protect the screw (MB-400 is standard configuration).

Notes: Add "U" at the end of the stainless steel model.

Model	Applied to	Magnetic Base	Aluminum Clamp Piece (mm)x2
MB-12	SHD-20U	MR-3	(88.5×78×2.3) mm
MB-20U	SHD-20U		
MB-50	SHD-40U~120U		
MB-40U	SHD-40U~120U		(119×105×2.3)mm
MB-100	SHD-160U~450U		
MB-160U	SHD-160U~450U		
MB-600U	SHD-600U~750U		

## 2.2.5 HAR-U "Euro" Hot Air Recycler

HAR-U "Euro" hot air recycler has energy saving and dust-collecting function, its design is for working with "Euro" dryer to form a sealed loop. This machine has a simple structure and very easy for installation. High efficiency in hot air recycling use will save energy up to 40% and improve the production efficiency greatly. The built-inside filter can maintain the air clean so to ensure production quality. The machine has a backup air adjusting valve and moisture drainage bore to make better recycling use of hot air.



Model: HAR-80U

Picture 2-6: "Euro" Hot Air Recycler

Features:

- 1) Hot air recycling can reduce the temperature of the plant.
- 2) Keep the air in the plant clean so can ensure production quality.
- 3) Because the hot air heats up faster, so can greatly cut the energy consumption up to 40%.
- 4) Adjustable air device.

## 2.2.5.1 Technical Specification

### 1) Specifications

Table 2-1: HAR/AIF/ADC Specifications

Model	Filtering Barrel Dia. (mm)	Air inlet Pipe Dia. (inch)(ΦA)	Air Outlet Pipe Dia. (inch)(ΦB)	Applicable Models / Fixed Plate	Ext. Dimension (W×D×H) (mm)	Blower Flange (With Air Quantity Adjustor)
-20U	127	1.5"	2"	SHD-20U	255×175×415	Air Inlet Flange for 0.12kW blower
-40U				SHD-40U	255×175×415	
-80U	225	2"	3"	SHD-80U/120U	305×310×465	
-160U	225	2.5"	3"	SHD-160U/230U	305×310×465	Air Inlet Flange for 0.18kW blower
-300U	225	2.5"	4"	SHD-300U/450U	330×315×510	Air Inlet Flange for 0.25kW blower
-600U	225	3"		SHD-600U/750U	330×325×510	Air Inlet Flange for 0.55kW blower
-900U	225	4"		SHD-900U	330×325×510	
-1200U	225	4"	4"	SHD-1200U	330×325×510	Air Inlet Flange for 1.1kW blower
-1500U	280	5"	5"	SHD-1500U~2000U	550×395×920	Air Inlet Flange for 3.7 KW blower
-2500U	340	6"	6"	SHD-2500U~3000U	655×520×1060	Air Inlet Flange for 5.5KW blower
				SHD-3500U		Air Inlet Flange for 7.5kW blower
-4000U	340	8"	8"	SHD-4000U	445×480×1090	Air Inlet Flange for 7.5kW blower
				SHD-5000U		Air Inlet Flange for 11kW blower
-6000U	420	8"	8"	SHD-6000U	620×565×1330	Air Inlet Flange for 15Kw blower
				SHD-7000U		Air Inlet Flange for 18.5kW blower
-8000U	420	10"	10"	SHD-8000U	-	Air Inlet Flange for 22kW blower

Notes\*: ADC is without the blower flange.

## 2) Outline Drawing

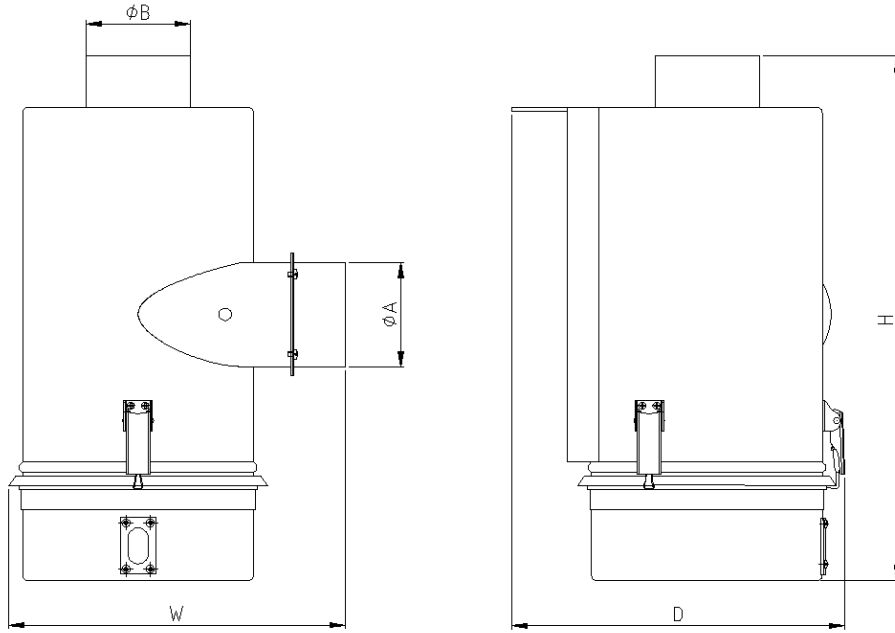
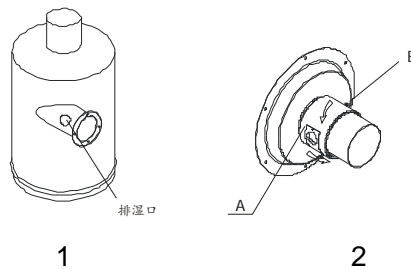


