SHD-EB

Budget Hopper Dryer

Date: Mar, 2017

Version: Ver.A

Content

Table Index

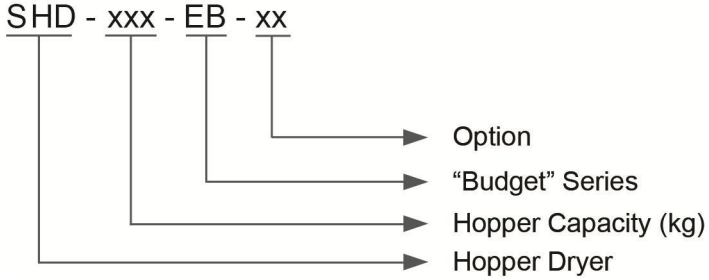
Picture Index

1. General Description

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

SHD-50-EB

1.1 Coding Principle



1.2 Feature

- Adopt hot air diffuser to gain an even hot air flow to improve drying efficiency.
- Hot air inlet elbow design can prevent dust piling up at bottom of the pipe heaters so as to avoid burning.
- All material contact surfaces are made of stainless steel to eliminate material contamination.
- Hopper separated from its base, ensuring convenient cleaning.
- Adopts heat-insulated blower to prolong blower lifespan.
- All series of models standard equipped with 7-day timing and intermittent operation function.add “T” the end of the model coed.
- Max. drying temperature is 160℃. Option high-temperature model, and the max. temperature is 180℃, add "H" the end of the model code.

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 5, 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.

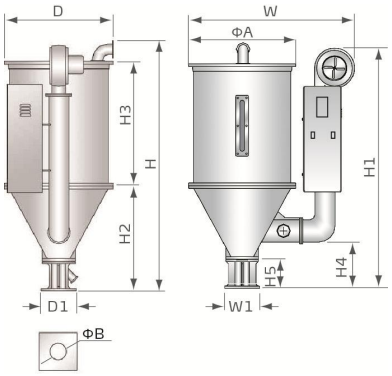
Headquarter and Taipei factory:
Tel: (886) 2 2680 9119

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 External Dimensions



Picture 1-1: External Dimensions

1.3.2 Specification

Table 1-1: Specification

Mode	**SHD-25-EB**	**SHD-50-EB**	**SHD-100-EB**	**SHD-200-EB**
Heater(kW)	3/3.3*	3.9/4.2*	6/6.6*	12/15*
Blower(kW)	0.12	0.12	0.12	0.18
Loading Capacity (kg)	25	50	100	200
H(mm)	1015	1145	1340	1332
H1(mm)	925	1045	1340	1332
H2(mm)	410	380	470	550
H3(mm)	460	520	725	975
H4(mm)	194	206	233	184
H5(mm)	150	150	158	158
W(mm)	725	840	955	1230
D(mm)	405	490	605	770
D1(mm)	158	158	238	238
W1(mm)	148	148	238	238
ΦA (mm)	385	470	595	750
ΦB (mm)	55	55	90	90
Net weight (kg)	40	45	70	100

Note: 1) Above loading capacity is based on pellet material of 0.65kg/L in bulk density and 3~5mmin diameter.
2) "*"Option for high-temperature model, and the max. temperature is 180°C.
3) Power: 3Φ, 230/400/460/575VAC, 50/60Hz.

Table 1-2: Dryer Drying Capacity(kg/hr)(Selection Guide)

Mode / Material	SHD-25-EB	SHD-50-EB	SHD-100-EB	SHD-200-EB	Drying Time	Drying Temp.
Polystyre (PS)	20	50	100	200	0.75hrs	80℃
Polyethylen (PE)	20	50	100	200	0.75hrs	80℃
Poly propyrene (PP)	20	50	100	200	0.75hrs	80℃
Poly styrence H · D	14	38	80	150	1hrs	80℃
ABS	8	20	40	80	1hrs	80℃
Nylon 11,12	4	10	20	35	4hrs	75℃
Nylon6/6,6/10	3.2	8	16	30	5hrs	75℃
Nylon 6	2	5	10	20	7hrs	75℃
Acrylic fiber	6	12	30	60	2.5hrs	80℃
Cellulose acetate	6	17	35	70	2.25hrs	75℃
Butyrate	10	25	50	100	1.5hrs	-
Polycarbonate (PC)	4	10	20	40	3hrs	120℃
Rigid PVC	12	30	60	120	1.25hrs	70℃

Notes:Based on relative humidity 65% with ambient temperature of 20℃,moisure content after drying can be 0.2% ro less.

1.4 Safety Regulations

1.4.1 Safety Signs and Labels

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.

Danger!

High presscure!

It is attached to the control box.

Warning!

High temperature surface may burn hands!

It is attached on the cover of pipe heater.

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.

1.4.2 Signs and Labels

	Protection device activates when overheat occurs; after faults are discharged,press blue key to reset and turn on the switch to Restart operation.
	Push-and-pull switch for shut-off plate: I: Means "Pull" O: Means "Push"
	Regularly clean the filter screen to avoid insufficient drying caused by blocking

1.5 Exemption Clause

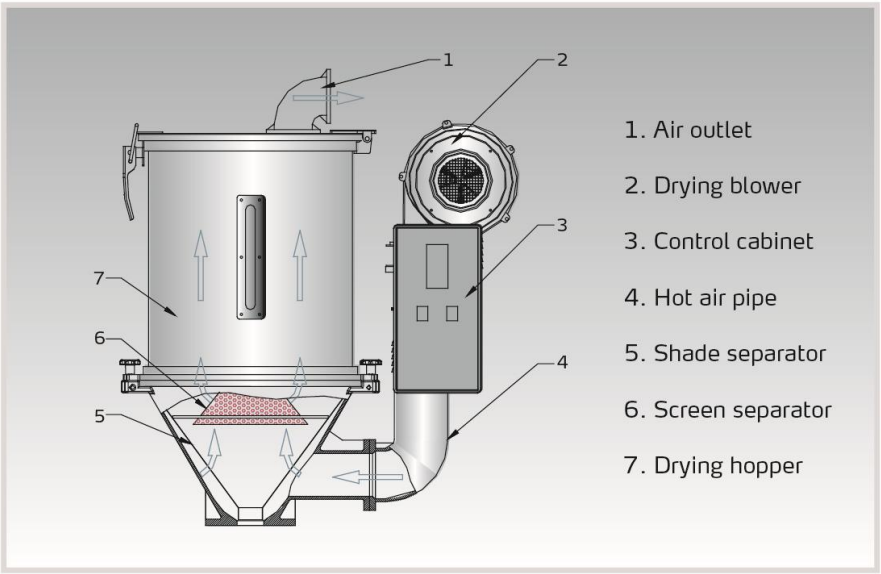
The following statements clarify the responsibilities and regulations born by any buyer or user who purchases products and accessories from Shini (including employees and agents).

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



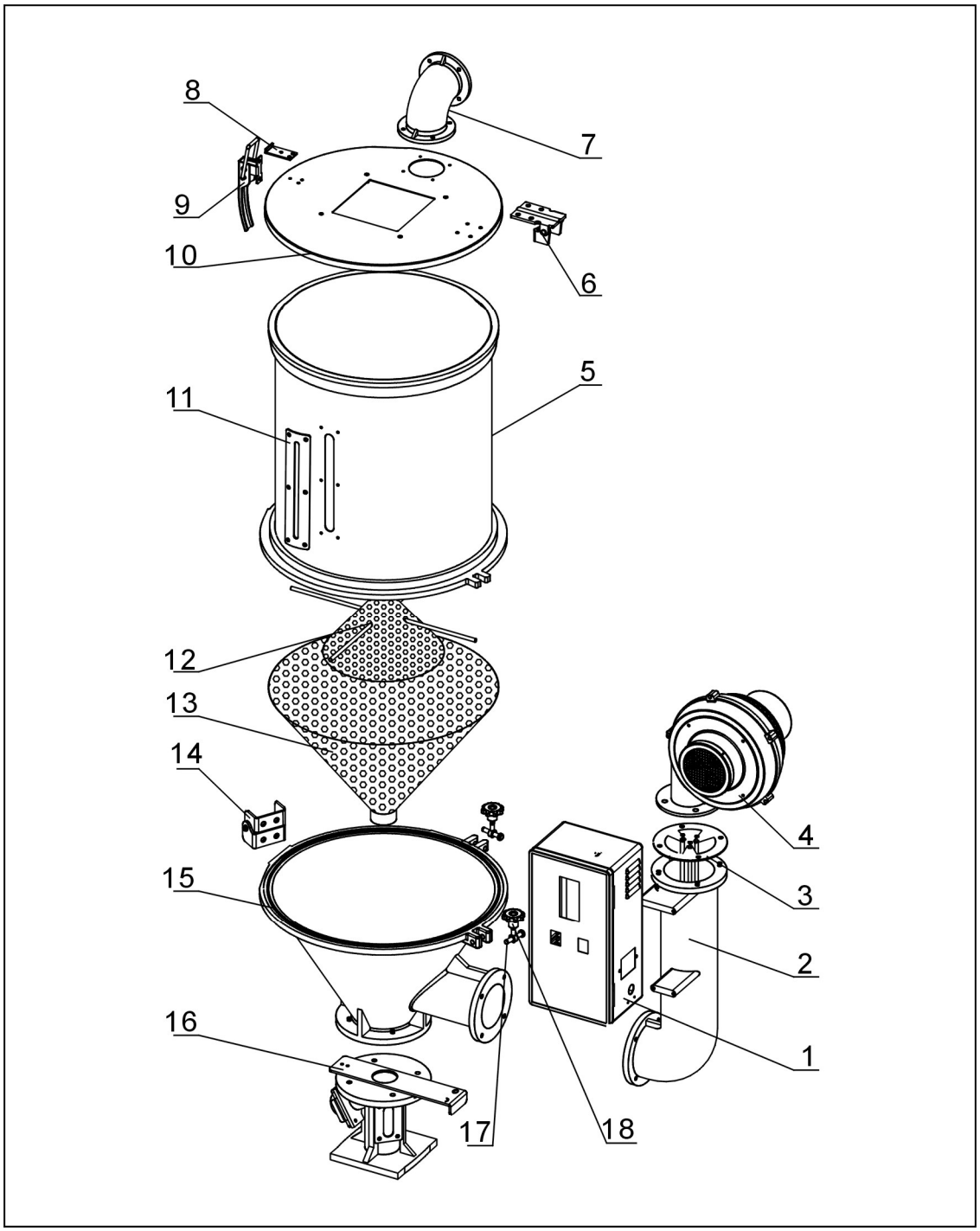
Picture 2-1: Working Principle

In the drying process, hot air with constant temperature is blown by the drying blower 2 of SHD into the drying hopper 7 to dry the materials. Moisture will be separated out and taken away by hot air, thus to gain a satisfied drying effect.

Air blown out of blower via hot air pipe 4 became high temperature drying air after being heated. Through shade separator 5 and screen protector 6, hot air can be equably dispersed to the material in storage tank (see picture). Hot air recycler is optional so the air entered drying blower 7 after being filtered by return air will get into the drying blower 2 to form a closed loop circle, which saves electricity.

