

# **SHD**

**“Standard” Hopper Dryer**

Date: Jun, 2015

Version: Ver.B





## Content

<b>1. General Description .....</b>	<b>9</b>
1.1 Coding Principle .....	10
1.2 Feature.....	10
1.3 Technical Specifications.....	12
1.3.1 External Dimensions.....	12
1.3.2 Specification .....	13
1.4 Safety Regulations .....	15
1.4.1 Safety Signs and Labels.....	15
1.4.2 Signs and Labels .....	16
1.5 Exemption Clause .....	16
<b>2. Structure Characteristics and Working Principle .....</b>	<b>17</b>
2.1 Working Principle .....	17
2.2 Drawing and Parts List .....	18
2.2.1 Assembly Drawing (SHD-25~75).....	18
2.2.2 Parts List (SHD-25~75) .....	19
2.2.3 Assembly Drawing (SHD-100~150).....	20
2.2.4 Parts List (SHD-100~150) .....	21
2.2.5 Assembly Drawing (SHD-12&200~300) .....	22
2.2.6 Parts List (SHD-12&200~300) .....	23
2.2.7 Assembly Drawing (SHD-400~600).....	24
2.2.8 Parts List (SHD-400~600) .....	25
2.2.9 Assembly Drawing (SHD-800~1000).....	26
2.2.10 Parts List (SHD-800~1000) .....	27
2.3 Circuit Diagram .....	28
2.3.1 Power, Diameter, Current (SHD-12~300 400V) .....	28
2.3.2 Electrical Diagram(SHD-12~300 400V).....	29
2.3.3 Electrical Components Layout (SHD-12~300 400V) .....	32
2.3.4 Bill of Electrical Parts(SHD-12~300 400V) .....	34
2.3.5 Power, Diameter, Current (SHD-400~1000 400V) .....	41
2.3.6 Electrical Diagram(SHD-400~1000 400V).....	42
2.3.7 Electrical Components Layout (SHD-400~1000 400V).....	44
2.3.8 Bill of Electrical Parts(SHD-400~1000 400V) .....	45

2.3.9	Power, Diameter, Current (SHD-EH 400V).....	50
2.3.10	Electrical Diagram(SHD-EH 400V).....	51
2.3.11	Electrical Components Layout (SHD-EH 400V) .....	53
2.3.12	Bill of Electrical Parts(SHD-EH 400V) .....	54
2.3.13	Power, Diameter, Current (SHD-12~300 230V) .....	60
2.3.14	Electrical Diagram (SHD-12~300 230V).....	61
2.3.15	Electrical Components Layout (SHD-12~300 230V) .....	64
2.3.16	Electrical Components List (SHD-12~300 230V) .....	66
2.3.17	Power, Diameter, Current (SHD-400~1000 230V) .....	73
2.3.18	Electrical Diagram (SHD-400~1000 230V).....	74
2.3.19	Electrical Components Layout (SHD-400~1000 230V) .....	76
2.3.20	Electrical Components List (SHD-400~1000 230V) .....	77
2.3.21	Electrical Diagram(SHD-12EH 230V).....	82
2.3.22	Electrical Components Layout (SHD-12EH 230V) .....	84
2.3.23	Electrical Components List (SHD-12EH 230V).....	85
<b>3.</b>	<b>Installation and Debugging.....</b>	<b>86</b>
3.1	Direct Installation.....	86
3.2	Floor Stand Installation .....	87
3.3	Connecting the Power Source .....	87
3.4	The Hopper Dryer Test .....	87
3.5	Installation of the Options.....	88
3.5.1	Installation of Air-Exhaust Cyclone Dust Collector /Air-Exhaust Filter	88
3.5.2	Suction Box Installation .....	89
3.5.3	Blower Inlet Filter Installation.....	89
3.5.4	Hot Air Recycler Installation.....	90
<b>4.</b>	<b>Operation Guide .....</b>	<b>91</b>
4.1	Control Panel .....	91
4.1.1	Panel Operation.....	91
4.1.2	Setting Temperature.....	91
4.2	Control Panel with Dryer .....	93
4.2.1	Panel Operation.....	94
4.2.2	Timer Setting .....	94
4.3	Control Panel(SHD-400~1000) .....	95

4.3.1 Panel Operation.....	95
4.3.2 Temperature Setting.....	95
4.3.3 Temperature Lock .....	95
4.3.4 PID Setting .....	96
4.3.5 Intermittent Operation Setting.....	97
4.3.6 One-week Timing Setting .....	97
4.3.7 Communication Setting (optional functions) .....	97
4.3.8 Operation Flow .....	99
4.3.9 Wrong Codes Remark .....	100
<b>5. Maintenance and Repair .....</b>	<b>101</b>
5.1 Blower .....	101
<b>6. Troubleshooting .....</b>	<b>101</b>

### Table Index

Table 1-1: Specification.....	13
Table 1-2: Dryer drying capacity(kg/hr)(Selection guide) .....	14
Table 2-1: Parts List (SHD-25~75).....	19
Table 2-2: Parts List (SHD-100~150).....	21
Table 2-3: Parts List (SHD-12&200~300).....	23
Table 2-4: Parts List (SHD-400~600).....	25
Table 2-5: Parts List (SHD-800~1000).....	27
Table 2-6: Electrical components list (SHD-12 400V) .....	34
Table 2-7: Electrical components list (SHD-25 400V) .....	35
Table 2-8: Electrical components list (SHD-50 400V) .....	36
Table 2-9: Electrical components list (SHD-75 400V) .....	37
Table 2-10: Electrical components list (SHD-100/150 400V) .....	38
Table 2-11: Electrical components list (SHD-200 400V) .....	39
Table 2-12: Electrical components list (SHD-300 400V) .....	40
Table 2-13: Electrical components list (SHD-400 400V) .....	45
Table 2-14: Electrical components list (SHD-500 400V) .....	46
Table 2-15: Electrical components list (SHD-600 400V) .....	47
Table 2-16: Electrical components list (SHD-800 400V) .....	48
Table 2-17: Electrical components list (SHD-1000 400V) .....	49

Table 2-18: Electrical components list (SHD-12EH 400V) .....	54
Table 2-19: Electrical components list (SHD-25EH 400V) .....	55
Table 2-20: Electrical components list (SHD-50EH 400V) .....	56
Table 2-21: Electrical components list (SHD-75EH 400V) .....	57
Table 2-22: Electrical components list (SHD-100EH 400V) .....	58
Table 2-23: Electrical components list (SHD-300EH 400V) .....	59
Table 2-24: Electrical components list (SHD-12 230V) .....	66
Table 2-25: Electrical components list (SHD-25 230V) .....	67
Table 2-26: Electrical components list (SHD-50 230V) .....	68
Table 2-27: Electrical components list (SHD-75 230V) .....	69
Table 2-28: Electrical components list (SHD-100/150 230V) .....	70
Table 2-29: Electrical components list (SHD-200 230V) .....	71
Table 2-30: Electrical components list (SHD-300 230V) .....	72
Table 2-31: Electrical components list (SHD-400 230V) .....	77
Table 2-32: Electrical components list (SHD-500 230V) .....	78
Table 2-33: Electrical components list (SHD-600 230V) .....	79
Table 2-34: Electrical components list (SHD-800 230V) .....	80
Table 2-35: Electrical components list (SHD-1000 230V) .....	81
Table 2-36: Electrical components list (SHD-12EH 230V) .....	85

## Picture Index

Picture 1-1: External dimensions.....	12
Picture 2-1: Working principle .....	17
Picture 2-2: Assembly drawing SHD-25~75 .....	18
Picture 2-3: Assembly drawing SHD-100~150 .....	20
Picture 2-4: Assembly drawing SHD-12&200~300.....	22
Picture 2-5: Assembly drawing SHD-400~600 .....	24
Picture 2-6: Assembly drawing SHD-800~1000 .....	26
Picture 2-7: Electrical diagram 1 (SHD-12~300 400V) .....	29
Picture 2-8: Electrical diagram 2 (SHD-12~300 400V) .....	30
Picture 2-9: Electrical diagram 3 (SHD-12T~300T 400V) .....	31
Picture 2-10: Electrical components layout 1(SHD-12~300 400V).....	32
Picture 2-11: Electrical components layout 2 (SHD-12T~300T 400V) .....	33

Picture 2-12: Electrical diagram 1 (SHD-400~1000 400V).....	42
Picture 2-13: Electrical diagram 2 (SHD-400~1000 400V).....	43
Picture 2-14: Electrical components layout (SHD-400~1000 400V).....	44
Picture 2-15: Electrical diagram 1 (SHD-EH 400V).....	51
Picture 2-16: Electrical diagram 2 (SHD-EH 400V).....	52
Picture 2-17: Electrical components layout (SHD-EH 400V).....	53
Picture 2-18: Electrical diagram 1 (12~300 230V).....	61
Picture 2-19: Electrical diagram 2 (SHD-12~300 230V).....	62
Picture 2-20: Electrical diagram 3 (SHD-12T~300T 230V).....	63
Picture 2-21: Electrical components layout 1(SHD-12~300 230V).....	64
Picture 2-22: Electrical components layout 2 (SHD-12T~300T 230V).....	65
Picture 2-23: Electrical diagram 1 (SHD-400~1000 230V).....	74
Picture 2-24: Electrical diagram 2 (SHD-400~1000 230V).....	75
Picture 2-25: Electrical components layout (SHD-400~1000 230V).....	76
Picture 2-26: Electrical diagram 1 (SHD-12EH 230V).....	82
Picture 2-27: Electrical diagram 2 (SHD-12EH 230V).....	83
Picture 2-28: Electrical components layout (SHD-12EH 230V).....	84
Picture 3-1: Direct installation.....	86
Picture 3-2: Floor stand installation.....	87
Picture 3-3: Blower.....	88
Picture 3-4: Left : Air-exhaust elbow of dryer.....	88
Picture 3-5: European suction box.....	89
Picture 3-6: Shut-off suction box.....	89
Picture 3-7: Right: AIF blower inlet filter.....	90
Picture 3-8: Hot air recycler.....	90
Picture 4-1: Control panel.....	91
Picture 4-2: Temperature controller.....	91
Picture 4-3: Lead sheet fuse.....	93
Picture 4-4: Overheating protector.....	93
Picture 4-5: Control panel (with timer).....	93
Picture 4-6: Timer.....	94
Picture 4-7: Control Panel(SHD-400~1000).....	95



## 1. General Description

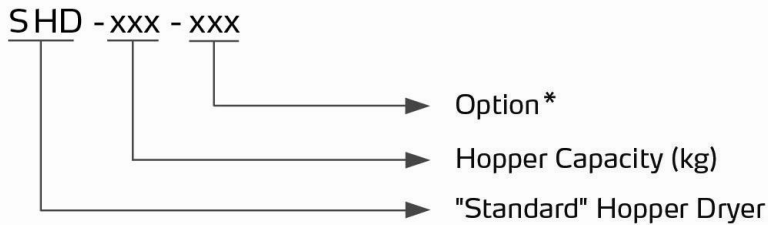


Please read through this operation manual before using the machine to prevent damages of the machine or personal injuries.



SHD-50

## 1.1 Coding Principle



### Note\*

M=Magnetic Base(SHD-300 and models below)    I=Double Insulated Layers

T=Timer    EH=Standard    DT=Microprocessor with timer

SL=RS485 Communication Function

## 1.2 Feature

### 1) Standard configuration

- ÿ Adopt hot air diffuser to gain an even hot air flow to improve drying efficiency.
- ÿ Hot air inlet elbow design can prevent dust piling up at bottom of the pipe heaters so as to avoid burning.
- ÿ All material contact surfaces are made of stainless steel to eliminate material contamination.
- ÿ Hopper separated from its base, ensuring convenient cleaning.
- ÿ For SHD-12~300, adopt proportional deviation display thermostat for accurate temperature control.
- ÿ All series are equipped with exposed power switch.
- ÿ For SHD-25~150, heater pipes are connected by aluminum sheets and other models are equipped with temperature protection to prevent heater pipe from damaging by blower faults.
- ÿ Overheat tripping can automatically cut off power when drying temperature exceeds set deviation value.
- ÿ Adopts heat-insulated blower to prolong blower lifespan.
- ÿ For SHD-100 and models above, standard equipped with 24-hour auto start/stop timer.
- ÿ For SHD-400~1000, adopt PCB controller for easy operation.

### 2) Accessory option

- Micro computer control panel (with timer) and heat-preservation hopper are optional for each model.
- Cyclone dust separator, exhaust air filter, magnetic base and blower inlet filter are optional.
- Hot air recycler, suction box, hopper magnetic, N type floor stand and storage hopper are optional.
- For SHD-75 and models below, 24-hour auto start/stop timer is optional.
- SHD-12~SHD-200 optional high-temp. model is available, the max. temp. can reach 180°C.
- Insulated hopper is 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 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.

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Shini Plastics Technologies (Dongguan), Inc:

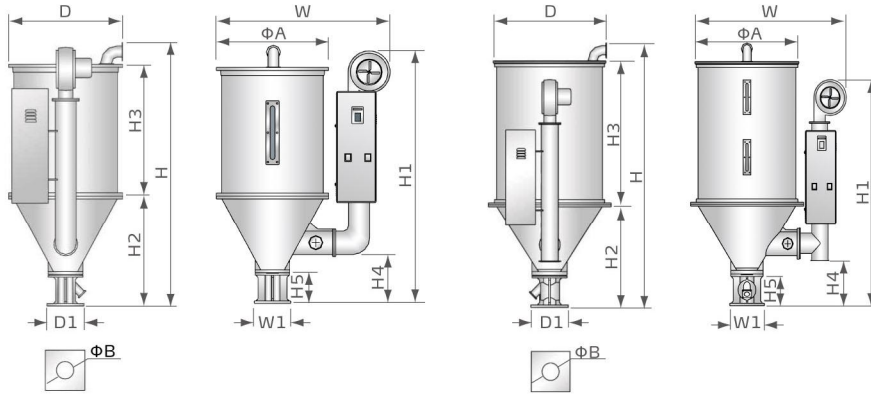
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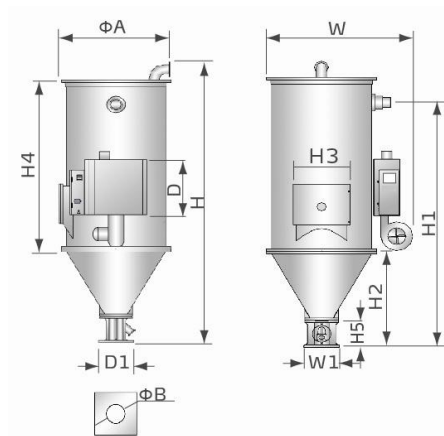
## 1.3 Technical Specifications

### 1.3.1 External Dimensions



SHD-25~150

SHD-12&SHD-200~600



SHD-800~1000

Picture 1-1: External dimensions

## 1.3.2 Specification

Table 1-1: Specification

SHD	12	25	50	75	100	150	200	300	400	500	600	800	1000
Ver.	B	A	A	A	A	A	A	A	A	A	A	B	B
HeaterPower(kW)	2.2 / 3*	3 / 3.3*	3.9 / 4.2*	4.2 / 4.8*	6 / 6.6*	6.6 / 7.2*	12 / 15*	15	18	19.5	21	24	32
BlowerPower (50 kW)	0.05	0.12	0.12	0.12	0.12	0.12	0.18	0.18	0.18	0.18	0.55	1.1	1.1
Loading Capacity (kg)	12	25	50	75	100	150	200	300	400	500	600	800	1000
H(mm)	790	1015	1145	1240	1340	1580	1580	1980	2170	2350	2570	2760	3060
H1(mm)	690	925	1045	1150	1340	1605	1332	1432	1900	1900	2075	2300	2530
H2(mm)	317	410	380	475	470	470	550	550	838	838	838	1010	1010
H3(mm)	370	460	520	620	725	970	975	1220	1220	1400	1545	540	540
H4(mm)	106	194	206	208	233	233	184	184	334	334	334	1550	1845
H5(mm)	115	150	150	150	158	158	158	158	283	283	283	283	283
W(mm)	660	725	840	900	955	955	1230	1230	1365	1365	1365	1420	1420
D(mm)	360	405	490	550	605	605	770	770	915	915	950	600	600
D1(mm)	130	158	158	158	238	238	238	238	345	345	345	345	345
W1(mm)	130	148	148	148	238	238	238	238	345	345	345	345	345
ΦA(mm)	325	385	470	530	595	595	750	750	910	910	910	960	960
ΦB(mm)	55	55	55	55	90	90	90	90	105	105	105	105	105
Weight (kg)	35	40	45	55	70	75	100	120	165	170	240	280	300

Note: 1) Install 24hr timer, add "T" at the back of the model. SHD-100 and models above standard equipped with the timer.

- 2) Additional note of "M" will be added to SHD-300 and below models, the bases of which are changed to be magnetic bases.
- 3) Change into double insulated layer, add "I" at the back of the model
- 4) Upon request, it can be built to comply with worldwide electrical safety standards .
- 5) Above loading capacity is based on pellet material of 0.65kg/L in bulk density and 3~5mm in diameter.
- 6) "\*"Stands for high-temp.model, add "H" at the end of model code.
- 7) Power: 3Φ, 230/400/460/575VAC, 50/60Hz.

Table 1-2: Dryer drying capacity(kg/hr)(Selection guide)

Material	Model SHD											Drying Time	Drying Temp.		
	12	25	50	75	100	150	200	300	400	500	600			800	1000
Polystyrene	8	20	50	75	100	150	200	300	400	500	600	800	1000	0.75hrs	80°C
Polyethylene	8	20	50	75	100	150	200	300	400	500	600	800	1000	0.75hrs	80°C
Polypropylene	8	20	50	75	100	150	200	300	400	500	600	800	1000	0.75hrs	80°C
Poly styrene H · D	6	14	38	57	80	115	150	225	300	375	440	600	750	1hrs	80°C
ABS	4	8	20	30	40	60	80	120	160	200	240	320	400	1hrs	80°C
Nylon 11,12	2	4	10	13	20	27	35	60	80	100	120	160	200	4hrs	75°C
Nylon6/6,6/10	1.5	3.2	8	11	16	22	30	45	65	80	100	130	165	5hrs	75°C
Nylon 6	1	2	5	7	10	15	20	35	50	60	70	90	110	7hrs	75°C
Acrylic fiber	2.5	6	12	22	30	45	60	100	140	165	200	365	330	2.5hrs	80°C
Cellulose acetate	2.5	6	17	26	35	52	70	110	150	180	220	300	375	2.25hrs	75°C
Butyrate	4	10	25	37	50	75	100	160	220	275	330	380	430	1.5hrs	-
Polycarbonate	1.5	4	10	15	20	30	40	75	90	105	120	160	200	3hrs	120°C
Rigid PVC	5	12	30	45	60	90	120	185	250	305	380	445	510	1.25hrs	70°C

Notes:Based on relative humidity 65% with ambient temperature of 20°C,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 pressure!

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

<p>⚠ 超溫時，保護裝置動作；解除故障後，按藍色鍵復位並合上開關，重新通電運行。 Protection device activates when overheat occurs; after faults are discharged, press blue key to reset and turn on the switch to restart operation.</p> <p>超溫保護裝置 Overheat protection device</p> 	<p>Protection device activates when overheat occurs; after faults are discharged, press blue key to reset and turn on the switch to Restart operation.</p>
	<p>Push-and-pull switch for shut-off plate: I: Means "Pull" O: Means "Push"</p>
<p>請定期清理過濾網以免阻塞而影響乾燥 Regularly clean the filter screen to avoid insufficient drying caused by blocking.</p>	<p>Regularly clean the filter screen to avoid insufficient drying caused by blocking</p>

## 1.5 Exemption Clause

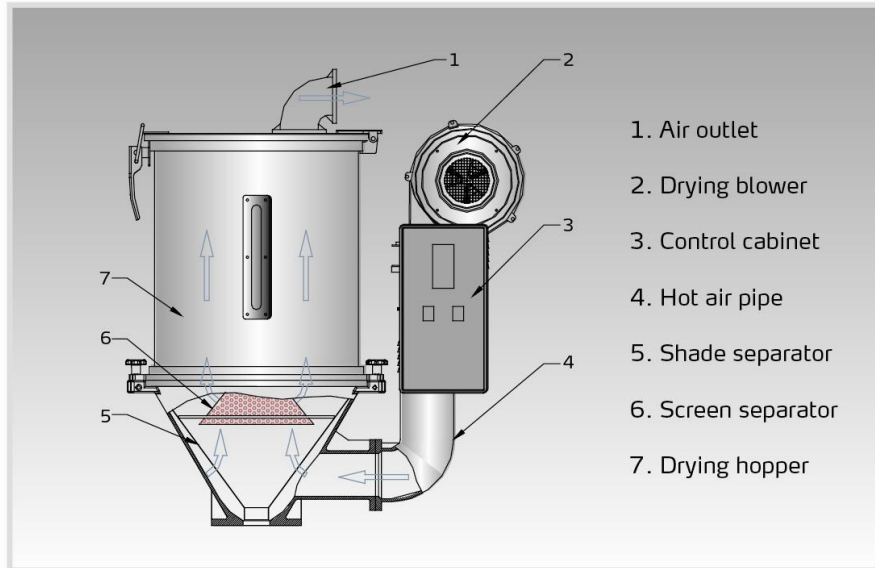
The following statements clarify the responsibilities and regulations born by any buyer or user who purchases products and accessories from Shini (including employees and agents).