Fig. 2-7: HAR/AIF/ADC Outline Drawing

### 2.2.5.2 Working Principle

HAR-U "Euro" hot air recycler has filter built in to connect the air vent of the dryer and backup air inlet of the blower. The hot air that discharged from dryer's air vent has moisture and dust powder, within which the humid air is discharged from the bores on (see Fig.1) filter barrel. After filtering by the filter, the residual hot air will be heated by the electric heater, and will enter the dry drum again to dry the materials, so it can be used repeatedly. HAR-U hot air recycler has rotary air adjusting aluminum sleeve (A), customer can unscrew the lockup screw (B) according to practical requirement to adjust the coming air in the dryer (see Fig.2).



Picture 2-8: "Euro" Hot Air Recycler

### 2.2.5.3 Installation Steps

1. Mount HAR/AIF/ADC on the drying hopper.
  - 1) Mount the hot air recycler (3) on proper place of the drying hopper at first.
  - 2) Find corresponding installation hole on the aluminum ring right behind the drying hopper (1).
  - 3) Mount the hot air recycler (3) and lock it with screws (2).

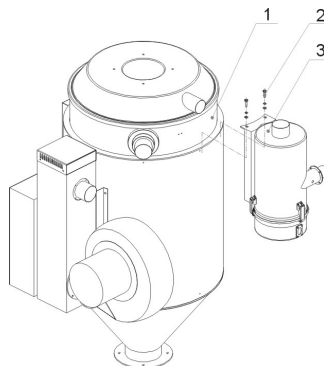
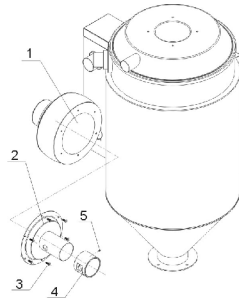


Fig. 2-9: Installation of "Euro" Hot Air Recycler

### 2. Installation of the Flange at HAR/AIF Blower Inlet

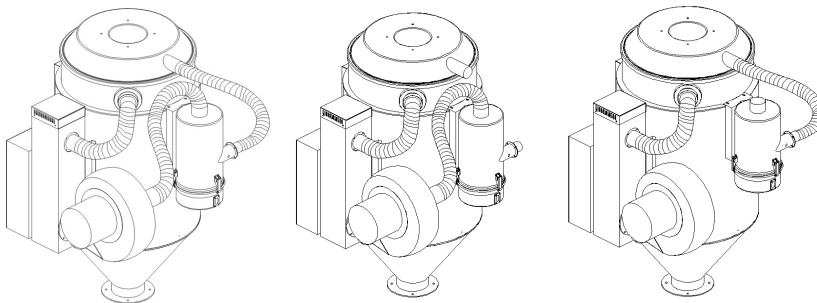
- 1) First insert the aluminum made air volume adjusting ring assembly parts (4) onto the coupling flange (2), to align the air adjusting bore, and then screw the insertive screw (5).
- 2) Mount coupling flange at the blower's air inlet (5), tighten up the screw (3).



Picture 2-10: Installation of the Flange at the Blower Inlet

### 3.Connection of Air Pipe

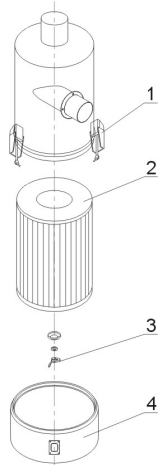
- 1) Mount the air pipe with according size as following picture, which are HAR, AIF, ADC.



