

USER'S MANUAL

(AZ-Series NOZZLE TYPE VACUUM SEALER)



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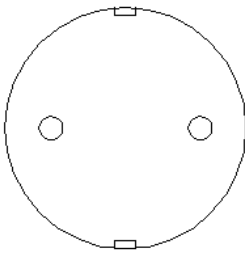
1. INTRODUCTION

Thank you for your purchase. This machine is a **nozzle type vacuum and gas flushing packaging machine**. The machine does vacuuming and gas flushing directly to the inside of the vacuum bag by using a nozzle to protect packed goods from oxidation, moisture, external shock, static electricity, etc.

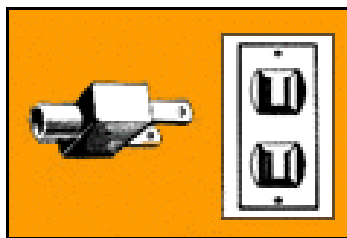
Before you start to use the machine, it is **essential to read this user's manual** with full attention so that no accident or injury from the malfunction of the machine should occur. **For any accident or injury caused by that the user does not conform to this user's manual, INTRISE CO. LTD has no legal liability.** Therefore, **please keep this user's manual near you** whenever you use the machine.

If you need more information beyond or have any question about the content of this **user's manual**, please feel free to contact to the following address ;

1-1 The type of electricity and electricity plug



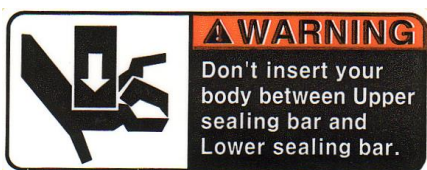
1 ph, 220V



1 ph, 110V

The above types are just one example and there could be other types according to the model, nation, etc

1-2 Caution label



The caution not to insert the hand between the sealing bars.



The caution against a danger of burn by heat around heat wire

1-3 Location of caution label



2. OPENING THE PACKED BOX OF THE MACHINE

After opening the packed box of the machine, please check up as follows ;

- A. Is the model same as your order ?
- B. Are there all things listed from 2-1 to 2-4 ?
- C. Is there any damage to all things listed from 2-1 to 2-4 ?

2-1 The machine

2-2 Spare Parts

- 1) Heat Wire
- 2) Teflon Tape
- 3) Fuse

2-3 Tool set

- 1) Driver
- 2) Wrench set
- 3) Spanner (13mm)

2-4 Others

- 1) Work tray ([Except for AZV-type](#))
- 2) User's manual

4. CAUTION FOR USE

4-1 Caution for safety

- 1) **In case of emergency, please pull off the power plug.** Basically, circuit protection fuses are installed to cut off any irregular electricity shock. Nevertheless, if there is any emergency including a breaking out of a fire on the Teflon tape, pull off the power plug.
- 2) **The user must use just the electricity power stipulated at this manual.**
- 3) **In case of exchanging any part of the machine, the power plug must be pulled off.** And, to prevent any malfunction or accident, **it is prohibited to use of part against the specification stipulated by the manufacturer.**
- 4) **It is prohibited that the buyer by himself rebuilds the machine.**
- 5) **Electricity flows on the heat wire. Please do not insert any metal product between sealing bars not to receive electricity shock.**
- 6) **If N.F.B automatically turns off, the user must find out the reason and take necessary measures before the user turns on N.F.B. (Please refer to 20-10. If N.F.B (NO FUSE BREAKER) turns off)**
- 7) **Please avoid installing the machine in the place where it is full of dust, or high temperature and high humidity. Especially, the temperature of work place suitable for this machine is 0~50 °C.**
- 8) **Please do not insert the hand between the sealing bars.**
 - (1) A long time use of the machine accumulates heat around heat wire, and there is a danger of burn.
 - (2) There is a chance that the power of the upper sealing bar's going down hurts fingers. (Regarding this, this machine has safety sensors so that sealing bar returns immediately to the original state when finger, alien substance or packed object get caught in.)
- 9) **Before mass operation, please find out proper sealing time and cooling time through a full sealing test.**
- 10) **Please check up whether there is any damage on Teflon sheet, Teflon tape, sealing rubber.**
- 11) **If the packing is wrongly operated, please push the STOP button. Then, the packing is instantly suspended and the nozzle moves back and the upper sealing bar go up.**
- 12) **To reduce the risk of electric shock, disconnect power cord set before cleaning**
- 13) **You must lock up the gas cock of external gas line to cut off gas inflow to the machine in the follow cases ;**
 - (1) **When the user does not use machine**
 - (2) **When the user does not use gas function of machine**
 - (3) **When there is any gas leakage on the gas line**

14) You must NOT use any explosive gas for gas flushing packing.

4-2 Method to make a good sealing

- 1) **Please set sealing time as short as possible in the range that sealing is possible.** An unnecessary long sealing time can do damage to Teflon sheet, Teflon tape, heat wire, etc, make sealed surface of packing film bad, and cause low productivity and high electricity consumption.
- 2) **Please set cooling time fully** (generally, 3.5~ 4 times as long as sealing time. Please refer to **13. SETTING PPOPER TIME/VACUUM DEGREE**). A full cooling time make sealed surface of packing film good. (Cooling is a state that heat of heat wire radiates while 2nd going down of upper sealing bar continues.)
- 3) **Please check up whether there is any damage on Teflon sheet, Teflon tape, sealing rubber.** If there is any damage, exchange it with new one. (Refer to **16. CONSUMABLES CHANGE**)
- 4) **A long time use of this machine raises the temperature of sealing bar and can change proper sealing condition. Please set sealing time more short and cooling time more long.**
- 5) **Please check up whether sealing bars are clean.** Any alien substance on there can not only make sealed surface of packing film bad but do damage to heat wire.
- 6) **Before 1st going down of upper sealing bar, the nozzle must be into the bag and the bag should be pulled at both sides with full tension by the user's hands.** It makes much more perfect vacuuming and clean sealing to prevent any vacuum leakage and wrinkle.
- 7) **Please check up whether the sealing is done rightly.** Put the packing film into the water, and check up whether bubbles come from it. **Especially, this is necessary in the case of Gusseted packing film, because each part of the packing film has different thickness,**

5. DEFINITION & BASIC FUNCTION OF THE MACHINE

5-1 DEFINITION OF THE MACHINE

Airzero vacuum sealer is a **nozzle type vacuum and gas flushing packaging machine**. The machine does vacuuming and gas flushing directly to the inside of the vacuum bag by using a nozzle to protect packed goods from oxidation, moisture, external shock, static electricity, etc.

5-2 BASIC FUNCTION OF THE MACHINE

If the user pushes the MODE button on control box, the work is changed as follows :

- 1) S MODE : Sealing
- 2) V MODE : Vacuum → Sealing
- 3) PROGRAM MODE (1 ~ 8)
 - (1) Gas flushing → Sealing
 - (2) Vacuum → Gas flushing → Sealing
 - (3) Gas flushing → Vacuum → Sealing
 - (4) Vacuum → Gas flushing → Vacuum → Sealing
 - (5) Gas flushing → Vacuum → Gas flushing → Sealing
 - (6) Vacuum → Gas flushing → Vacuum → Gas flushing → Sealing

6. USABLE RANGE OF PACKING ENVELOPE

6-1 This machine's sealing process is as follows ; 1. Press packing film with sealing bars, 2. Flow electricity on heat wire, 3. Hot-press and melt packing film by thermal conduction, 4. After sealing time, radiate the heat on sealing bar.

This machine can seal most of common packing film. But, Sealing may be impossible if packing film is too thick or the smelting point is too high.

6-2 The thickness of packing film that this machine can seal is as follows ;

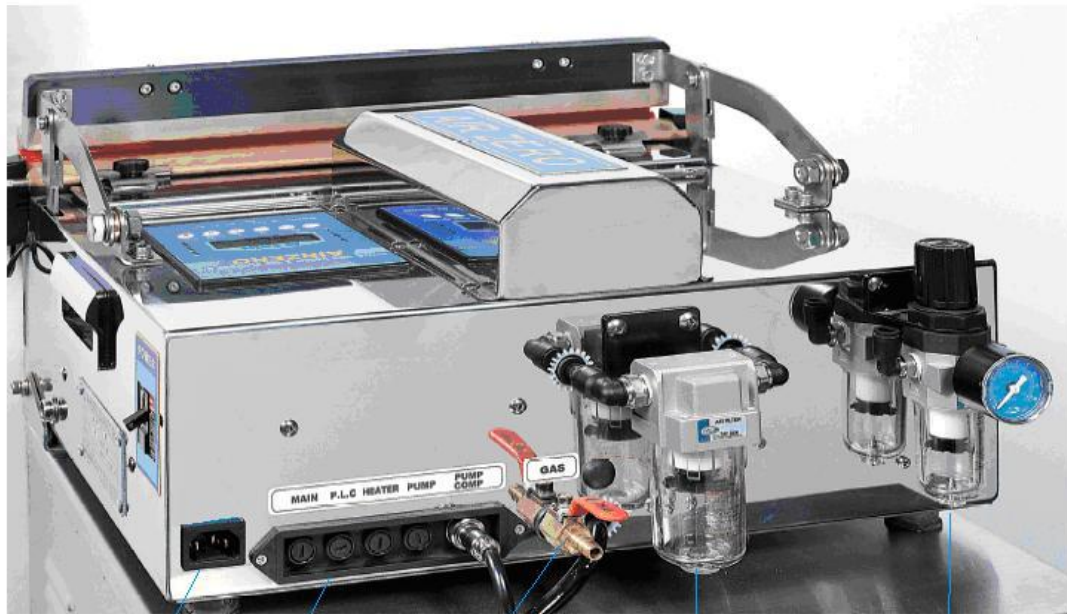
Heat wire	Width of Heat wire	The thickness of packing film (In terms of one layer of film is measured)
Single	5 mm	less than 0.25 mm
	10 mm	less than 0.3 mm
Up and low double	5/10 mm	less than 0.4 mm

* There is some variance of the limit of thickness of film to be sealed according the film's material

7. NAME OF EACH PART

7-1 AZ-type





ELECTRICITY
INLET

FUSE

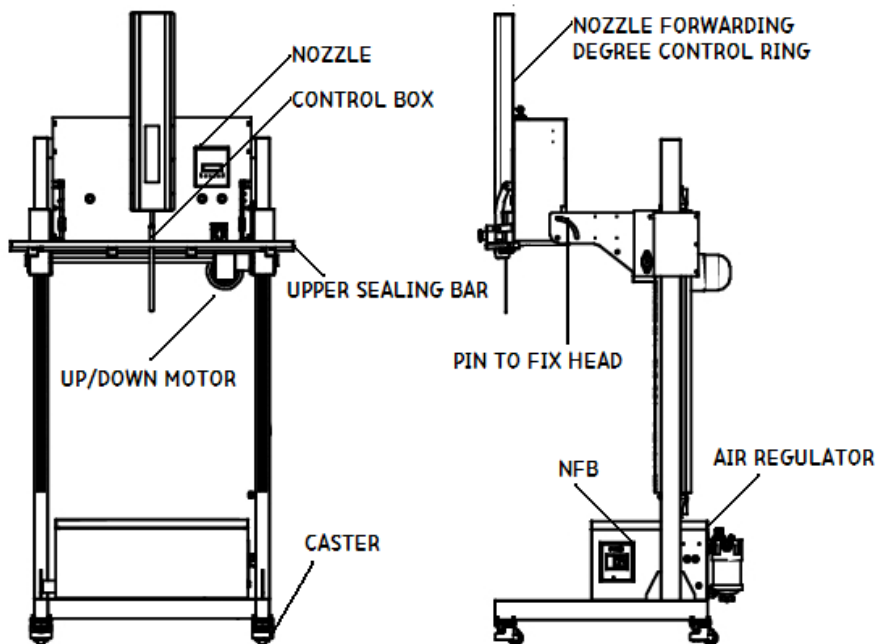
GAS COCK

VACUUM
FLITER

AIR REGULATOR

PROPER AIR PRESSURE IS 6 kg/cm²

7-2 AZV-type



- 1) **NOZZLE** : This is to suck air from and insert gas to the packing envelope.
- 2) **UPPER SEALING BAR** : This is to press the front of the packing envelope during the 1st going-down of upper sealing bar and to seal the front during the 2nd going-down of upper sealing bar.
- 3) **CONTROL BOX** : Refer to 9. FUNCTION & USE OF EACH BUTTON ON CONTROL BOX
- 4) **N.F.B (No Fuse Breaker)** : This is to cut off the supply of electricity against the an electric leakage and overload
- 5) **AIR REGULATOR** : This is to control the pressure degree of compressed air supplied to the machine.
- 6) **UP/DOWN BUTTON** : This is to control the height of the machine's upper body.
- 7) **PIN TO FIX HEAD** : The user adjust and fix the angle of the head between 0 ~ 90 ° by using this.
- 8) **CASTER** : This is used to move the machine.
- 9) **NOZZLE FORWARDING DEGREE CONTROL RING** : With this, the degree nozzle moves forward can be controlled. So, the case user can set the nozzle to move deeply into packing film so that it can get close to the packed object. (If the nozzle is too far from the packed object, both sides of packing film stick to each other which prevents air from being sucked fully out.)