2.2 Drawing and Parts List

2.2.1 Assembly Drawing (SHD-25~75-EB)



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

Picture 2-2: Assembly Drawing (SHD-25~75-EB)

2.2.2 Parts List (SHD-25~75-EB)

Table 2-1: Parts List (SHD-25~75-EB)

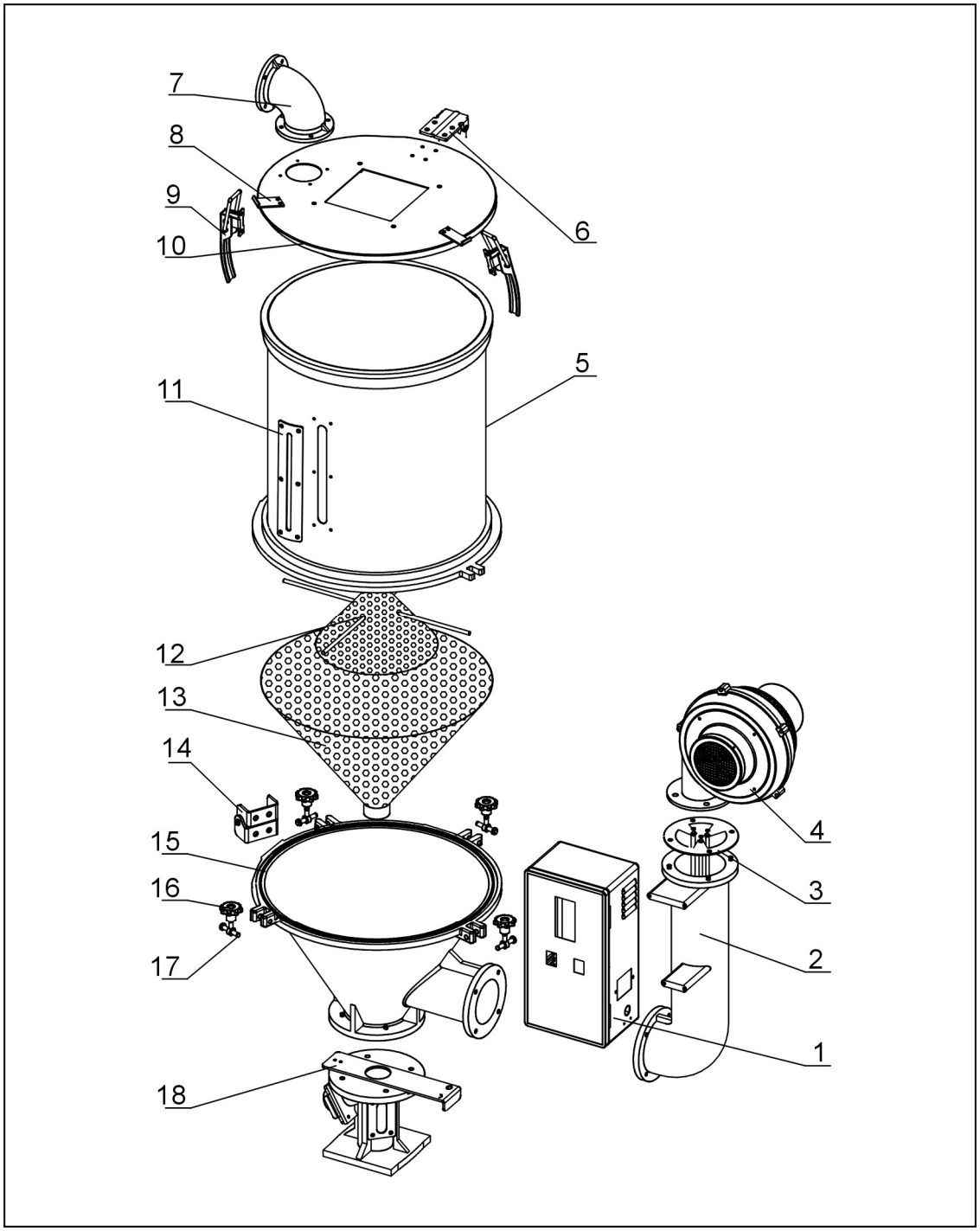
NO.	Name	Part NO.		
		SHD-25-EB	SHD-50-EB	SHD-75-EB
1	Control box**	BH31002509550	BH31005006550	BH31007506550
2	Hot-air pipe**	BA10002500410	BA10005000610	BA10005000610
3	Pipe heater*(SHD)	BH70250300150	BH70500300150	BH70750300050
	Pipe heater **(SHD-H)	BH70253300010	BH70007500510	BH70754800010
4	Blower*	YM40002501150	YM40000300900	YM40000300900
5	Storage hopper	BK01002500020	BK01005000020	BK01007500020
6	Rear hinge at cover	YW06125040000	YW06125040000	YW06125040000
7	Exhaust pipe	BA10251000010	BA10251000010	BA10251000010
8	Handle hook	YW00251000000	YW00251000000	YW00251000000
9	Handle	YW00121000000	YW00121000000	YW00121000000
10	Hopper cover	YW09002500000	YW09005000100	BL01007500020
	Cover fastener	YR10002500100	YR10005000100	YR10010040000
11	Sight glass	YW09000600000	YW09000600000	YW09000600000
	Sight glass acryl	YR40001200000	YR40001200000	YR40001200000
	Sight glass Fastener	YR40000600000	YR40000600000	YR40000600000
12	Screen separator**	BL01002500620	BL01005001120	BL01007500120
13	Shade separator**	BL01002501520	BL01005000320	BL01007500320
14	Rear hinge at hopper	YW09125000100	YW09125000100	YW09125000100
15	Hopper	BA10002500210	BA10005000110	BA10007500110
	Hopper fastener	YR10002500200	YR10005000200	YR10010000200
16	Base**	BY10050000550	BY10050000550	BY10050000550
17	Star pin	YW09085400000	YW09085400000	YW09085400000
18	Star nut	YW09675100000	YW09675100000	YW09675100000
	Star screw	YW09051600100	YW09051600100	YW09051600100

* means possible broken parts.

** means easy broken parts 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.

2.2.3 Assembly Drawing (SHD-100/150-EB)



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

Picture 2-3: Assembly Drawing (SHD-100/150-EB)

2.2.4 Parts List (SHD-100/150-EB)

Table 2-2: Parts List (SHD-100/150-EB)

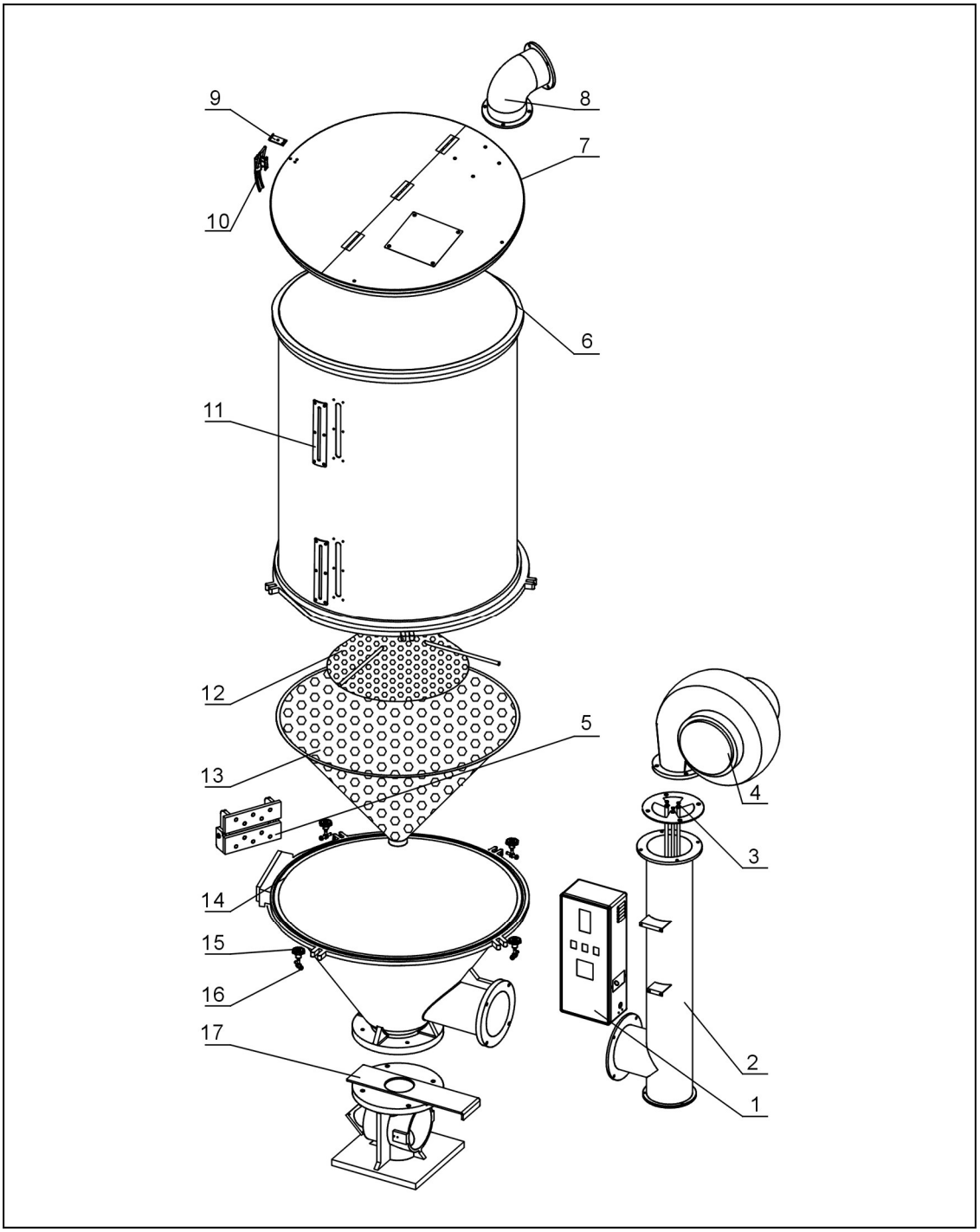
NO.	Name	Part NO.	
		SHD-100-EB	SHD-150-EB
1	Control box*	BH31010006550	BH31015006550
2	Hot-air pipe**	BA10010000610	BA10010000610
3	Pipe heater**(SHD)	BH70103800050	BH70153800050
	Pipe heater**(SHD-H)	BH70153800050	BH70150720010
4	Blower*	YM40000400900	YM40000400900
5	Storage hopper	BK01010000020	BK01015000020
6	Rear hinge at cover	YW06102000000	YW06102000000
7	Exhaust pipe	BA10251000010	BA10251000010
8	Handle hook	YW00251000000	YW00251000000
9	Handle	YW00121000000	YW00121000000
10	Hopper cover	BL01100700720	BL01100700720
	Cover fastener	YR10010040000	YR10010040000
11	Sight glass	YW09000600000	YW09000600000
	Sight glass acryl	YR40001200000	YR40001200000
	Sight glass fastener	YR40000600000	YR40000600000
12	Screen separator**	BL01010000120	BL01010000120
13	Shade separator**	BL01010000320	BL01010000320
14	Rear hinge at hopper	YW09102000100	YW09102000100
15	Hopper	BA10010000110	BA10010000110
	Hopper fastener	YR10010000200	YR10010000200
16	Star nut	YW09115600000	YW09115600000
	Star screw	YW09100000000	YW09100000000
17	Star pin	YW09085400000	YW09085400000
18	Base**	BY10200000050	BY10200000050

* means possible broken parts.