Picture 2-11: Connection of Air Pipe

#### 2.2.5.4 Clean up the HAR/AIF/ADC

- 1) Loosen the spring clip (1), and take out the dust collecting barrel (4) of the hot air recycler.
- 2) Unscrew the butterfly nut (3), and take out the filter (2) then clean it with a high pressure air jetter.
- 3) Install the filter in opposite steps.



Picture 2-12: Clean up the HAR/AIF/ADC



## 2.2.6 AIF-U "Euro" Blower Inlet Filter

AIF-U "Euro" blower inlet filter has filtering and dust-collecting function. Its design is for working with "Euro" dryer and can be installed at the backup air inlet of the blower. This machine features simple structure, easier installation and greatly improves the production efficiency. The built-inside filter can maintain the air clean so to ensure production quality. The machine has also configured with a backup air adjusting valve.



Model: AIF-80U

Picture 2-13: "Euro" Blower Inlet Filter

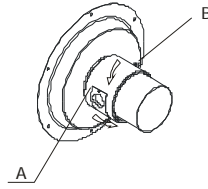
### Features:

- 1) Filter the air at the blower inlet to improve the production quality.
- 2) Economical and less space occupation that can work on the original "Euro" hopper dryer;
- 3) Good shape, optimal structure and especially easy for installation.

### 2.2.6.1 Working Principle

AIF-U "Euro" blower inlet filter has filter built in to connect the air vent of backup air inlet of the dryer blower and air vent of filter blower to improve production quality.

AIF-U "Euro" blower inlet filter has rotary air adjusting aluminum sleeve (A), customer can unscrew the lockup screw (B) according to practical requirement to adjust the coming air in the dryer.



Picture 2-14: Working Principle

### 2.2.7 ADC-U "Euro" Air Filter

ADC-U "Euro" air filter can avoid 100% dust with good exhaust effect. This machine features simple structure, easier installation and greatly improves the production efficiency. The built-in filter can maintain the air clean so to ensure production quality. The machine has also configured with a backup air adjusting valve.



Model: ADC-80U

Picture 2-15: "Euro" Air Filter

#### Features:

- 1) Keep clean air in the workshop and improve the production efficiency.
- 2) It can prevent 100% dust and has good dust exhaust effect.
- 3) Economical and less space occupation that can work on the original "Euro" hopper dryer.
- 4) Good shape, optimal structure and especially easy for installation.

#### 2.2.7.1 Working Principle

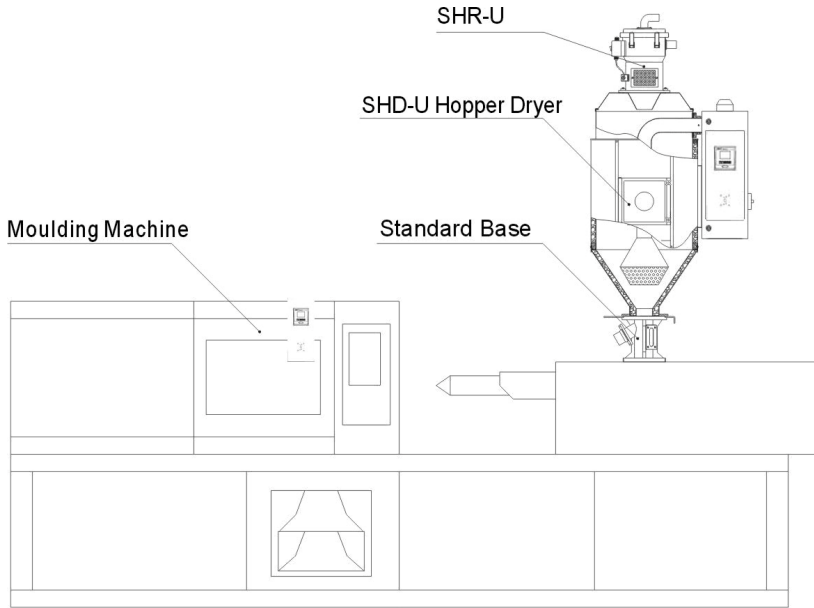
ADC-U "Euro" air filter has a built-in cylinder filter, which can avoid 100% dust with good filtering effect. It can keep the air in the plant clean and improve the production efficiency.

### 3. Installation and Debugging

This series of models can only be used in workplace with good ventilation.