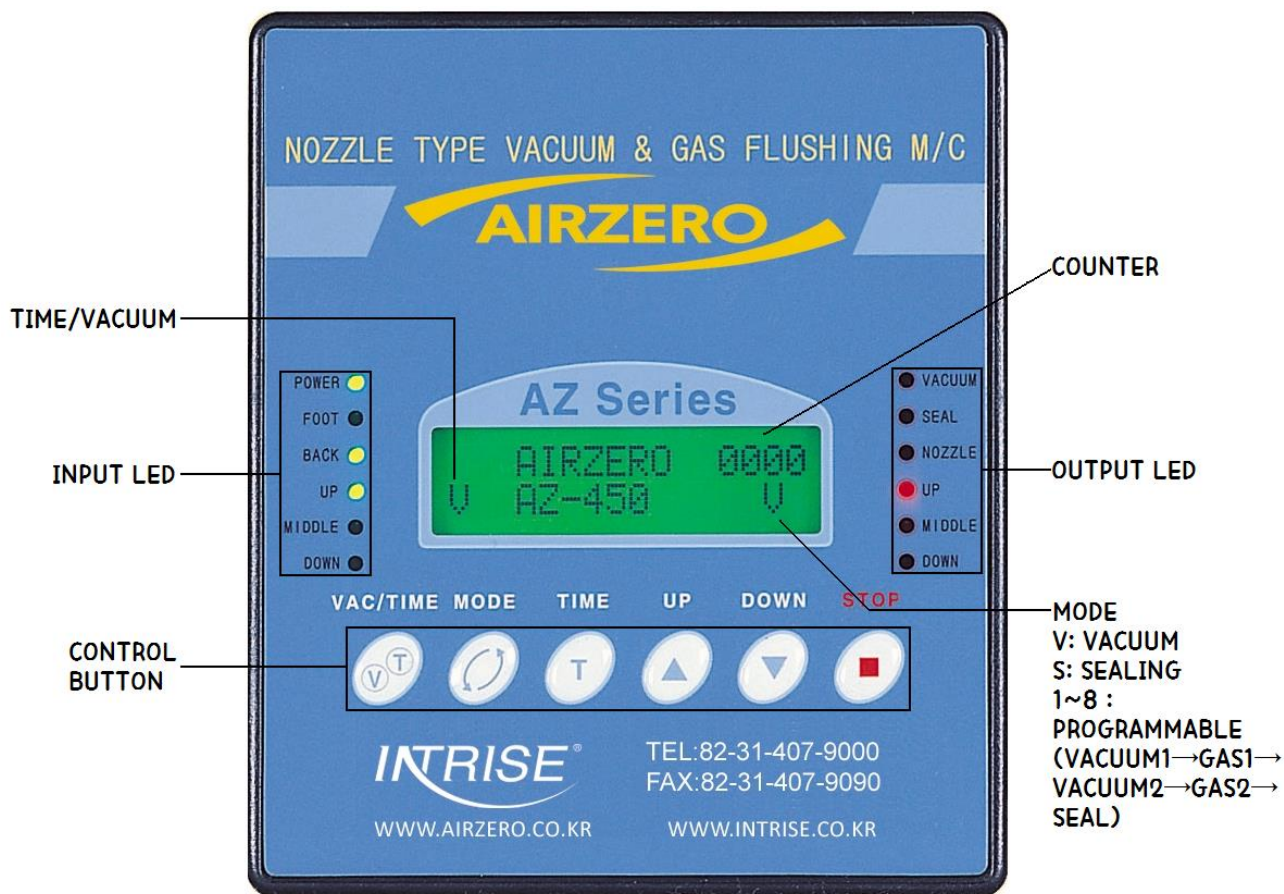
8. INSTALLATION

- 8-1 Place the machine on a **plane around where it is well ventilated to be not humid and protected from any external shock.**
- 8-2 **By using the caster**, set the horizontal of the machine and locate it to the proper place. (Except for DESKTOP TYPE)
- 8-3 **Connect electricity strictly according to the name board on the machine (If you use any other type of electricity different from the type at the name board , the machine will get broken out.)** and connect the **ground wire**. (This machine adopts the power plug which has ground connection. But, if the power outlet of work place has no ground connection, the user must by himself connect to the ground wire to the body of machine.)
- 8-4 Connect FOOT S/W to 2P connector of the machine. (Regarding 2P connector, refer to **18. INSIDE DRAWING**)
- 8-5 The machine needs compressed air for operating. Therefore, it needs a compressor, of which the capacity is above **250 NI/m for AZ-type** and above **350 NI/m for AZV-type** respectively. The pressure of compressed air supplied to the machine should be set at **5~6.5 kgf/cm²**. If the compressed air of more than **7 kgf/cm²** is supplied continuously, it can do damage to any part of the machine. In the other hand, if the compressed air is less than **4.5 kgf/cm²**, there is a chance that the machine does not operate well.
- (Pull up the air regulator and turns right (clockwise). Then, air pressure goes up. If the air regulator is turned left (counterclockwise), air pressure goes down. Set the air pressure about at **6 kgf/cm²** and push the air regulator down to be locked.
- In the other hand, if the compressed air contains a lot of liquid, there is a chance that the machine does not operate well. Get rid of the liquid from the compressed air. In addition to that, if the air regulator contains liquid, get rid of the liquid by pushing the pin attached at the bottom of the air regulator.
- 8-6 Connect a gas line. Keep up gas pressure at proper degree by using the pressure controller.
- * The proper pressure is **1~5 kgf/cm²** and should be set to match well with the gas time according to the quantity of inserted gas relying to the size of bag. (But, you must set the gas pressure **not more than 5 kgf/cm²**)
- 8-7 Connect Foot S/W to the machine.

9. PREPARATION OF OPERATION

- 9-1 After the fulfillment of above installation condition, turn on the power switch.
- 9-2 Check up whether the **air pressure** is at **5~6.5 kgf/cm²**.
- 9-3 Start the work after setting exactly **TIME** and **MODE**. (Refer to 10. **FUNCTION & USE OF EACH BUTTON ON CONTROL BOX**)

10. FUNCTION & USE OF EACH BUTTON ON CONTROL BOX



10-1 VAC/TIME

This button is to select whether you control vacuum procedure **by time** or **by vacuum degree**.
(T and V appear at the lower-left side of LCD)

T : Time of vacuuming

The machine is operated by the preset **time** for vacuuming. When you select 25, the vacuum works for 2.5 second and the nozzle moves backward after that.

V : Vacuum Degree (Kpa) of vacuuming

The machine is operated by the preset **vacuum degree**. If you select 45, the vacuum works until the **vacuum degree for the inside of vacuum bag approaches to 45 Kpa** and the nozzle moves backward after that. Therefore, it is not related to vacuuming time.

10-2 MODE

This button decides the type of work. PROGRAMMABLE 1 ~ 8, VACUUM, and SEALING are changed one by one for each press of MODE button. (1~8, V, and S mean respectively PROGRAMMABLE, VACUUM, and SEALING which appear at the lower-right side of LCD)

10-3 TIME

This button decides target time or target degree of each process the user wants to get. With each pressing of TIME button, the turns are changed one by one from VACUUM1, VACUUM2, GAS1, GAS2, and SEALING to COOLING. Then, for each of them, you can adjust time or vacuum degree by UP and DOWN button. (If V is set by using VAC / TIME button, the value below VACUUM1 and VACUUM2 means vacuum degree)

10-4 UP

Increase time / vacuum degree for each selected process.

10-5 DOWN

Decrease time / vacuum degree same as 6-4

10-6 STOP

This is the Stop button. If you press the button, the machine comes back to the original state. So, the nozzle moves backward and the sealing bar moves up.

11. OPERATION PROCEDURE

11-1 Turn on N.F.B and check whether AIRZERO AZ-() appears on LCD screen. If other words appear, check whether the compressed air is supplied properly. (Refer to 8-5)

11-2 Press VAC/TIME button and Select whether to do vacuum procedure by time or vacuum degree. (T-time, V-vacuum degree)

11-3 Press MODE button to select the work which you want to do among 1 ~ 8, V or S.

11-4 Set time or vacuum degree, for each of VACUUM1, VACUUM2, GAS1, GAS2, SEALING and COOLING, using by TIME and UP and DOWN button.

11-5 If you press STOP button, all processes are suspended and the machine comes back to original state. So, the nozzle moves backward and the sealing bar moves up.

11-6 Each MODE under setting appears at the upper-middle row of LCD. The value of TIME/VACUUM DEGREE appears at the lower-middle side of LCD. The V or T of VAC/TIME appears at the lower-left side of LCD. The work by set MODE button appears at the lower-right side of LCD. (M1~M8 = PROGRAMMABLE MODE, V = VACUUM MODE, , S =

SEALING MODE). The value of counting is at the up-right side of LCD, which increases by one for each cycle of work.

11-7 When the above setting is under way, the operation of machine is impossible to start. That is, the operation of machine can start only when 'AIRZERO AZ-()' appears on LCD. (After above setting, press TIME button once more. Then, you can find 'AIRZERO AZ-()' appears on LCD screen.)

11-8 After completion of setting, start packing operation by stepping on FOOT S/W. (Refer to **14. PROCESS OF EACH MODE**)

11-9 In the case of VACUUM and 1 ~ 8 MODE, if the worker steps on FOOT S/W, upper sealing bar's 1st going down is carried out.

Before 1st going down of upper sealing bar, the nozzle must be into the bag and the bag should be pulled at both sides with full tension by the user's hands. It makes much more perfect vacuuming and clean sealing to prevent any vacuum leakage and wrinkle.

Then, arrange the packed object as you like and step on the FOOT S/W once more. Then, the operation proceeds automatically according to the selected MODE. (Refer to **14. PROCESS OF EACH MODE**)

At this time, to do vacuum smoothly without a hitch, please close (however, do not touch) the nozzle to the packed object. If the nozzle is too far from the packed object, both sides of packing film stick to each other and vacuum cannot be done.