** means easy broken parts 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.

2.2.5 Assembly Drawing (SHD-200-EB)



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

Picture 2-4: Assembly Drawing (SHD-200-EB)

2.2.6 Parts List (SHD-200-EB)

Table 2-3: Parts List (SHD-200-EB)

NO.	Name	Part NO.
1	Control box**	BH31020006950
2	Hot-air pipe**	BA10020000610
3	Pipe heater**(SHD)	YW90001201500
4	Blower*	YM40000500900
5	Rear hinge at cover	YW09102000100
6	Storage hopper	BK01020000020
7	Hopper cover	BW09020000020
	Cover fastener	YR10002500200
8	Exhaust pipe	BA10020000210
9	Handle hook	YW00251000000
10	Handle	YW00121000000
11	Sight glass	YW09000600000
	Sight glass acryl	YR40001200000
	Sight glass fastener	YR40000600000
12	Screen separator**	BL01020000120
13	Shade separator**	BL01020000320
14	Hopper	BA10020000110
	Hopper fastener	YR10002500200
15	Star nut	YW09115600000
	Star screw	YW09100000000
16	Star pin	YW09085400000
17	Base**	BY10200000050

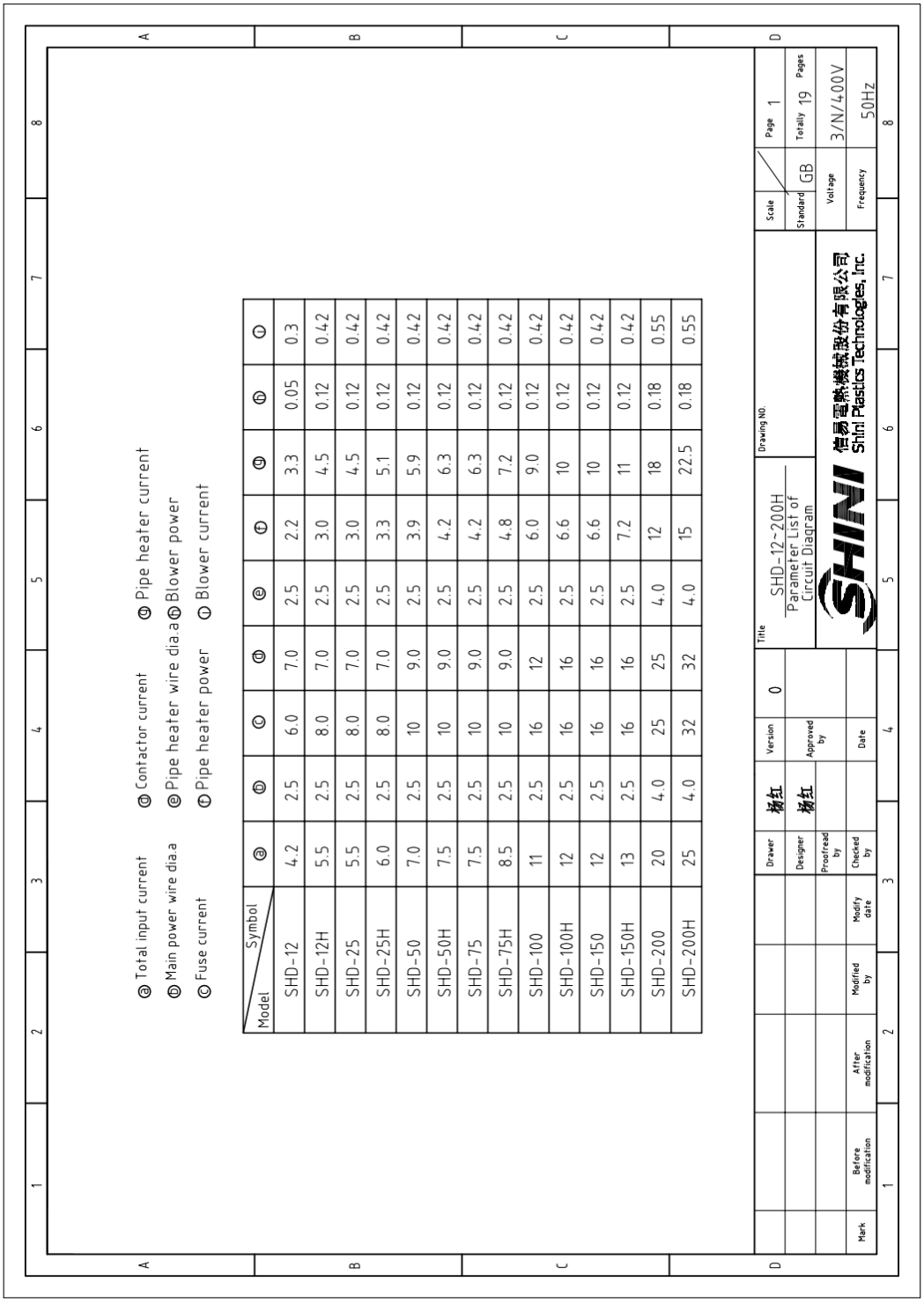
* means possible broken parts.

** means easy broken parts 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.

2.3 Circuit Diagram

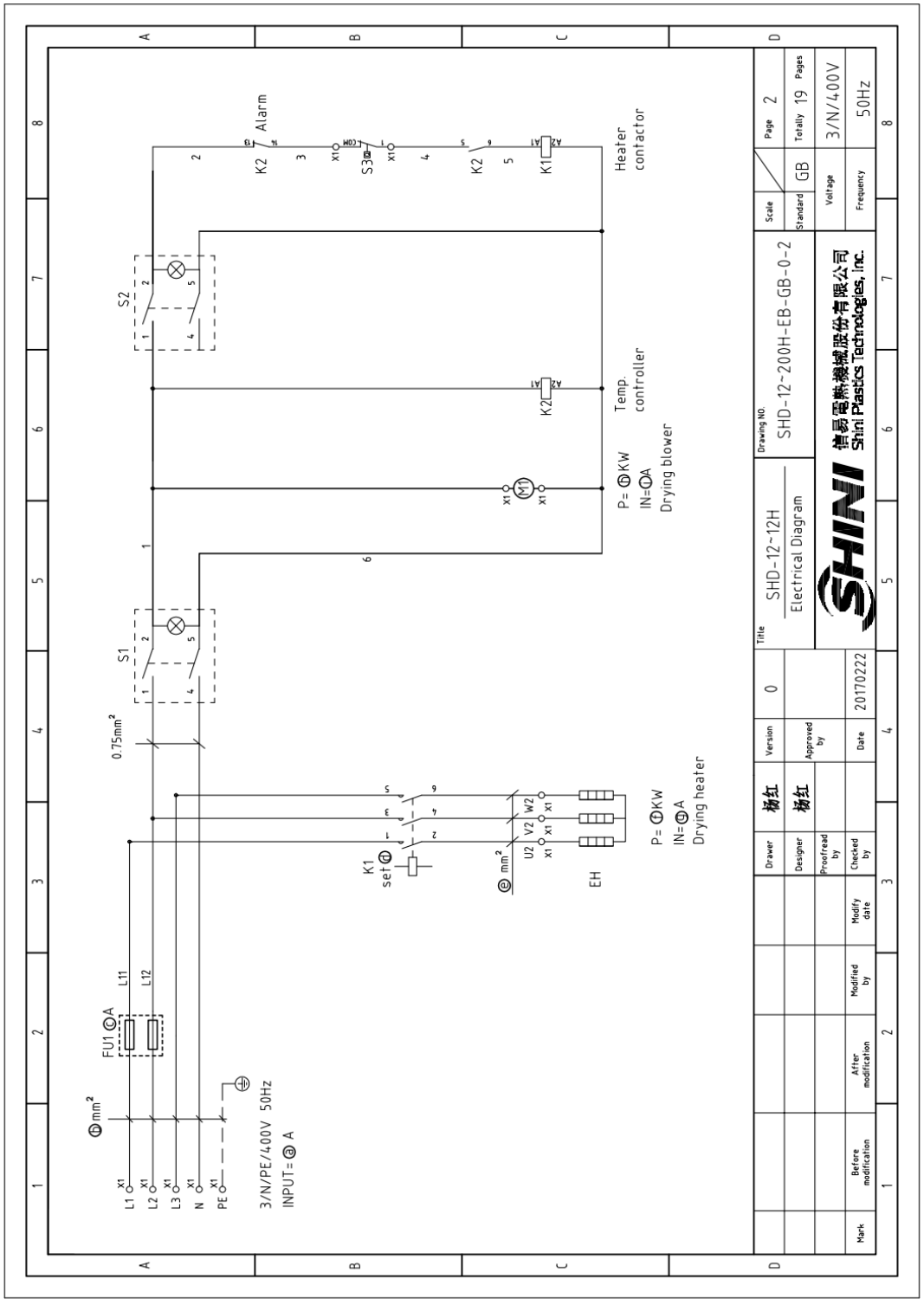
2.3.1 Power, Diameter, Current



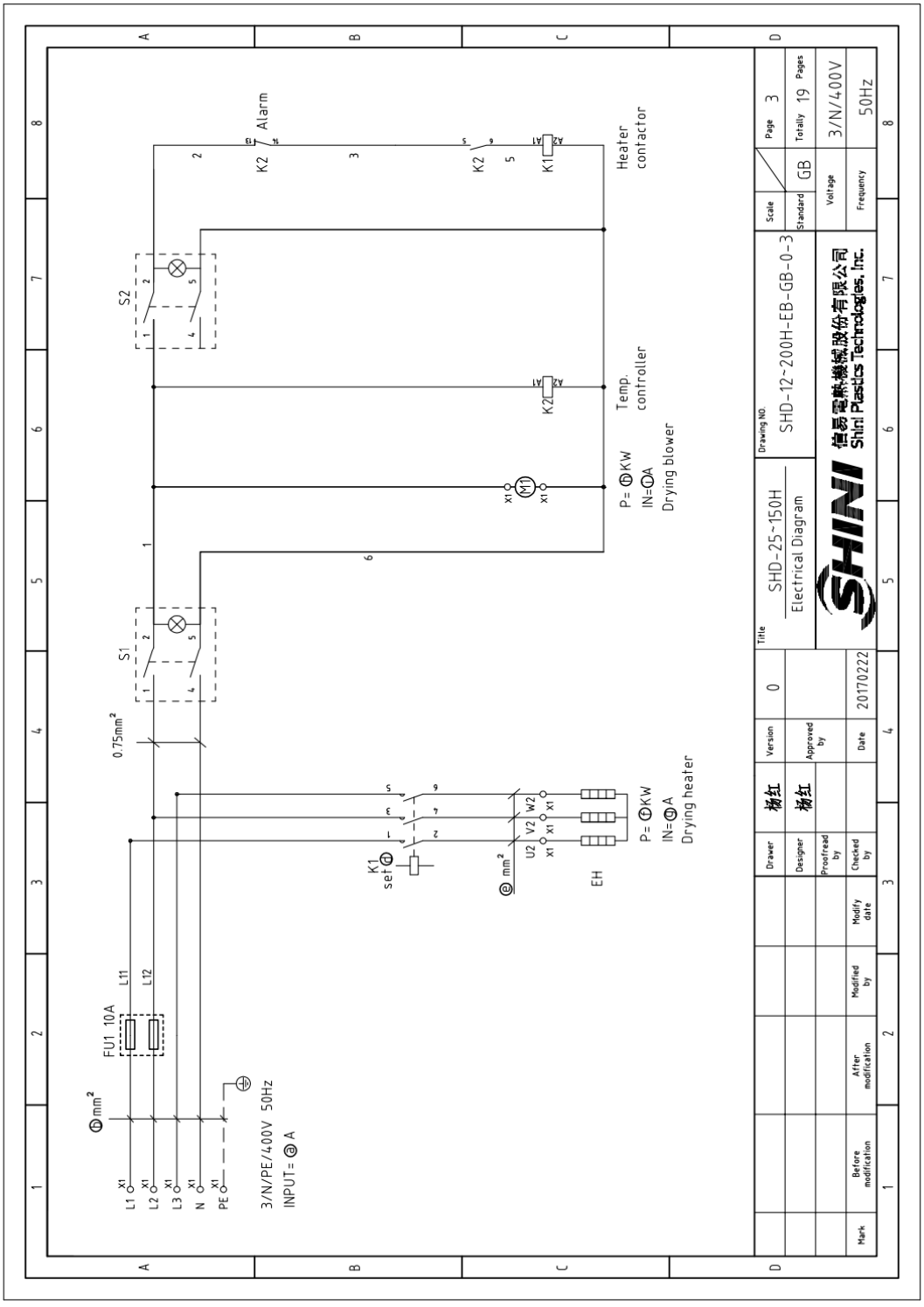
ⓐ Total input current ⓑ Contactor current ⓓ Pipe heater current
ⓑ Main power wire dia.a ⓔ Pipe heater wire dia.a ⓗ Blower power
ⓒ Fuse current ⓕ Pipe heater power ⓘ Blower current