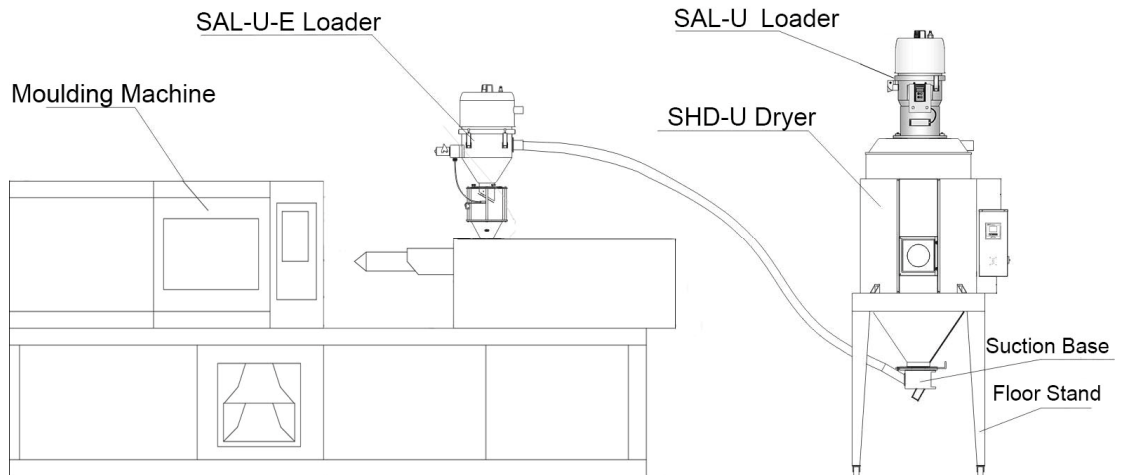
#### 3.1 Machine Location

##### 3.1.1 Install directly on a molding machine



Picture 3-1: Install Directly on a Molding Machine

##### 3.1.2 To be used with Hopper Loaders



Picture 3-2: To be used with Hopper Loaders

## 3.2 Power Connection

- 1) Make sure voltage and frequency of the power source comply with those indicated on the manufacture's plate, which is attached to the machine.
- 2) Power cable and earth connections should conform to local regulations.
- 3) Use independent power cable and ON / OFF switch. The cable's size should not smaller than those applied 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:  $\pm 5\%$ :
  - Main power frequency:  $\pm 2\%$
- 7) Specific power supply specifications please refer to the schematic model.

## 4. Application and Operation

### 4.1 Control Panel



Picture 4-1: Control Panel

#### 4.1.1 Panel Operation

- 1) Turn on main power switch of control box.
- 2) Press “ON/OFF” key, it starts drying process, indicator turns green;
- 3) Press “ON/OFF” key, it stops drying process, indicator turns yellow.

#### 4.1.2 Temperature Setting

- 1) The SV (Set valve) will flash after pressing "Menu" key, increase or decrease temperature by pressing “Up” or “Down” key.
- 2) Press "Enter" key again to confirm the input value.

#### 4.1.3 Temperature Lock

- 1) Press “Menu” key for 2 seconds, it displays “TIME”.
- 2) Press “Up” key repeatedly, till it display “LOCK”;
  - 1) Press “Enter” key, the set value will flash, press “Up” or “Down” key to select “YES”(lock temperature setting) and “NO” (Unlock).
  - 2) Press “Enter” key to confirm the input value.
  - 3) Press “Menu” key to return operation menu.

**Notes: When “LOCK” is set as “YES, temperature setting value will be locked which not accessible to change.**



#### 4.1.4 PID Setting

- 1) Press both “Menu” and “Down” keys for 3 seconds, it shows “P” (proportion) setting;



- 4) Press "Enter" key, the set value will flash, then press “Up” or “Down” key to increase or decrease the value.
- 5) Press "Enter" key to confirm the input value.
- 6) Press “Up” key again and again, it displays “I” (integral time) and “D” (differential time) setting accordingly.
- 7) Repeat above step 2 and step 3, input and confirm related parameters.
- 8) Press “Menu” key, it returns operation menu.

**Notes: The PID parameter will directly influence the effect of temperature control, please be careful to set the value!**

Parameters	Codes	Factory Default
Proportion	P	40
Integral time	I	120

Differential time	D	20
Over-temp alarm	OTP	15°C
Control cycle	HCLE	15
Blower delay	FDLY	180
Temp. unit	UNIT	°C

#### 4.1.5 Intermittent Operation Setting

- 1) Hold “Menu” for about 2 secs. to set current time and week. Press “Up” or “Down” key to set start/stop function of AUTO timer, the time for RONE intermittent operation, the OFF time of ROFF intermittent operation, the ON time of RON intermittent operation.