After first cycle of work, the nozzle is moved forward automatically. Then, proceed work as same as the above described method. (If you want the nozzle not to move forward automatically, press STOP button and UP button at the same time. If you want the nozzle to move forward automatically, press once more STOP button and UP button at the same time.)

11-10 In the case of SEALING MODE, if you insert a packing envelope between sealing bars and step on FOOT S/W, sealing is proceeded.

12. SPECIAL FUNCTION

12-1 At VACUUM MODE, if you want to stop vacuum procedure suddenly, please step on FOOT S/W. Then, vacuuming is suspended and the nozzle moves back and sealing starts.

12-2 If you want the nozzle not to move forward automatically, press STOP button and UP button at the same time. If you want the nozzle to move forward automatically, press once more STOP button and UP button at the same time.

12-3 To make counter value as 0 (zero), turn off and on the electricity power.

13. SETTING OF PROPER TIME/VACUUM DEGREE

MODE	TIME / VACUUM DEGREE SETTING
VACUUM1 VACUUM2	Set the proper time or vacuum degree according to the size of vacuum bag, the type of packed object, and packing purpose.
GAS1 GAS2	Set the proper time according to the size of vacuum bag, the type of packed object, packing purpose and pressure degree of GAS.
SEALING	Set the proper time according to the type and thickness of vacuum bag (Generally, set 6 ~ 11 (=0.6 ~ 1.1sec)). Especially, in the case of dual heat wire option or 5 mm heat wire option, sealing time should be set more shortly. * Warning : If the sealing time is set at 0, it means in effect infinite time so that sealing continue infinitely. But, in program, if someone even just once set sealing time at more than 0, it can't be set at 0 since then. So, if the sealing time is set at 0 when you first get the machine, you must change the value at more than 0. Of course, before delivery to buyer, my production line always does two times of final inspection test. And, during that time, sealing time is set at more than 0.
COOLING	Set 3.5~4.0 times as long as sealing time. The longer cooling time is, the better the sealed surface is. (There is a chance that a change is needed according to the type of film)

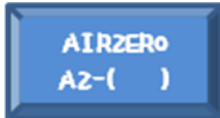
* Time Unit : 1 = 0.1 Sec.

* Before mass operation, please find out proper sealing time and cooling time through a full sealing test.

* A continuous use of the machine raises the temperature of sealing bar and can change proper sealing condition. Please set sealing time more short and cooling time more long.

14. PROCESS OF EACH MODE

14-1 VACUUM MODE



Step on FOOT S/W



Nozzle moves forward. Then, insert an envelope

Step on FOOT S/W

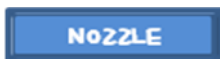


1st going down (**Sensor 2 turns on**)

Step on FOOT S/W



Vacuum 1 works as long as preset vacuum time or vacuum degree



Nozzle moves back (**Sensor 4 turns on**)



2nd going down. (**Sensor 3 turns on**) Then, Sealing works as long as preset sealing time



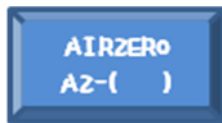
Cooling works as long as preset cooling time



Sealing bar goes up (**Sensor 1 turns on**) and 1st work completes

* If you want the nozzle not to move forward automatically, press STOP button and UP button at the same time. If you want the nozzle to move forward automatically, press once more STOP button and UP button at the same time.

14-2 PROGRAMMABLE MODE (1 ~ 8)



Step on FOOT S/W



Nozzle moves forward. Then, insert an envelope

Step on FOOT S/W



1st going down (**Sensor 2 turns on**)

Step on FOOT S/W



Vacuum 1 works as long as preset vacuum time or vacuum degree



Gas 1 works as long as preset gas 1 time



Nozzle moves back (**Sensor 4 turns on**)



2nd going down. (**Sensor 3 turns on**) Then, Sealing works as long as preset sealing time



Cooling works as long as preset cooling time

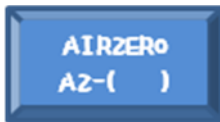


Sealing bar goes up (**Sensor 1 turns on**) and 1st work completes.

- 1) If all of Vacuum 1, Vacuum 2, Gas 1, and Gas2 are set at "0", the machine does not operate.
- 2) If you want to do just no other work but gas flushing, please set all of Vacuum 1, Vacuum 2, and Gas 2 at "0" and set **Gas1** at some value you want. (If you set all of Vacuum 1, Vacuum 2, and Gas 1 at "0" and set Gas1 at some value you want. The machine does not operate as above diagram)

* If you want the nozzle not to move forward automatically, press STOP button and UP button at the same time. If you want the nozzle to move forward automatically, press once more STOP button and UP button at the same time.

14-3 SEALING MODE



Insert an envelope.

Step on FOOT S/W.



Sealing bar goes down. (**Sensor 2 and 3 turn on**) Then, Sealing works as long as preset sealing time.



Cooling works as long as preset cooling time



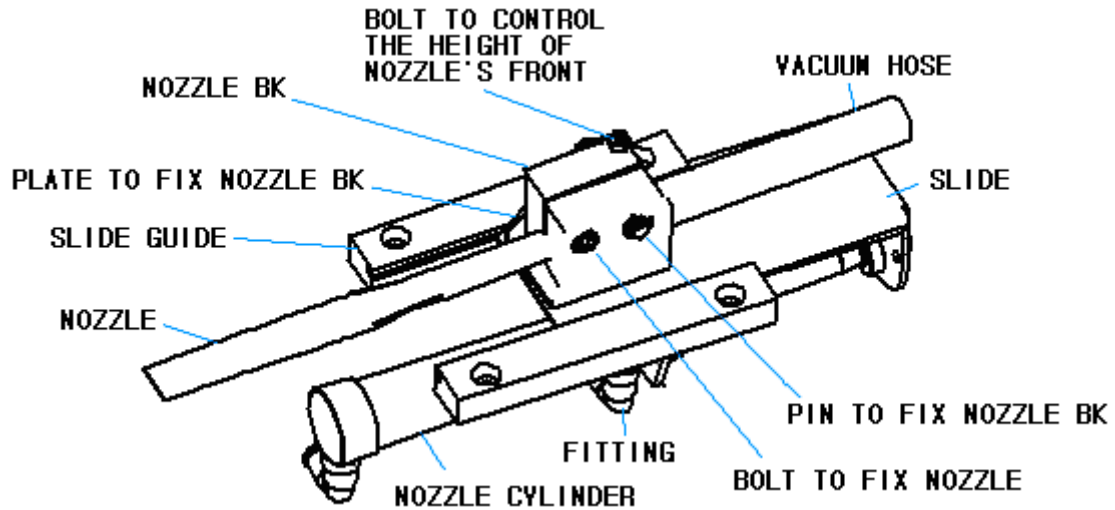
Sealing bar goes up (**Sensor 1 turns on**) and 1st work completes

14-4 End of operation

- 10) Push the STOP button on control box. Then, the nozzle moves back and the upper sealing bar go up.
- 11) Turn off the N.F.B.
- 12) Pull out the power plug from the outlet.
- 13) Close the supply of compressed air and gas.

15. MAINTENANCE

15-1 Cleaning of nozzle



For many case, as an easy method, you can clean the nozzle if you set the work at V1 MODE and push out any gas through nozzle. But, if you can not clean the nozzle by that method, please do as follows :

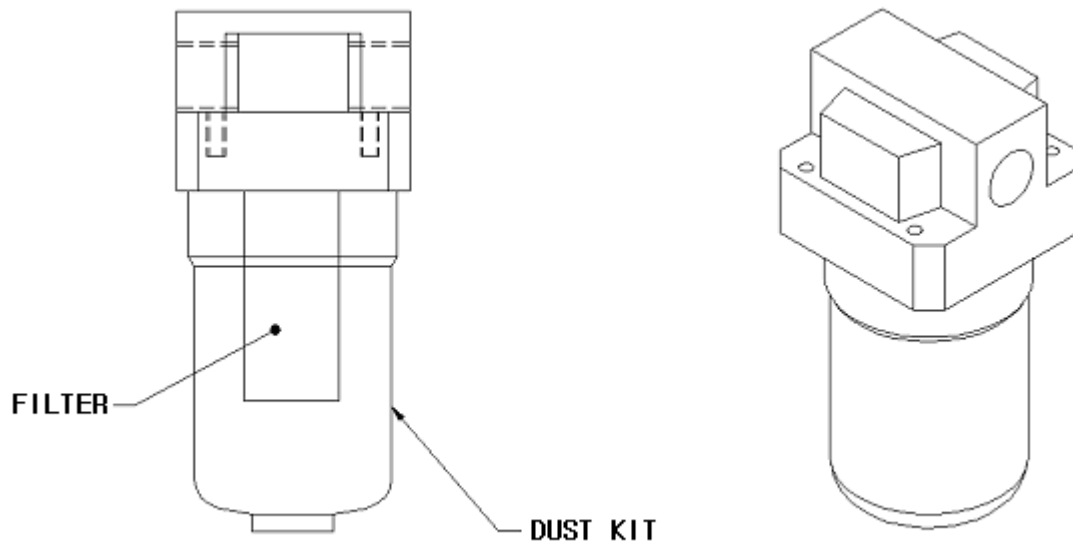
- 14) To disassemble the nozzle – Loosen BOLT TO FIX NOZZLE and separate VACUUM HOSE and pull out NOZZLE
- 15) To clean the nozzle – Put compressed air into NOZZLE, or put NOZZLE in warm water for a while and then wash its inside.
- 16) To assemble the nozzle – Do the reverse of 1). At this time, by using BOLT TO CONTROL THE HEIGHT OF NOZZLE'S FRONT, set the front of NOZZLE at the middle of upper sealing bar and lower sealing bar during the upper sealing bar's 2ND going down.

15-2 Cleaning of vacuum and gas line

Put compressed air into VACUUM HOSE, or put VACUUM HOSE in warm water for a while and then wash its inside.

15-3 Cleaning of vacuum filter

Vacuum filter is located between nozzle and vacuum pump. Its function is to keep any alien substance, which comes in through nozzle, from vacuum pump. (The filter type can be different according to the model and options.)



- 1) To disassemble vacuum filter – Turn the dust kit to the left (counterclockwise) and separate it. (At this time, **pay attention not to lose the rubber ring which is stuck on the upper side of dust kit.**)
- 2) To clean vacuum filter – Get rid of any alien substance by putting compressed air into filter and dust kit.
- 3) To assemble vacuum filter – Stick the rubber ring on the upper side of dust kit and turn the dust kit to the right (clockwise). **If the rubber ring is not stick on the upper side of dust kit, vacuum work is impossible.**

16. CONSUMABLES CHANGE

16-1 Heat Wire : It is located under Teflon sheet ⑩ of the lower sealing bar. Separate lower sponge bar ⑤ and Teflon sheet. (please refer to Teflon sheet change method) and open heat wire holder cover ③. Loosen the bolt which lock heat wire and change it.