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



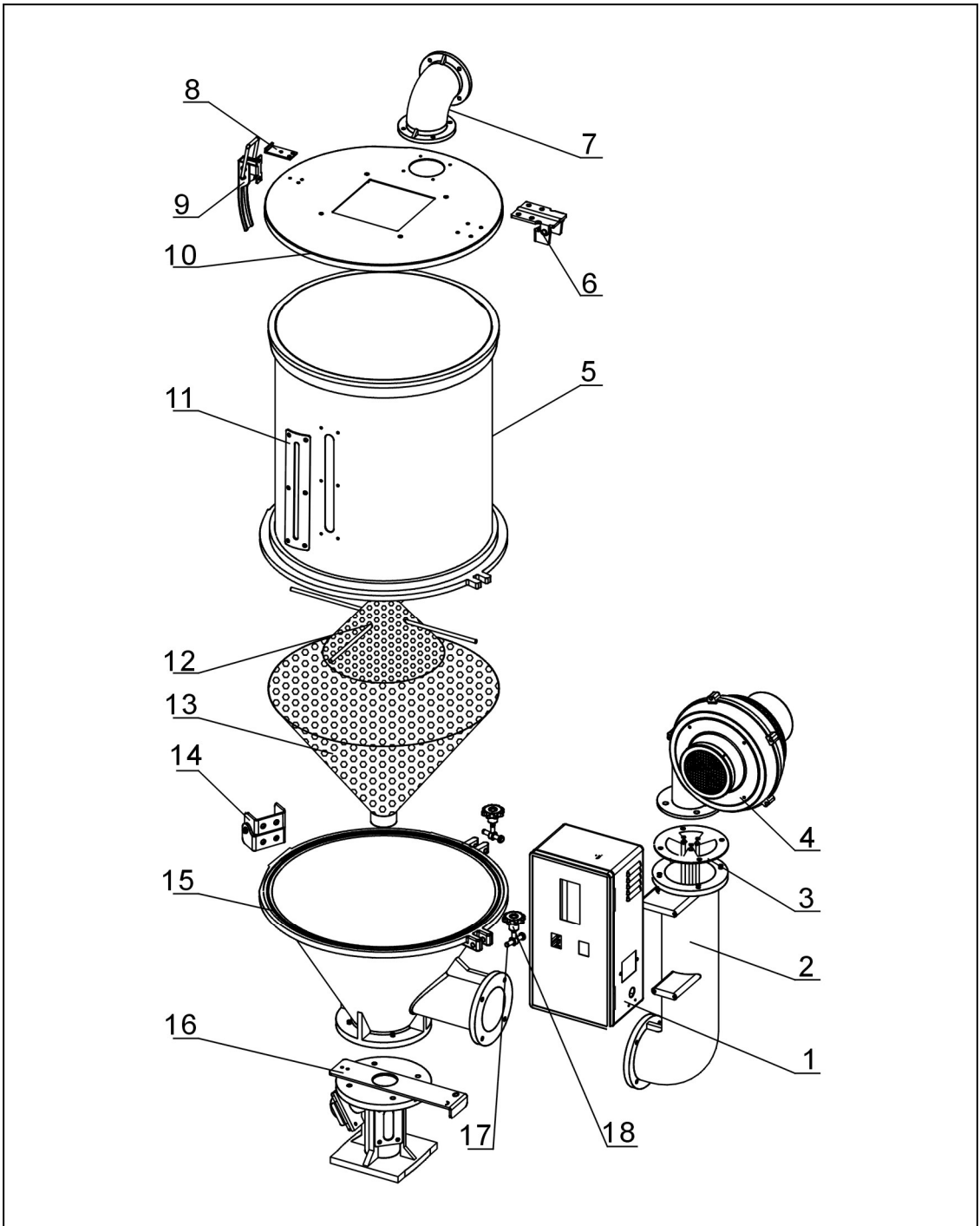
Picture 2-1: Working principle

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)



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

Picture 2-2: Assembly drawing SHD-25~75

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

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

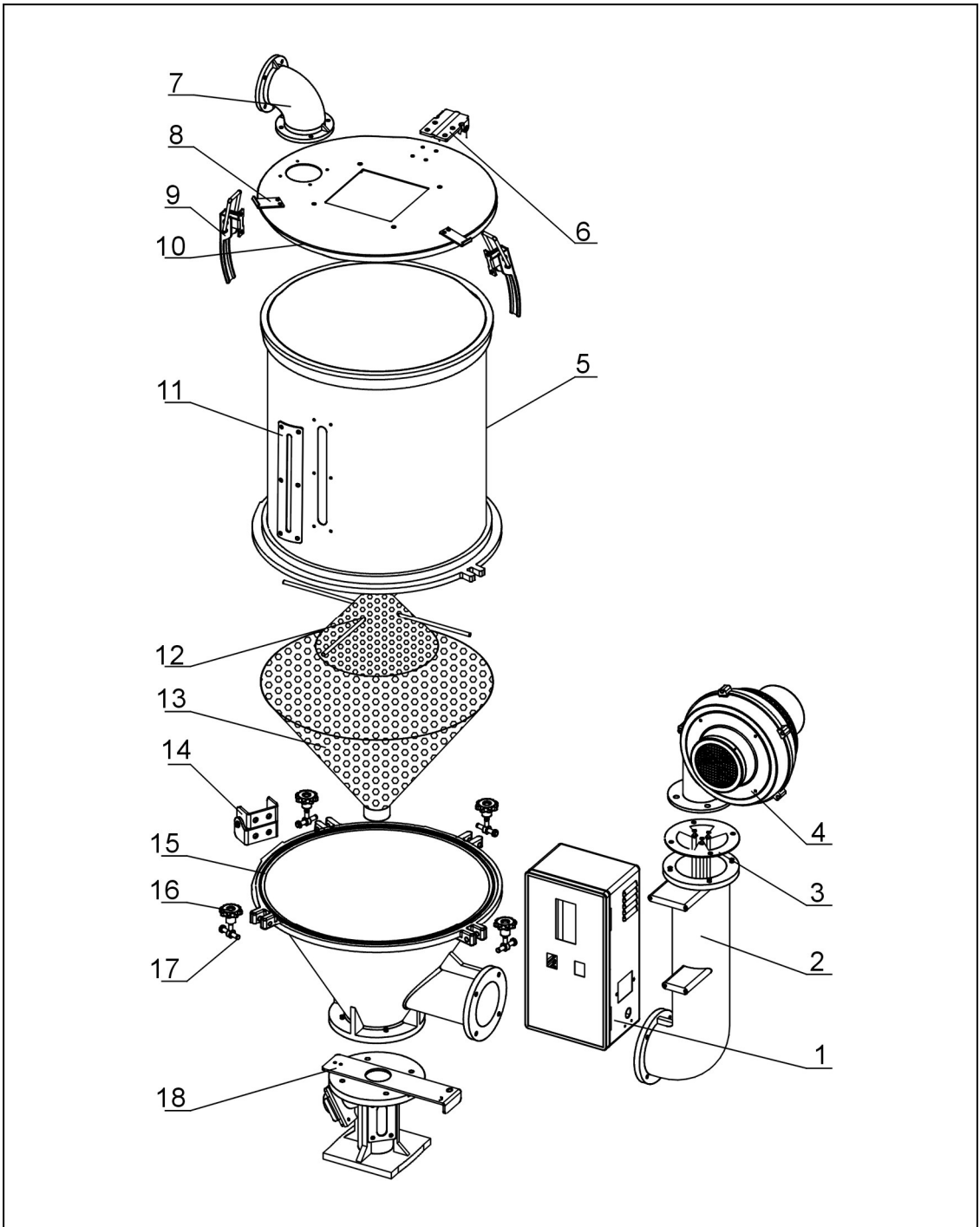
NO.	Name	Part NO.		
		SHD-25	SHD-50	SHD-75
1	Control box**	BH31002500450	BH31005000750	BH31007500250
2	Hot-air pipe**	BA10002500410	BA10005000610	BA10005000610
3	Pipe heater*(SHD)	BH70250300150	BH70500300150	BH70750300050
	Pipe heater **(SHD-H)	BH70253300010	BH70007500510	BH70754800010
	Pipe heater **(SHD-EH)	YW90000301500	YW90003901500	YW90004200000
4	Blower*	BM40002500350	BM40003000250	BM40003000250
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)



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

Picture 2-3: Assembly drawing SHD-100~150

## 2.2.4 Parts List (SHD-100~150)

Table 2-2: Parts List (SHD-100~150)

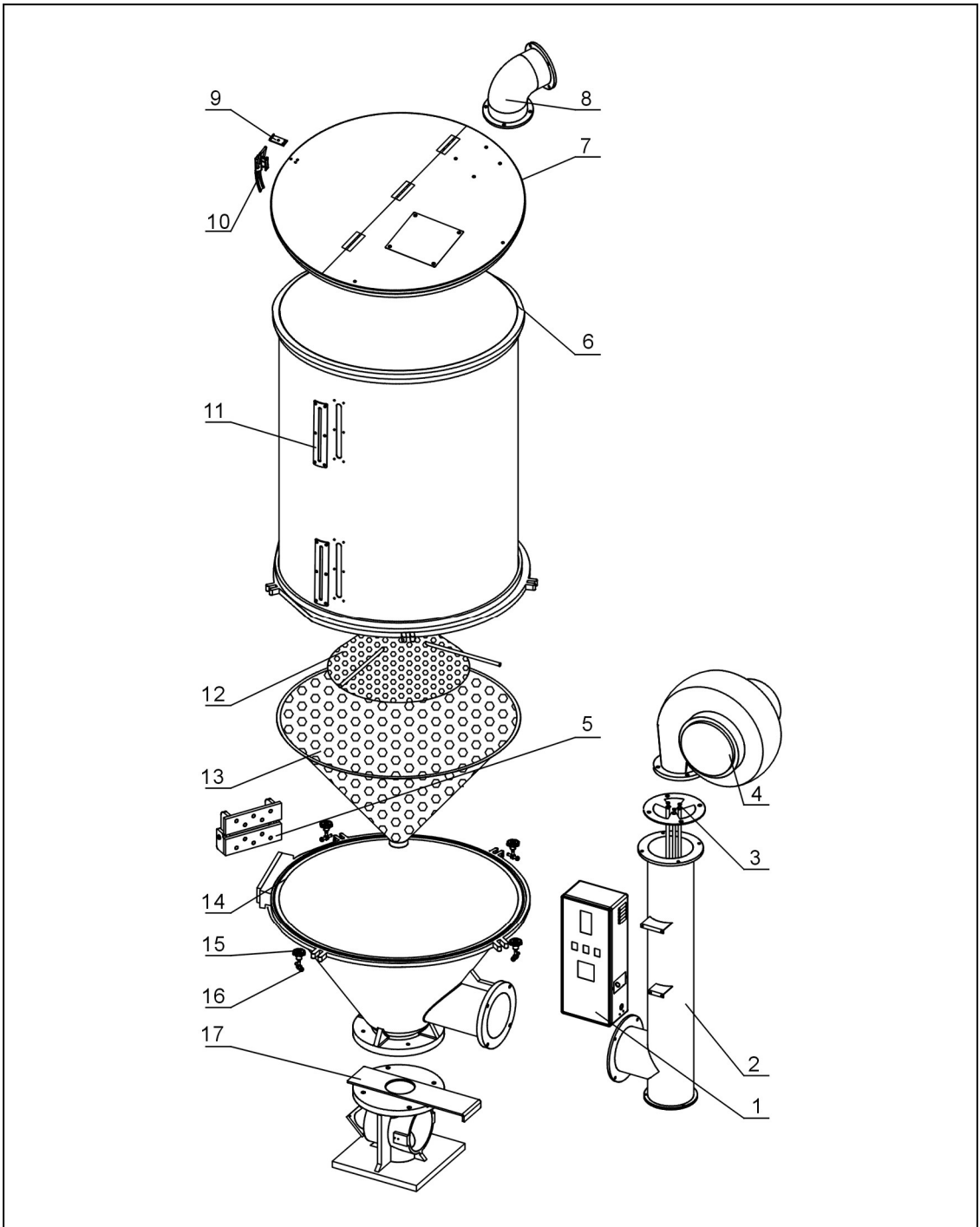
NO.	Name	Part NO.	
		SHD-100	SHD-150
1	Control box*	BH31101500350	BH31100001550
2	Hot-air pipe**	BA10010000610	BA10010000610
3	Pipe heater**(SHD)	BH70103800050	BH70153800050
	Pipe heater**(SHD-H)	BH70153800050	BH70150720010
	Pipe heater**(SHD-EH)	YW90000601500	-
4	Blower*	BM40004000150	BM40004000150
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-12&200~300)



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

Picture 2-4: Assembly drawing SHD-12&200~300

## 2.2.6 Parts List (SHD-12&200~300)

Table 2-3: Parts List (SHD-12&200~300)

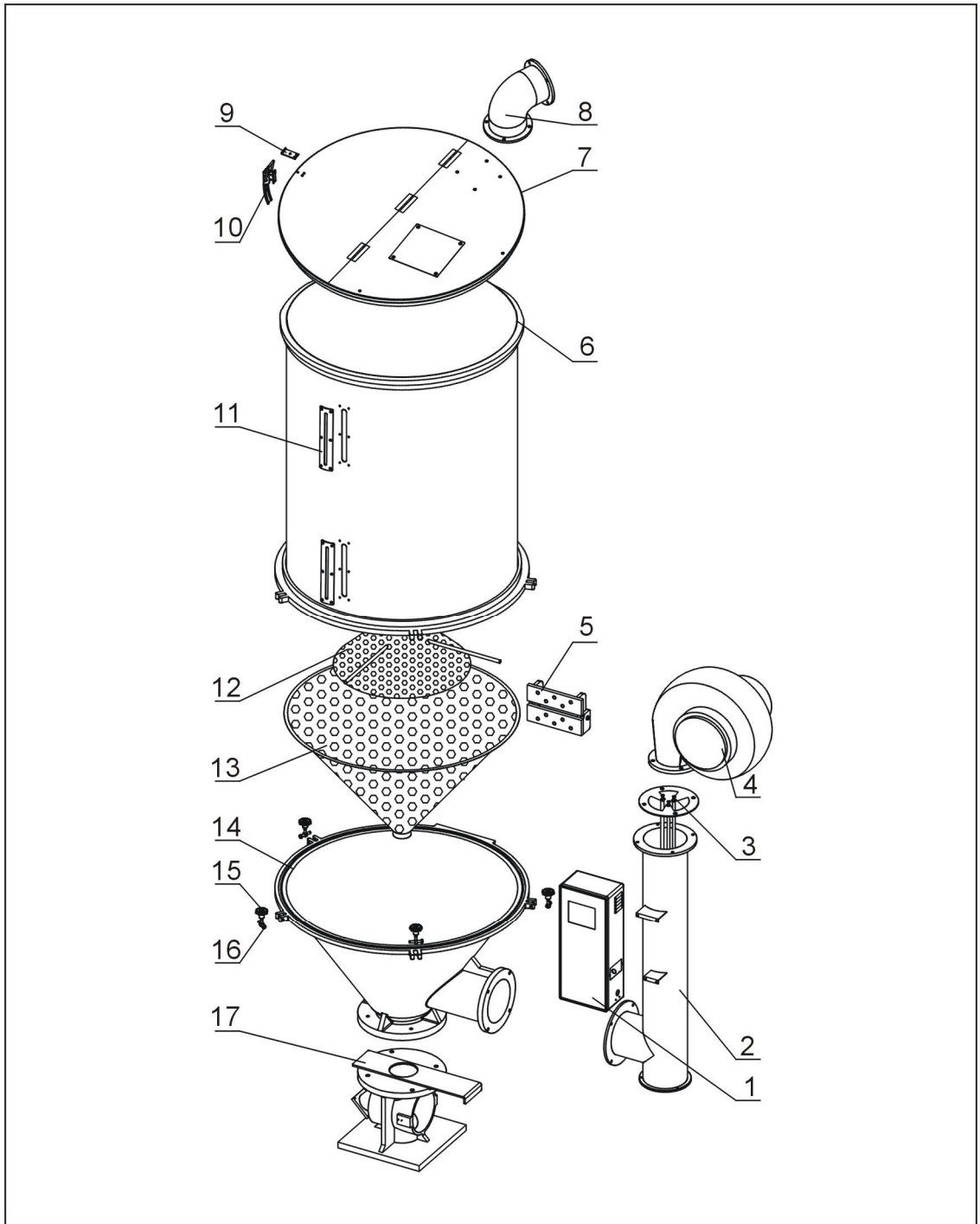
NO.	Name	Part NO.		
		SHD-12	SHD-200	SHD-300
1	Control box**	BH31001200350	BH31020000550	BH31030000950
2	Hot-air pipe**	BA10001200610	BA10020000610	BL01030000220
3	Pipe heater**(SHD)	BH70120300150	BH70203800050	BH70303800050
	Pipe heater** (SHD-H)	BH70120300010	BH70200150010	-
	Pipe heater *(SHD-EH)	YW90122200600	-	YW90001501500
4	Blower*	BM40001500550	BM40005000150	BM40005000150
5	Rear hinge at cover	YW06125040000	YW09102000100	YW09102000100
6	Storage hopper	BK01001200020	BK01020000020	BK01030000020
7	Hopper cover	YW09001200300	BW09020000020	BW09020000020
	Cover fastener	YR10002500100	YR10002500200	YR10002500200
8	Exhaust pipe	BA10001200110	BA10020000210	BA10020000210
9	Handle hook	YW00001200000	YW00251000000	YW00251000000
10	Handle	YW00121000000	YW00121000000	YW00121000000
11	Sight glass	YW09000600000	YW09000600000	YW09000600000
	Sight glass acryl	YR40001200000	YR40001200000	YR40001200000
	Sight glass fastener	YR40000600000	YR40000600000	YR40000600000
12	Screen separator**	BL01001200120	BL01020000120	BL01020000120
13	Shade separator**	BL01001200320	BL01020000320	BL01020000320
14	Hopper	BA10001200310	BA10020000110	BA10020000110
	Hopper fastener	YR10002500200	YR10002500200	YR10002500200
15	Star nut	YW09675100000	YW09115600000	YW09115600000
	Star screw	YW09051600100	YW09100000000	YW09100000000
16	Star pin	YW09084500100	YW09085400000	YW09085400000
17	Base**	BY10012000150	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.

## 2.2.7 Assembly Drawing (SHD-400~600)



Remarks: Please refer to material list 2.2.8 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-5: Assembly drawing SHD-400~600

## 2.2.8 Parts List (SHD-400~600)

Table 2-4: Parts List (SHD-400~600)

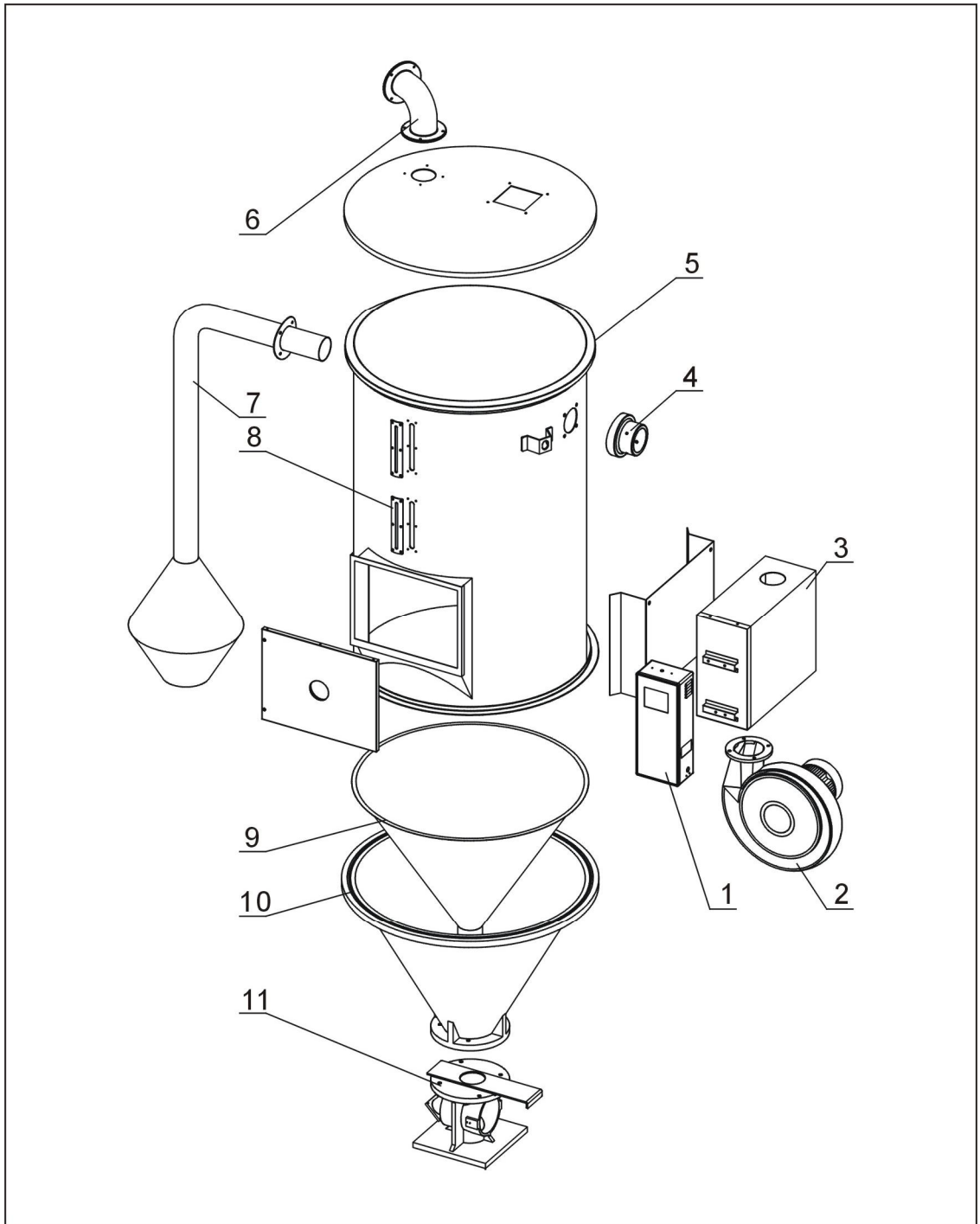
NO.	Name	Part NO.		
		SHD-400	SHD-500	SHD-600
1	Control box**	BH31040007550	BH31050007650	BH31060007750
2	Hot-air pipe**	BA10001200610	BA10001200610	BL01060000220
3	Pipe heater**	BH70403800050	BH70503800050	BH70603800050
4	Blower*	BM40005000150	BM40005000150	BM30055000150
5	Rear hinge at cover	BW09040000110	BW09040000110	BW09040000110
6	Storage hopper	BK01040000020	BK01050000020	BK01060000020
7	Hopper cover	BL01040000720	BL01040000720	BL01040000720
	Cover fastener	YR10002500100	YR10002500100	YR10002500100
8	Exhaust pipe	BA10020000210	BA10020000210	BA10020000210
9	Handle hook	YW00251000000	YW00251000000	YW00251000000
10	Handle	YW00121000000	YW00121000000	YW00121000000
11	Sight glass	YW09000600000	YW09000600000	YW09000600000
	Sight glass acryl	YR40001200000	YR40001200000	YR40001200000
	Sight glass fastener	YR40000600000	YR40000600000	YR40000600000
12	Screen separator**	BL01040000920	BL01040000920	BL01040000920
13	Shade separator**	BL01040000320	BL01040000320	BL01040000320
14	Hopper	BA10040000110	BA10040000110	BA10040000110
	Hopper fastener	YR10002500100	YR10002500100	YR10002500100
15	Star nut	YW09115600000	YW09115600000	YW09115600000
	Star screw	YW09100000000	YW09100000000	YW09100000000
16	Star pin	YW09085400000	YW09085400000	YW09085400000
17	Base**	BY10400000050	BY10400000050	BY10400000050

\* 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.

## 2.2.9 Assembly Drawing (SHD-800~1000)



Remarks: Please refer to material list 2.2.10 for specific explanation of the Arabic numbers in parts drawing.

Picture 2-6: Assembly drawing SHD-800~1000

## 2.2.10 Parts List (SHD-800~1000)

Table 2-5: Parts List (SHD-800~1000)

NO.	Name	Part NO.	
		SHD-800	SHD-1000
1	Control box**	BH31080007850	BH31100007950
2	Blower*	BM30113230050	BM30113230050
3	Heating case	BH70244000750	BH70324000750
4	Air inlet flange	BW21601200010	BW21601200010
5	Storage hopper	BK01080000420	BK01100000420
	Cover fastener	YR10002500200	YR10002500200
6	Exhaust pipe	BA10020000210	BA10020000210
7	Down-blow pipe	BL01800000020	BL01801042620
8	Sight glass	YW09000600000	YW09000600000
	Sight glass acryl	YR40001200000	YR40001200000
	Sight glass fastener	YR40000600000	YR40000600000
9	Shade separator**	BL01080000010	BL01080000010
10	Hopper	BA10100000010	BA10100000010
	Hopper fastener	YR10002500200	YR10002500200
11	Base**	BY10400000050	BY10400000050

\* 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.