#### 4.1.6 One-week Timing Setting

- 1) After current time is set, hold “menu” for about 5 secs, press “Up” or “Down” key to set OFF1 (Mon. off time), OFF2(Tues. off time), OFF3 (Wed. off time), OFF4(Thur. off time), OFF 5(Fri. off time), OFF6(Sat. off time), OFF7(Sun.off time).
- 2) Hold “Menu” for about 7S, press “Up” or “Down” key to set ON1.(Mon. start time), ON2(Tues. start time), ON3(Wed. start time), NO4(Thur. start time), ON5(Fri. start time), ON6(Sat. start time), ON7(Sun. start time).hhhhh

#### 4.1.7 Communication Setting (optional functions)

- 1) Press both “Menu” and “Up” for 3 seconds, it displays “PRO” (communication protocol) setting.

***Notes: communication protocol is fixed to Modbus RTU protocol—“RTU”.***



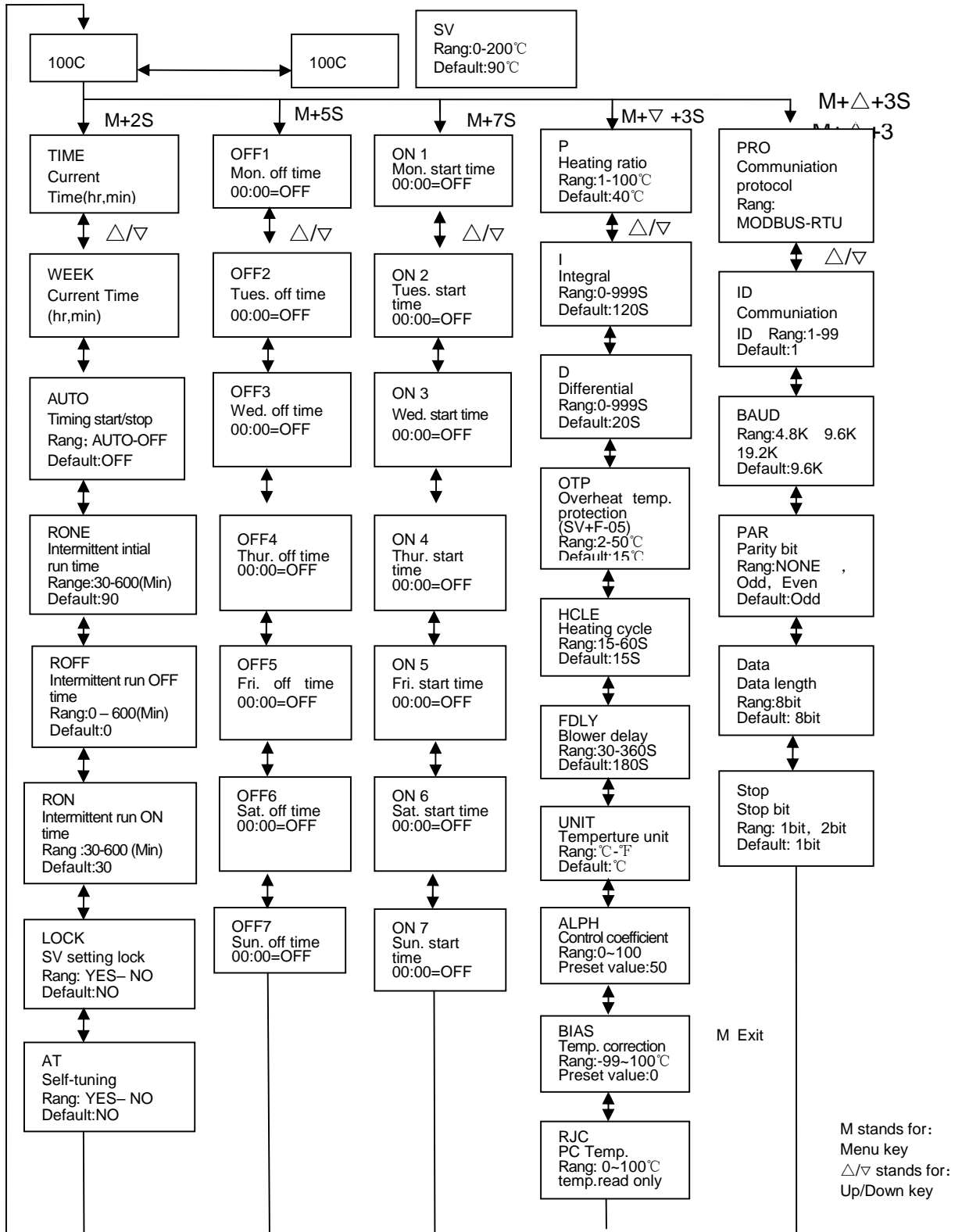
- 2) Press “Up” key to enter “ID” (communication address) setting;
 

**Notes: The communication address of every controller in the same system must be the only one, no repeat use. In principle: communication address of hopper 1 is 1, communication address of hopper 1 is 2, and so on.**
- 3) Press “Setup” key, the set value flickers, then press “Up” or “Down” key to increase or decrease the value.
- 4) Press "Enter" key to confirm the input value;
- 5) Press “Up” key again and again, it displays “Baud” and “PAR” settings, (as below )
- 6) Repeat step 3 and step 4, then confirm the related input parameters.
- 7) Press “Menu” key to return operation menu.