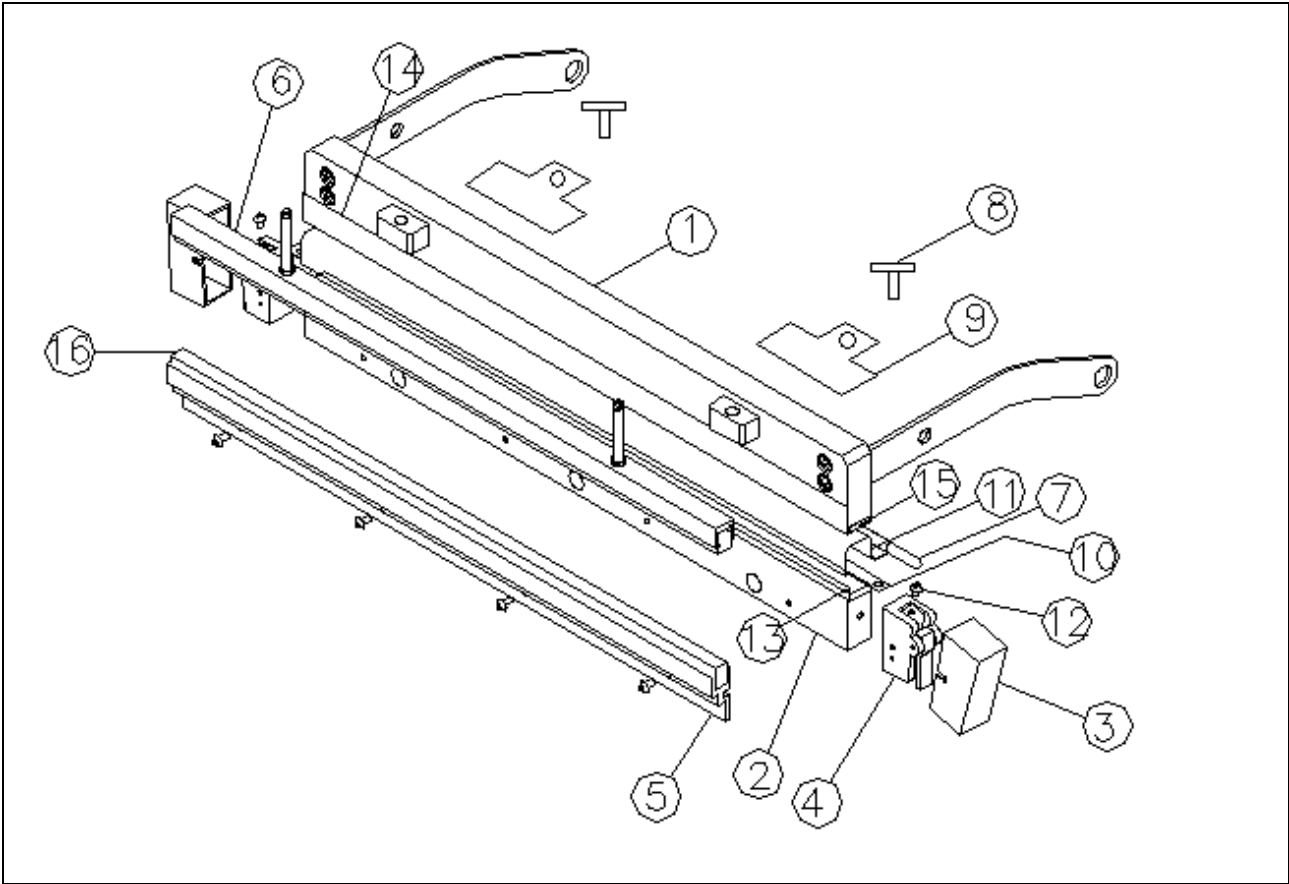
16-2 Upper and Lower Teflon Sheet : Separate the lower or upper sponge bar and change them. When Teflon sheet is run out, change it with new one. Get rid of any particle on the place where tape was stuck.

16-3 Teflon Tape : Using the method as same as Article 1, separate heat wire and change existing tape with new one. At this time, get rid of any particle on the place where tape was stuck. (When any particle is on there, sealed surface is to be bad.) Please check regularly the condition of Teflon tape and change Teflon tape if there is any damaged part. **The use of damaged Teflon tape may cause the malfunction of machine.**

16-4 Sealing Rubber : Go on according to 16-4. Then Sealing Rubber appears. Change it with new one. At this time, if you can not stick it well or the state of tape, change tape.

16-5 Compression Sponge : It is just in a state of being inserted. Therefore, just change it with new one. Using of damaged sponge may make vacuum degree lower.

Single Heat Wire Type			Double Heat Wire Type		
ex) AZ-450ES, AZ-600E, AZV-800 ("D" is NOT included in model name)			ex) AZ-450E-D, AZ-600ES-D, AZV-800-D ("D" is included in model name)		
CONSUMABLE SPARE PARTS	SPECIFICATION	QTY FOR 1 SET	CONSUMABLE SPARE PARTS	SPECIFICATION	QTY FOR 1 SET
Heat wire	450 / 600 / 800 ~	1	Heat wire	450 / 600 / 800 ~	2
Upper Teflon Sheet	54mm (Upper bar)	1			
Lower Teflon Sheet	54mm (Lower bar)	1	Lower Teflon Sheet	54mm (Both bars)	2
Teflon Tape	25mm*10m (Lower bar)	1	Teflon Tape	40mm*10m (Lower bar)	1
Teflon Tape	19mm*10m (Lower bar)	1			
Sealing Rubber	4T (Upper bar)	1	Sealing Rubber	2T (Both bars)	2
Compression Sponge	450/600/800~ (Both bars)	2	Compression Sponge	450/600/800~ (Both bars)	2

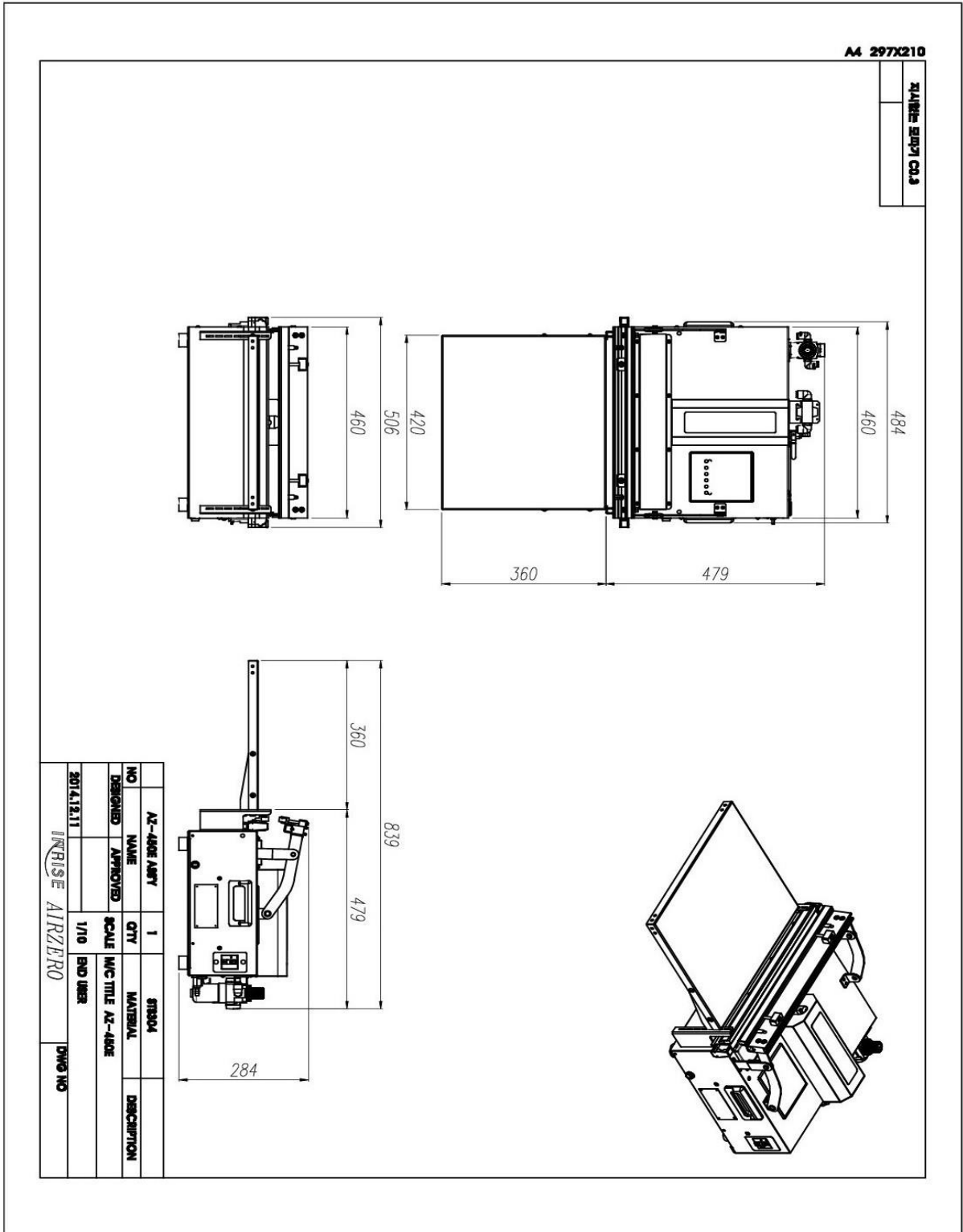


1	UPPER SEALING BAR	9	N/A
2	LOWER SEALING BAR	10	HEAT WIRE
3	HEATER HOLDER COVER	11	TEFLON TAPE
4	HEATER HOLD	12	BOLT TO FIX HEAT WIRE
5	LOWER SPONGE BAR	13	LOWER TEFLON SHEET
6	UPPER SPONGE BAR	14	UPPER TEFLON SHEET
7	N/A	15	SEALING RUBBER
8	N/A	16	COMPRESSION SPONGE

17. LAY-OUT DRAWING

(The real shape and size including frame, sealing bar and work tray, etc can be changed according to the model and options)


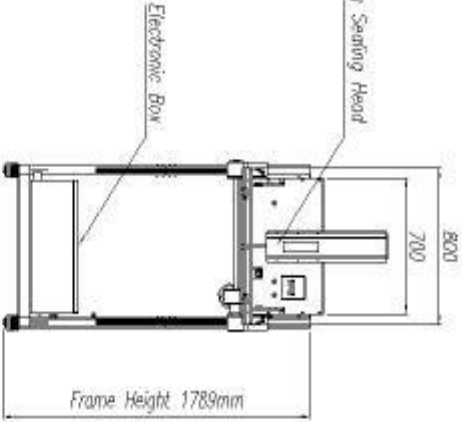
17-1 AZ-type



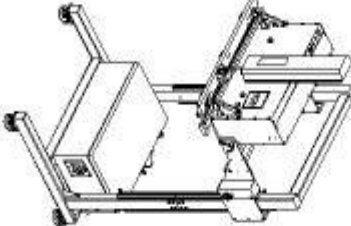
17-2 AZV-type

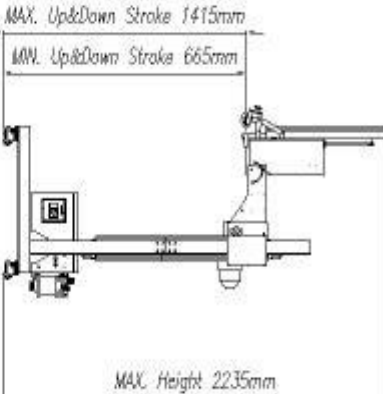
A4 297X210

시리즈 AIRZERO CO.3

Frame Height 1789mm





Main Function

1. Vacuum Packing
2. Gas Flushing
3. Sealing
4. Head Up & Down
5. Single/Double Heat (option)
6. Bag Size Open/Close (option)