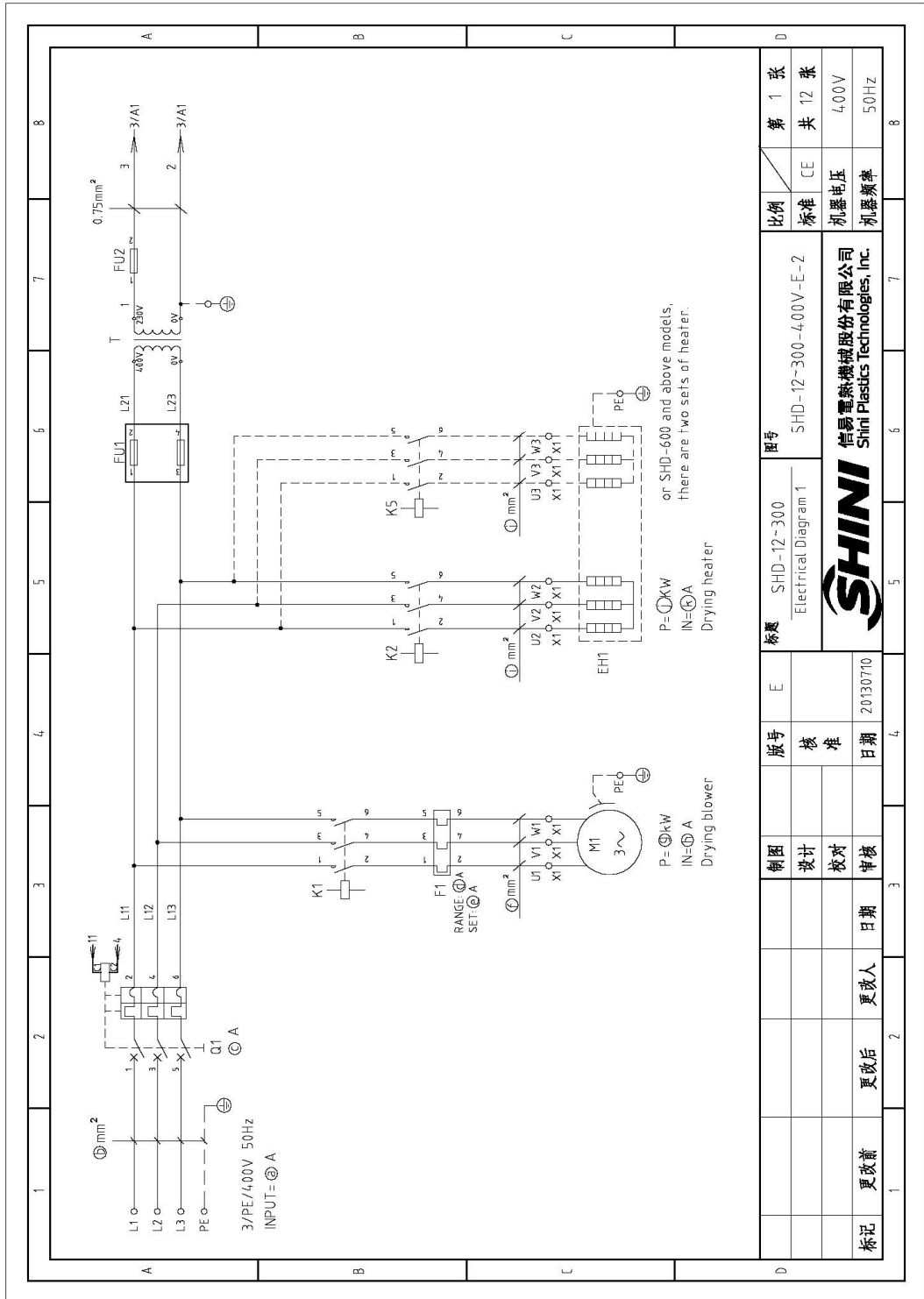
## 2.3 Circuit Diagram

### 2.3.1 Power, Diameter, Current (SHD-12~300 400V)

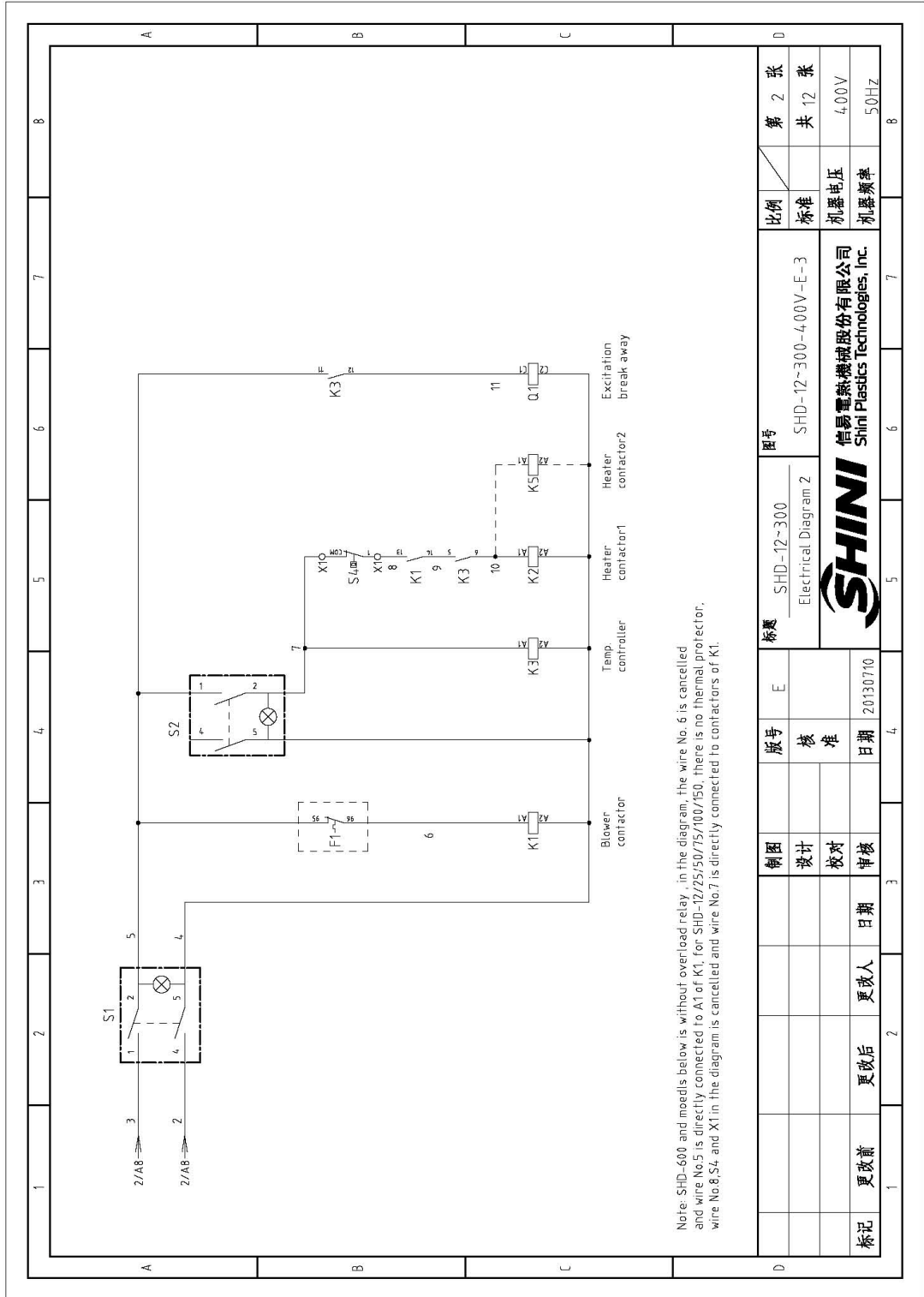
Symbol Model	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
SHD-12	3.5	1.5	10	-	-	1.5	0.05	0.2	1.5	2.2	3.3
SHD-25	4.9	1.5	10	-	-	1.5	0.12	0.31	1.5	3.0	4.5
SHD-50	6.4	1.5	10	-	-	1.5	0.12	0.31	1.5	3.9	6.0
SHD-75	4.9	1.5	10	-	-	1.5	0.12	0.31	1.5	4.2	6.5
SHD-100	9.4	2.5	15	-	-	1.5	0.12	0.46	1.5	6.0	9.0
SHD-150	9.4	2.5	15	-	-	1.5	0.12	0.46	1.5	6.0	9.0
SHD-200	18.5	4.0	25	-	-	1.5	0.18	0.64	4.0	12	18
SHD-300	23	4.0	32	-	-	1.5	0.18	0.64	4.0	15	22.5

- (a) Total current
- (b) Power cable diameter
- (c) Rated current of circuit breakers
- (d) Drying blower loader
- (e) Settings for drying blower loader
- (f) Blower cable diameter
- (g) Drying blower power
- (h) Drying blower current
- (i) Wire diameter of heater
- (j) Heater power
- (k) Heater current

### 2.3.2 Electrical Diagram(SHD-12~300 400V)



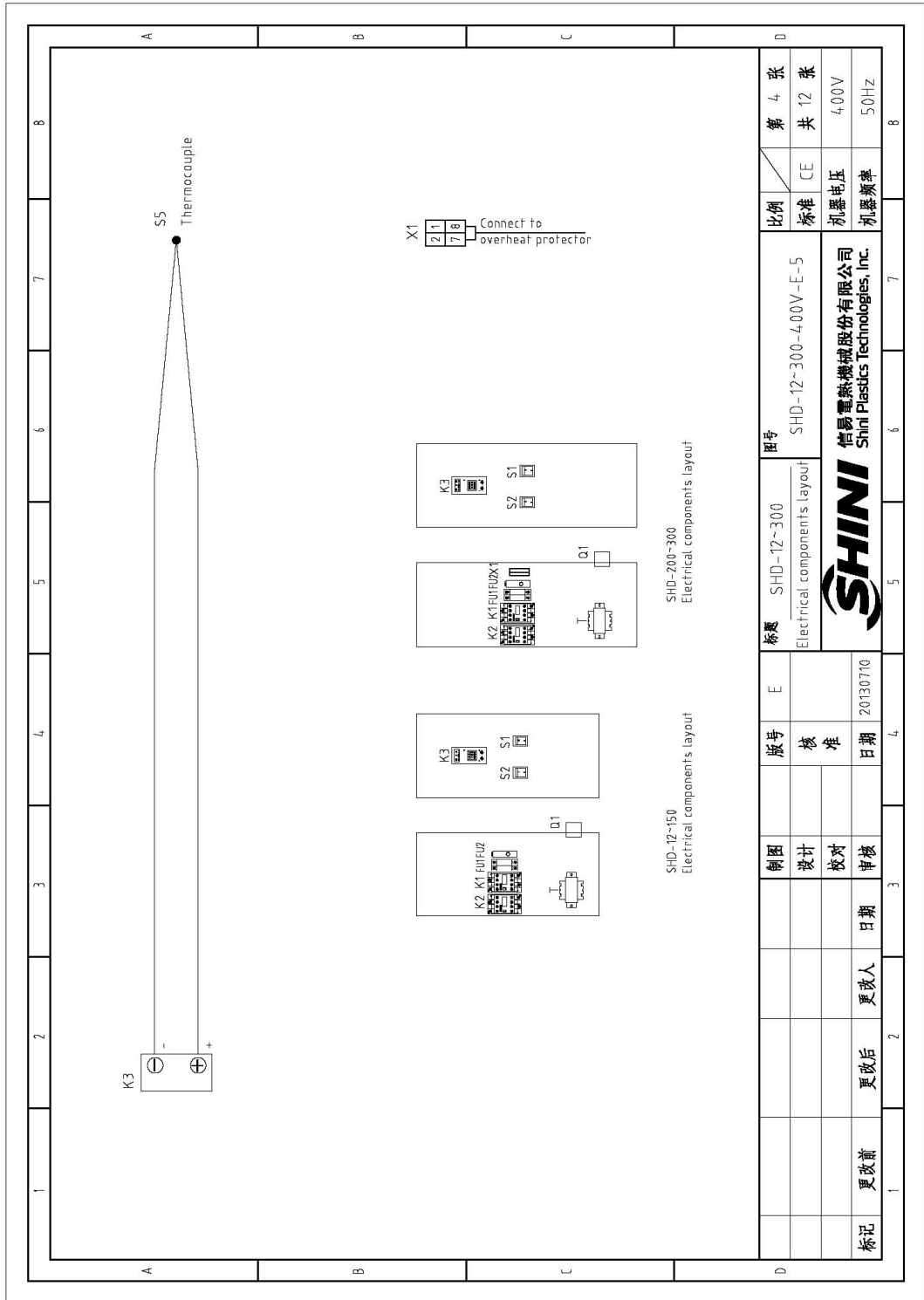
Picture 2-7: Electrical diagram 1 (SHD-12~300 400V)



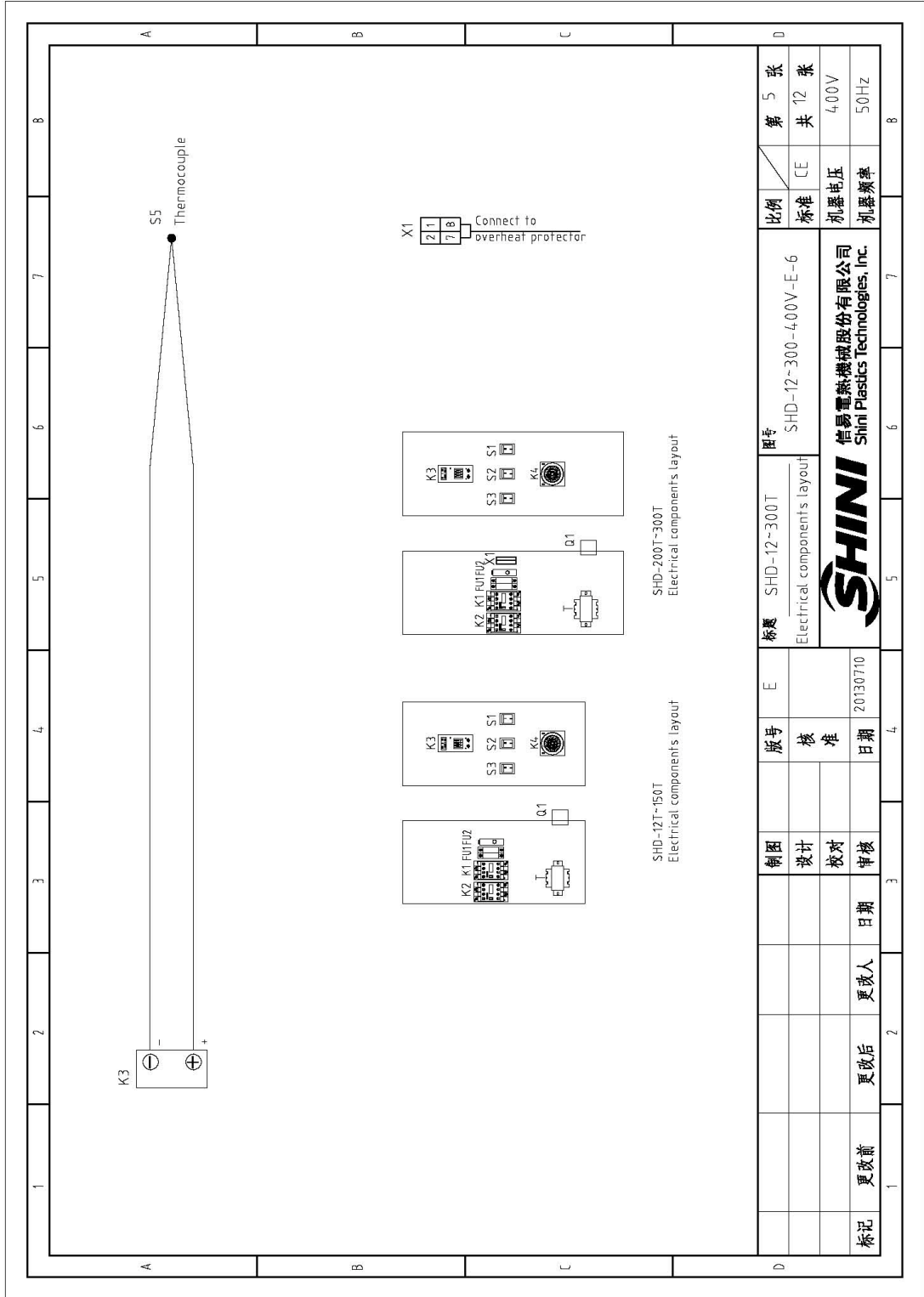
Picture 2-8: Electrical diagram 2 (SHD-12~300 400V)



### 2.3.3 Electrical Components Layout (SHD-12~300 400V)



Picture 2-10: Electrical components layout 1(SHD-12~300 400V)



Picture 2-11: Electrical components layout 2 (SHD-12T~300T 400V)

### 2.3.4 Bill of Electrical Parts(SHD-12~300 400V)

Table 2-6: Electrical components list (SHD-12 400V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker*	TECO	BM-63C	10A 3P	1	YE40301003000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact*	SIEMENS	3RT16015-1AN21	220V 50/60Hz	1	YE06601521000								
4	K2	Contact*	SIEMENS	3RT16016-1AN21	220V 50/60Hz	1	YE06601621000								
5	K3	Temp. Controller**	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000								
6	K4	24H Timer	PANASONIC	24H A-TB-12-D	230V 50/60Hz	1	YE86002400000	(2)							
7	FU1	Fuse Box*	CHINT	RT18-32	2P	1	YE41032200000								
8		Fuse**	CHINT	10x38 500V	1A	2	YE46001000100								
9	FU2	Fuse**	YINDA	FS-10	6x30mm ZA 250V	1	YE41001000000								
10	T	Transformer	BAIYUN	IN=400V OUT=230V	300mA	1	YE70402300700								
11	S1 S2	Control switch	SHINI	T120/55	4P (WH)	2	YE10270400000	(2)							
12	S3	Control switch	SHINI	T120/55	6P (WH)	1	YE10220600000	(1)							
13	S4	Overheat protector*	TONGBAO	KSD301	15A	1	----	(1)							
14	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
15	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250040000								
16	M1	Blower*	--	--	0.05kW	1	----	(1)							
17	EH1	Heater**	SHINI	--	2.2kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box. (2) S1stands for optional.															
D		制图		E		标题		SHD-12		图号		比例		第 6 张	
		设计		核 准		Electrical Components List		SHD-12-300-400V-E-7		标准		CE		共 12 张	
		校对		日期		SHINI		SHINI 信易电热机械股份有限公司 Shini Plastics Technologies, Inc.		机盖电压		4.00V			
标记		更改前		更改后		日期		20130710		机盖频率		50Hz			

\* 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.

Table 2-7: Electrical components list (SHD-25 400V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	D1	Circuit-breaker*	TECO	BM-63C	10A 3P	1	YE40301003000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2	Contact*	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000								
5	K3	Temp Controller*	SHINI	0-199℃	230V 50/60Hz	1	YE85019900000								
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE86002400000	(Z)							
7	FU1	Fuse Box*	CHINT	RT18-32	2P	1	YE41032200000								
8		Fuse**	CHINT	10x38-500V	1A	2	YE46001001000								
9	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
10	T	Transformer	BAIYUN	IN=400V OUT=230V	300mA	1	YE70402300700								
11	S1 S2	Control switch	SHINI	T120/55	4P (WH)	2	YE10210400000								
12	S3	Control switch	SHINI	T120/55	6P (WH)	1	YE10220600000	(Z)							
13	S5	Thermocouple	SHINI	K TYPE	--	1	----	(f)							
14	M1	Blower*	--	--	0.12kW	1	----	(f)							
15	EH1	Heater**	SHINI	--	3.0kW	1	----	(f)							
Notes: (f)Means it's not the material inside the control box. (Z) Stands for optional.															
		制图		版号		E		标号		SHD-25		型号		SHD-12-300-4.00V-E-8	
		设计		核准				Electrical Components List				比例		第 7 张	
		校对		日期		20130710		SHINI		SHINI 信易电热机械股份有限公司		标准		CE	
		审核		日期				SHINI 信易电热机械股份有限公司		SHINI Plastics Technologies, Inc.		初选电压		4.00V	
标记		更改前		更改后		更改人		日期				初选频率		50Hz	

\* 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.

Table 2-8: Electrical components list (SHD-50 400V)

1		2		3		4		5		7		8	
NO	Symbol	Name	Manufacturer	Type	Specification	Number	Material number					Remark	
1	Q1	Circuit-breaker**	TECO	BM-63C	10A 3P	1	YE40301003000						
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000						
3	K1	Contactor*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000						
4	K2	Contactor*	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000						
5	K3	Temp. Controller**	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000						
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE86002400000					(Z)	
7	FU1	Fuse Box	CHINT	RT18-32	2P	1	YE41032200000						
8		Fuse**	CHINT	10×38 500V	1A	2	YE4601000100						
9	FU1	Fuse**	YINDA	FS-10	6×30mm 2A 250V	1	YE41001000000						
10	T	Transformer	BAIYUN	IN=400V OUT=230V	300mA	1	YE70402300700						
11	S1 S2	Control switch	SHINI	T120/S5	4P (WH)	2	YE10210400000						
12	S3	Control switch	SHINI	T120/S5	6P (WH)	1	YE10220600000					(Z)	
13	S5	Thermocouple	SHINI	K TYPE	---	1	----					(1)	
14	M1	Blower*	--	--	0.12kW	1	----					(1)	
15	EH1	Heater**	SHINI	--	3.9kW	1	----					(1)	
Notes: (1)Means it's not the material inside the control box. (2) Stands for optional.													
				制图		版号		标题		图号		比例	
				设计		核 准		SHD-50		SHD-12-300-4,00V-E-9		标准 CE	
				校对		日期		Electrical Components List		信易电热机械股份有限公司		机器电压	
				审核		20130710		SHINI		Shini Plastics Technologies, Inc.		机器频率	
标记		更改前		更改后		更改人		日期		第 8 张		共 12 张	
												400V	
												50Hz	

\* 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.

Table 2-9: Electrical components list (SHD-75 400V)

1		2		3		4		5		6		7		8	
NO	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker**	TECO	BM-63C	10A 3P	1	YE40301003000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact**	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601520000								
4	K2	Contact**	SIEMENS	3RT6017-1AN21	220V 50/60Hz	1	YE00601720000								
5	K3	Temp. Controller**	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000								
6	K4	24H Timer	PANASONIC	24H A-TB-7Z-D	230V 50/60Hz	1	YE86602400000	(2)							
7	FU1	Fuse Box	CHINT	RT18-32	2P	1	YE41032200000								
8		Fuse**	CHINT	10x38 500V	1A	2	YE46001000100								
9	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
10	T	Transformer	BAIYUN	IN=400V OUT=230V	300mA	1	YE70402300700								
11	S1 S2	Control switch	SHINI	T120/55	4P (WH)	2	YE10210400000	(2)							
12	S3	Control switch	SHINI	T120/55	6P (WH)	1	YE10220600000	(1)							
13	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
14	M1	Blower**	--	--	0.12kW	1	----	(1)							
15	EH1	Heater**	SHINI	--	4.2kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box ( 2 ) Stands for optional.															
		制图		版号		E		标号		SHD-75		图号		SHD-12~300-4.00V-E-10	
		设计		核				Electrical Components List				比例		第 9 张	
		校对		准								标准		共 12 张	
		审核		日期		20130710						机盖电压		4.00V	
标记		更改前		更改人		日期						机盖频率		5.0Hz	

\* 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.

Table 2-10: Electrical components list (SHD-100/150 400V)

1	2	3	4	5	6	7	8
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number
1	Q1	Circuit-breaker*	TECO	BM-63C	16A 3P	1	YE4030603000
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE4002560000
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000
4	K2	Contact*	SIEMENS	3RT6018-1AN21	220V 50/60Hz	1	----
5	K3	Temp. Controller*	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000
6	K4	24H Timer	PANASONIC	Z4H A-TB-72-D	230V 50/60Hz	1	YE86002400000
7	FU1	Fuse Box	CHINT	RT18-32	2P	1	YE41032201000
8		Fuse**	CHINT	10×38 500V	1A	2	YE46001000100
9	FU1	Fuse**	YINDA	FS-10	6×30mm 2A 250V	1	YE4100100000000
10	T	Transformer	BAIYUN	IN=400V OUT=230V	300mA	1	YE70402300700
11	S1 S2	Control switch	SHINI	T120/55	4P (WH)	2	YE102104000000
12	S3	Control switch	SHINI	T120/55	6P (WH)	1	YE10220600000
13	S5	Thermocouple	SHINI	K TYPE	--	1	----
14	M1	Blower*	--	--	0.12kW	1	----
15	EH1	Heater**	SHINI	--	6.0kW	1	----
Notes: (1)Means, it's not the material inside the control box (2) Stands for optional.							
			制图	版号	标题	图号	比例
			设计	核	SHD-100/150	SHD-12-300-4.00V-E-11	第 10 张
			校对	准	Electrical Components List		共 12 张
			日期	日期			标准 CE
			更改人	日期			初选电压 4.00V
			更改后	更改人			初选频率 5.0Hz
			更改前	更改人			
					 信昌電熱機械股份有限公司 Shini Plastics Technologies, Inc.		