Communication Parameters	Communication Codes	Factory Default
Communication Protocol	PRO	RTU
Communication Address	Id	1(current address)
Baud Rate	Baud	19.2K
PAR	PAR	none
Data Length	Data	8
Stop Bit	Stop	1



### 4.1.8 Operation Flow



#### 4.1.9 Wrong Codes Remark



Wrong Codes	Remark
bR	Thermocouple off-line alarm
oH	Over-heat alarm
REV	Temperature sensor reversely connected
oL	Overload alarm
bAT	Battery error alarm
EGO	EGO over-temperature alarm
xATx	Auto-turning error
LT	Low temperature alarm
HT	Heater alarm

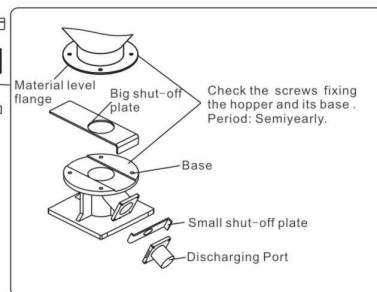
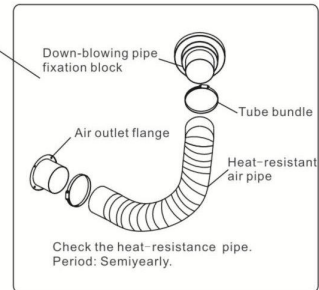
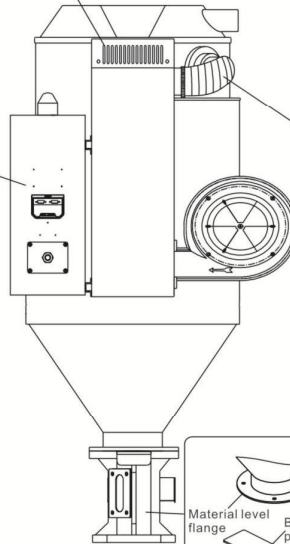
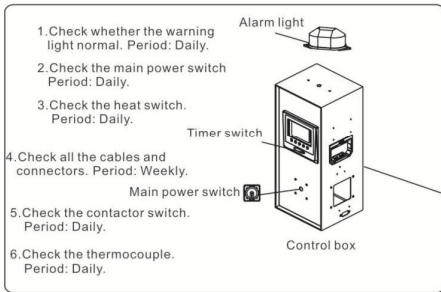
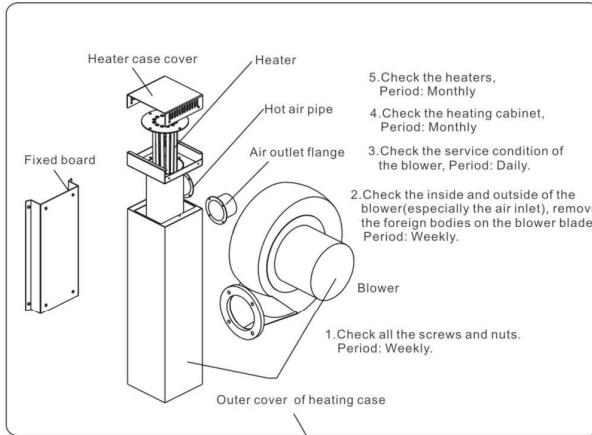
## 5. Trouble-shooting

Symptom	Possible causes	Actions Taken
The rotating direction of blower fan is not as indicated.	1. Blower phase-reversal	1. Exchange two of the electrical wires
Blower can not be started.	1. Motor failures	1. Repair or replace
	2. Solenoid switch contact open circuit.	2. Check and repair or replace
The blower and heater can not work.	1. Tripping of overload relay	1. Check or replace
	2. Problems of transformer	2. Check or replace
	3. Fuse melted	3. Check or replace
	4. Troubles of power	4. Check whether there's phase shortage.
The blower can work, but heater can not.	1. Pipe heater lead melted	1. Check or replace
	2. Solenoid switch failure	2. Check and repair or replace
	3. Pipe heater failure	3. Check or replace
	4. Temp. controller problems(No output)	4. Replace the temp. controller
	5. Thermocouple problems	5. Replace thermocouple
The blower is working, but drying temperature will not increase.	1. Pipe heater or lead sheet defects	1. Check or replace
	2. Short circuit of overheat protector or tripping off	2. Check or replace
	3. Phase shortage of contactor	3. Check or replace
	4. Temp. controller damaged.	4. Replace temp. controller
The blower can work, but the temp. Is too high.	1. Hot air pipe jammed	1. Cleaning
	2. Temp. controller failure or large erros	2. Replace temp. controller or adjust the knob
	3. Solenoid switch contact bonding	3. Replace