Material

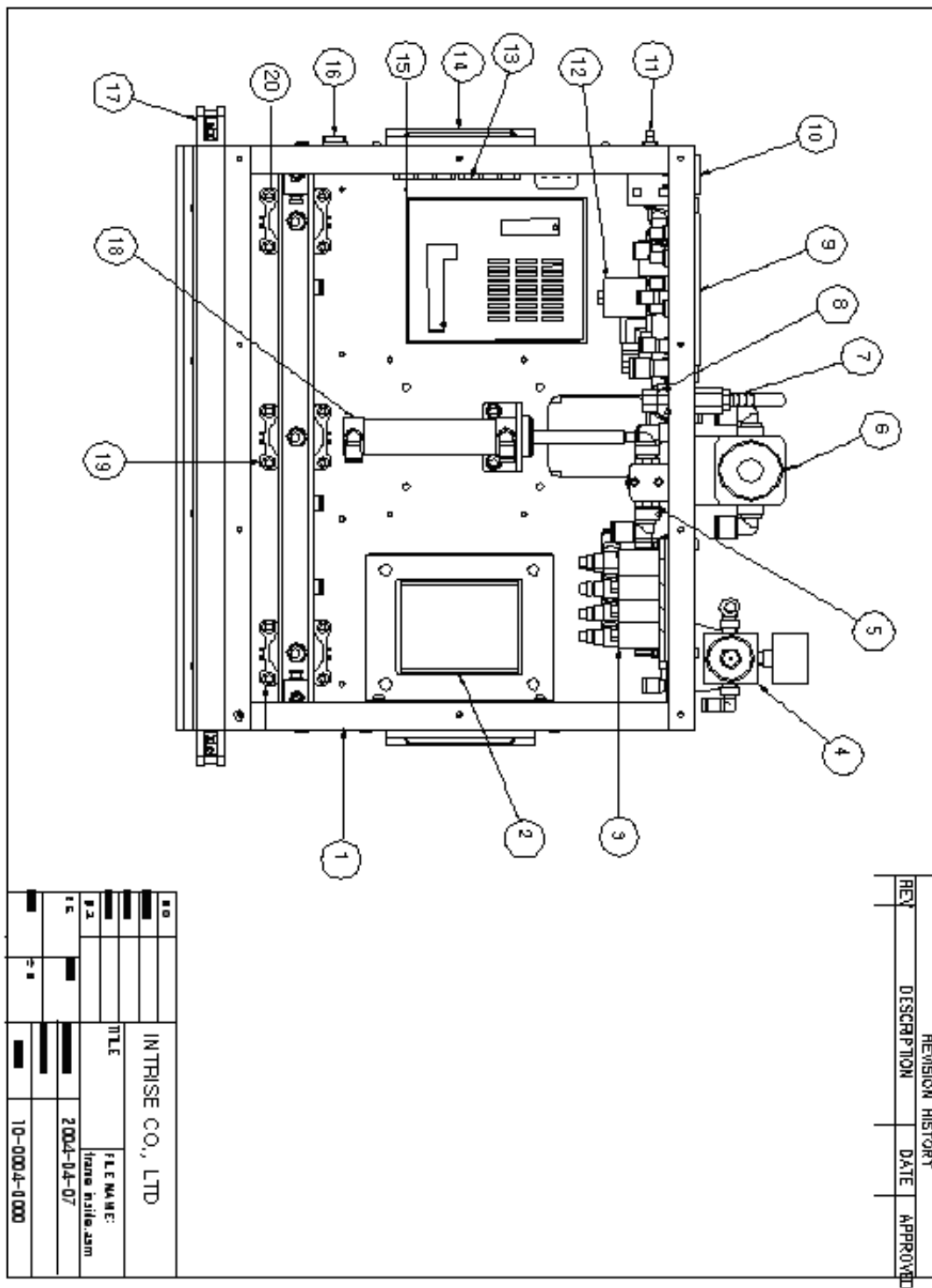
Frame - SPS(SUS)304
 Head - AL6061 Frame, SPS304 Cover
 Other Cover - SPS304

1. This drawing created for quote or conception.
 2. According to requirement, dimension and form, specification can be changed. Also it is able to be replaced randomly by manufacturer for quality increase too.

NO.	LAYOUT	NAME	QTY	MATERIAL	DESCRIPTION
DESIGNED	APPROVED	SCALE	INC TIME	AVV-00	
V.J.S		1/30	END USER		
<p style="font-weight: bold;">AIRRISE AIRZERO</p>					P/C NO

18. INSIDE DRAWING

18-1 AZ-type



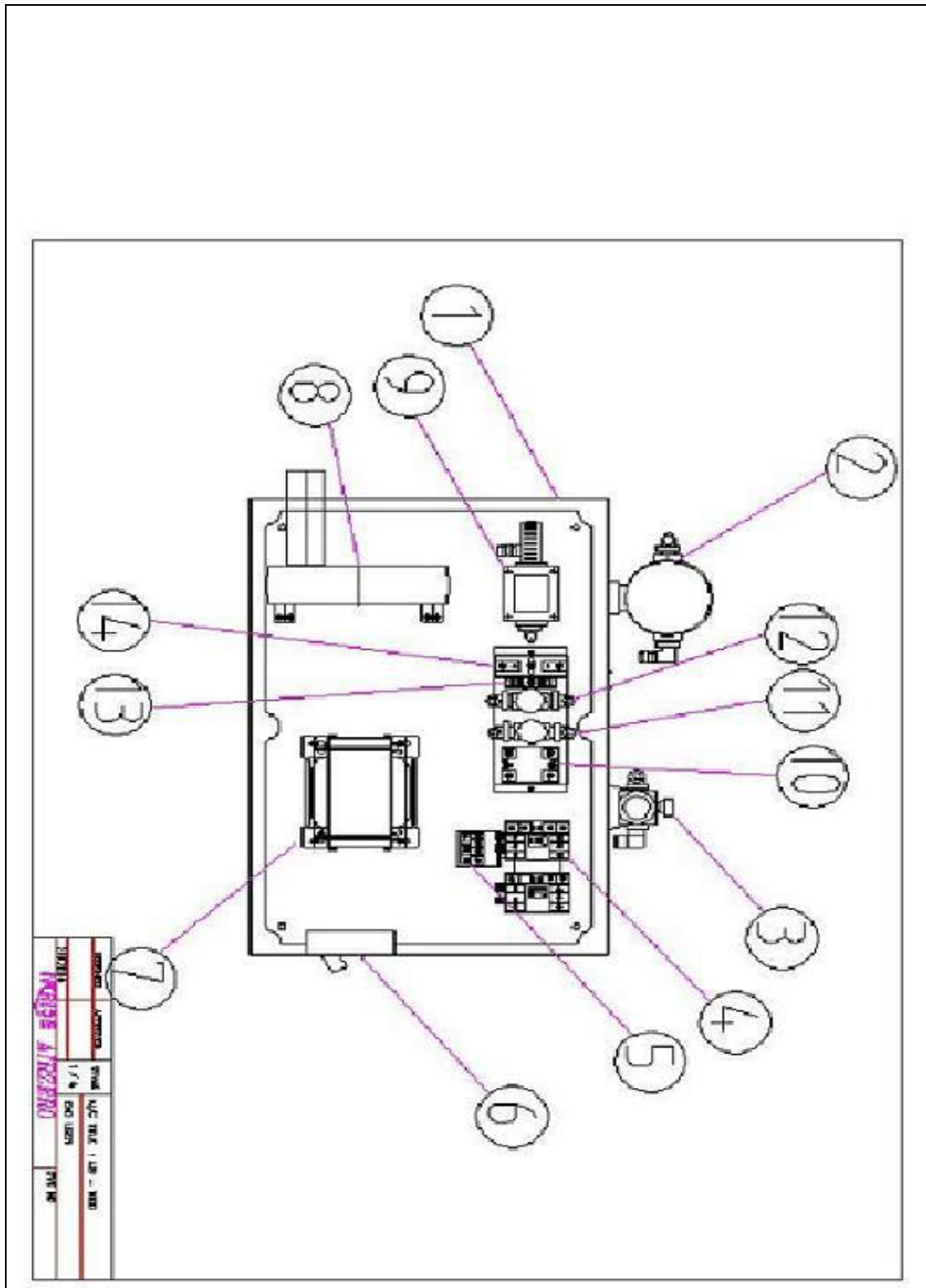
1	Frame
2	Transformer
3	Solenoid valve set
4	Air regulator
5	Vacuum valve
6	Vacuum filter
7	Gas cock
8	Gas valve
9	Fuse holder plate
10	Electricity inlet
11	N.F.B
12	Air solenoid
13	SSR
14	Grip
15	Control box
16	2P connector
17	Heat wire holder
18	Nozzle cylinder (Sensor 4 is attached)
19	Middle cylinder
20	Left cylinder (Sensor 1, 2, 3 are attached)

18-2 AZV-type

17) Upper body

In the case of AZV-type, the parts including 2, 4, 6, 9 and 10 on the drawing of AZ-type are moved to the sub-box.

18) Sub-box



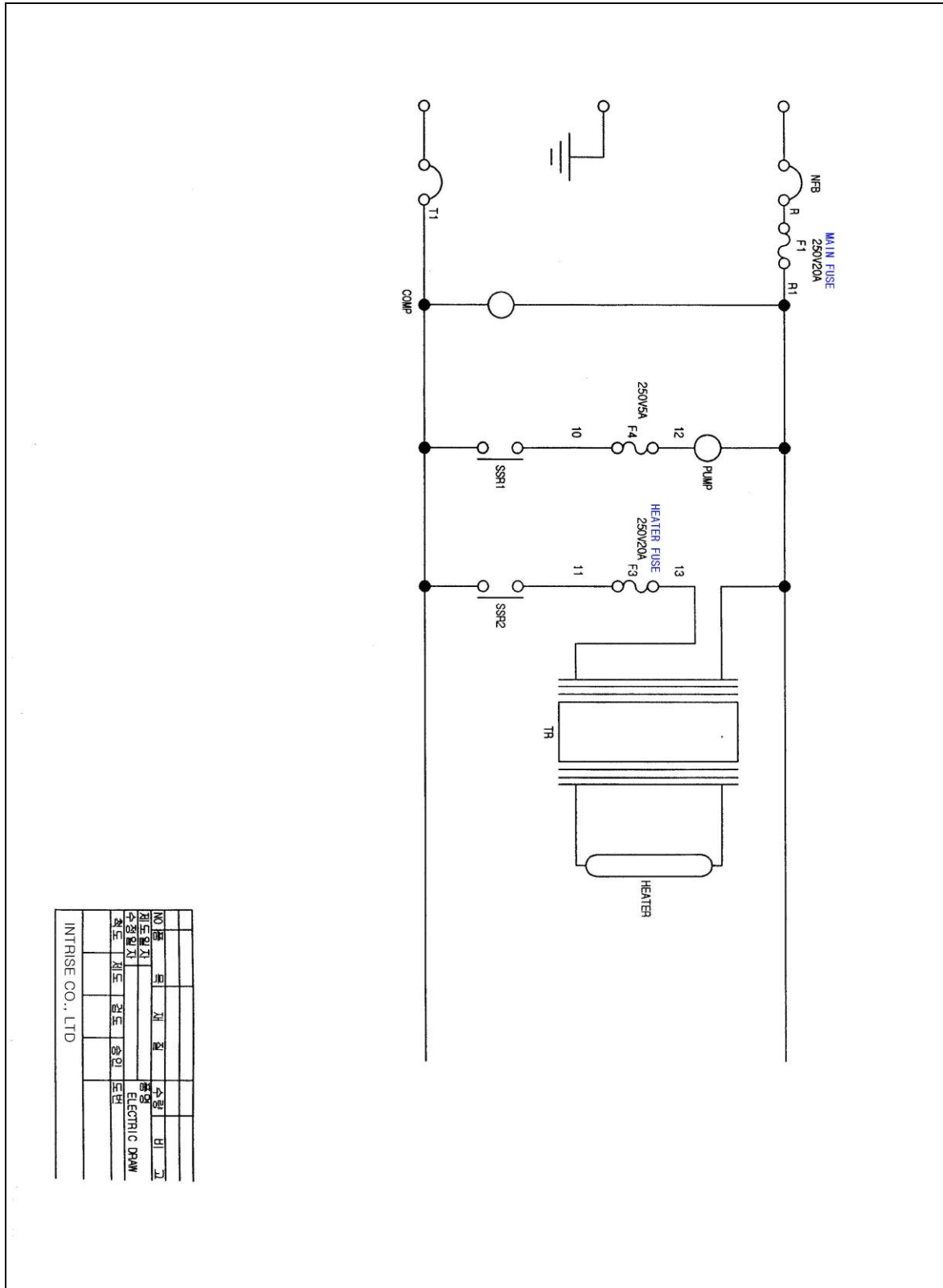
14	MAIN FUSE	1	40A
13	PLC FUSE	1	2A
12	AIR SOL	1	WV 2200
11	AIR CLEANER SOL	1	WV 2200
10	SSR	1	SSA1 -240Z
09	VACUUM VALVE	1	TVF -3130
08	EJECTOR	1	VTM - 50
07	TRANSFORMER	1	3.0K
06	NFB	1	54B
05	OVERLOAD RELAY	1	GTH-22
04	MAGNETIC CONTACT	1	GMC9R
03	AIR REGULATOR	1	PW2000
02	VACUUM FILTER	1	ø95*100L
01	CONTROL BOX	1	660*380
NO	NAME	Q'TY	MODEL

* Please understand there could be changes of parts according to the model and option.