\* 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.

Table 2-11: Electrical components list (SHD-200 400V)

1		2		3		4		5		6		7		8	
No	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker**	TECO	BM-63C	25A 3P 400V 50/60Hz	1	YE40202503000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact*•	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2	Contact*•	SIEMENS	3RT6026-1AN20	220V 50/60Hz	1	YE00602620000								
5	K3	Temp. Controller**	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000								
6	K4	24H Timer	PANASONIC	24H A-TB-7Z-D	230V 50/60Hz	1	YE86002400000	(2)							
7	FU1	Fuse Box	CHINT	RT1B-32	2P	1	YE41032200000								
8		Fuse**	CHINT	10x38 500V	1A	2	YE46001000000								
9	FU1	Fuse**	YONDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
10	T	Transformer	BAIYUN	IN=400V OUT=230V	300mA	1	YE10402300700								
11	S1 S2	Control switch	SHINI	T120/55	4P (WH)	2	YE10210040000	(2)							
12	S3	Control switch	SHINI	T120/55	6P (WH)	1	YE10220600000	(1)							
13	S4	Overheat protector**	TONGBAO	KSD301	15A	1	----	(1)							
14	S5	Thermocouple	SHINI	K TYPE	---	1	----	(1)							
15	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250040000								
16	M1	Blower**	--	--	0.18kW	1	----	(1)							
17	EH1	Heater**	SHINI	--	12kW	1	----	(1)							
Notes: (1) Means it's not the material inside the control box. (2) Stands for optional.															
D		制图	版号	E	标号	SHD-200	型号	SHD-12-300-4.00V-E-12	比例	第 11 张					
		设计	核准		Electrical Components List				标准	共 12 张					
标记		更改前	更改后	更改人	日期	20130710			机器电压	4.00V					
		审核	日期						机器频率	50Hz					
									信昌 塑料科技股份有限公司 Shini Plastics Technologies, Inc.						

\* 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.

Table 2-12: Electrical components list (SHD-300 400V)

1	2	3	4	5	5	7	8
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number
1	D1	Circuit-breaker**	TECO	BM-63C	32A 3P	1	YE40303203000
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000
3	K1	Contact**	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521800
4	K2	Contact**	SIEMENS	3RT6027-1AN20	220V 50/60Hz	1	YE00602722000
5	K3	Temp. Controller**	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE86024000000
7	FU1	Fuse Box	CHINT	RT18-32	2P	1	YE41032200000
8	FU1	Fuse**	CHINT	10x38 500V	1A	2	YE46001001000
9	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000
10	T	Transformer	BAIYUN	IN=400V,OUT=230V	300mA	1	YE70402300700
11	S1-S2	Control switch	SHINI	T120/55	4-P (WH)	2	YE10210400000
12	S3	Control switch	SHINI	T120/55	6-P (WH)	1	YE10220600000
13	S4	Overheat protector**	TONGRAO	KSD301	15A	1	----
14	S5	Thermocouple	SHINI	K TYPE	--	1	----
15	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250140000
16	M1	Blower**	--	--	0.18kW	1	----
17	EH1	Heater**	SHINI	--	15kW	1	----

Notes: (1)Means it's not the material inside the control box (2) Stands for optional.	
比例	第 12 张
标准	共 12 张
CE	4.00V
机器电压	50Hz
机器频率	

图号	SHD-300	图号	SHD-12-300-4.00V-E-13
Electrical Components List		信易电热机械股份有限公司	
SHINI		Shini Plastics Technologies, Inc.	
版号	E	日期	20130710
核准		更改人	
日期		更改后	
日期		更改前	

\* 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.

### 2.3.5 Power, Diameter, Current (SHD-400~1000 400V)

Symbol Model	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
SHD-400	27.5	6.0	40	-	1.5	0.18	0.45	6.0	18	27
SHD-500	30	6.0	40	-	1.5	0.18	0.45	6.0	19.5	29.5
SHD-600	32.8	6.0	50	1.5	1.5	0.55	1.3	2.5x2	21	31.5
SHD-800	38.5	10.0	50	2.5	1.5	1.1	2.3	4.0x2	24	36
SHD-1000	50.5	10.0	80	2.5	1.5	1.1	2.3	6.0x2	32	48

(a) Total current

(b) Power cable diameter

(c) Rated current of circuit breakers

(d) Drying blower loader

(e) Blower cable diameter

(f) Drying blower power

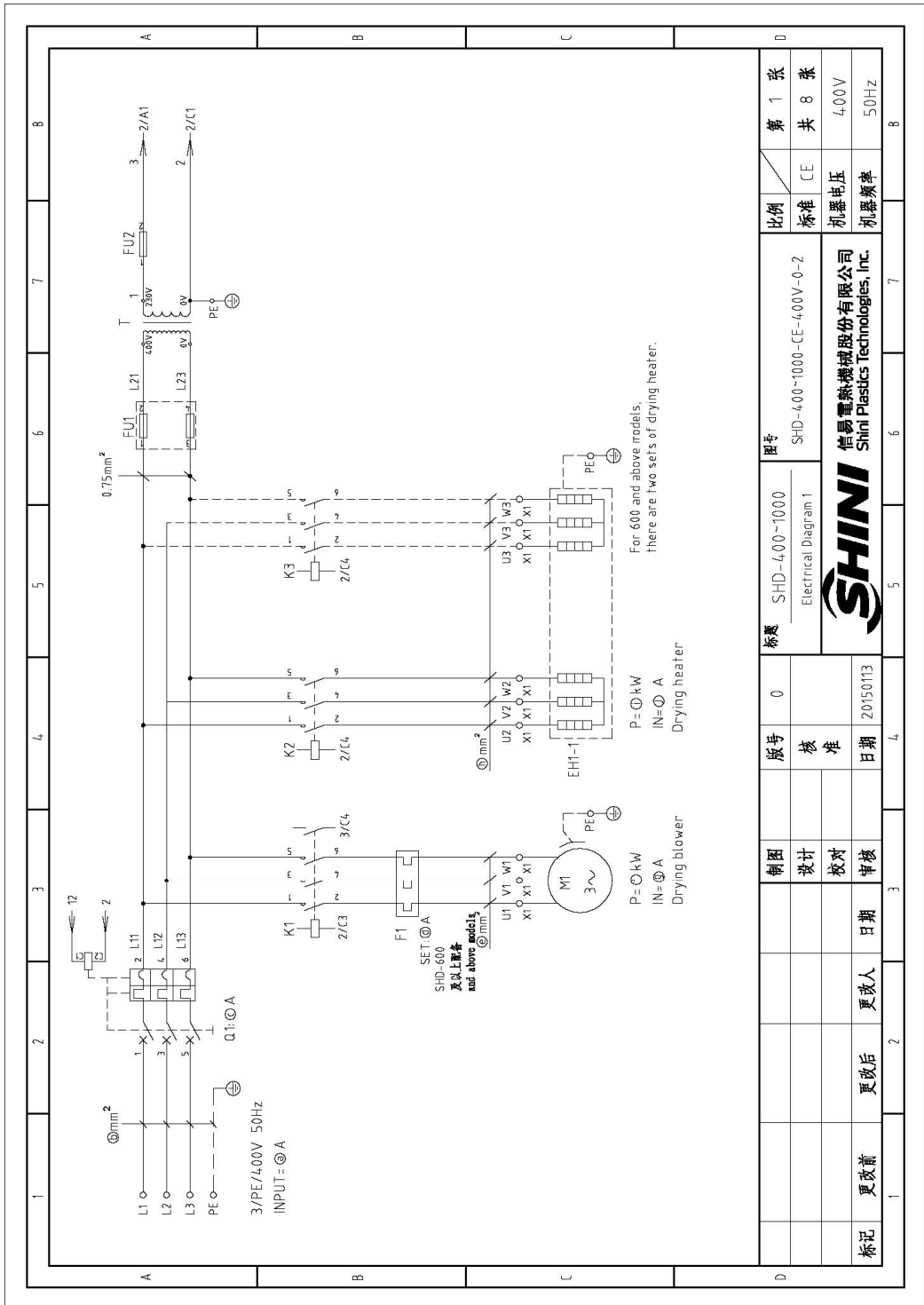
(g) Drying blower current

(h) Wire diameter of heater

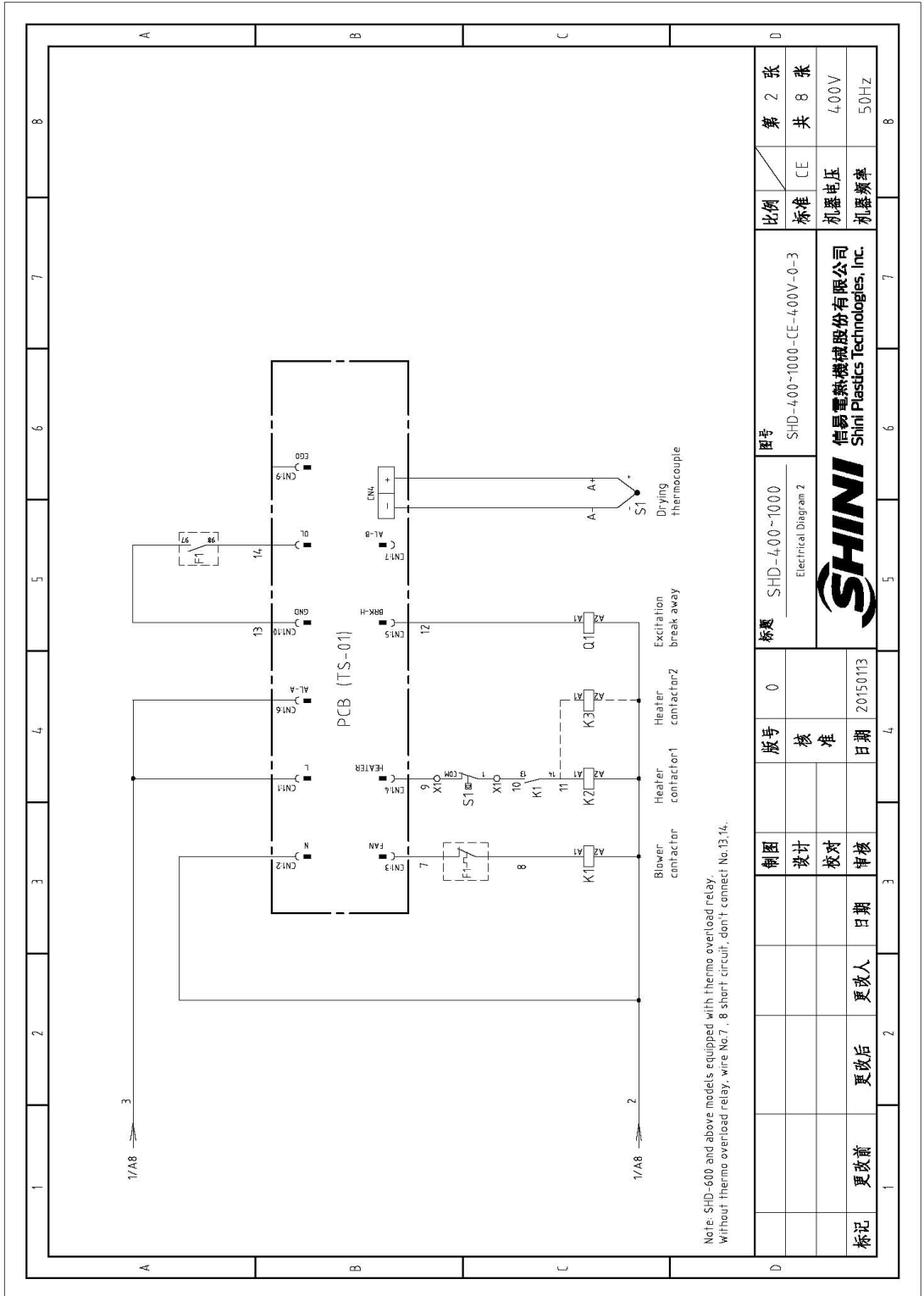
(i) Heater power

(j) Heater current

### 2.3.6 Electrical Diagram(SHD-400~1000 400V)



Picture 2-12: Electrical diagram 1 (SHD-400~1000 400V)



制图		版号	0	标题	SHD-400~1000 Electrical Diagram 2	图号	SHD-400~1000-CE-400V-0-3	比例	第 2 张
设计		核 准						标准	共 8 张
校对		日期	20150113					机器电压	400V
审核		更改人						机器频率	50Hz
标记	更改前	更改后	更改人	日期					

Picture 2-13: Electrical diagram 2 (SHD-400~1000 400V)



### 2.3.8 Bill of Electrical Parts(SHD-400~1000 400V)

Table 2-13: Electrical components list (SHD-400 400V)

1	2		3	4	5		6	7	8			
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark				
1	D1	Circuit-breaker**	TECO	BM-43L/3040S	40A 3P	1	YE40304003000					
2		Excitation Break Away	CHINT	MX	220V 50/60Hz	1	YE44023560000					
3	K1	Contact**	SIEMENS	3RT6015-1ANZ1	220V 50/60Hz	1	YE00601521000					
4	K2	Contact**	SIEMENS	3RT6028-1AN20	220V 50/60Hz	1	YE00602822000					
5	FU1	Fuse**	CHINT	RT18-32	32A 2P	1	YE44032200000					
6	FU2	Fuse**	YINDA	10x38 500V	2A	2	YE44001000100					
7	T	Transformer	BAIYUN	FS-10	6x30mm 2A 250V	1	YE44001000000					
8	PCB	PCB	YUYUN	TS-01	IN=400V OUT=230V 300mA	1	YE70402300700					
9		Plastic box			220V 50/60Hz	1	YE80000100300					
10		Lamp cover of plastic box				1	YR40440020000					
11		Name plate				1	YR90441300000					
12		Pressing plate of plastic box				1	YR01105503300					
13	S1	Overheat protector*	TONCEAD	KSD301	15A	1	YR90000003300	(1)				
14	S2	Thermocouple	SHINI	K TYPE	--	1	----	(1)				
15	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250040000					
16	M1	Blower**	--	--	0.78kW	1	----	(1)				
17	EHT	Heater**	SHINI	--	18kW	1	----	(1)				
Notes: (1)Means it's not the material inside the control box.												
				版号	0	标题		SHD-4,00	图号	SHD-4.00~1000-CE-4.00V-0-5	比例	第 4 张
				设计		Electrical Components List			标准	CE	标准	共 8 张
				校对		SHINI			机座电压	4.00V	机座频率	50Hz
				日期	20150713	SHINI			机座电压	4.00V	机座频率	50Hz
				更改前		SHINI			机座电压	4.00V	机座频率	50Hz
				更改后		SHINI			机座电压	4.00V	机座频率	50Hz
				更改人		SHINI			机座电压	4.00V	机座频率	50Hz
				日期		SHINI			机座电压	4.00V	机座频率	50Hz

\* 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.



Table 2-15: Electrical components list (SHD-600 400V)

1		2		3		4		5		6		7		8	
No	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker*	TECO	BM-63C/304US	50A 3P	1	YE40305003000								
2		Excitation Break Away	CHINT	MX	220V 50/60Hz	1	YE40029560000								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2 K3	Contact*	SIEMENS	3RT6026-1AN20	220V 50/60Hz	2	YE00602620000								
5	F1	Overload relay	SIEMENS	3RU5116-1AB0	11-16A	1	YE01160110000								
6	FU1	Fuse**	CHINT	RT18-3Z	32A 2P	1	YE41032Z00000								
7					2A	2	YE46001000100								
8	FU2	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
9	T	Transformer	BAIYUN	--	IN=400V OUT=230V 300mA	1	YE700402300700								
10	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300								
11		Plastic box				1	YR40402000000								
12		Lamp cover of plastic box				1	YR904413000000								
13		Name plate				1	YR01105503300								
14		Pressing plate of plastic box				1	YR900000003300								
15	S1	Overheat protection*	TONCEAD	KSD301	15A	1	----	(1)							
16	S2	Thermocouple	SHINI	K TYPE	---	1	----	(1)							
17	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE62500400000								
18	M1	Blower*	--	--	0.55kW	1	----	(1)							
19	EH1	Heater**	SHINI	--	21kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box.															
				制图	版号	0	标题	SHD-600	图号	SHD-400-1000-CE-400V-0-7	比例	第 6 张			
				设计	核准		Electrical Components List					标准	CE	共 8 张	
				校对	日期	20150113			信易电热机械股份有限公司 Shini Plastics Technologies, Inc.			机器电压	400V		
				审核	日期							机器频率	50Hz		

\* 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.

Table 2-16: Electrical components list (SHD-800 400V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker**	TECO	BM-63C/30AOS	50A 3p	1	YE4030503000								
2		Excitation Break Away	CHINT	KX	220V 50/60Hz	1	YE4002356000								
3	K1	Contact*	SIEMENS	3RT6915-1AN21	220V 50/60Hz	1	YE0060152100								
4	K2, K3	Contact*	SIEMENS	3RT6926-1AN20	220V 50/60Hz	2	YE0060262200								
5	F1	Overload relay	SIEMENS	3RU6116-1DB0	2.2-3.2A	1	YE0160220000								
6	FU1	Fuse**	CHINT	RT18-32	32A 2P	1	YE41032200000								
7				10*38 500V	2A	2	YE46001000100								
8	FU2	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
9	T	Transformer	BAIYUN	--	IN=400V OUT=230V 300mA	1	YE70402300700								
10	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300								
11		Plastic box				1	YR40400200000								
12		Lamp cover of plastic box				1	YR90441300000								
13		Name plate				1	YR0105503300								
14		Pressing plate of plastic box				1	YR900000003300								
15	S1	Overheat protector*	TONCEAO	KSD301	15A	1	----	(f)							
16	S2	Thermocouple	SHINI	K TYPE	--	1	----	(f)							
17	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61251040000								
18	M1	Blower**	--	--	1.1kW	1	----	(f)							
19	EH1	Heater**	SHINI	--	24kW	1	----	(f)							
Notes: (f)Means it's not the material inside the control box.															
D		制图		版号		0		标题		图号		比例		第 7 张	
		设计		核 准				SHD-800		S-D-4.00-10.00-CE-4.00V-0-8		标准 CE		共 8 张	
		校对		日期		20150113		SHINI		SHINI Electrical Components List		机器电压		4.00V	
标记		更改前		更改后		更改人		SHINI		SHINI 信易电热机械股份有限公司 Shini Plastics Technologies, Inc.		机器效率		5.0Hz	
1		2		3		4		5		6		7		8	

\* 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.



### 2.3.9 Power, Diameter, Current (SHD-EH 400V)

Symbol Model	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
SHD-12EH	3.5	1.5	10	1.5	0.05	0.2	1.5	2.2	3.3
SHD-25EH	4.9	1.5	10	1.5	0.12	0.31	1.5	3.0	4.5
SHD-50EH	6.2	2.5	16	1.5	0.12	0.31	2.5	3.9	5.8
SHD-75EH	6.9	2.5	10	1.5	0.12	0.31	2.5	4.2	6.5
SHD-100EH	9.4	2.5	16	1.5	0.12	0.31	2.5	6	9
SHD-300EH	23	4.0	32	1.5	0.18	0.42	4.0	15	22.5