Model \ Symbol	ⓐ	ⓑ	ⓒ	ⓓ	ⓔ	ⓕ	ⓖ	ⓗ	ⓘ
SHD-12	4.2	2.5	6.0	7.0	2.5	2.2	3.3	0.05	0.3
SHD-12H	5.5	2.5	8.0	7.0	2.5	3.0	4.5	0.12	0.42
SHD-25	5.5	2.5	8.0	7.0	2.5	3.0	4.5	0.12	0.42
SHD-25H	6.0	2.5	8.0	7.0	2.5	3.3	5.1	0.12	0.42
SHD-50	7.0	2.5	10	9.0	2.5	3.9	5.9	0.12	0.42
SHD-50H	7.5	2.5	10	9.0	2.5	4.2	6.3	0.12	0.42
SHD-75	7.5	2.5	10	9.0	2.5	4.2	6.3	0.12	0.42
SHD-75H	8.5	2.5	10	9.0	2.5	4.8	7.2	0.12	0.42
SHD-100	11	2.5	16	12	2.5	6.0	9.0	0.12	0.42
SHD-100H	12	2.5	16	16	2.5	6.6	10	0.12	0.42
SHD-150	12	2.5	16	16	2.5	6.6	10	0.12	0.42
SHD-150H	13	2.5	16	16	2.5	7.2	11	0.12	0.42
SHD-200	20	4.0	25	25	4.0	12	18	0.18	0.55
SHD-200H	25	4.0	32	32	4.0	15	22.5	0.18	0.55

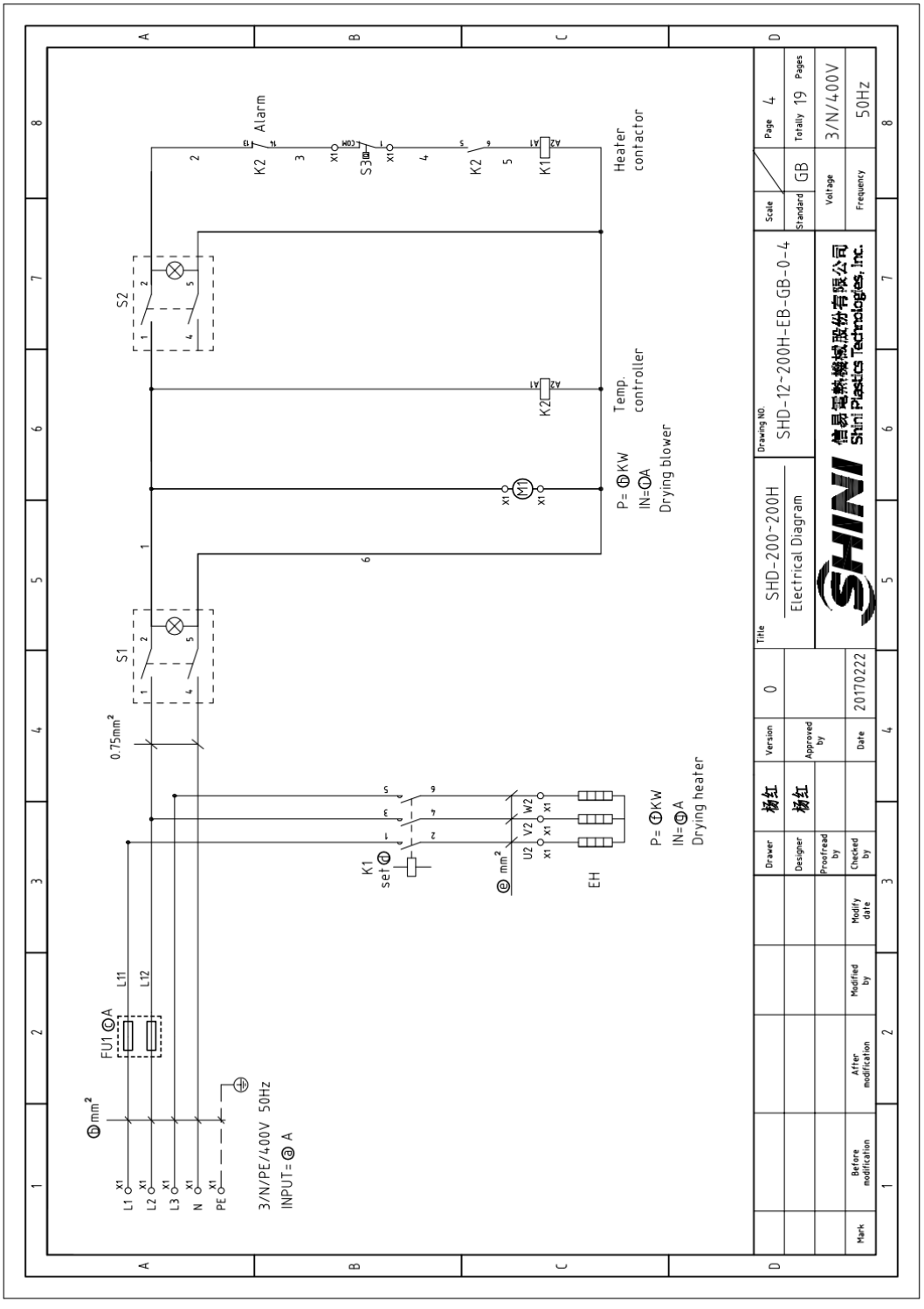
2.3.2 Electrical Diagram



Picture 2-5: Electrical Diagram (SHD-12/12H-EB)

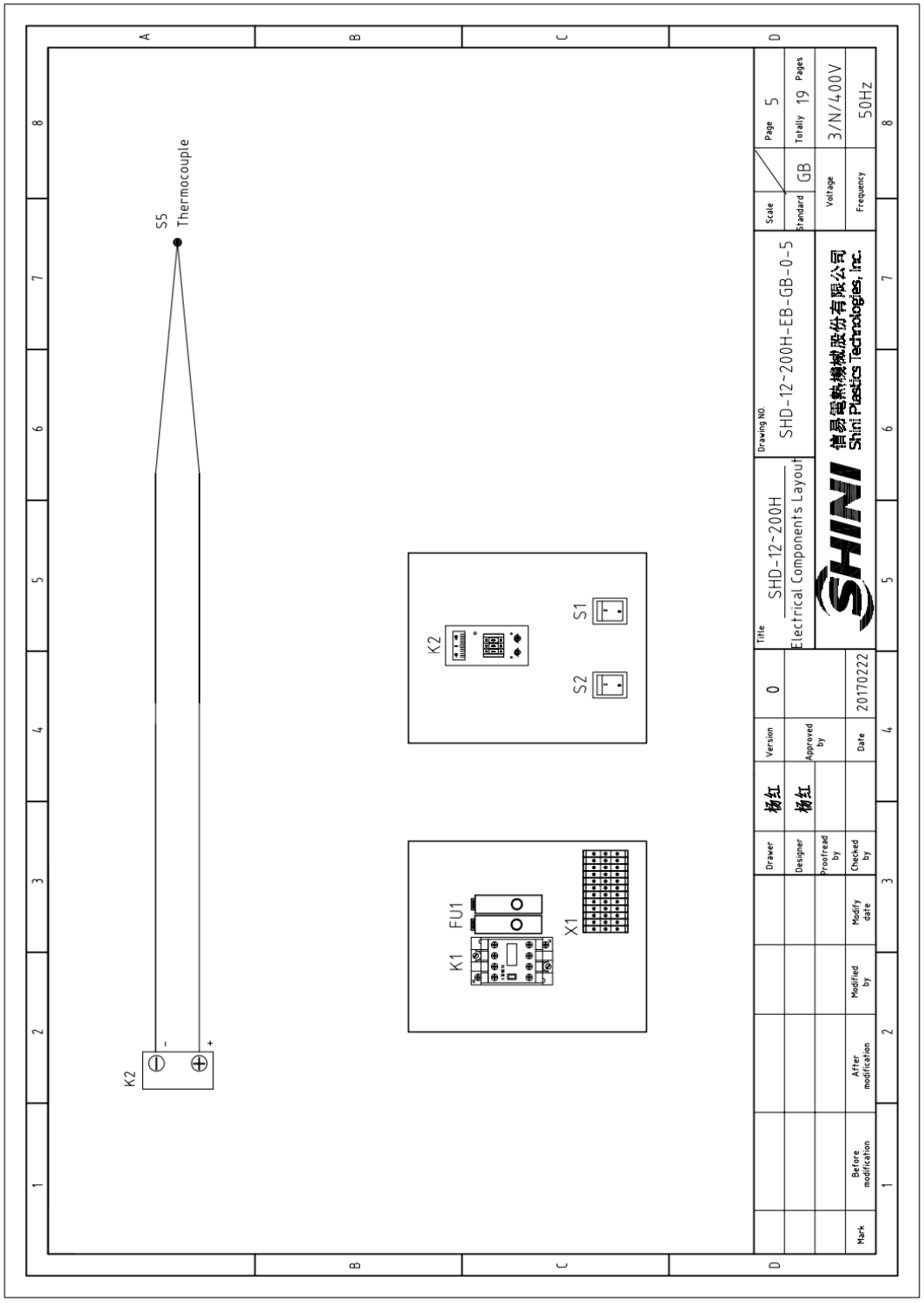


Picture 2-6: Electrical Diagram (SHD-25~150H-EB)



Picture 2-7: Electrical Diagram (SHD-200/200H-EB)