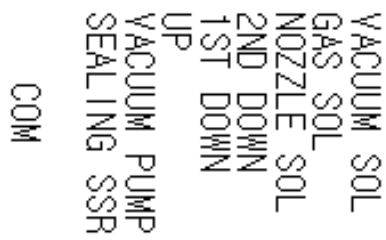
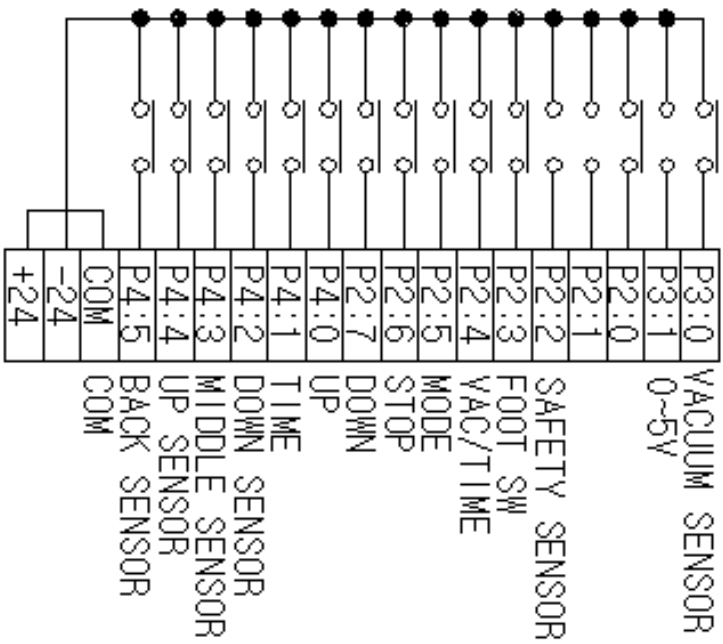
19. ELECTRICITY CIRCUIT DIAGRAM

According to model and option, main and heater fuse type can be changed to 30 A or 40A.

19-1 AZ-type



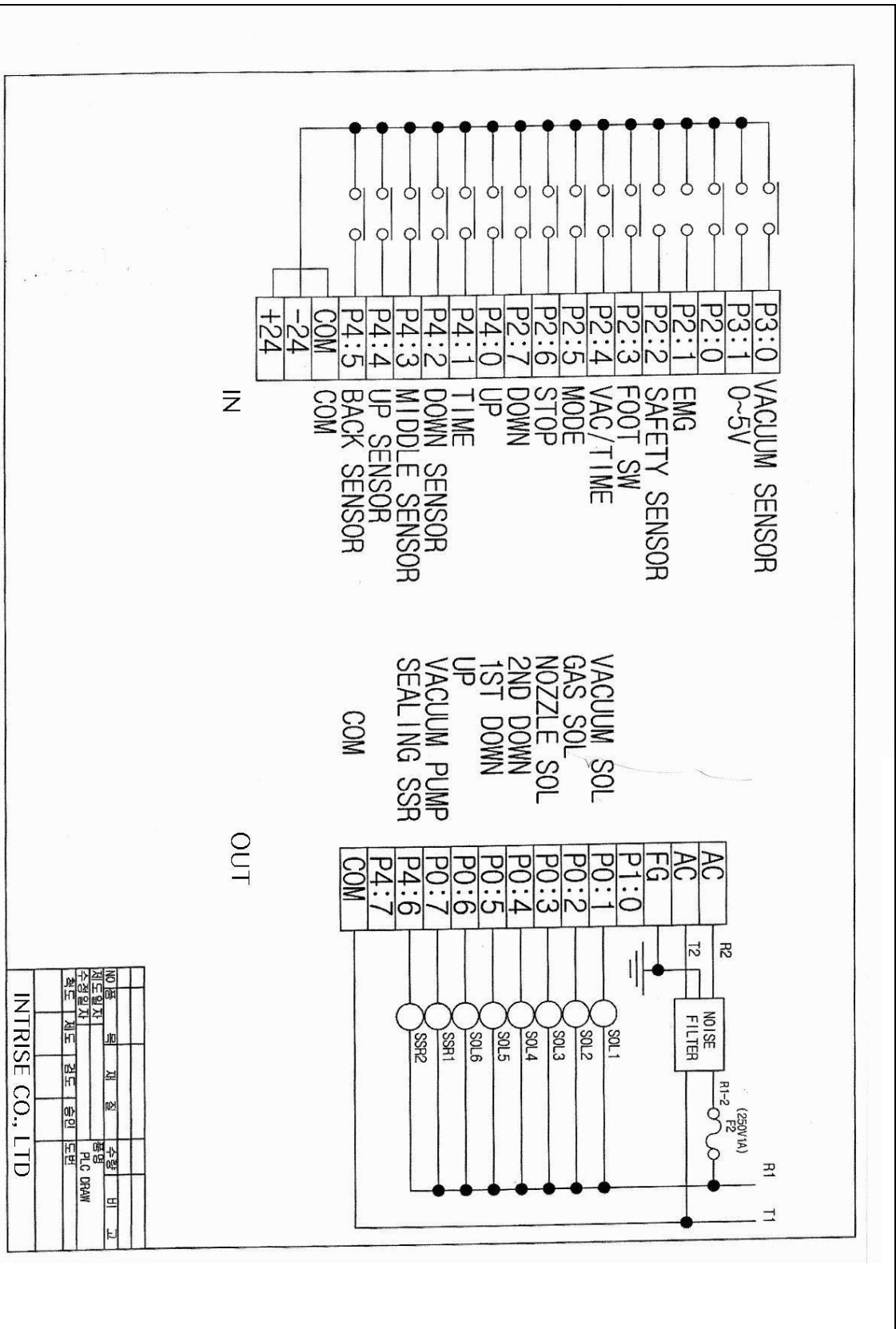
NO	圖號	圖	號	圖	號	圖	號	圖	號
製造廠	製造廠	製造廠	製造廠	製造廠	製造廠	製造廠	製造廠	製造廠	製造廠
規格	規格	規格	規格	規格	規格	規格	規格	規格	規格
規格	規格	規格	規格	規格	規格	規格	規格	規格	規格
規格	規格	規格	規格	規格	規格	規格	規格	規格	規格
INTRISE CO., LTD									