(a) Total current

(b) Power cable diameter

(c) Rated current of circuit breakers

(d) Blower cable diameter

(e) Drying blower power

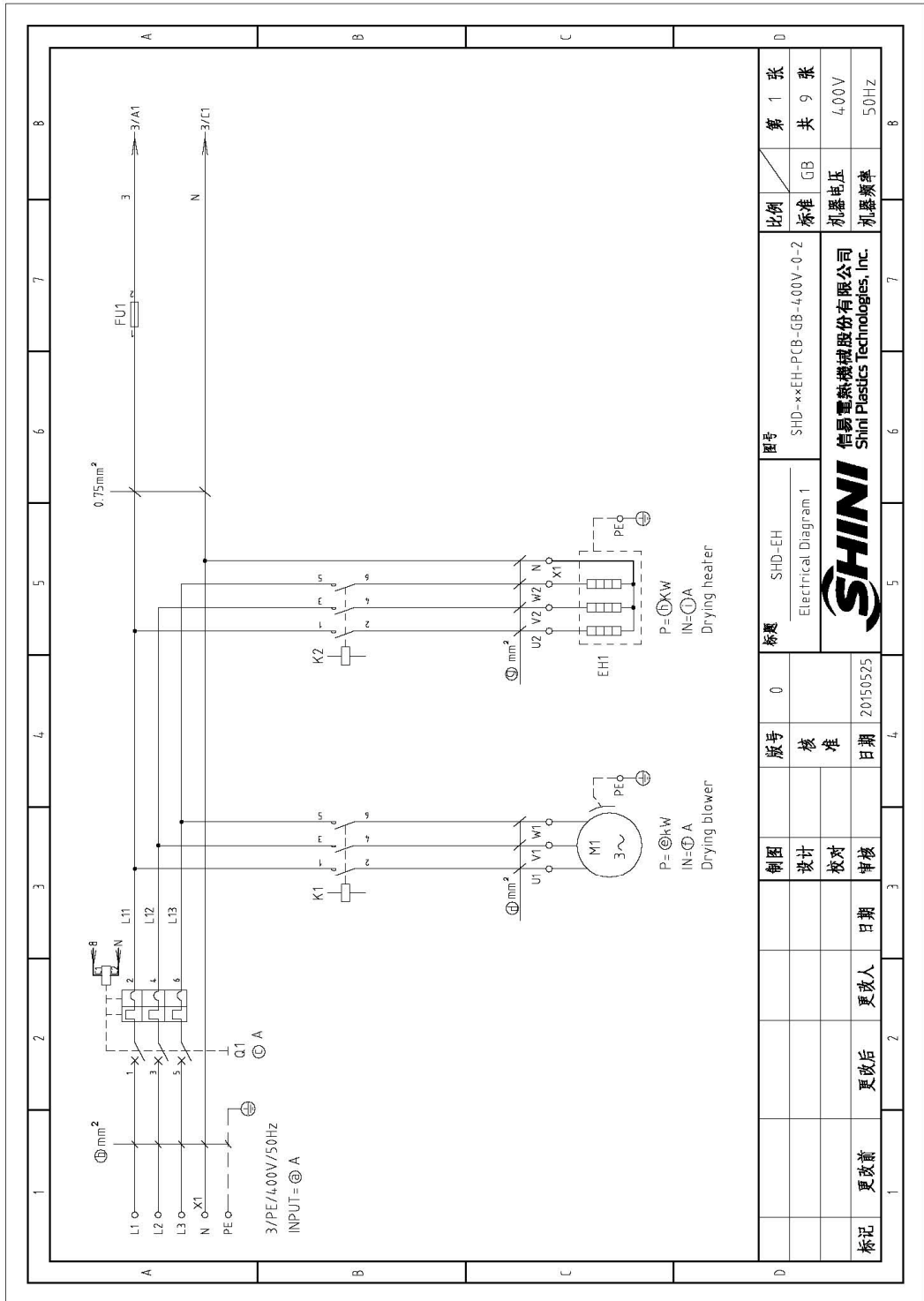
(f) Drying blower current

(g) Wire diameter of heater

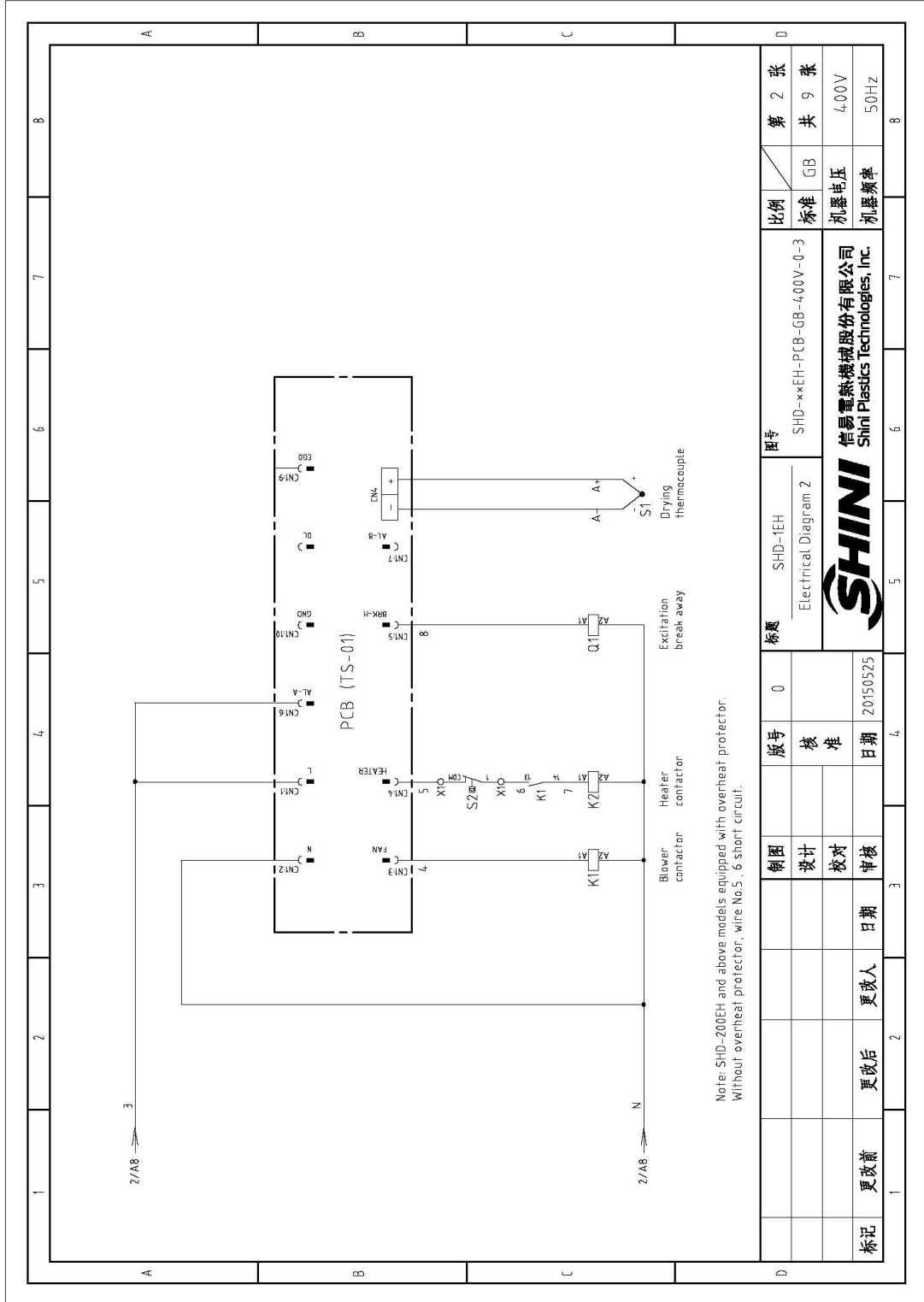
(h) Heater power

(i) Heater current

### 2.3.10 Electrical Diagram(SHD-EH 400V)

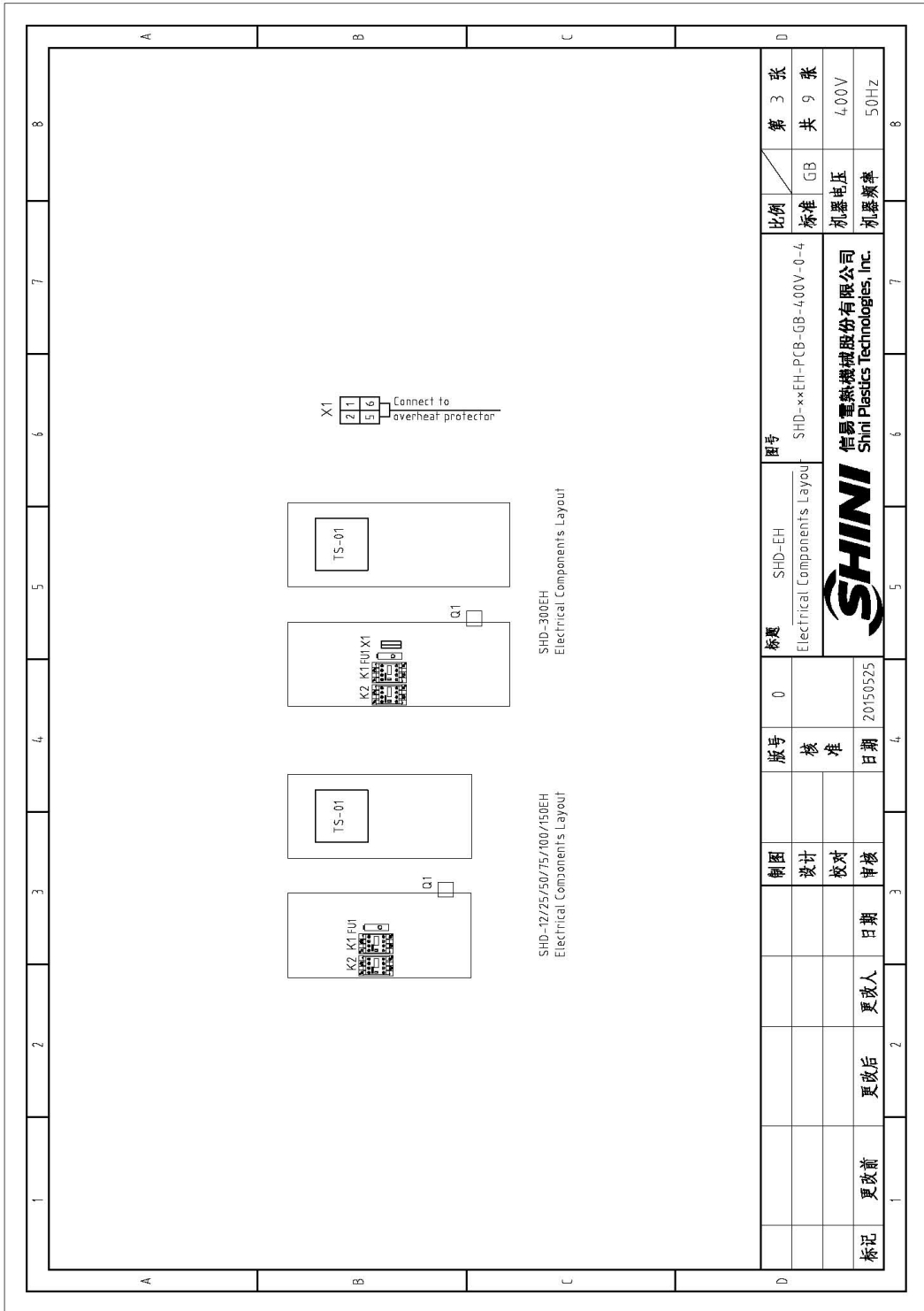


Picture 2-15: Electrical diagram 1 (SHD-EH 400V)



Picture 2-16: Electrical diagram 2 (SHD-EH 400V)

### 2.3.11 Electrical Components Layout (SHD-EH 400V)



Picture 2-17: Electrical components layout (SHD-EH 400V)

### 2.3.12 Bill of Electrical Parts(SHD-EH 400V)

Table 2-18: Electrical components list (SHD-12EH 400V)

1		2		3		4		5		5		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	D1	Circuit-breaker**	TECO	BM-63C	10A 3P	1	YE40301003000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact**	SIEMENS	3RT6015-1ANZ1	220V 50/60Hz	1	YE06601521000								
4	K2	Contact**	SIEMENS	3RT6016-1ANZ1	220V 50/60Hz	1	YE06601621000								
5	FU1	Fuse**	YINDA	FS-10	6*30mm ZA 250V	1	YE41001000000								
6	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YEB0000100300								
7		Plastic box				1	YR40400200000								
8		Lamp cover of plastic box				1	YR90413000000								
9		Name plate				1	YR0105503500								
10		Pressing plate of plastic box				1	YR90000003300								
11	S1	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
12	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250040000								
13	M1	Blower**	--	--	0.05kW	1	----	(1)							
14	EH1	Heater**	SHINI	--	2.2kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box.															
		制图	版号	标题	图号	比例	第 4 张								
		设计	核 准	Electrical Components List	SHD-12EH	标准	GB	共 9 张							
		校对	日期	SHINI	SHD-xxEH-PCB-GB-400V-0-5	机罩电压	400V								
		更改前	更改后	20150525	信昌塑料科技股份有限公司 Shini Plastics Technologies, Inc.	机罩频率	50Hz								
		日期	日期	20150525											

\* 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.

Table 2-19: Electrical components list (SHD-25EH 400V)

1	2	3	4	5	6	7	8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	Q1	Circuit-breaker*	TECO	BM-63C	10A 3P	1	YE40301003000	
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE4002560000	
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000	
4	K2	Contact*	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601621000	
5	FU1	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YEL40010000000	
6	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YEB00001003000	
7		Plastic box				1	YRA04.002000000	
8		Lamp cover of plastic box				1	YR900443000000	
9		Name plate				1	YR01105503300	
10		Pressing plate of plastic box				1	YR90000003300	
11	S1	Thermocouple	SHINI	K TYPE	--	1	----	(1)
12	M1	Blower*	--	--	0.12kW	1	----	(1)
13	EH1	Heater**	SHINI	--	3.0kW	1	----	(1)
Notes: (1)Means it's not the material inside the control box.								
		制图	0	标准	SHD-25EH	图号	SHD-xxEH-PCB-GB-400V-0-6	比例
		设计		核准	Electrical Components List			标准 GB
		校对		日期	SHINI			机器电压
标记		更改前	更改后	更改人	日期	20150525		机器频率
						信易塑料机械股份有限公司 Shini Plastics Technologies, Inc.		4.00V
								50Hz
								第 5 张
								共 9 张

\* 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.



Table 2-21: Electrical components list (SHD-75EH 400V)

1		2		3		4		5		6		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker*	TECO	BM-63C	10A 3P	1	YE40301003300								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact*	SIEMENS	3RT6015-1ANZ1	220V 50/60Hz	1	YE00601521000								
4	K2	Contact*	SIEMENS	3RT6017-1ANZ1	220V 50/60Hz	1	YE00601721000								
5	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
6	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YR40400200000								
7		Plastic box				1	YR90041300000								
8		Lamp cover of plastic box				1	YR01105503300								
9		Name plate				1	YR90000003300								
10		Pressing plate of plastic box				1	YR90000003300								
11	S1	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
12	M1	Blower*	--	--	0.12kW	1	----	(1)							
13	EH1	Heater**	SHINI	--	4.2kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box.															
		制图		版号		0		标题		SHD-75EH		图号		SHD-xxEH-PCB-GB-400V-0-7	
		设计		核				SHINI		Electrical Components List		标准		GB	
		校对		日期		20150525		信易电热机械股份有限公司		Shini Plastics technologies, Inc.		比例		4:00V	
标记		更改前		更改后		更改人		日期		审核		机盖电压		50Hz	
												机盖频率			

\* 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.

Table 2-22: Electrical components list (SHD-100EH 400V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker*	TECO	BM-63L/3016S	16A 3P	1	YE40301603000								
2		Excitation break away	TECO	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2	Contact*	SIEMENS	3RT6018-1AN21	220V 50/60Hz	1	YE00601800000								
5	FU1	Fuse**	YINDA	FS-10	6×30mm 2A 250V	1	YE41001000000								
6	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300								
7		Plastic box				1	YR40400200000								
8		Lamp cover of plastic box				1	YR900441300000								
9		Name plate				1	YR0105503300								
10		Pressing plate of plastic box				1	YR90000003300								
11	X1	Terminal board	PHOENIX	TB2.5	----	2	YE61250040000	(1)							
12	S1	Thermocouple	SHINI	K TYPE	----	1	BE90565800050	(1)							
13	M1	Blower*	----	----	0.12kW	1	----	(1)							
14	EH1	Heater**	SHINI	----	6kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box.															
D															
制图		版号		标题		型号		比例		第 8 张		共 9 张			
设计		核 准		SHD-100EH		SHD-xxEH-PCB-GB-400V-0-6		标准 GB		GB		400V			
校对		日期		SHINI		SHINI		机器电压		机器频率		50Hz			
审核		日期		SHINI		SHINI		机器电压		机器频率		50Hz			
更改前		更改人		更改后		更改人		更改日期		更改日期					
更改日期		更改人		更改日期		更改人		更改日期		更改人		更改日期			

\* 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.

Table 2-23: Electrical components list (SHD-300EH 400V)

1		2		3		4		5		6		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	D1	Circuit-breaker*	TECO	BM-63C	32A 3P	1	YE4030203000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2	Contact*	SIEMENS	3RT6027-1AN20	220V 50/60Hz	1	YE00602722000								
5	FU1	Fuse**	YINDA	FS-10	6×30mm 2A 250V	1	YE41001000000								
6	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE8000100300								
7		Plastic box				1	YR404.00200000								
8		Lamp cover of plastic box				1	YR904.41300000								
9		Name plate				1	YR01105503300								
10		Pressing plate of plastic box				1	YR90000003300								
11	S2	Overheat protector*	TONGBAO	KSD301	15A	1	----	(1)							
12	S1	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
13	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250040000								
14	M1	Blower*	--	--	0.18kW	1	----	(1)							
15	EH1	Heater**	SHINI	--	15kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box.															
		制图		版号		图号		标题		比例		第 9 张		共 9 张	
		设计		核 准		SHD-300EH		SHD-xxEH-PCB-CB-400V-0-8		标准		GB			
		校对		日期		Electrical Components List		SHINI		机 电 压		4-00V			
		审核		日期		SHINI		SHINI 塑料机械股份有限公司		机 电 率		50Hz			
标记		更改前		更改后		20150525		SHINI		机 电 率		50Hz			

\* 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.

### 2.3.13 Power, Diameter, Current (SHD-12~300 230V)

Symbol Model	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
SHD-12	6.1	2.5	10	-	-	1.0	0.05	0.3	1.5	2.2	5.8
SHD-25	8.1	2.5	15	-	-	1.0	0.12	0.42	1.5	3.0	7.6
SHD-50	10.7	2.5	15	-	-	1.0	0.12	0.42	2.5	3.9	10.2
SHD-75	11.5	2.5	15	-	-	1.0	0.12	0.42	2.5	4.2	11
SHD-100	16.3	2.5	20	-	-	1.0	0.12	0.55	2.5	6.0	15.8
SHD-150	16.3	2.5	20	-	-	1.0	0.12	0.55	2.5	6.0	15.8
SHD-200	32.1	6.0	40	-	-	1.0	0.18	0.8	6.0	12	31.5
SHD-300	40.1	10.0	50	-	-	1.0	0.18	0.8	10.0	15	39.5

(a) Total current

(b) Power cable diameter

(c) Rated current of circuit breakers

(d) Drying blower loader

(e) Settings for drying blower loader

(f) Drying blower diameter

(g) Drying blower power

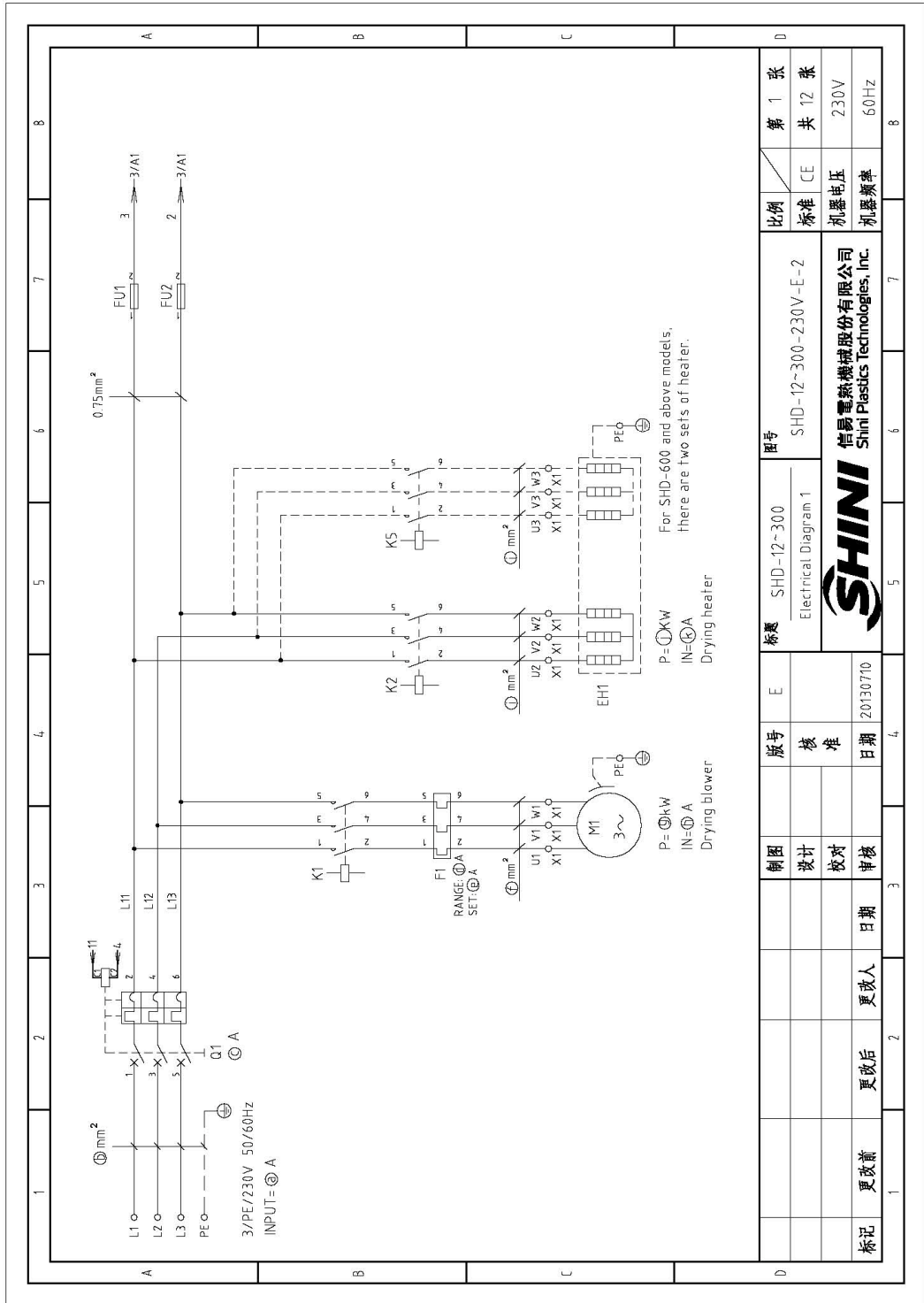
(h) Drying blower current

(i) Wire diameter of heater

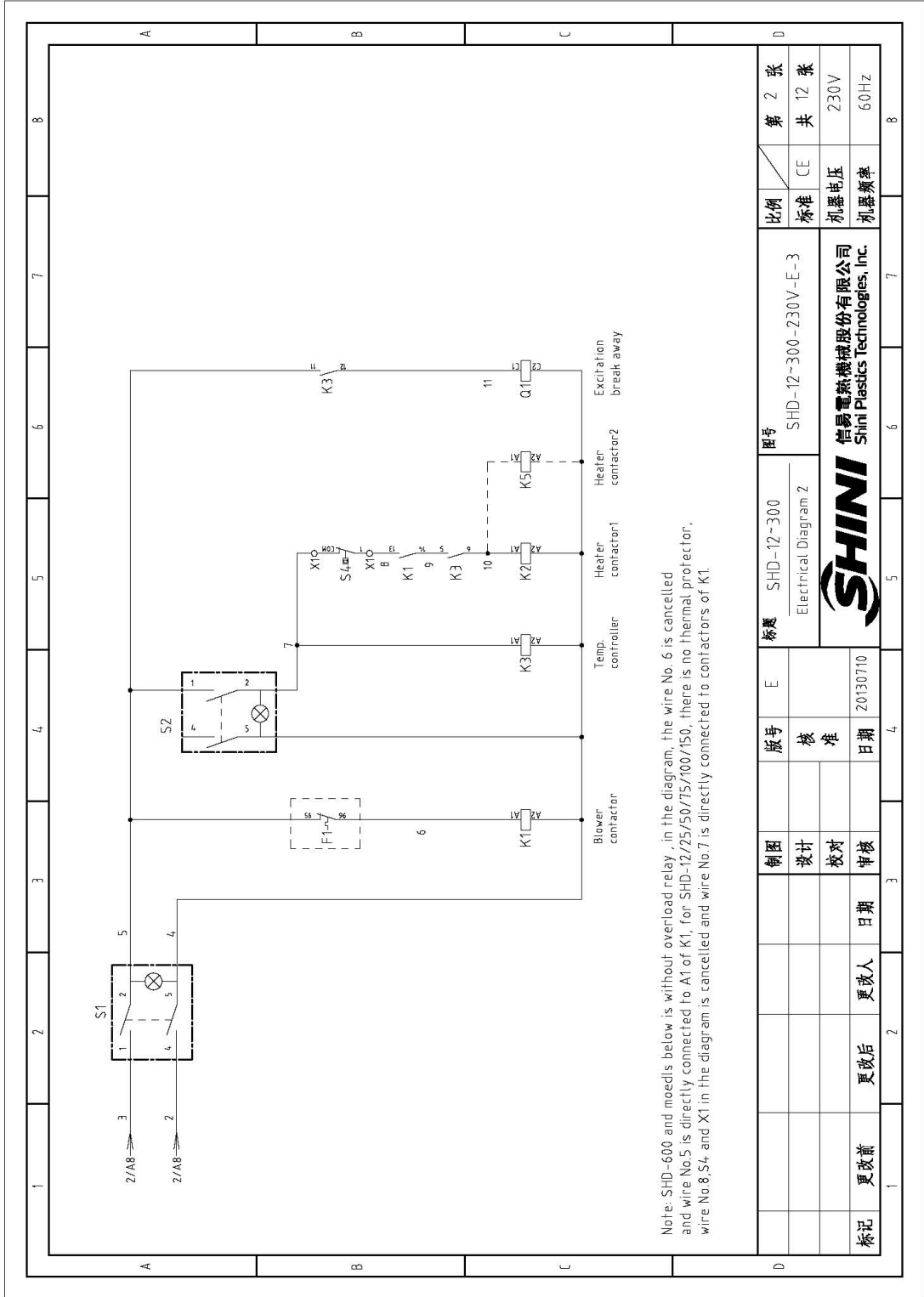
(j) Heater power

(k) Heater current

### 2.3.14 Electrical Diagram (SHD-12~300 230V)

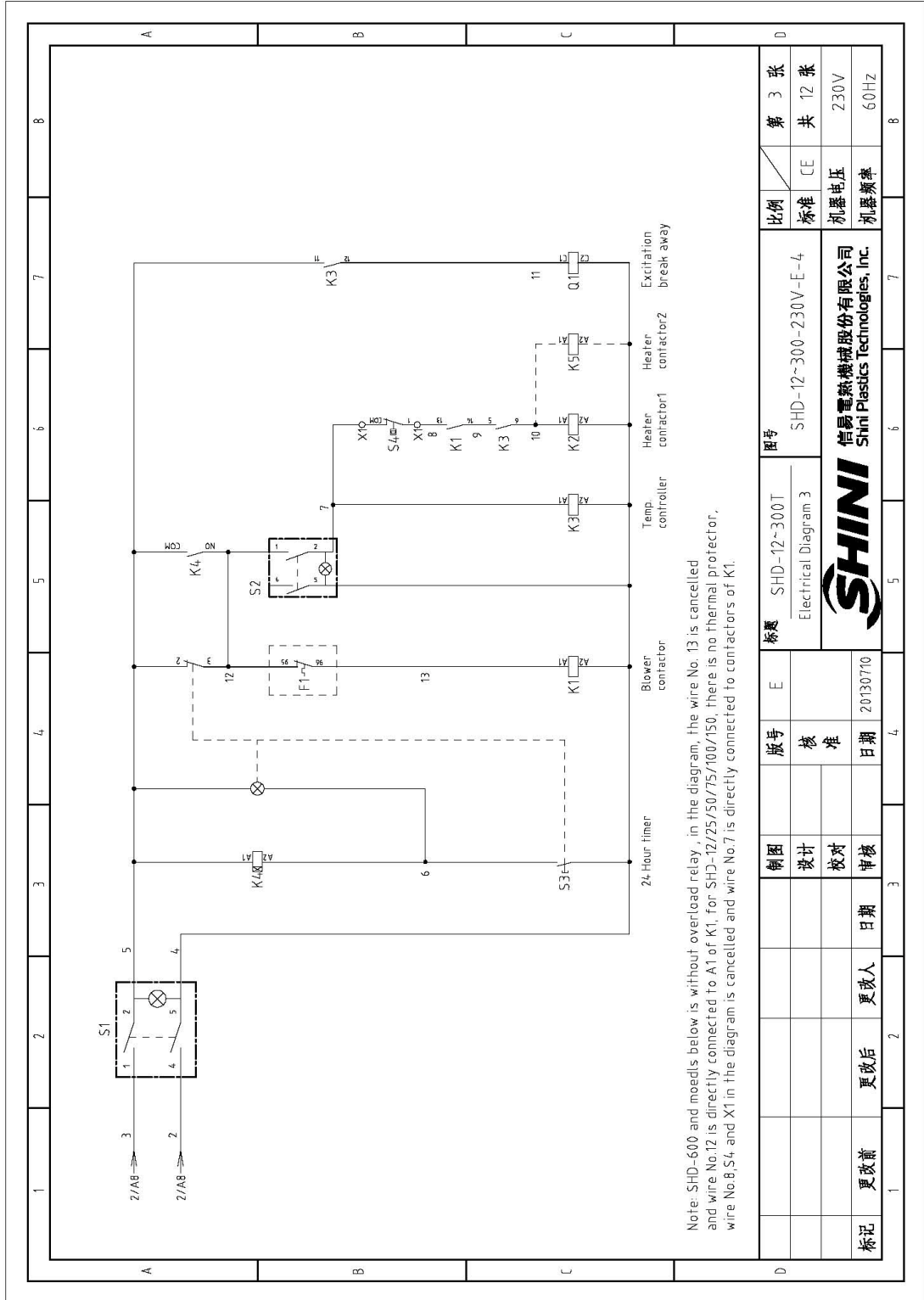


Picture 2-18: Electrical diagram 1 (12~300 230V)