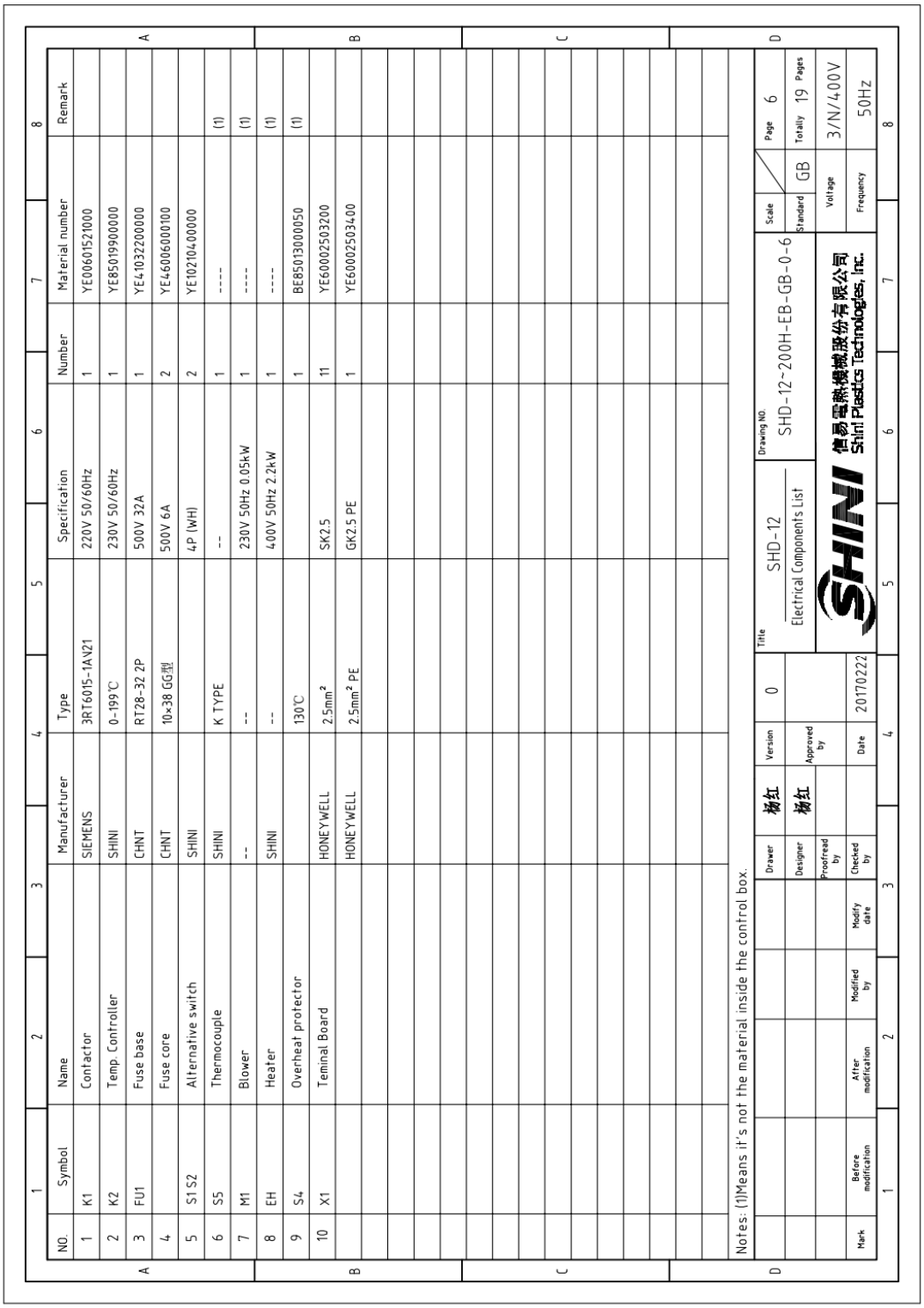
2.3.3 Electrical Components Layout



Picture 2-8: Electrical Components Layout

2.3.4 Electrical Components List

Table 2-4: Electrical Components List (SHD-12-EB)



NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 6A	2	YE46006000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.05kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 2.2kW	1	----	(1)
9	S4	Overheat protector		130℃		1	BE85013000050	(1)
10	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	11	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Drawer	Designer	Proofread by	Checked by	Approved by	Version	Date
					杨红	杨红				0	20170222

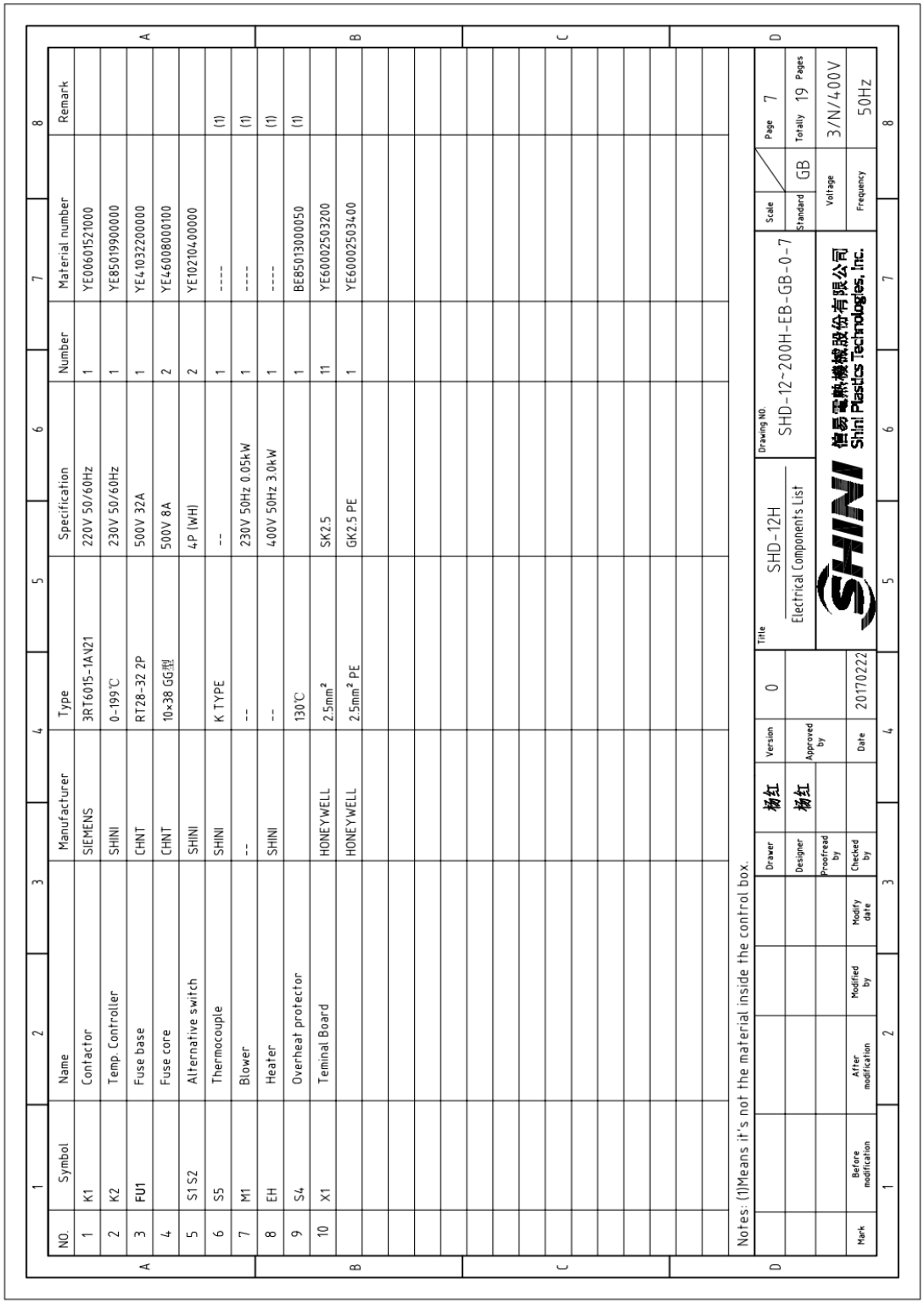
Title: SHD-12 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-6

信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale: Standard GB | Page 6 | Totally 19 Pages | Voltage 3/N/400V | Frequency 50Hz

Table 2-5: Electrical Components List (SHD-12H-EB)



NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6015-1AV21	220V 50/60Hz	1	YE00601521000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 8A	2	YE46008000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.05kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 3.0kW	1	----	(1)
9	S4	Overheat protector		130℃		1	BE85013000050	(1)
10	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	11	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Drawer	杨红	Version	0
					Designer	杨红	Approved by	
					Proofread by			
					Checked by		Date	20170222

Title: SHD-12H Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-7

SHINI 禧嘉電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale | Page 7

Standard GB | Totally 19 Pages

Voltage 3/N/400V

Frequency 50Hz

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 8A	2	YE46008000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 3.0kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer	杨红	Version	0
Designer	杨红	Approved by	
Proofread by			
Checked by		Date	20170222

Title: SHD-25 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-8

Scale		Page	8
Standard	GB	Totally	19 Pages
Voltage		3/N/400V	
Frequency		50Hz	

信易電熱機械股份有限公司
Shini Plastics Technologies, Inc.

Table 2-7: Electrical Components List (SHD-25H-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 8A	2	YE46008000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 3.3kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer	杨红	Version	0
Designer	杨红	Approved by	
Proofread by			
Checked by		Date	20170222

Title: SHD-25H Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-9

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale	
Standard	GB
Page	9
Totally	19 Pages
Voltage	3/N/400V
Frequency	50Hz

Table 2-8: Electrical Components List (SHD-50-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 10A	2	YE46010000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 3.9kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer	杨红	Version	0
Designer	杨红	Approved by	
Proofread by			
Checked by		Date	20170222