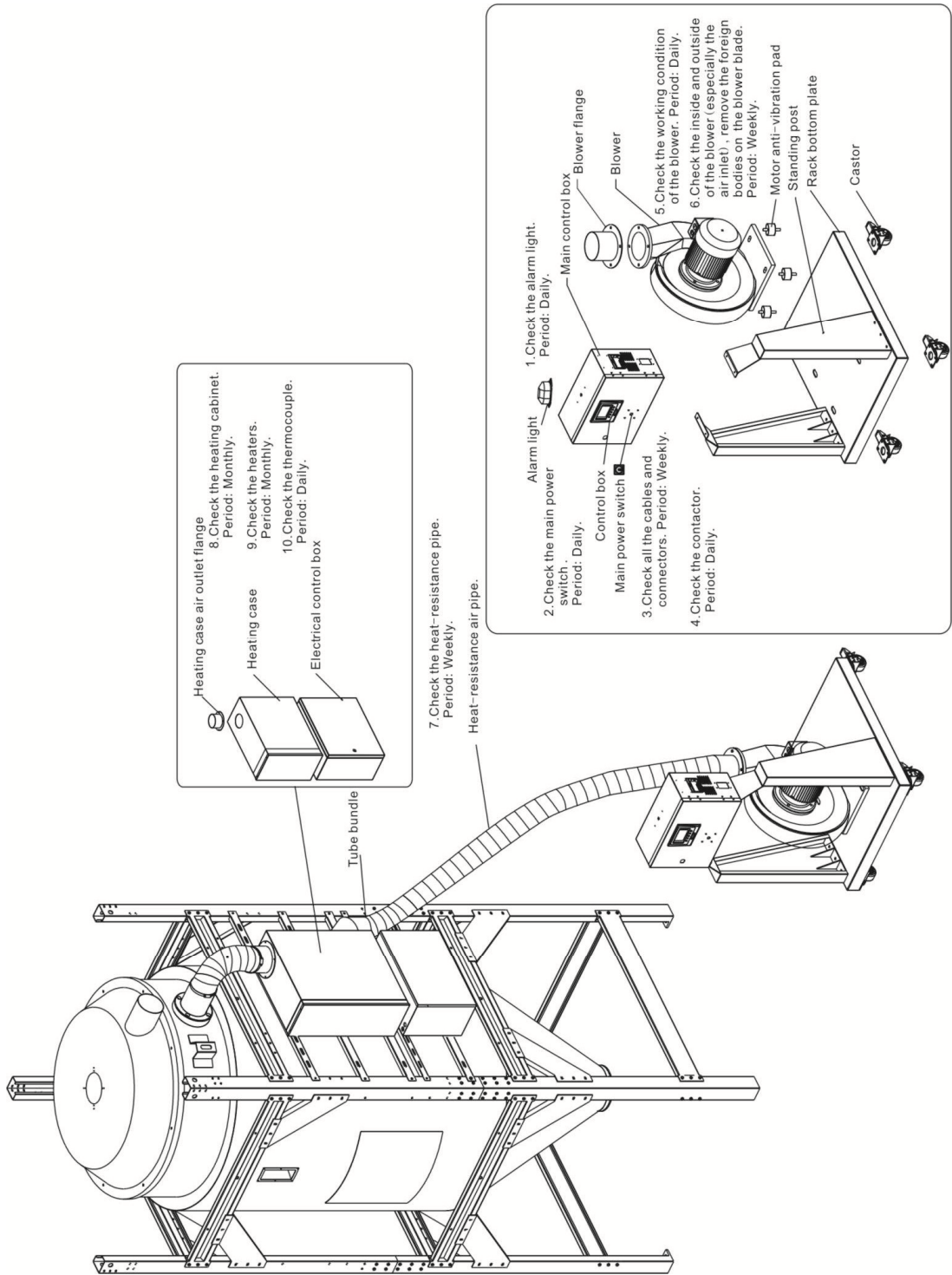
Note: Main switch must be turned "OFF" when checking or replacing the components of the machine.