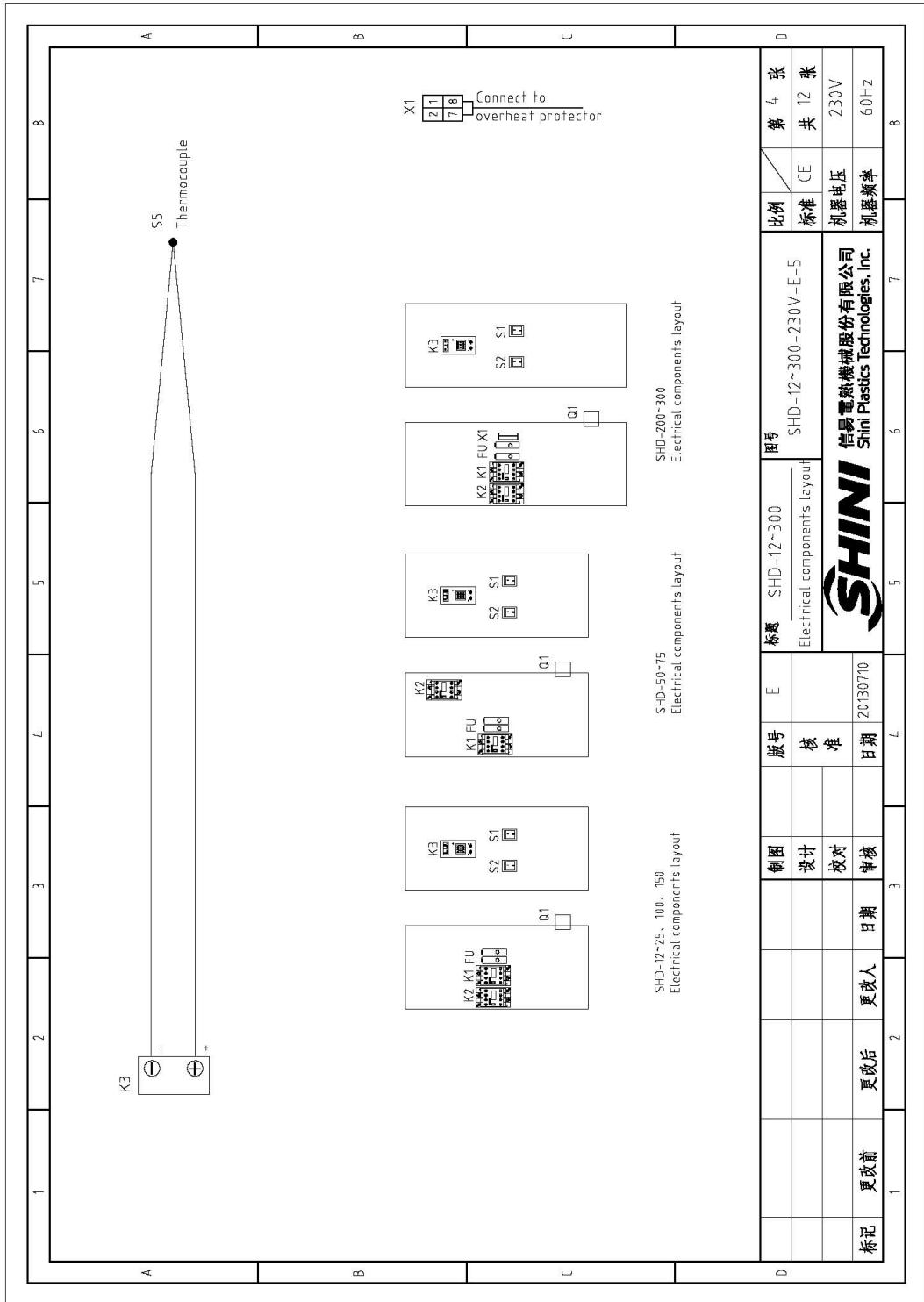
图号	SHD-12~300	比例	第 2 张
标题	SHD-12~300	标准	共 12 张
Electrical Diagram 2		机器的电压	230V
SHINI 信易电热机械股份有限公司 Shini Plastics Technologies, Inc.		机器的频率	60Hz
版号	E	比例	CE
核 准		机器的电压	230V
日期	20130710	机器的频率	60Hz
更 改 著	更 改 后	更 改 人	更 改 日 期
1	2	3	4
5	6	7	8

Picture 2-19: Electrical diagram 2 (SHD-12~300 230V)

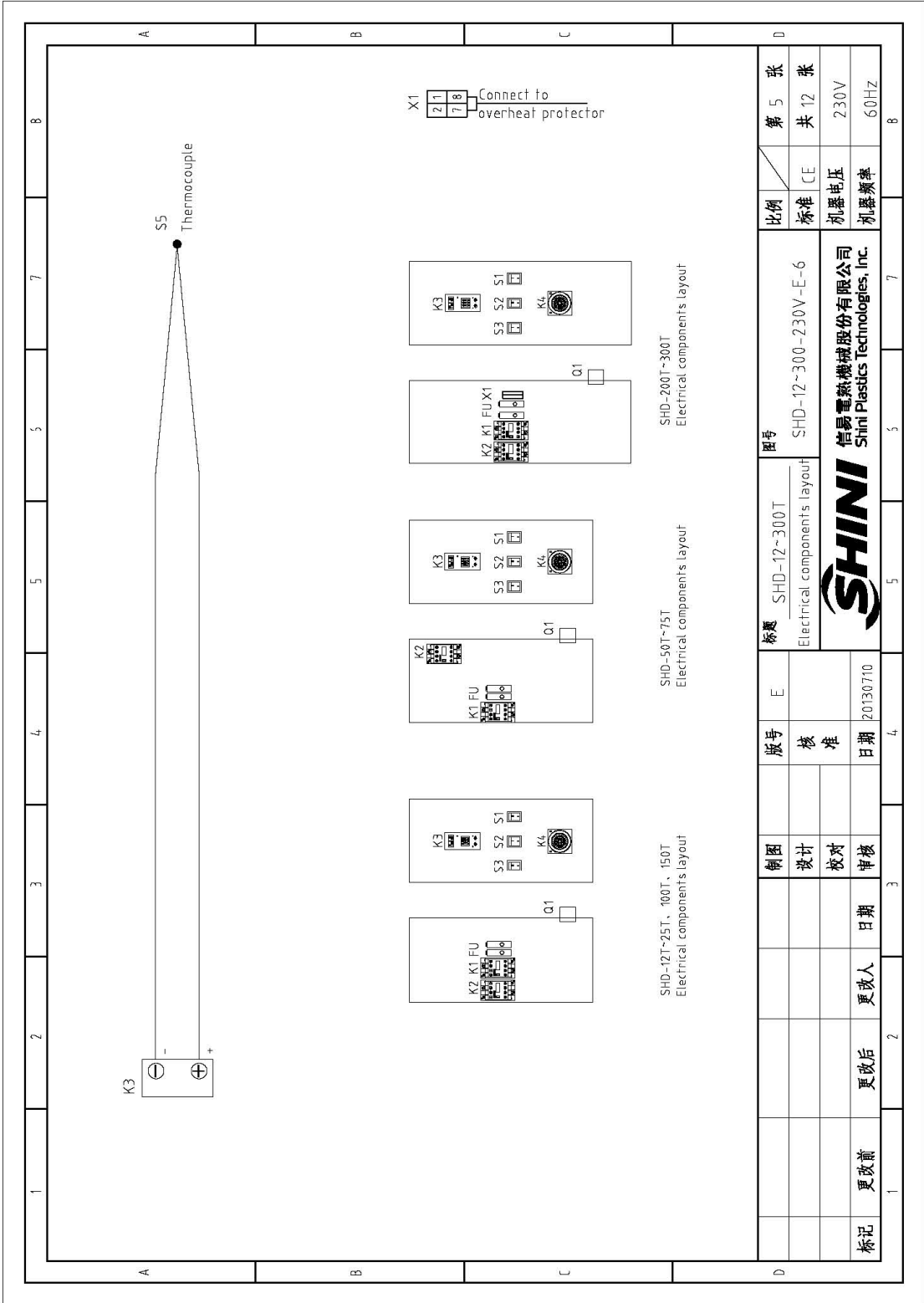


Picture 2-20: Electrical diagram 3 (SHD-12T~300T 230V)

### 2.3.15 Electrical Components Layout (SHD-12~300 230V)



Picture 2-21: Electrical components layout 1(SHD-12~300 230V)



Picture 2-22: Electrical components layout 2 (SHD-12T~300T 230V)

### 2.3.16 Electrical Components List (SHD-12~300 230V)

Table 2-24: Electrical components list (SHD-12 230V)

1		2		3		4		5		5		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	D1	Circuit-breaker*	CHINT	DZ47-60		1	YE4060030000								
2		Excitation break away	CHINT	PK	230V 50/60Hz	1	YE4023560000								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601527000	A							
4	K2	Contact*	SIEMENS	3RT6016-1AN21	220V 50/60Hz	1	YE00601627000								
5	K3	Temp. Controller	SHINI	0-199°C	230V 50/60Hz	1	YE8501990000								
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE8602400000	(2)							
7	FU1	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YE4100100000								
8	FU2	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YE4100100000								
9	S1 S2	Alternative switch	SHINI	T120/55	4P (WH)	2	YE1021040000	(2)							
10	S3	Alternative switch	SHINI	T120/55	6P (WH)	1	YE1022060000	(2)							
11	S4	Overheat protector*	TONGBAO	KSD301	15A	1	----	(1)							
12	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
13	X1	Terminal	--	3ZA	2.5mm <sup>2</sup>	2	YE61250040000	(1)							
14	M1	Blower**	--	--	0.95kW	1	BM40001500950	(1)							
15	EH1	Heater**	SHINI	--	2.2kW	1	BHT01020300150	(1)							
C															
D															
Notes: (1)Means it's not the material inside the control box. (2) Strands for optional.															
				标题	SHD-12	图号	SHD-12~300-230V-E-7	比例		第 6 张					
				Electrical Components List			标准	CE	共 12 张						
				SHINI		信易电热机械股份有限公司		孔盖电压		230V					
				SHINI		Shini Plastics Technologies, Inc.		孔盖频率		60Hz					
标记	更改前	更改后	更改人	日期	审核	日期	20130710								
1															

\* 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.

Table 2-25: Electrical components list (SHD-25 230V)

1	2		3	4	5	5	6	7	8																																																																						
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark																																																																							
1	Q1	Circuit-breaker*	CHINT	DZ47-60	15A 3P	1	YE4-0601500000																																																																								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE4-0023560000																																																																								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000		A																																																																						
4	K2	Contact*	SIEMENS	3RT6017-1AN21	220V 50/60Hz	1	YE00601721000																																																																								
5	K3	Temp Controller	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000																																																																								
6	K4	24H Timer	PANASONIC	24H A-TB-7Z-D	230V 50/60Hz	1	YE860024-00000	(2)																																																																							
7	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE4-10010000000																																																																								
8	FU2	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE4-10010000000																																																																								
9	S1S2	Alternative switch	SHINI	T120/55	4P (WH)	2	YE102104-00000	(2)																																																																							
10	S3	Alternative switch	SHINI	T120/55	6P (WH)	1	YE10220600000	(2)																																																																							
11	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)	B																																																																						
12	M1	Blower*	--	--	0.12kW	1	BM4-0002500350	(1)																																																																							
13	EH1	Heater**	SHINI	--	3.0kW	1	BH70250300150	(1)																																																																							
Notes: (1)Means it's not the material inside the control box. (2) Stands for optional.																																																																															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">制图</td> <td colspan="2">版号</td> <td colspan="2">标题</td> <td colspan="2">型号</td> <td colspan="2">比例</td> </tr> <tr> <td colspan="2">设计</td> <td colspan="2">E</td> <td colspan="2">SHD-25</td> <td colspan="2">SHD-12-300-230V-E-8</td> <td colspan="2">第 7 张</td> </tr> <tr> <td colspan="2">校对</td> <td colspan="2">核</td> <td colspan="2">Electrical Components List</td> <td colspan="2">5HD-12-300-230V-E-8</td> <td colspan="2">共 12 张</td> </tr> <tr> <td colspan="2">审核</td> <td colspan="2">日期</td> <td colspan="2">SHINI</td> <td colspan="2">信易电热机械股份有限公司</td> <td colspan="2">机器电压</td> </tr> <tr> <td colspan="2">更改后</td> <td colspan="2">20130710</td> <td colspan="2">SHINI</td> <td colspan="2">Shini Plastics Technologies, Inc.</td> <td colspan="2">230V</td> </tr> <tr> <td colspan="2">更改者</td> <td colspan="2">日期</td> <td colspan="2">SHINI</td> <td colspan="2">Shini Plastics Technologies, Inc.</td> <td colspan="2">机器频率</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">60Hz</td> </tr> </table>										制图		版号		标题		型号		比例		设计		E		SHD-25		SHD-12-300-230V-E-8		第 7 张		校对		核		Electrical Components List		5HD-12-300-230V-E-8		共 12 张		审核		日期		SHINI		信易电热机械股份有限公司		机器电压		更改后		20130710		SHINI		Shini Plastics Technologies, Inc.		230V		更改者		日期		SHINI		Shini Plastics Technologies, Inc.		机器频率										60Hz	
制图		版号		标题		型号		比例																																																																							
设计		E		SHD-25		SHD-12-300-230V-E-8		第 7 张																																																																							
校对		核		Electrical Components List		5HD-12-300-230V-E-8		共 12 张																																																																							
审核		日期		SHINI		信易电热机械股份有限公司		机器电压																																																																							
更改后		20130710		SHINI		Shini Plastics Technologies, Inc.		230V																																																																							
更改者		日期		SHINI		Shini Plastics Technologies, Inc.		机器频率																																																																							
								60Hz																																																																							

\* 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.

Table 2-26: Electrical components list (SHD-50 230V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker*	CHINT	DZ47-60	15A 3P	1	YE4.061500000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE4.002350000								
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2	Contact**	SIEMENS	3RT6025-1AN20	220V 50/60Hz	1	YE00602520000								
5	K3	Temp. Controller	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000								
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE86002400000	{2}							
7	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE4.10010000000								
8	FU2	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE4.10010000000								
9	S1 S2	Alternative switch	SHINI	T120/55	4P (WH)	2	YE10210400000								
10	S3	Alternative switch	SHINI	T120/55	6P (WH)	1	YE10220600000	{2}							
11	S5	Thermocouple	SHINI	K TYPE	--	1	----	{1}							
12	M1	Blower**	--	--	0.12kW	1	BM4.0003000250	{1}							
13	EH1	Heater**	SHINI	--	3.9kW	1	BH700500300150	{1}							
Notes: (1)Means it's not the material inside the control box. (2) Stands for optional.															
		制图		版号		E		标题		图号		比例		第 8 张	
		设计		核				SHD-50		SHD-12-300-230V-E-9		标准 CE		共 12 张	
		校对		日期		20130710		SHINI		SHINI 塑料机械股份有限公司		机器电压		230V	
标记		更改前		更改后		更改人		SHINI		SHINI Plastics Technologies, Inc.		机器频率		60Hz	

\* 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.

Table 2-27: Electrical components list (SHD-75 230V)

1	2	3	4	5	6	7	8
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number
1	Q1	Circuit-breaker*	CHINT	DZ47-60	15A 3P	1	YE40601500000
2		Excitation break away	CHINT	KX	230V 50/60Hz	1	YE40022500000
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000
4	K2	Contact**	SIEMENS	3RT6026-1AN20	220V 50/60Hz	1	YE00602620000
5	K3	Temp. Controller	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE86024000000
7	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000
8	FU2	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000
9	S1 S2	Alternative switch	SHINI	T120/55	4P (WH)	2	YE10210400000
10	S3	Alternative switch	SHINI	T120/55	6P (WH)	1	YE10220600000
11	S5	Thermocouple	SHINI	K TYPE	--	1	----
12	M1	Blower**	--	--	0.12kW	1	BM40103000250
13	EH1	Heater**	SHINI	--	4.2kW	1	BH707050300050
Notes: (*)Means it's not the material inside the control box. (2) Stands for optional.							
				制圖	版号	图号	比例
				设计	核	SHD-12-300-230V-E-10	标准 CE
				校对	准	SHINI	初器电压
				日期	日期	SHINI 信易電熱機械股份有限公司 Shini Plastics Technologies, Inc.	初器频率
标记 更改前				更改后	更改人	20130710	230V
				日期	日期		60Hz
				2	3	4	5
				6	7	8	9
				10	11	12	13
				14	15	16	17
				18	19	20	21
				22	23	24	25
				26	27	28	29
				30	31	32	33
				34	35	36	37
				38	39	40	41
				42	43	44	45
				46	47	48	49
				50	51	52	53
				54	55	56	57
				58	59	60	61
				62	63	64	65
				66	67	68	69
				70	71	72	73
				74	75	76	77
				78	79	80	81
				82	83	84	85
				86	87	88	89
				90	91	92	93
				94	95	96	97
				98	99	100	101

\* 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.

Table 2-28: Electrical components list (SHD-100/150 230V)

1	2	3	4	5	6	7	8	
No	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	Q1	Circuit-breaker*	CHINT	DZL7-60	ZSA 3P	1	YE4.0625200000	
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE4.0023560000	
3	K1	Contact*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE006601521000	A
4	K2	Contact**	SIEMENS	3RT6026-1AN20	220V 50/60Hz	1	YE006602620000	
5	K3	Temp Controller	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000	
6	K4	24H Timer	PANASONIC	Z4H A-TB-72-D	230V 50/60Hz	1	YE860024.000000	{2}
7	FU1	Fuse**	YINDA	FS-10	6x30mm ZA 250V	1	YE4.10010000000	
8	FU2	Fuse**	YINDA	FS-10	6x30mm ZA 250V	1	YE4.10010000000	
9	S1 S2	Alternative switch	SHINI	T120/55	4P (W/H)	2	YE102104.00000	
10	S3	Alternative switch	SHINI	T120/55	6P (W/H)	1	YE10220600000	{2}
11	S5	Thermocouple	SHINI	K TYPE	--	1	----	{1}
12	M1	Blower**	--	--	0.12kW	1	BM4.0004.000150	{1}
13	EH1	Heater**	SHINI	--	6.0kW	1	BH70103800050	{1}
Notes: {1}Means it's not the material inside the control box. (2) Stands for optional.								
D		制图	版号	E	标题	图号	比例	第 10 张
		设计	核		SHD-100/150 Electrical Components List	SHD-12~300-230V-E-11	标准	共 12 张
		校对	准		SHINI	信易电热结构股份有限公司 Shini Plastics Technologies, Inc.	机器电压	230V
标记	更改前	更改后	更改人	日期	20130710		机器频率	60Hz
1	2	3	4	5	6	7	8	

\* 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.

Table 2-29: Electrical components list (SHD-200 230V)

1		2		3		4		5		6		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker**	CHINT	DZ47-60	40A 3p	1	YE40604-000000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contactor*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE06001521000								
4	K2	Contactor*	SIEMENS	3RT6028-1AN20	220V 50/60Hz	1	YE06002822000								
5	K3	Temp. Controller	SHINI	0-199°C	230V 50/60Hz	1	YE85019900000								
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE86002400000	(2)							
7	FU1	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
8	FU2	Fuse**	YINDA	FS-10	6x30mm 2A 250V	1	YE41001000000								
9	S1 S2	Alternative switch	SHINI	T120/55	4P (WH)	2	YE10210400010								
10	S3	Alternative switch	SHINI	T120/55	6P (WH)	1	YE10220600000	(2)							
11	S4	Overheat protector*	TONGBAO	KSD301	15A	1	----	(1)							
12	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
13	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250640000								
14	M1	Blower*	--	--	0.18kW	1	BM4-005-000150	(1)							
15	EH1	Heater**	SHINI	--	12kW	1	BH70203800050	(1)							
Notes: (1)Means it's not the material inside the control box. (2) Stands for optional.															
		制图		版号		E		标号		SHD-200		型号		SHD-12-300-230V-E-12	
		设计		核准				Electrical Components List						比例	
		校对		日期		20130710		SHINI						标准	
		审核		日期				SHINI						CE	
标记		更改前		更改后		更改人		日期						机器电压	
														230V	
														机器频率	
														60Hz	
											第 11 张		共 12 张		

\* 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.