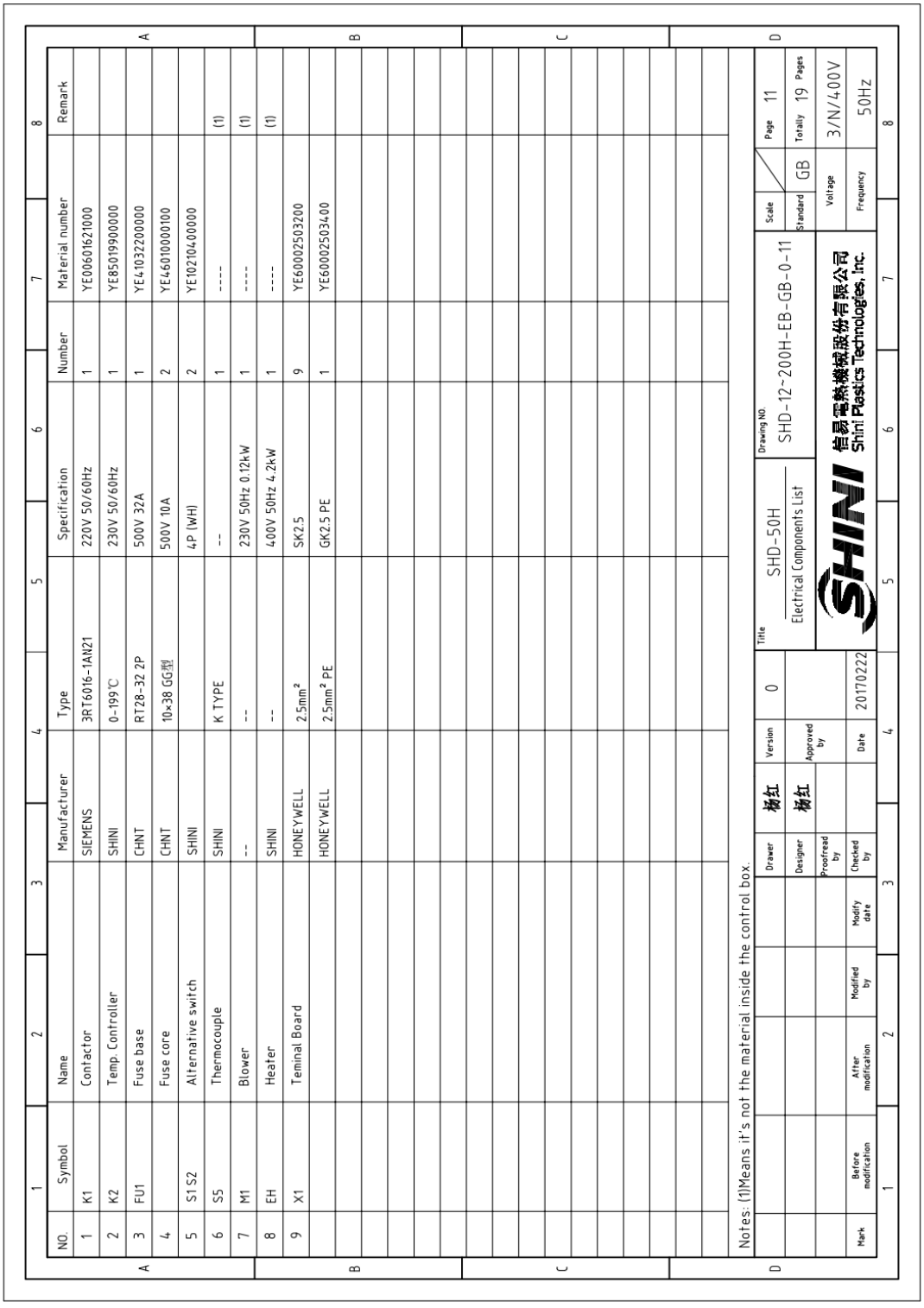
Title: SHD-50 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-10

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale	
Standard	GB
Page	10
Totally	19 Pages
Voltage	3/N/400V
Frequency	50Hz

Table 2-9: Electrical Components List (SHD-50H-EB)



NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 10A	2	YE46010000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 4.2kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Drawer	杨红	Version	0
					Designer	杨红	Approved by	
					Proofread by			
					Checked by		Date	20170222

Title: SHD-50H Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-11

信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

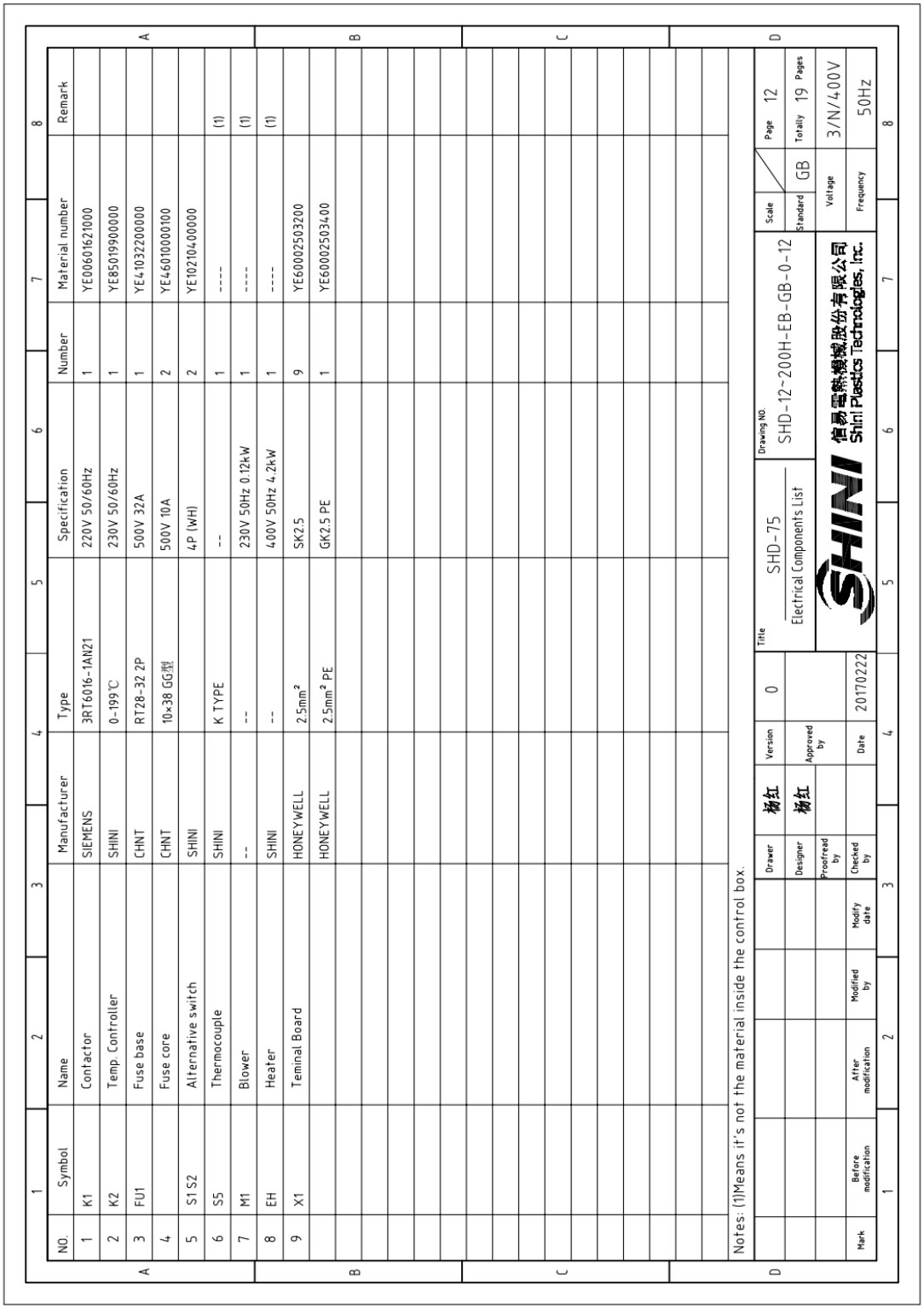
Scale | Page 11

Standard GB | Totally 19 Pages

Voltage 3/N/400V

Frequency 50Hz

Table 2-10: Electrical Components List (SHD-75-EB)



NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 10A	2	YE46010000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 4.2kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Designer	Proofread by	Checked by	Drawer	Approved by	Version	Date
					杨红			杨红		0	20170222

Title: SHD-75 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-12

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale: Standard GB | Page 12 | Totally 19 Pages

Voltage: 3/N/400V

Frequency: 50Hz

Table 2-11: Electrical Components List (SHD-75H-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 10A	2	YE46010000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 4.8kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer	杨红	Version	0	
Designer	杨红	Approved by		
Proofread by				
Checked by		Date	20170222	

Title: SHD-75H Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-13

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale		Page	13
Standard	GB	Totally	19 Pages
Voltage		3/N/400V	
Frequency		50Hz	

Table 2-12: Electrical Components List (SHD-100-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6017-1AN21	220V 50/60Hz	1	YE00601721000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 16A	2	YE46016000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 6.0kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer	杨红	Version	0	
Designer	杨红	Approved by		
Proofread by				
Checked by		Date	20170222	

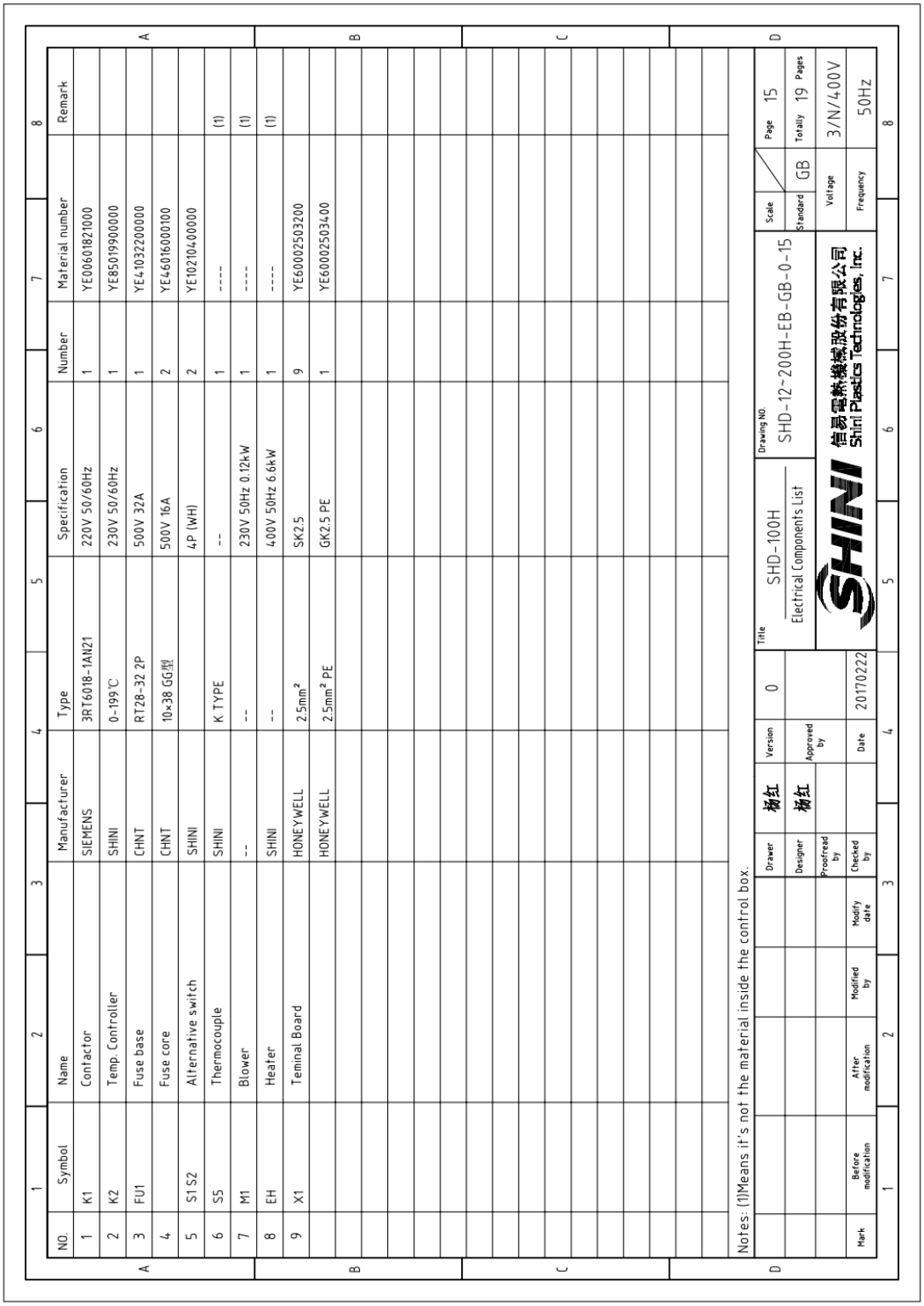
Title: SHD-100 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-14