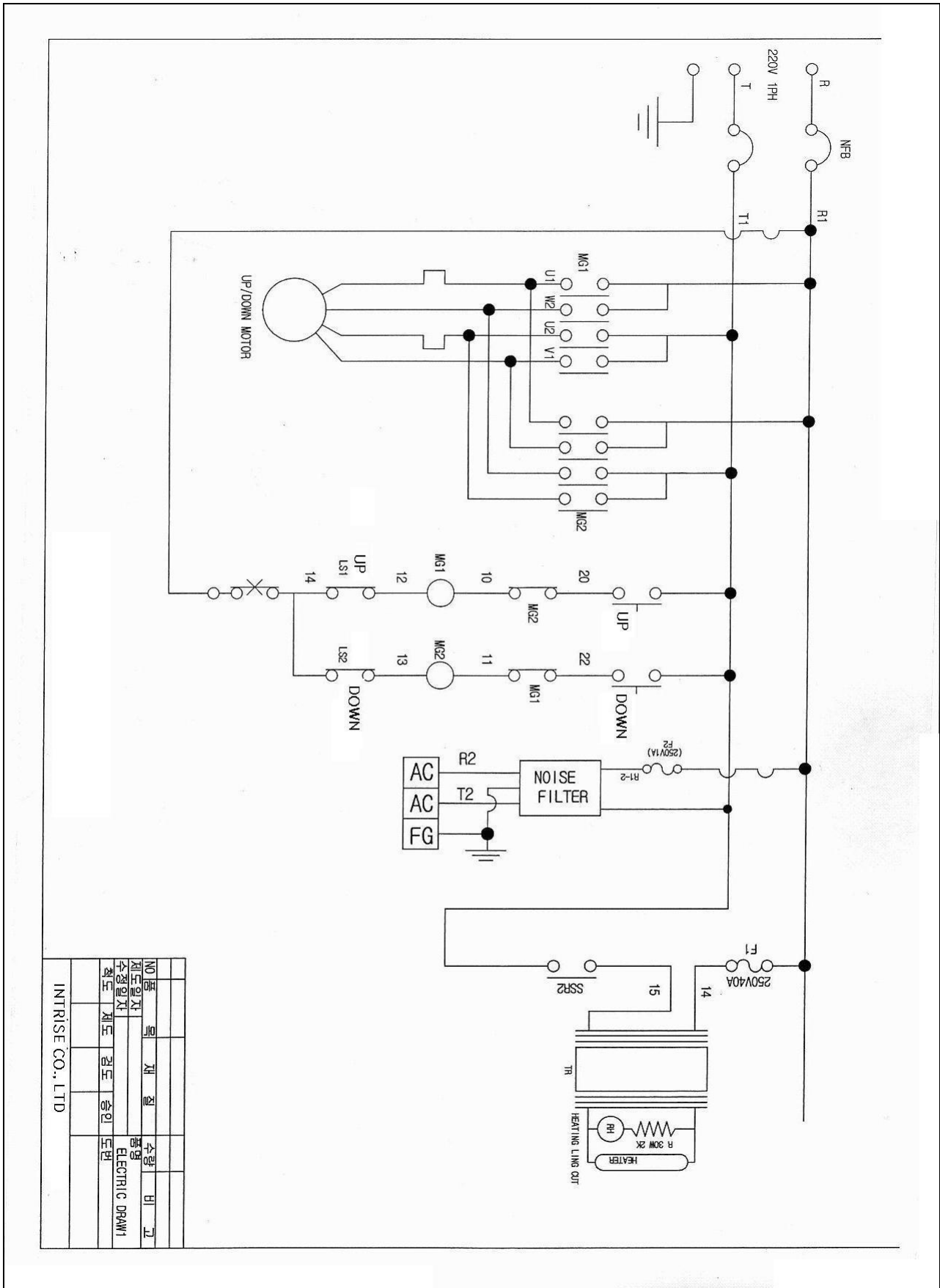
P0:0 LCD OUT

회로	용량	부호	비고
회로	용량	부호	비고
회로	용량	부호	비고
회로	용량	부호	비고
주)인트라이오			

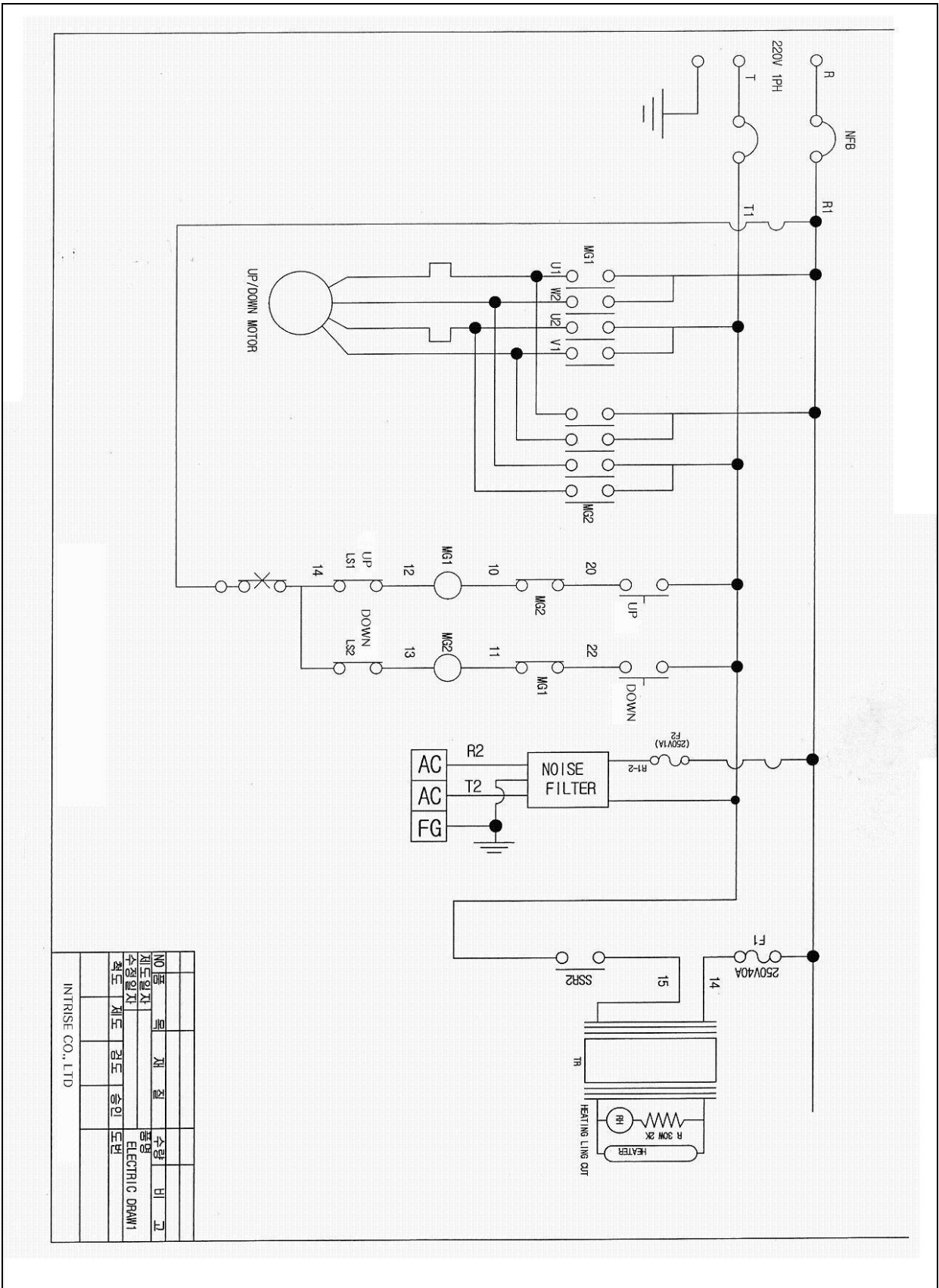
19-2 AZV-type



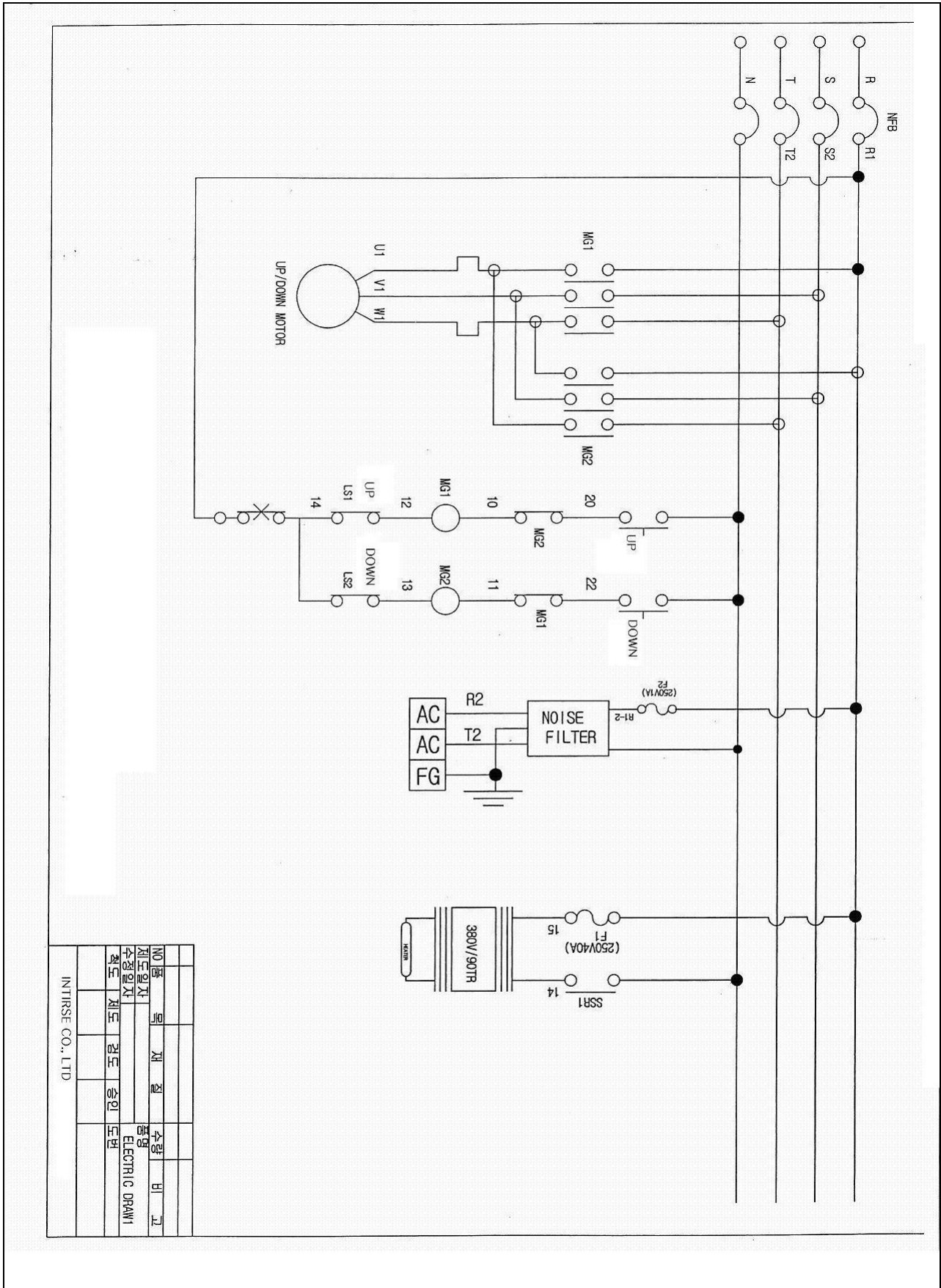
19) 電氣 : 220, 1Ph



20) 電氣 : 220, 3Ph



21) 電氣 : 380, 3Ph



NO	目	数	材	質	仕様	材	目	高
制御盤					構造			
設計者					電機			
NO	目	数	材	質	仕様	材	目	高
制御盤					構造			
設計者					電機			
検印	検印	検印	検印	検印	検印	検印	検印	検印

INTRISE CO., LTD

20. TROUBLE SHOOTING

* If it is difficult for you to troubleshoot despite the following method, please contact to the seller of the machine.

20 – 1 If the electricity power of the machine does not turn on,

- 1) Check up whether the electricity is well supplied to the electricity outlet → If so,
- 2) Check up whether the plug inserted rightly into the electricity outlet, → If so,
- 3) Check up whether the electricity line is cut off → If so, exchange it with a new one.
But, if not cut off,
- 4) Check up whether the electricity inlet of the machine is all right → If not, exchange it with a new one. But, if all right,
- 5) Check up whether N.F.B is ON → If N.F.B is off, refer to 20-10. But, if N.F.B is ON,
※ N.F.B (No Fuse Breaker) = MCCB (Mold Case Circuit Breaker)
- 6) Check up whether the fuse is cut off → If so, exchange it with a new one.

20 – 2 If the machine does not start to operate, after the electricity power of the machine turns on,

For first, check up and take action according to 1) and 2). Despite that, if the machine does not start to operate, find out what among 3) ~ 5) answers the actual condition and take action.

- 1) Check up whether **AIRZERO AZ-()** appears on LCD screen → If not, Check up whether compressed air is supplied rightly. (Refer to **8.5**). But, if so,
- 2) Check up whether FOOT S/W is all right (Refer to the following method)
※ Check up FOOT S/W
Check up whether FOOT among **input** led on the control box turns on → If so, FOOT S/W is all right. But, if not, FOOT S/W is out of order. Exchange it with a new one.
- 3) **If the nozzle does not move forward despite stepping on FOOT S/W, at the V or M1~M8 MODE**
 - (1) Check up whether UP and BACK among **input** led on the control box turns on → if not, adjust the location of sensor 1 and 4. (Refer to **21. SENSOR SETTING**). But, if so,
 - (2) Check up whether NOZZLE among **output** led on the control box turns on → If so, the solenoid valve set is out of order. But, if not, the control box is out of order.
- 4) **If the upper sealing bar can't do 1st going down despite stepping on FOOT S/W, after the nozzle has moved forward,**
 - (1) If the upper sealing bar goes down a little and the goes back to up,
Check up whether MIDDLE among **input** led on the control box turns on momentarily → If so, adjust the location of sensor 2 and 2-1. (Refer to **21. SENSOR SETTING**)
But, if not, check up whether compressed air is supplied rightly. (Refer to **8.5**)
 - (2) If the upper sealing bar does not go down at all,

Check up whether UP turns on and BACK turns off, among **input** led on the control box → If not, adjust the location of sensor 1 and 4 (Refer to **21. SENSOR SETTING**).
But, if so, Check up whether MIDDLE among **output** led on the control box turns on
→ If so, 1st going down solenoid is out of order. But, if not, the control box is out of order.

(3) If the upper sealing bar is going down too slowly, it returns up. (Please check speed control and the pressure of compressed air (Refer to **8.5**)

5) If vacuum can't be processed despite stepping on FOOT S/W, after the upper sealing bar has done 1st going down,

(1) Check up whether MODE is V MODE on LCD screen → If so,

(2) Check up whether VACUUM among output led on the control box turns on →

1. If so,

Check up whether compressed air is supplied rightly to the vacuum pump → If so,
Check up vacuum solenoid. But, if not, check up air solenoid

2. If not, the control box is out of order.

20 – 3 If vacuum is done not smoothly, after the upper sealing bar has done 1st going down,

1) Check up whether SEALING TIME, COOLING TIME and AIR PRESSURE are set properly (Refer to **8-5 and 13**) → If so,

2) Check up whether the nozzle correctly is being inserted into packing film → If not, restart operation. But, if so,

3) Check up whether the distance between the nozzle and the packed object is proper (Refer to **11-9**) → If so,

4) Check up whether the vacuum filter is kept clean (Refer to **15-3**) → If so,

5) Check up whether vacuum pump and vacuum valve work correctly.