Table 2-30: Electrical components list (SHD-300 230V)

1	2	3	4	5	6	7	8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark
1	Q1	Circuit-breaker*	CHINT	DZ47-60	50A 3P	1	YE4.0605000000	
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE4.0023500000	
3	K1	Contact*	SIEMENS	3RT16015-1ANZ1	220V 50/60Hz	1	YE00601521000	
4	K2	Contact*	SIEMENS	3RT15036-1AN20	220V 50/60Hz	1	YE00503600000	
5	K3	Temp Controller	SHINI	0-199C	230V 50/60Hz	1	YE85019900000	
6	K4	24H Timer	PANASONIC	24H A-TB-72-D	230V 50/60Hz	1	YE860024-00000	(2)
7	FU1	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YE4.10010000000	
8	FU2	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YE4.10010000000	
9	S1 S2	Alternative switch	SHINI	T120/55	4P (WH)	2	YE102104-00000	(2)
10	S3	Alternative switch	SHINI	T120/55	6P (WH)	1	YE10220160000	(2)
11	S4	Overheat protector*	TONGBAO	KSD301	15A	1	----	(1)
12	S5	Thermocouple	SHINI	K TYPE	--	1	----	(1)
13	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE1625004-00000	(1)
14	M1	Blower*	--	--	0.18kW	1	BH4.0005000150	(1)
15	EH1	Heater**	SHINI	--	15kW	1	BH70303800050	(1)
Notes: (1)Means it's not the material inside the control box. (2) Stands for optional.								
D		制图	版号	E	标题	图号	比例	第 12 张
		设计	核准		SHD-300	SHD-12-300-230V-E-13	标准	共 12 张
		校对	核准		Electrical Components List		机器电压	230V
		审核	日期	20130710	SHINI 信易电热机械股份有限公司 Shini Plastics Technologies, Inc.		机器频率	60Hz
标记	更改前	更改后	更改人	日期				
1	2	3	4	5	6	7	8	

\* 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.

### 2.3.17 Power, Diameter, Current (SHD-400~1000 230V)

Symbol Model	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
SHD-400	47.6	10.0	63	-	1.5	0.18	0.6	10.0	18	47
SHD-500	50.6	10.0	63	-	1.5	0.18	0.6	16.0	19.5	50
SHD-600	55.5	16.0	80	2.5	1.5	0.55	2.5	6.0x2	21	53
SHD-800	64.5	16.0	80	5.0	1.5	1.1	4.5	6.0x2	24	61
SHD-1000	86.5	25.0	100	5.0	1.5	1.1	4.5	10.0x2	32	82

(a) Total current

(b) Power cable diameter

(c) Rated current of circuit breakers

(d) Settings for drying blower loader

(e) Blower cable diameter

(f) Drying blower power

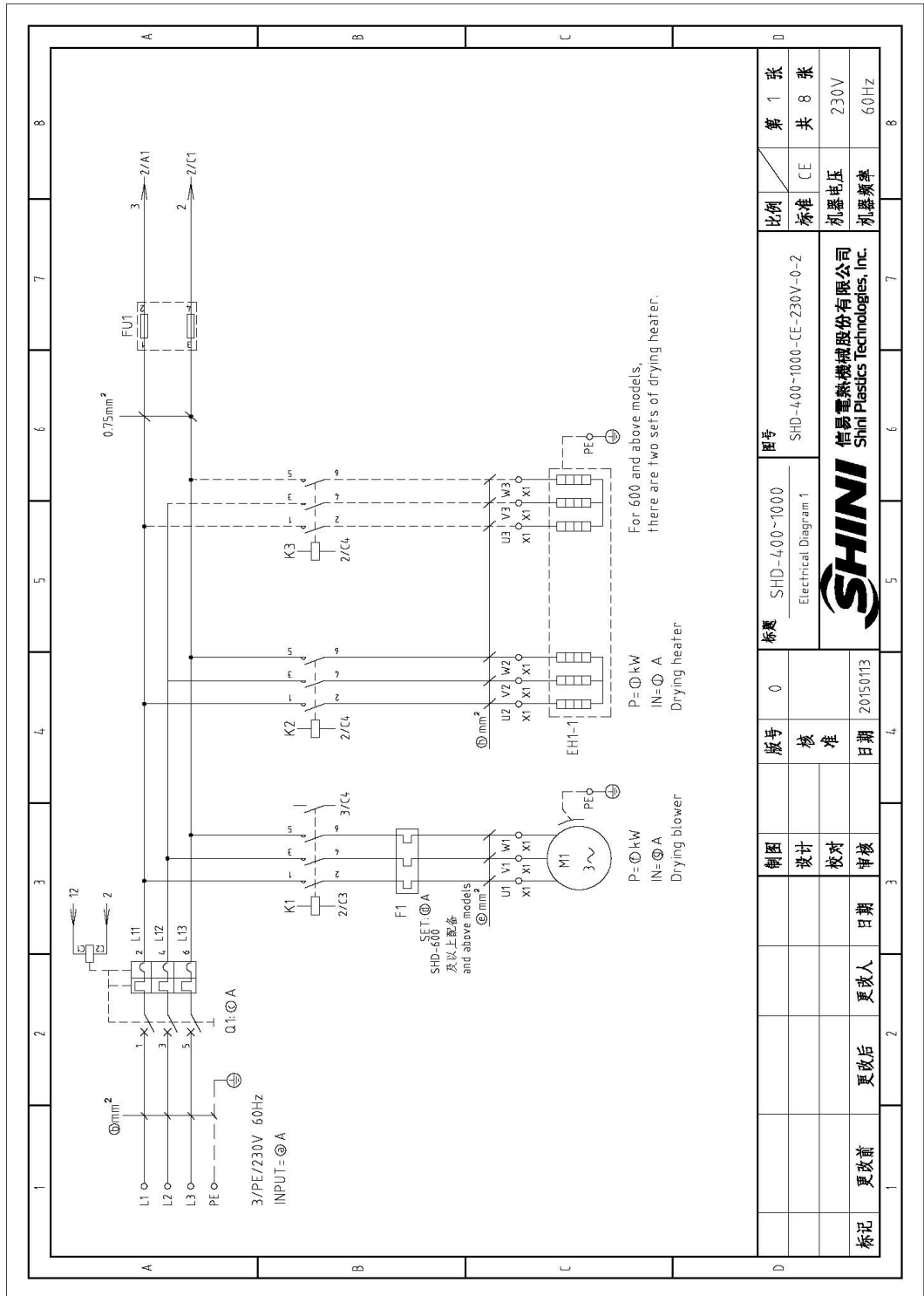
(g) Drying blower current

(h) Wire diameter of heater

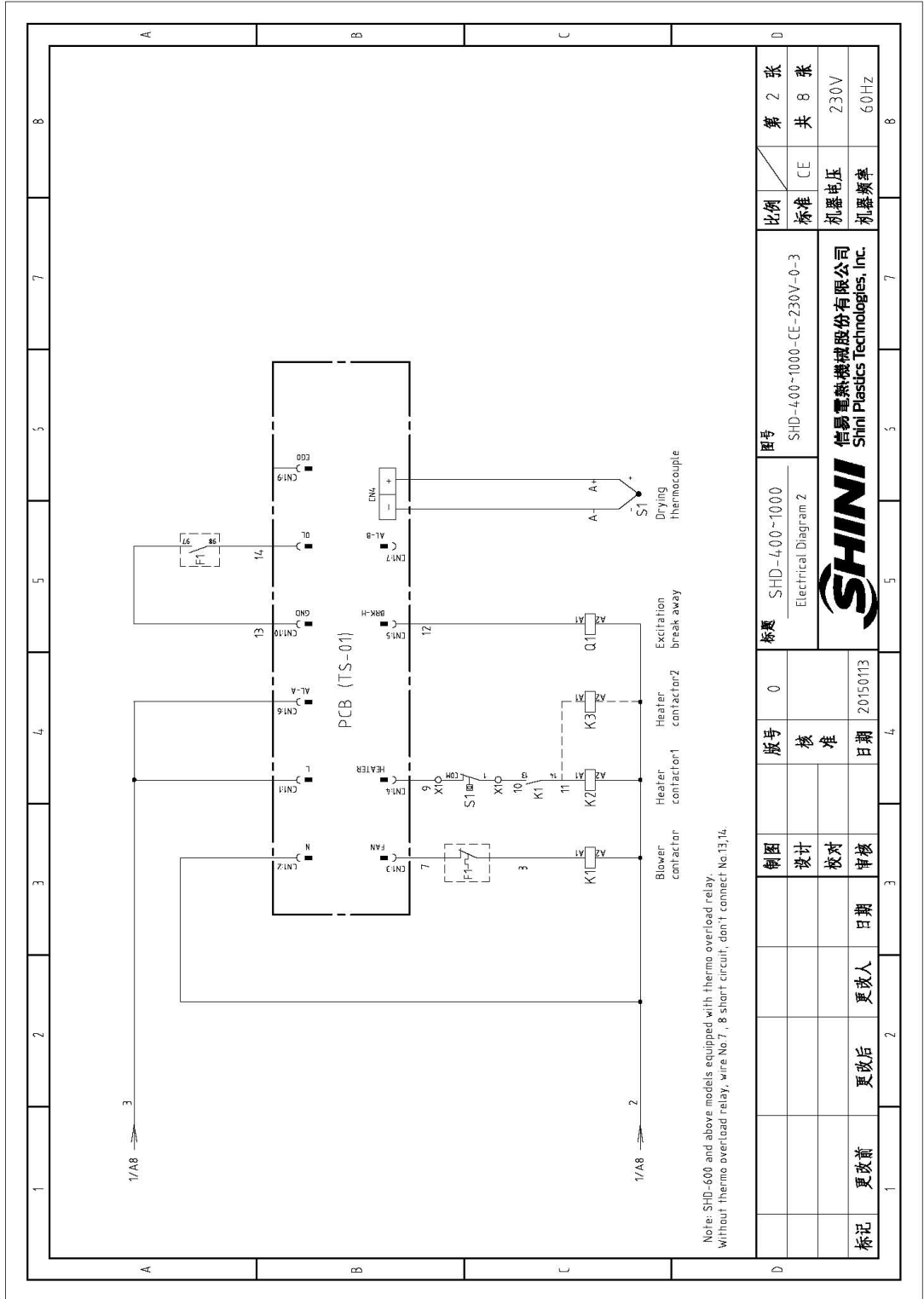
(i) Heater power

(j) Heater current

### 2.3.18 Electrical Diagram (SHD-400~1000 230V)



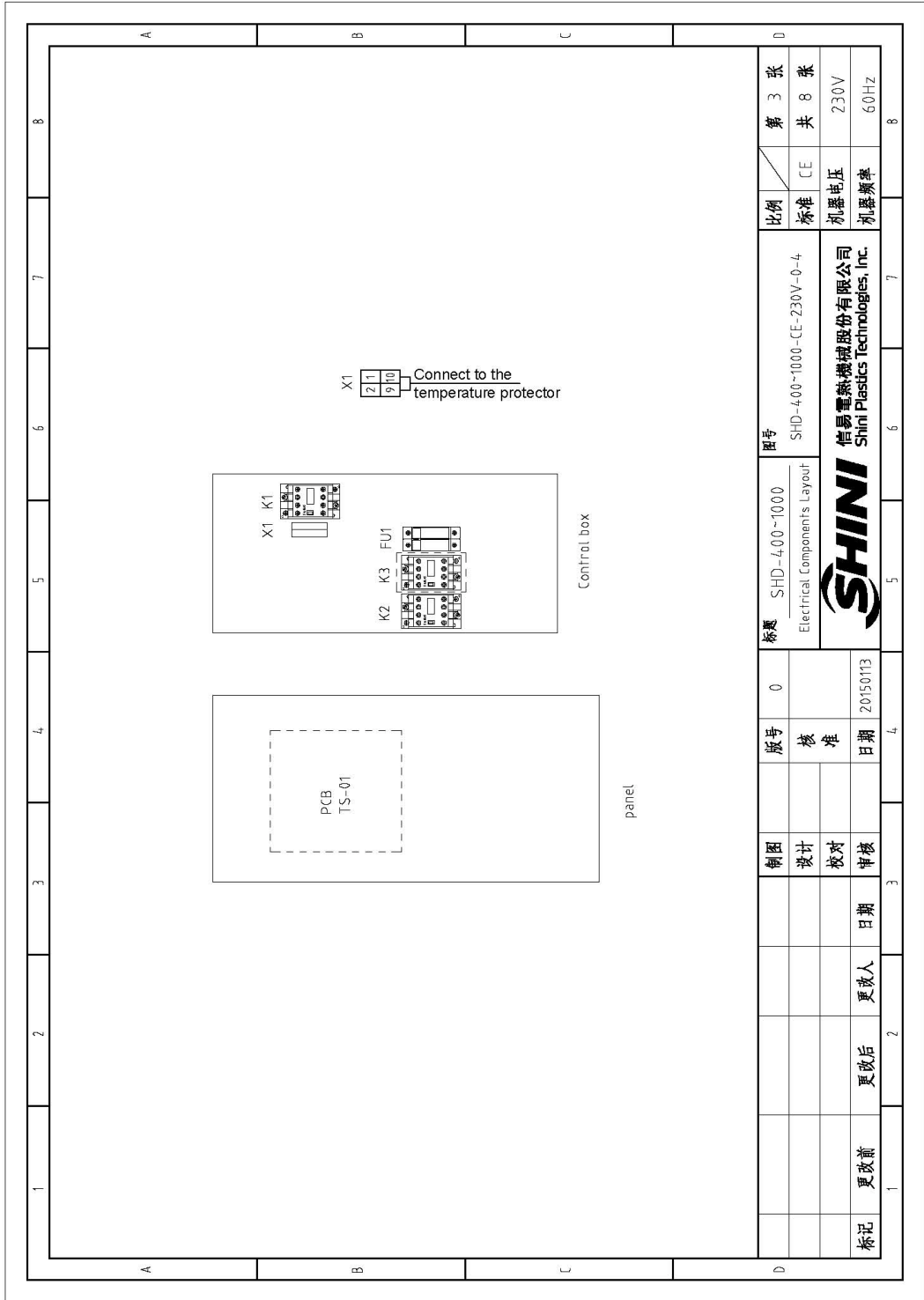
Picture 2-23: Electrical diagram 1 (SHD-400~1000 230V)



比例	第 2 张	图号	SHD-400~1000-CE-Z30V-0-3
标准	共 8 张	标题	SHD-400~1000 Electrical Diagram 2
机器电压	230V	SHINI 信昌电热机械股份有限公司 Shini Plastics Technologies, Inc.	图号
机器频率	60Hz		
制图	版号	核准	日期
设计	0	20150113	
校对			
审核			
更改前	更改后	更改人	日期

Picture 2-24: Electrical diagram 2 (SHD-400~1000 230V)

### 2.3.19 Electrical Components Layout (SHD-400~1000 230V)



Picture 2-25: Electrical components layout (SHD-400~1000 230V)

## 2.3.20 Electrical Components List (SHD-400~1000 230V)

Table 2-31: Electrical components list (SHD-400 230V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker**	TECO	BM-63L/3063S	63A 3P	1	YE40306303000								
2		Excitation Break Away	CHINT	MX	220V 50/60Hz	1	YE40023560000								
3	K1	Contact**	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000								
4	K2	Contact**	SIEMENS	3RT5036-1AN20	220V 50/60Hz	1	YE00503600000								
5	FU1	Fuse**	CHINT	RT18-32	32A 2P	1	YE41032200000								
6				10*38 500V	2A	2	YE46002000100								
7	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300								
8		Plastic box				1	YR40400200000								
9		Lamp cover of plastic box				1	YR90441300000								
10		Name plate				1	YR0105503300								
11	S1	Pressing plate of plastic box	TONCEAO	KSD301	15A	1	YR90000003300	(1)							
13	S2	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
14	X1	Terminal	---	32A	2.5mm <sup>2</sup>	2	YE61250040000								
15	M1	Blower**	---	--	0.18kW	1	----	(1)							
16	EH1	Heater**	SHINI	--	18kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box.															
				制图	版号	标题	图号	比例							
				设计	核准	0	SHD-4.00	CE							
				校对	日期	Electrical Components List	S-ID-4.00~1000-CE-230V-0-5	标准							
				审核	日期		信易塑料机械股份有限公司 Shini Plastics Technologies, Inc.	机座电压							
标记	更改前	更改后	更改人	日期	日期	20150113		机座频率							
				第 4 张											
				共 8 张											
				230V											
				60Hz											

\* 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.

Table 2-32: Electrical components list (SHD-500 230V)

1		2		3		4		5		6		7		8	
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	Q1	Circuit-breaker*	TECO	BM-63C/3063S	63A 3P	1	YE4.0306303000								
2		Excitation Break Away	CHINT	MX	220V 50/60Hz	1	YE4.0023560000								
3	K1	Contactor**	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE00601521000	A							
4	K2	Contactor**	SIEMENS	3RT5036-1AN20	220V 50/60Hz	1	YE00503600000								
5	FU1	Fuse**	CHINT	RT18-32	32A 2P	1	YE4.032200000								
6				10x38 500V	2A	2	YE4.6002000100								
7	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300								
8		Plastic box				1	YR4.04.00200000								
9		Lamp cover of plastic box				1	YR904.4.1300000								
10		Name plate				1	YR0105503300								
11		Pressing plate of plastic box				1	YR90000003300	B							
12	S1	Overheat protector*	TONEAD	KSD301	15A	1	----	(f)							
13	S2	Thermocouple	SHINI	K TYPE	--	1	----	(f)							
14	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE6125.004.0000								
15	M1	Blower*	--	--	0.18kW	1	----	(f)							
16	EH1	Heater**	SHINI	--	19.5kW	1	----	(f)							
Notes: (f)Means it's not the material inside the control box															
D		版号		0		图号		SHD-500		比例		第 5 张		第 8 张	
		核准				SHD-400~1000-CE-230V-0-6		Electrical Components List		标准		CE		共 8 张	
标记		更改前		更改后		更改人		日期		20150113		机座电压		230V	
		更改前		更改后		更改人		日期		20150113		机座频率		60Hz	
		核准				SHINI		SHINI Plasstics Technologies, Inc.		机座电压		230V		60Hz	

\* 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.

Table 2-33: Electrical components list (SHD-600 230V)

1	2	3	4	5	6	7	8
NO.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number
1	Q1	Circuit-breaker*	TECO	BM-100D/3080S	80A 3P	1	YE40308003000
2		Excitation Break Away	CHINT	MX	220V 50/60Hz	1	YE40023560000
3	K1	Contact*	SIEMENS	3RT16015-1AN21	220V 50/60Hz	1	YE00601527000
4	K2 K3	Contact*	SIEMENS	3RT16028-1AN20	220V 50/60Hz	2	YE00602822000
5	F1	Overload relay	SIEMENS	3RU6116-1DB0	2.2-3.2A	1	YE01160220000
6	FU1	Fuse**	CHINT	RT18-32	32A 2P	1	YE41032200000
7				10*35 500V	2A	2	YE46002000100
8	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300
9		Plastic box				1	YR40400200000
10		Lamp cover of plastic box				1	YR90413000000
11		Name plate				1	YR01105033000
12		Pressing plate of plastic box				1	YR9000000033000
13	S1	Overheat protector*	TONCEAO	KSD301	15A	1	----
14	S2	Thermocouple	SHINI	K TYPE	---	1	----
15	X1	Terminal	--	32A	2.5mm <sup>2</sup>	2	YE61250040000
16	M1	Blower*	--	--	0.55kW	1	----
17	EH1	Heater**	SHINI	--	21R-W	1	----
							(f)
							(f)
							(f)
							(f)

Notes: (f)Means it's not the material inside the control box.	
标题	SHD-600
图号	SHD-400~1000-CE-230V-0-7
Electrical Components list	
比例	第 6 张
标准	共 8 张
CE	230V
机器电压	60Hz
机器频率	

制图	版号	0
设计	核准	
校对	日期	20150113
审核	更改人	
标记	更改前	
	更改后	

\* 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.

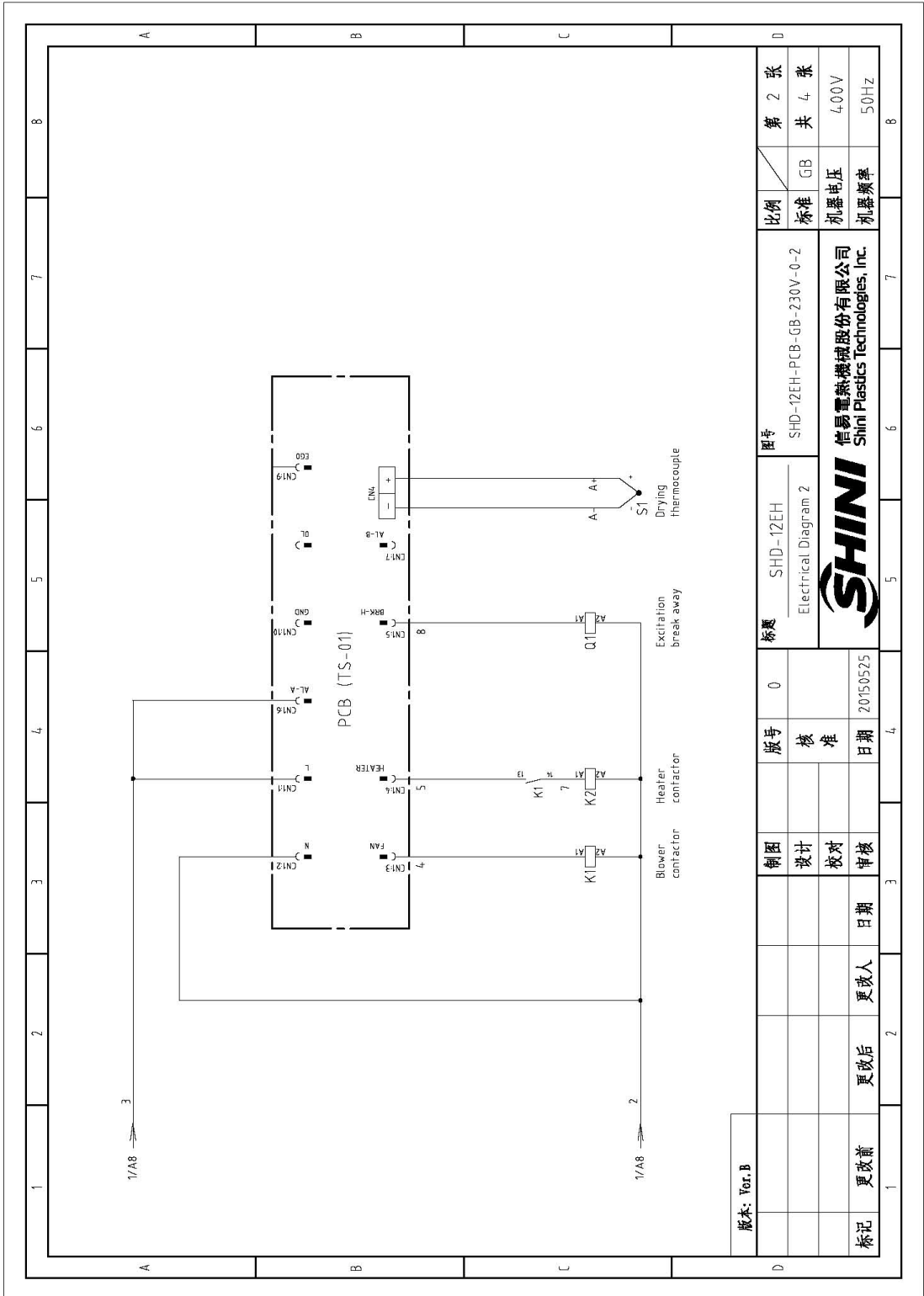


Table 2-35: Electrical components list (SHD-1000 230V)

1		2		3		4		5		6		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	D1	Circuit-breaker**	TECO	BM-100D/30100S	100A 3P	1	YE4031003000								
2		Excitation Break Away	CHINT	MX	220V 50/60Hz	1	YE40023560000								
3	K1	Contactor*	SIEMENS	3RT6015-1AN21	220V 50/60Hz	1	YE06601521000								
4	K2 K3	Contactor*	SIEMENS	3RT5035-1AN20	220V 50/60Hz	2	YE00503500000								
5	F1	Overload relay	SIEMENS	3RU6116-1CE0	4.5-6.3A	1	YE011604-50000								
6	FU1	Fuse**	CHINT	RT18-3Z	32A 2P	1	YE41032200000								
7				10*38 500V	2A	2	YE46002000100								
8	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE8000100300								
9		Plastic box				1	YR40400200000								
10		Lamp cover of plastic box				1	YR90441300000								
11		Name plate				1	YR01105503300								
12		Pressing plate of plastic box				1	YR90000003300								
13	S1	Overheat protector**	TONCEAO	KSD301	15A	1	----	(1)							
14	S2	Thermocouple	SHINI	K TYPE	---	1	----	(1)							
15	X1	Terminal	---	32A	2.5mm <sup>2</sup>	2	YE61250040000								
16	M1	Blower*	---	--	1.1kW	1	----	(1)							
17	EH1	Heater**	SHINI	--	32kW	1	----	(1)							
Notes: (1)Means it's not the material inside the control box															
		制图		版号		0		标题		型号		比例		第 8 张	
		设计		核				SHD-1000		SHD-400~1000-CE-230V-0-9		标准		CE	
		校对		准				Electrical Components List		SHINI		机器电压		230V	
标记		更改前		更改后		更改人		日期		20150713		机器频率		60Hz	
								SHINI		信易电热机械股份有限公司 Shini Plasitics Technologies, Inc.					