Scale		Page	14
Standard	GB	Totally	19 Pages
Voltage		3/N/400V	
Frequency		50Hz	

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Table 2-13: Electrical Components List (SHD-100H-EB)



NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6018-1AN21	220V 50/60Hz	1	YE00601821000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 16A	2	YE46016000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 6.6kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Designer	Proofread by	Checked by	Drawer	Approved by	Version	Date
								杨红	杨红	0	20170222

Title: SHD-100H Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-15

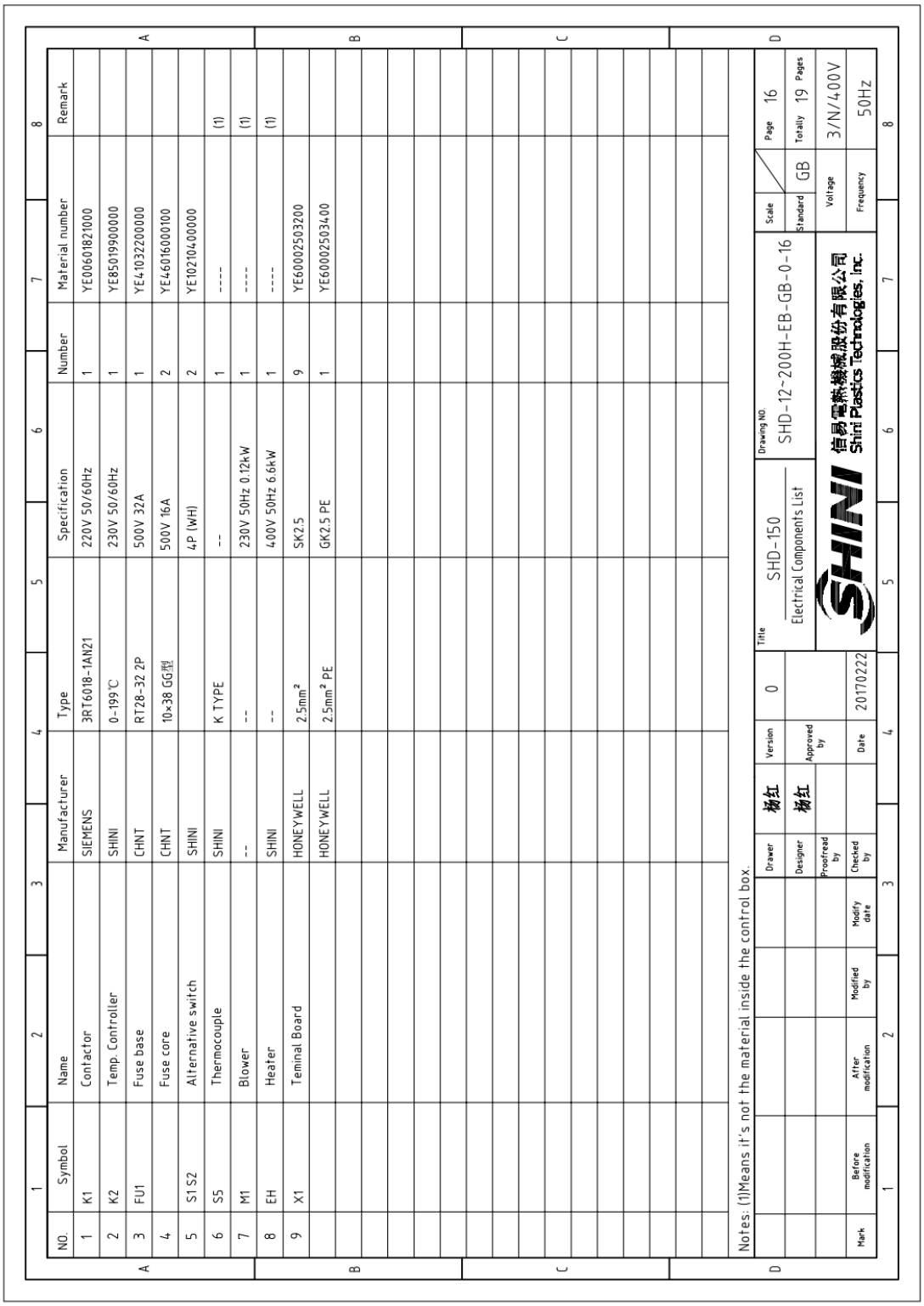
信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale: Standard GB | Page 15 | Totally 19 Pages

Voltage: 3/N/400V

Frequency: 50Hz

Table 2-14: Electrical Components List (SHD-150-EB)



NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6018-1AN21	220V 50/60Hz	1	YE00601821000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 16A	2	YE46016000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 6.6kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Drawer	杨红	Version	0
					Designer	杨红	Approved by	
					Proofread by			
					Checked by		Date	20170222

Title: SHD-150 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-16

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale | Page 16

Standard GB | Totally 19 Pages

Voltage 3/N/400V

Frequency 50Hz

Table 2-15: Electrical Components List (SHD-150H-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6018-1AN21	220V 50/60Hz	1	YE00601821000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 16A	2	YE46016000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.12kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 7.2kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	9	YE60002503200	
			HONEYWELL	2.5mm² PE	GK2.5 PE	1	YE60002503400	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer 杨红 | Version 0
Designer 杨红 | Approved by
Proofread by
Checked by | Date 20170222

Title: SHD-150H Electrical Components List
Drawing NO.: SHD-12~200H-EB-GB-0-17
Scale / Standard GB | Page 17 | Totally 19 Pages
Voltage 3/N/400V
Frequency 50Hz

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Table 2-16: Electrical Components List (SHD-200-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6026-1AN20	220V 50/60Hz	1	YE00602622000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 25A	2	YE46025000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.18kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 12kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	4	YE60002503200	
			HONEYWELL	4.0mm²	SK4	7	YE60000403200	
			HONEYWELL	4.0mm² PE	GK5 PE	1	YE60000403500	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date

Drawer	杨红	Version	0
Designer	杨红	Approved by	
Proofread by			
Checked by		Date	20170222

Title: SHD-200 Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-18

SHINI 售易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale	
Standard	GB
Page	18
Totally	19 Pages
Voltage	3/N/400V
Frequency	50Hz

Table 2-17: Electrical Components List (SHD-200H-EB)

NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	K1	Contactor	SIEMENS	3RT6027-1AN20	220V 50/60Hz	1	YE00602722000	
2	K2	Temp. Controller	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000	
3	FU1	Fuse base	CHNT	RT28-32 2P	500V 32A	1	YE41032200000	
4		Fuse core	CHNT	10×38 GG型	500V 32A	2	YE46032000100	
5	S1 S2	Alternative switch	SHINI		4P (WH)	2	YE10210400000	
6	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
7	M1	Blower	--	--	230V 50Hz 0.18kW	1	----	(1)
8	EH	Heater	SHINI	--	400V 50Hz 15kW	1	----	(1)
9	X1	Teminal Board	HONEYWELL	2.5mm²	SK2.5	4	YE60002503200	
			HONEYWELL	4.0mm²	SK4	7	YE60000403200	
			HONEYWELL	4.0mm² PE	GK5 PE	1	YE60000403500	

Notes: (1)Means it's not the material inside the control box.

Mark	Before modification	After modification	Modified by	Modify date	Drawer	杨红	Version	0
					Designer	杨红	Approved by	
					Proofread by			
					Checked by		Date	20170222

Title: SHD-200H Electrical Components List

Drawing NO.: SHD-12~200H-EB-GB-0-19

SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.

Scale	
Standard	GB
Page	19
Totally	19 Pages
Voltage	3/N/400V
Frequency	50Hz

3. Installation and Debugging

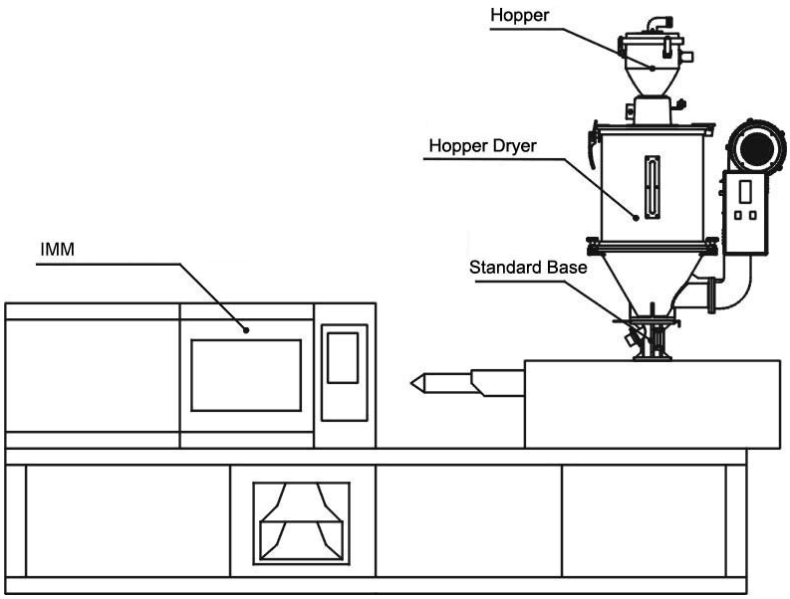
Notes for Installation and Positioning:

1) Machine just can be mounted in vertical position. Make sure there's no pipe, fixed structure or other objects above the installing location and around the machine which may block machine's installation, hit objects or injure human person.

2) In order to maintain convenient operation, it's suggested to keep 1m space around the machine. Please keep at least 2m distance between the device and the inflammable goods.

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

3.1 Direct Installation

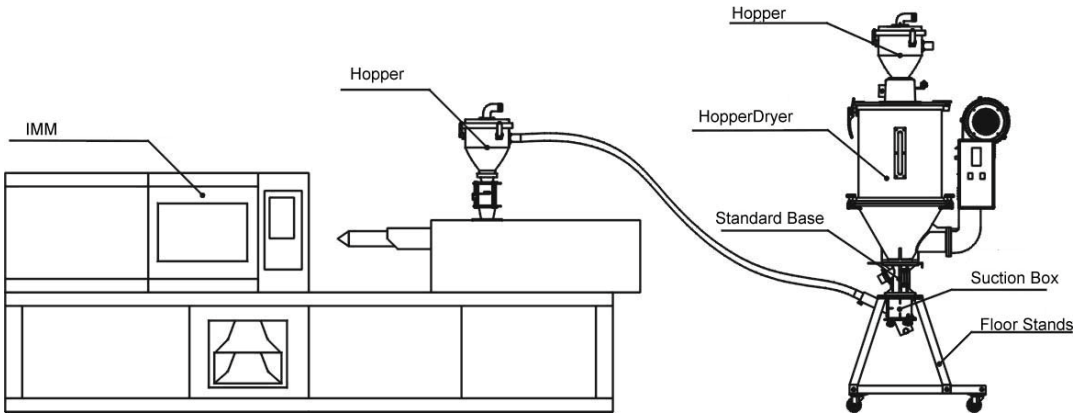


Picture 3-1: Direct Installation

Direct installation type is to mount the hopper dryer directly on the molding machine via a standard base. SHD-12~300 is suitable for this mounting method as well as floor stand installation type; SHD-400 and models above should adopt floor stand installation type.