20 – 4 If gas can not be inserted, after vacuum (If vacuum time/vacuum degree is set at 0, after the upper sealing bar's 1st going down, the work goes on to gas process without vacuum.)

1) Check up whether Mode is PROGRAMMABLE MODE (1 ~ 8) → If so,

2) Check up whether GAS 1 and GAS 2 TIME is set properly (Refer to **13**) → If so,

3) Check up whether GAS pressure degree is all right (Refer to 7-3 SET GAS PRESSURE)
→ If so,

4) Check up whether GAS COCK is open → If so,

5) Check up whether GAS valve works correctly → If GAS valve is out of order, exchange it with a new one. But if GAS valve works correctly,

6) Check up whether GAS line works correctly

20 – 5 If sealing can not be done, after vacuum or gas inserting,

- 1) Check up whether DOWN turns on among **input** led on the control box → If not, adjust the location of sensor 3. (Refer to **21. SENSOR SETTING**) But, if so,
- 2) Check up whether SEALING TIME, COOLING TIME and AIR PRESSURE are set properly (Refer to **8-5 and 13**) → If so,
- 3) Check up whether heat wire is cut → If so, exchange it with a new one. But, if not,
- 4) Check up whether heat wire is well connected to electrodes → If so,
- 5) Check up whether the transformer works correctly

20 – 6 If sealing can not be done at S MODE,

For first, check up and take action according to 1) and 2) of **20-2**. If sealing can not be done despite this action,

- 1) Check up whether UP and BACK turns on among **input** led on the control box → If not, adjust the location of sensor 1 and 4. (Refer to **21. SENSOR SETTING**) But, if so,
- 2) Check up and take action according to 2) ~ 5) of **20-5**.

20 – 7 If sealed surface is bad,

- 1) Check up whether SEALING TIME, COOLING TIME and AIR PRESSURE are set properly (Refer to **8-5 and 13**) → If so,
- 2) Check up whether Teflon, Sealing Rubber and Heating Element are all right. → If not, exchange it with a new one.

20 – 8 If the heat wire is easily cut off

- 1) Check up whether SEALING TIME is too long or COOLING TIME is too short (Refer to **13**) → If not,
- 2) Check up whether Teflon, Sealing Rubber and Heating Element are all right. → If not, exchange it with new one. But, if all right,
- 3) Check up whether electrodes all right → If not, exchange it with a new one.

20 – 9 If the middle of heat wire is broken and gone up,

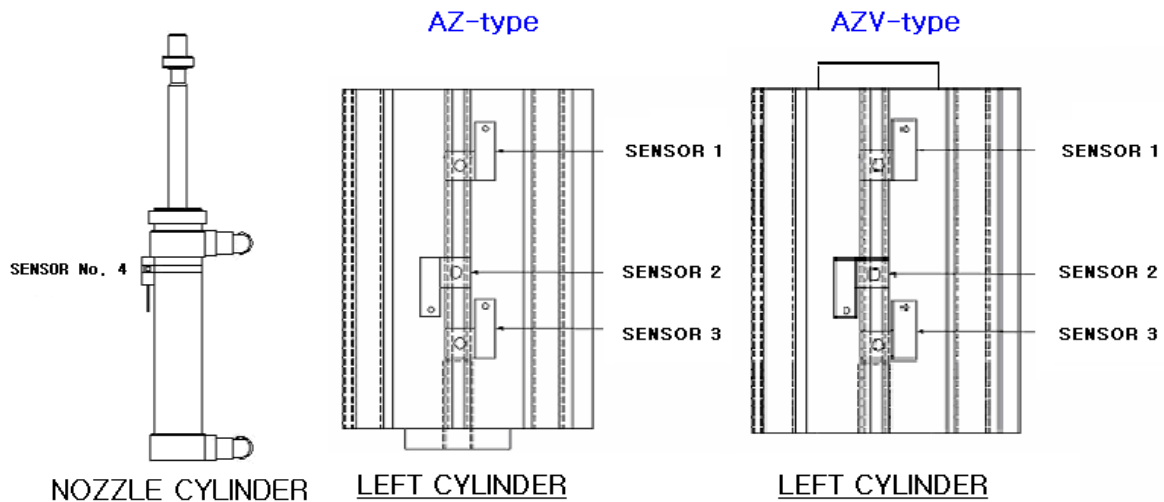
- 1) Check up whether the shaper of sealing rubber is 凸凹 → If so, exchange it a with new one. But, if all right,
- 2) Check up VACUUM TIME / VACUUM DEGREE is set correctly → If so,
- 3) Check up whether electrodes all right → If not, exchange it with new one.

20 – 10 If N.F.B (NO FUSE BREAKER) turns off,

- 1) Check up whether Teflon is all right. (If Teflon is torn so that heat wire is exposed, there is a chance of electric leakage → If not, exchange it with new one. But, if all right,
- 2) Check up whether the proper electricity is supplied to the machine (If so, There can be electric leakage. Find out the place and get rid of the electric leakage

21. SENSOR SETTING

- * Please do not adjust this sensor setting by yourself as far as possible. It is fixed at optimized condition.
- * Regarding the location of cylinder and sensor, refer to 18. INSIDE DRAWING



21-1 Set sensor 4 to turn ON when the nozzle moves back.

21-2 If you connect compressed air of 5~6.5 kg/cm² and turn on N.F.B, **the nozzle moves back and the upper sealing bar goes up.** At this time, set sensor 1 to turn ON. For this setting, loosen the bolt attached to sensor 1 and move and set sensor 1 in the middle of beginning point and ending point where sensor turns ON. If this setting is completed, AIRZERO AZ-() appears on LCD.

21-3 Press the MODE button to V and step on FOOT S/W. Then, the nozzle moves forward. Step on FOOT S/W once more. At this time, if sensor 2 is located incorrectly, the upper sealing bar can't do 1st going down. Therefore, move and set sensor 2 according to the same method as 21-2)

21-4 After setting of sensor 2, step on FOOT S/W once more. Then, the nozzle moves back and 2nd going down of upper sealing bar is done. At this time, if sensor 3 is set incorrectly, 2nd going down of upper sealing bar continues. Therefore, move and set sensor 3 according to the same method as 21-2)

Warranty Paper

Limited Warranty

The seller warrants to the purchase of the Product (defined herein as the boxed AIRZERO packaging machine's body and work tray except spare parts, tool box, and tools) in its original sealed packaging ("Original Purchaser ") as follows : if the Product properly used and installed, it will be free from defects in material and workmanship and will substantially conform to the seller 's publicly available specifications for a period of one (1) year after the date the Product was purchased in its original sealed packaging in the case of an Original Purchaser. If the Product, which is the subject of this Limited Warranty, fails to conform to the above warranty during the warranty period for reasons covered by this Limited Warranty, the seller, at its option, will:

REPAIR the Product by means of hardware and/or software; **OR**

REPLACE the Product with another the Product; **OR**, if the seller is unable to repair or replace the Product,

REFUND the then-current value of the Product at the time a claim for warranty service is made to the seller under this Limited Warranty.

THIS LIMITED WARRANTY, AND ANY IMPLIED WARRANTIES THAT MAY EXIST UNDER INTERNATIONAL LAW, APPLY ONLY TO YOU AS THE ORIGINAL PURCHASER OF THE PRODUCT AND LAST ONLY FOR AS LONG AS SUCH PURCHASER CONTINUES TO OWN THE PRODUCT.

EXTENT OF LIMITED WARRANTY

The seller does not warrant that the Product will be free from design defects or errors known as "errata." Current characterized errata are available upon request. Further, this limited warranty does NOT cover :

- any costs associated with the repair or replacement of the Product including labor, installation or other cost incurred by you : **OR**
- damages to the Product due to external causes, including accident, problems with electrical power, abnormal electrical, mechanical or environmental conditions, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing ; **OR**
- any Product which has been modified or operated outside of the seller's publicly available specifications or where the original identification markings (trademark or serial number) has been removed, altered, or obliterated from the Product.

HOW TO OBTAIN WARRANTY SERVICE

To obtain warranty service for the Product, you may contact your original place of purchase in accordance with its instructions, or you may contact to the seller.

To request warranty service from the seller you must contact to the seller or a the seller's Customer Support center in your region within the warranty period during normal business hours (local time) excluding holidays and return the Product to the seller or a the seller's Customer Support. Please be prepared to provide: (1) your name, mailing address, e-mail address and telephone numbers; (2) proof of purchase; (3) model name and product identification number found on the Product; (4) an explanation of the problem. The seller or a the seller's Customer Support center representative may need additional information from you depending on the nature of the problem.

Upon the seller's or a designated seller's Customer Support center's verification that the Product is eligible for warranty service, you will be issued a Return Material Authorization ("RMA") number and provided with instruction for returning the Product to the seller or a designated seller's Customer Support center. When you return the Product to the seller or a designated seller's Customer Support center, you must include the RMA number on the outside of the package. The seller will not accept any returned Product without an RMA number, or that has an invalid RMA number, on the package, You must deliver the returned Product to the seller or a designated seller's Customer Support center in the original or equivalent packaging, with shipping charges (except shipping related charges occurred within your local country) collect and assume the risk of damage or loss during the shipment.

The seller may elect to repair or replace the Product with either a new or reconditioned Product or components as the seller deems appropriate. The repaired or replaced Product will be shipped to you at the expense of seller within a reasonable period of time after receipt of the returned Product by Customer Support center. The returned Product shall become the seller's property on receipt by SECS. The replacement product is warranted under this written warranty and is subject to the same limitations and exclusions for ninety (90) days or the remainder of the original warranty period, whichever is longer. If the seller replaces the Product, the Limited Warranty period for the replacement Product is not extended.

WARRANTY LIMITATIONS AND EXCLUSIONS

THESE WARRANTY REPLACES FOR THE PRODUCT AND SUNWOO EM DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, COURSE OF DEALING AND USAGE OF TRADE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES SO THIS LIMITATION MAY NOT APPLY TO YOU. ALL EXPRESS AND IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD. SOME JURISDICTIONS DO

NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

LIMITATIONS OF LIABILITY

THE SELLER'S RESPONSIBILITY UNDER THIS, OR ANY OTHER WARRANTY, IMPLIED OR EXPRESS, IS LIMITED TO REPAIR, REPLACEMENT OR REFUND, AS SET FORTH ABOVE. THESE REMEDIES ARE THE SOLE AND EXCLUSIVE REMEDIES FOR ANY BREACH OF WARRANTY. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE SELLER IS NOT RESPONSIBLE FOR ANY DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR UNDER ANY OTHER LEGAL THEORY (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, DOWNTIME, GOODWILL, DAMAGE TO OR REPLACEMENT OF EQUIPMENT AND PROPERTY, AND ANY COSTS OF RECOVERING, REPROGRAMMING, OR REPRODUCING ANY PROGRAM OR DATA STORED IN THE PRODUCT), EVEN IF THE SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

ANY AND ALL DISPUTES ARISING UNDER OR RELATED TO THIS WARRANTY SHALL BE ADJUDICATED IN THE FORUM OF THE REPUBLIC OF KOREA AND GOVERNED BY THE LAW OF THE REPUBLIC OF KOREA.

IN THE EVENT OF ANY CONFLICT BETWEEN THE ENGLISH LANGUAGE VERSION AND ANY OTHER TRANSLATED VERSION(S) FOF THIS LIMITED WARRANTY, THE ENGLISH LANGUAGE VERSION SHALL CONTROL.