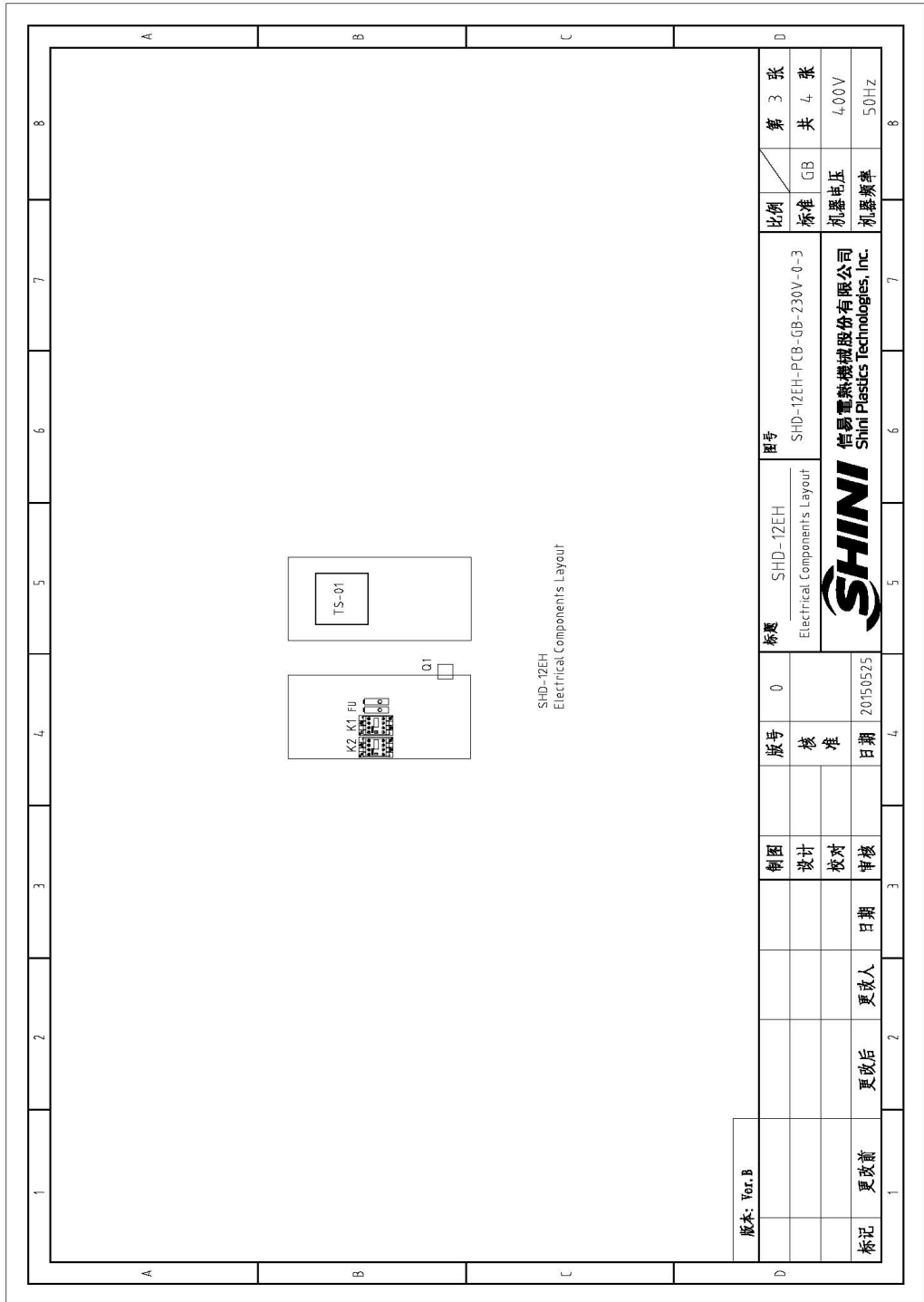
\* means possible broken parts. \*\* means easy broken parts and spare backup is suggested.  
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.





Picture 2-27: Electrical diagram 2 (SHD-12EH 230V)

### 2.3.22 Electrical Components Layout (SHD-12EH 230V)



Picture 2-28: Electrical components layout (SHD-12EH 230V)

### 2.3.23 Electrical Components List (SHD-12EH 230V)

Table 2-36: Electrical components list (SHD-12EH 230V)

1		2		3		4		5		5		7		8	
No.	Symbol	Name	Manufacturer	Type	Specification	Number	Material number	Remark							
1	D1	Circuit-breaker**	TECO	BM-63C	10A 3p	1	YE40301003000								
2		Excitation break away	CHINT	MX	230V 50/60Hz	1	YE40023560000								
3	K1	Contact**	SIEMENS	3RT6015-1ANZ1	220V 50/60Hz	1	YE00601521000								
4	K2	Contact**	SIEMENS	3RT6015-1ANZ1	220V 50/60Hz	1	YE00601521000								
5	FU1	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YE41001000000								
6	FU2	Fuse**	YINDA	FS-10	6*30mm 2A 250V	1	YE41001000000								
7	PCB	PCB	YUYUN	TS-01	220V 50/60Hz	1	YE80000100300								
8		Plastic box				1	YR40400200000								
9		Lamp cover of plastic box				1	YR90413000000								
10		Name plate				1	YR010550300								
11		Pressing plate of plastic box				1	YR90000003300								
12	S1	Thermocouple	SHINI	K TYPE	--	1	----	(1)							
13	X1	Terminal	--	3ZA	2.5mm <sup>2</sup>	2	YE67250040000								
14	M1	Blower**	--	--	0.05kW	1	----	(1)							
15	EH1	Heater**	SHINI	--	2.2kW	1	----	(1)							
<p>版本: Ver. B      Notes: (1)Means it's not the material inside the control box.</p>															
				制图	版号	0	标题		SHD-12EH	图号	S-ID-12EH-PCB-GB-230V-0-4		比例	第 4 张	
				设计	核		电气元件明细表一		标准		GB		共 4 张		
				校对	准		SHINI		标准		机要电压		230V		
				审核	日期	20150525	SHINI		标准		机要频率		50Hz		
标记				更改前	更改后	更改人	日期	SHINI		标准		机要电压		230V	
				更改前	更改后	更改人	日期	SHINI		标准		机要频率		50Hz	

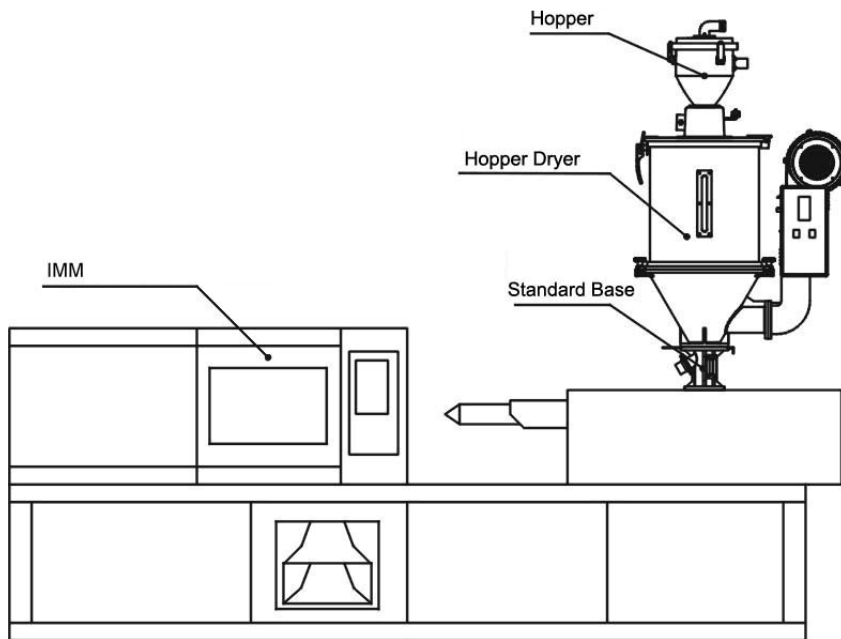
\* means possible broken parts. \*\* means easy broken parts and spare backup is suggested. Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

### 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



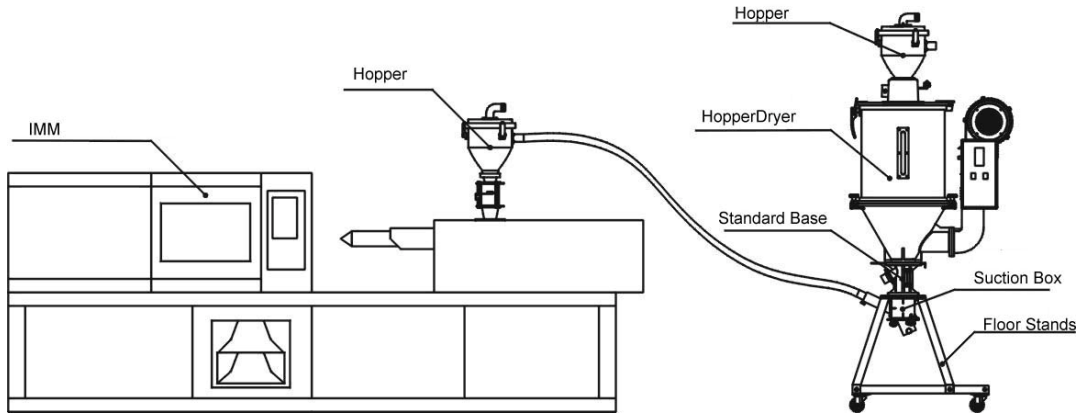
Picture 3-1: Direct installation

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 direction 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 Cyclone Dust Collector /Air-Exhaust Filter

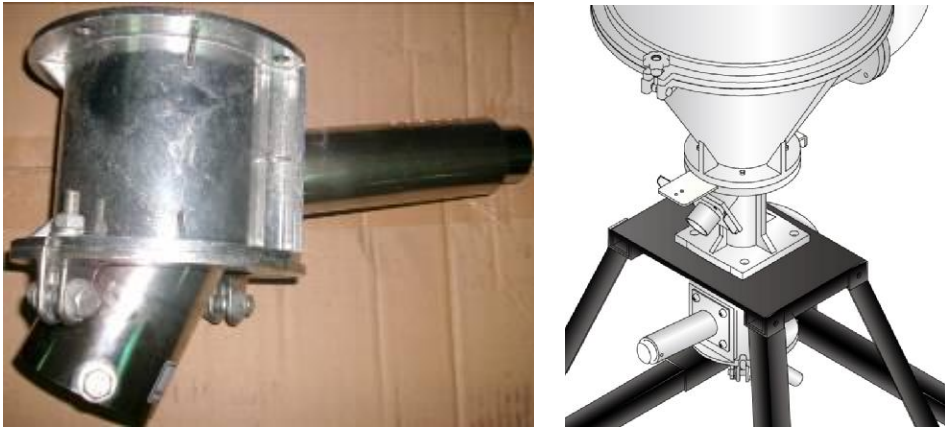
If the materials contain dust or to avoid the dust-contain air exhausted by dryer polluting the workshop's environment. Option with air-exhaust cyclone dust collector HCF or air-exhaust filter ADC can filter the exhausted air from the dryer. HCF can reach filter efficiency of 80% and ADC can reach filter 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  
Middle : Air-exhaust cyclone dust collector  
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: Right: 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

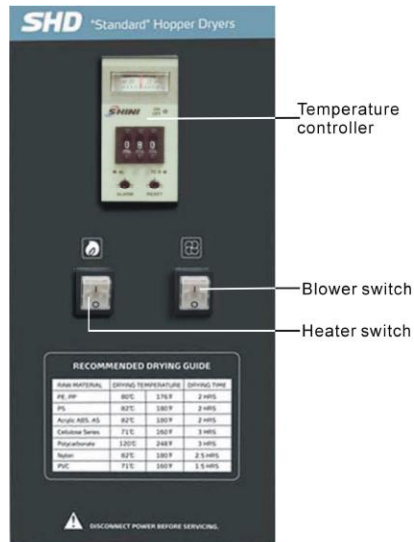
Based on AIF blower inlet filter, using a hear-resistance pipe to connect the hopper exhausting air to AIF. Thus to form a hot air recycler. By recycling the hot air can at most save energy consumption by 40%.



Picture 3-8: Hot air recycler

## 4. Operation Guide

### 4.1 Control Panel

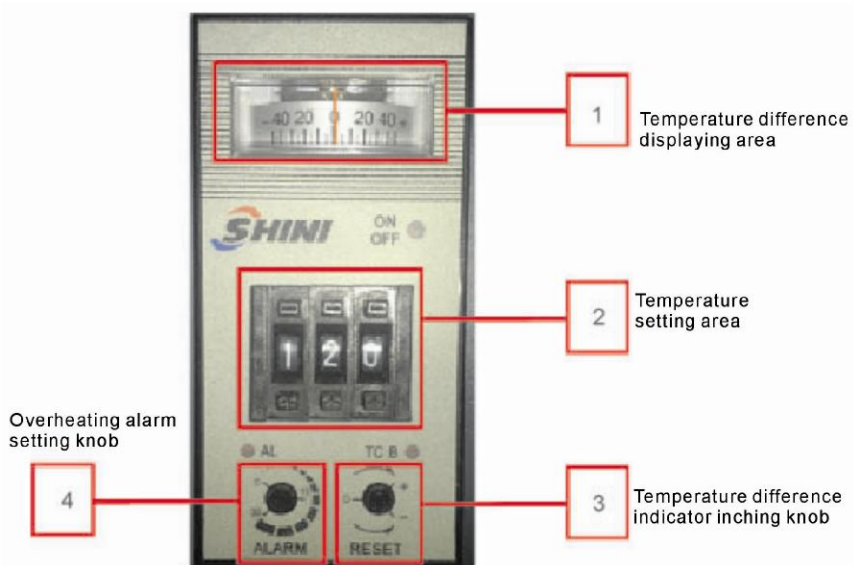


Picture 4-1: Control panel

#### 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°C, 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  $\pm 2^{\circ}\text{C}$ .
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  $15^{\circ}\text{C}$ .

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  $328^{\circ}\text{C}$ , the lead sheet will break itself and stop heating (as picture 4-3). SHD-200 and models above, adopts overheat protector It is mounted on fixing pole at the back of control box. When detecting the temperature of fixing pole over  $130^{\circ}\text{C}$ , the protector will cut off the power supply (as picture 4-4).

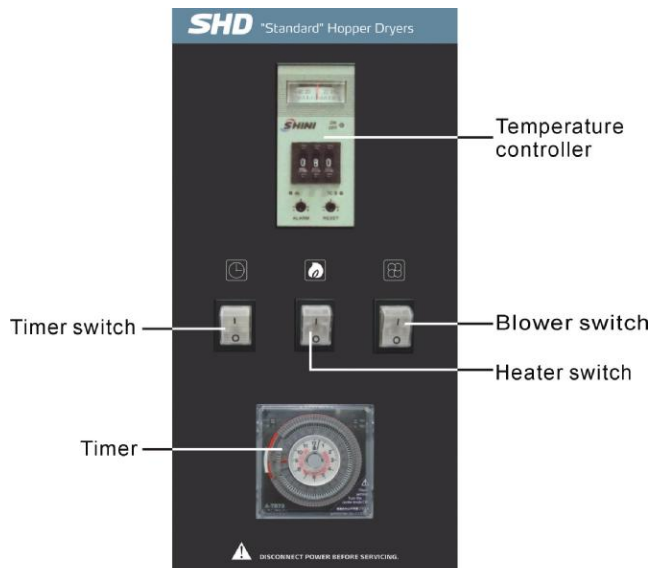


Picture 4-3: Lead sheet fuse



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.

## 4.3 Control Panel(SHD-400~1000)



Picture 4-7: Control Panel(SHD-400~1000)

### 4.3.1 Panel Operation

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

### 4.3.2 Temperature Setting

- 1) The setup number will flicker after pressing "Meun" key, add or decrease temperature by pressing“Up”or “Down”key.
- 2) Press " Setup" key again to confirm the input value.

### 4.3.3 Temperature Lock

- 1) Press “menu” key for 2 seconds, it displays “TIME” .
- 2) Press “page up” repeatedly, till it display “LOCK”;
- 3) Press “Setup” key, the set value flickers, press “Up”or “Down” key to select “YES”(lock temperature setting) and “NO” (don’t lock).
- 4) Press “Setup” key to confirm the input value.
- 5) 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.



#### 4.3.4 PID Setting

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



- 2) Press “Setup” key, the set value flickers, then press “Up” or “Down” key to add or decrease the value.
- 3) Press “Setup” key to confirm the input value.
- 4) Press “page up” key again and again, it displays “I” (integral time ) and “D” (differential time) setting accordingly.
- 5) Repeat above step2 and step 3, input and confirm related parameters.
- 6) 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	5
Integral time	I	200
Differential time	D	30
Over-temp alarm	OTP	15°C
Control cycle	HCLE	15
Blower delay	FDLY	180
Temp. unit	UNIT	°C

#### 4.3.5 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.

#### 4.3.6 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).

#### 4.3.7 Communication Setting (optional functions)

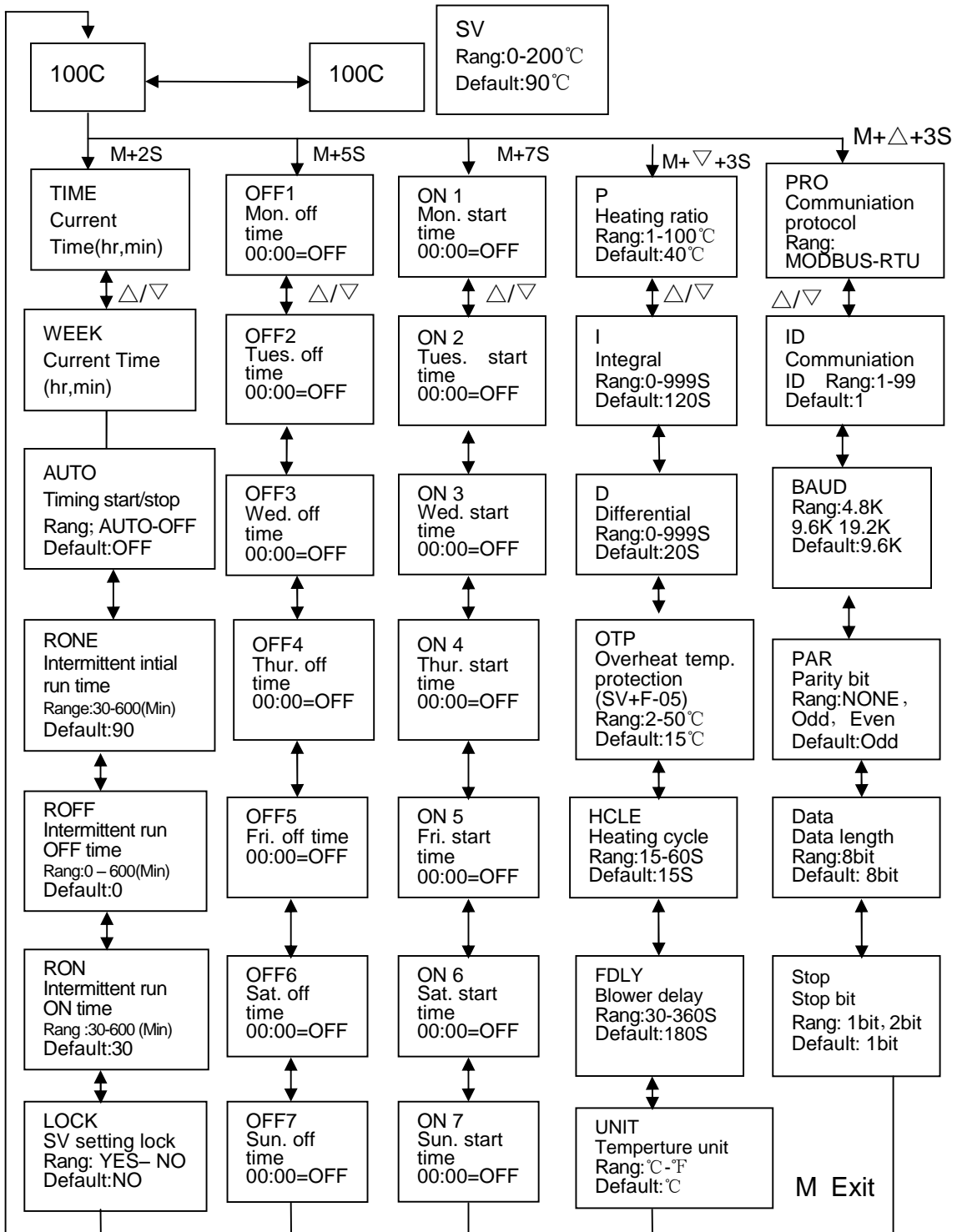
- 1) Press both “Menu” and “Up” for 3 seconds, it displays “PRO”(communication protocol) setting.  
(Notes: communication protocol is fixed to Modbus RTU protocol—“RTU”.)



- 2) Press “page 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 add or decrease the value.
- 4) Press “Setup”key to confirm the input value;
- 5) Press “page 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

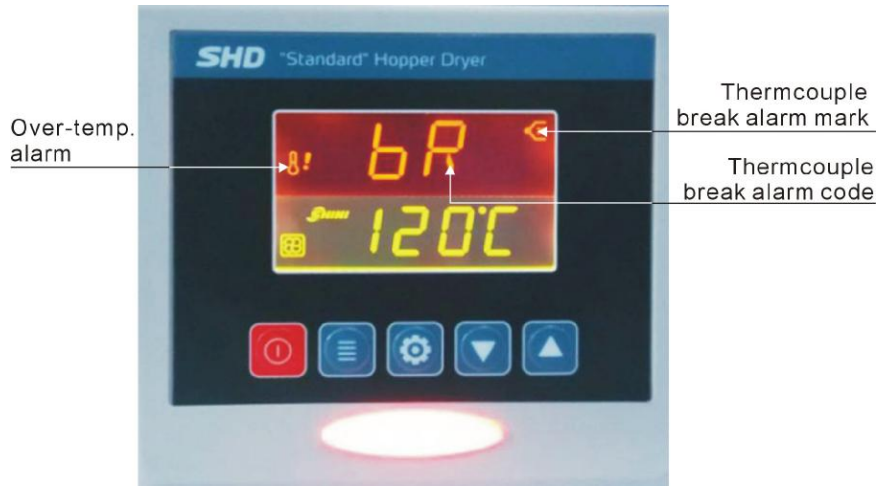
### 4.3.8 Operation Flow



M stands for: Menu key

Δ/∇ stands for: Up/Down key

### 4.3.9 Wrong Codes Remark



Wrong Codes	Remark
bR	Thermocouple break alarm
oH	Over-temp alarm
oL	Overload alarm
EGO	EGO Over-temp heater cable cut off

## 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 the electrical 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.