When using the method to mount the dryer, the equipped standard base must according to material inlet diameter of the molding machine mounting drill holes. Then use the screw to fasten the base and the molding machine inlet.

3.2 Floor Stand Installation



Picture 3-2: Floor stand Installation

Floor stand installation type is to mount dryer on a floor stand, then via a photo-sensor hopper receiver to convey the material to the feed port of a molding machine. SHD-400 and above models should adopt floor stand installation type.

Machine should be placed on water-level floor to keep balance. If it is to be mounted on a high surface(e.g. on a scaffold or a interlayer), should ensure its structure and sizes can bear the weight and size of the machine.

3.3 Connecting the Power Source

Open the control box and connect the power source in accordance with wiring diagram. Notice should be taken concerning if the power voltage is in compliance with the required specifications, also if the switch and load are proper and safe.

Notes: Before connecting, the main switch and heat switch should be off.

3.4 The Hopper Dryer Test

After ensuring all the circuits have been connected firmly, turn on the blower switch to" ON" status and turn on the heater switch on control box to "ON" status. Then light indicator of the switch would turn on, observe whether the rotating derection of the blower is same as the arrow indicated direction. If it is not, randomly exchange two of the three power firing lines and connect them firmly.

Picture 3-3: Blower

3.5 Installation of the Options

3.5.1 Installation of Air-Exhaust Filter

If the materials contain dust or to avoid the dust-contain air exhausted by dryer polluting the workshop's environment. Option with air-exhaust filter ADC can filter the exhausted air from the dryer. ADC can reach filter efficiency of 99%.

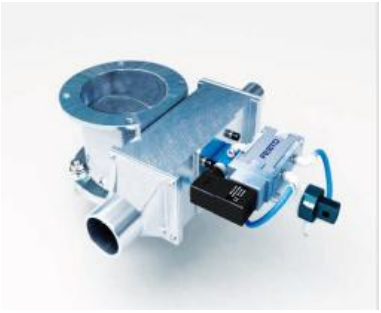
Both HCF/ADC are installed on air-exhaust elbow of the dryer. Point it to the installed holes then tighten up the screws, use rubber ring to seal the combined place.

Picture 3-4: Left : Air-exhaust Elbow of Dryer
Right: Air-exhaust Filter

3.5.2 Suction Box Installation


Picture 3-5: European Suction Box

When SHD is mounted on the floor stand suction box should be equipped. To convey the dried plastic material conveniently. The installation of suction box is simple. Install them at bottom of the hopper, point to the holes and tighten up the screws.



Picture 3-6: Shut-off Suction Box

3.5.3 Blower Inlet Filter Installation

When dryers in the dust-contain environment or hot air requires high cleanliness, it can option with AIF blower inlet filter.


Picture 3-7: AIF Blower Inlet Filter

Installing AIF at blower inlet port when installing it, firstly loosen screws of the blower inlet screen , take down the screen; then install the AIF at blower inlet port, point to the holes and tighten up the screws.

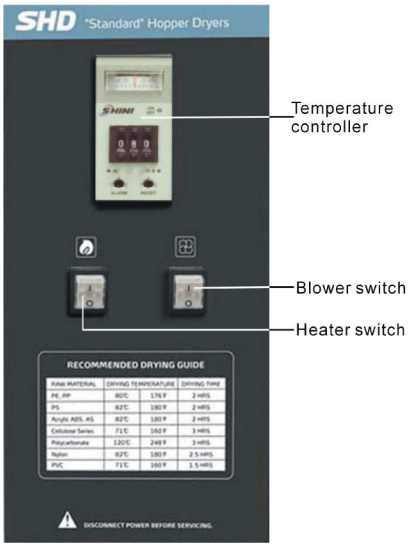
3.5.4 Hot Air Recycler Installation

Based on AIF blower inlet filter, using a hear-resistance pipe to connect the hopper exhausting air to AIF. Thus to form a hot air recycler. By recycling the hot air can at most save energy consumption by 40%.

Picture 3-8: Hot Air Recycler

4. Operation Guide

4.1 Control Panel

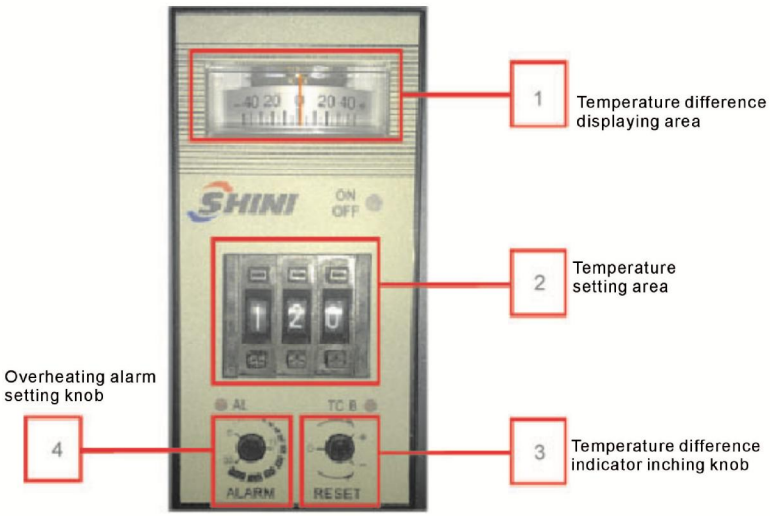


Picture 4-1: Control Panel

4.1.1 Panel Operation

1) Turn on the blower switch;
2) Turn on heater switch, and start heating operation;

4.1.2 Setting Temperature



Picture 4-2: Temperature Controller

As figures on above picture 4-2:

1. Temperature difference display area. It is used to display difference value between actual temp. and set temp. For example, if actual temperature is lower than set temp., the pointer turns left (negative direction), otherwise, it turns right(positive direction).
2. Temperature set area. Set value range: 0~199℃， when heating process lasts for some time, “on/off” indicator light on temperature controller will display yellow and green light alternatively. It means the set temperature is reached. At the same time, observe if the value on temperature controller is consistent with the thermometer or not. The acceptable deviation is ±2℃.
3. Inching knob of temperature difference pointer. When the working temperature runs stably (about 1 hr after the start), the pointer should be at “0” (the difference value between actual temperature and set value), otherwise adjust the pointer to “0” is available by rotating the inching knob.
4. Overheat indicator setting knob. When actual temperature is no less than set value alarming value, temperature controller has alarming output, the factory set value is 15℃.

Temperature controller panel indicator light description as below:

ON/OFF: ON status green light on, OFF status red light on;

AL: light on means over temperature alarm output;

TC B: light on means temperature sensor line breaks

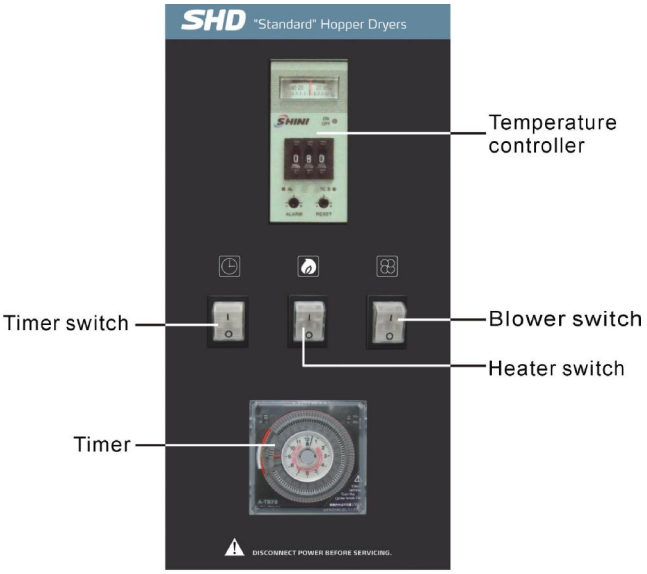
Notes: Drying temperature setting of plastic material must be in accordance with related drying temperature. If temperature gets too high, it would make material blocked and potentially cause serious accident. Thus the temperature setting must collocate with actual experience.

Moreover, the dryer equipped with overheat protective device. SHD-25~150 adopts lead sheet as the protector when overheat breaking happened. When flowing through heater is bigger or heating pipe temperature higher than 328℃, the lead sheet will break itself and stop heating (as picture 4-3). SHD-200 and models above, adopts overheat protectior It is mounted on fixing pole at the back of control box. When detecting the temperature of fixing pole over 130℃, the protector will cut off the power supply (as picture 4-4).

Picture 4-3: Lead Sheet Fuse

Picture 4-4: Overheating Protector

4.2 Control Panel with Dryer



Picture 4-5: Control Panel (with timer)

4.2.1 Panel Operation

1) Turn on blower switch;
2) Turn on heater switch, start heating operation;
3) Turn on the timer switch, set time to dry the material.

4.2.2 Timer Setting

Picture 4-6: Timer

1. Under the condition that all the switches turned on, turn on the timer switch.
2. Take down the transparent cover of the timer, push the little gray switch at left conner on top of the timer to “Auto” status. Set the pressure electrical frequency at top right conner of timer to current customer’s frequency.
3. Current time setting. As the picture 4-6, rotate the “TIME SET DIAL” knob at middle of the timer clockwise to set current time. In the middle is 12-hour white circle dial, the outside is 24-hour gray circle dial. Please pay special attention to distinguish them. As above picture, it set time is half past four in the morning, just the 4:30 am.
4. Requirement drying hour setting. Press timer’s outer teech down to the inner circle. The pressing range is the drying hour from beginning to the ending. As above picture, when it reaches 8 o’clock, the machine starts work; till 4 o’clock in the afternoon, the machine stops. Everyday repeat the circulation.

5. Maintenance and Repair

5.1 Blower

1) Clean the blower regularly (especially the air inlet path).
2) Eliminate the fan's dirt regularly to avoid the damage to the blower.

Attention!

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

6. Troubleshooting

Fault	Possible Reasons	Solution
Blower rotating on the contrary with arrow	Blower circuit connection reverse phase.	Exchange two of theel ectrical wires.
Blower not turning hot air pipe reeky	1. Motor fault. 2. Failures of solenoid switch.	1. Check and change. 2. Change or repair.
Blower not rotating and not heating	1. Overload jumped. 2. Transformer fault. 3. Fuse melted. 4. Power supply fault.	1. Check and change. 2. Check and change. 3. Check and change. 4. Check if lack of phase.
No temperature for blower running	1. Plumb slip of heater pipe melted. 2. Magnetic switch fault. 3. Heater pipe fault. 4. Power supply fault. 5. Thermocouple fault.	1. Check and change. 2. Check and change. 3. Check and change. 4. Check if lack of phase. 5. Change.
The blower can run but temperature is too low	1. Plumb slip of heater pipe fault. 2. EGO jumped or breaking. 3. Magnetic switch is lack of phase. 4. Temperature controller is damaged or its error is too much.	1. Check and change. 2. Check or re-set. 3. Check and change. 4. Change the temperature controller.
The blower can run but temperature is too high	1. Hot-air pipe is jam. 2. Temperature controller is fault or its error is too much. 3. Electromagnetic switch contacts stuck up.	1. Cleaning. 2. Change the temp. Controller or adjust inching switch. 3. Change.

Notes: Before inspecting or changing spare parts, ensure the main switch should be off.