## 6. Maintenance and Repair

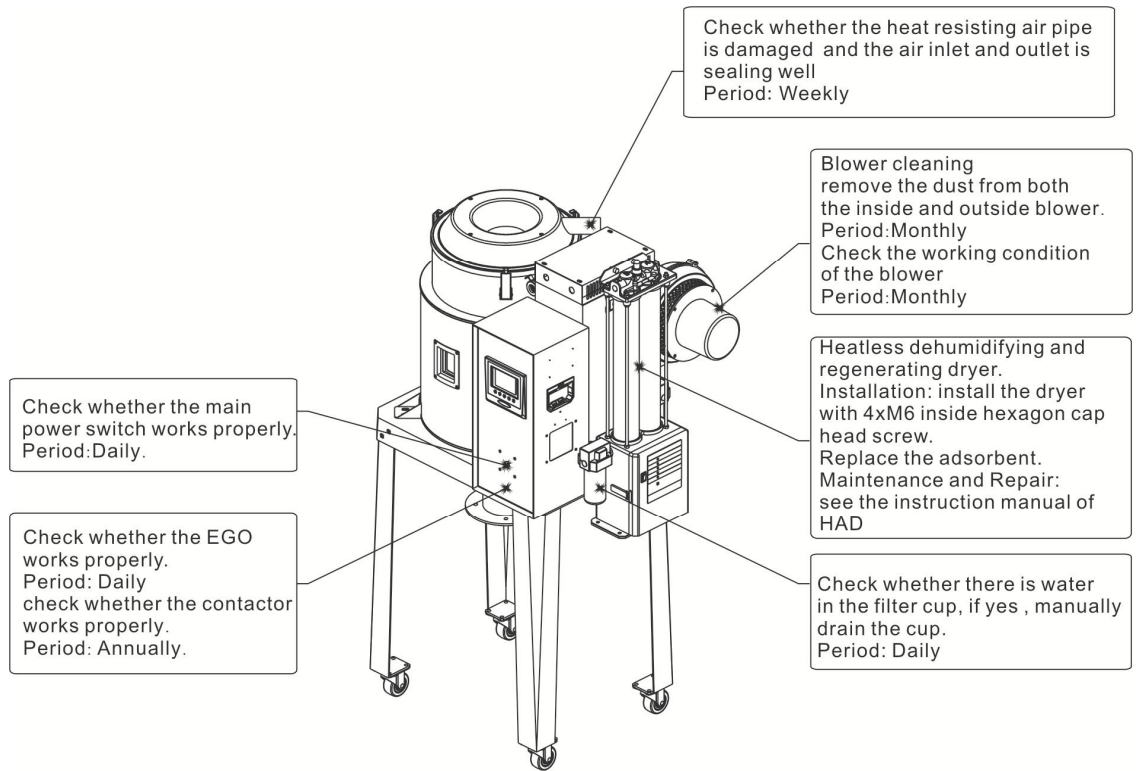
### SHD-20U~1200U



# SHD-1500U~8000U



# SHD-40U~80U-HD



## 6.1 Blower

- 1) Clean inner and outer parts (especially at blower inlet) of the blower periodically.
- 2) Remove the dusts on leaves of the fan for protection.

## 6.2 Maintenance Schedule

### 6.2.1 General Machine Information

Model \_\_\_\_\_ SN \_\_\_\_\_ Manufacture date \_\_\_\_\_

Voltage \_\_\_\_\_  $\Phi$  \_\_\_\_\_ V Frequency \_\_\_\_\_ Hz Power \_\_\_\_\_ kW

### 6.2.2 Installation & Inspection

- Check if the pipe joint is tightly locked by clips or not.
- Check that the material clearance door is firmly closed.
- Check that the piping system is correctly connected.

#### Electrical Installation

- Voltage \_\_\_\_\_ V \_\_\_\_\_ Hz
- Fuse melt current: 1 Phase \_\_\_\_\_ A 3 Phase \_\_\_\_\_ A
- Check phase sequence of the power supply.
- Check the rotating direction of the blower.

### 6.2.3 Daily Checking

- Check the switches of the machine.
- Check auto-start function of the machine.

### 6.2.4 Weekly Checking

- Check all the electrical cables of the machine.
- Check if there are loose electrical connections.

### 6.2.5 Monthly Checking

- Check that the pipe heater is working properly.
- Check the performance of blower.
- Check the functions of electrical components.

### 6.2.6 Half-yearly Checking

- Check if there are damages of heat-resistant hose or not.
- Check the process heater.
- Check the blower.