

**sankosha®**  
PRESS AND PROGRESS

# **DP-450RE-V3**

## **Instruction Manual**

For your safety, please read this Instruction Manual carefully and understand all instructions before starting operating of the machine. If at any time you have any questions, please do not hesitate to contact us.



## Welcome

Thank you for choosing our Multi Form Finisher DP-450RE-V3.

This machine was delivered to you after thorough inspection at our plant.

Please read this manual carefully for proper usage of this machine.

### Product Specifications

Model	DP-450RE-V3
Power	Single Phase 230V 0.75kW
Air Consumption	12.5 liter / cycle
Steam Consumption	10 kg / hour
Air Pressure	0.6MPa
Steam Pressure	0.5MPa
Air Pipe	3/8B
Steam Pipe	Inlet : 1/2B , Outlet : 1/2B
Noise Level	A Level : 72dB / C Level : 77dB
Weight	350kg
Dimensions	1600×1220×1390 (mm)
Width × Depth × Height	2080×1480×1390 (mm) (Max)

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# Safety Guideline












Warning labels are placed on the machine in order to prevent an operator and others from injury, and to ensure proper and safe operation. For most parts, labels are placed on the operational area of the machine.

Use this product safely upon reading this manual and understand the warning labels on the machine.  
Please keep this manual as it will be needed in the future.

- Please read the description of each warning label below. Each sign shows the degree of risk of injury or damage if the manual and/or labels are not followed and the machine is misused.

	<b>DANGER</b>	This indicates a potentially hazardous situation which, if not followed, may result in death.
	<b>WARNING</b>	This indicates a potentially hazardous situation which, if not followed, may result in serious injury.
	<b>CAUTION</b>	This indicates a potentially hazardous situation which, if not followed, may result in minor or moderate injury.

- Rules are shown in the table below.

	<b>General Sign (for Alertness)</b> This is to alert the user to unspecified caution, warning or danger.		<b>General Sign (for Prohibition)</b> This is to alert the user to unspecified prohibition.
	<b>Shock Hazard</b> This is to alert the user to a risk of electric shock in certain circumstances.		<b>Prohibition of Dismantling</b> This is to alert the user to a risk of injury or shock if the indicated part is dismantled.
	<b>Cut Hazard</b> This is to alert the user to a risk of cutting hands or fingers by a cutter or others. May cause physical handicap.		<b>General Sign (for Compulsion)</b> This is to alert the user to unspecified user's action.
	<b>Burn Hazard</b> This is to alert the user to a risk of burn from heat or steam.		<b>Necessity to Ground</b> This is to indicate that the machine must be properly grounded, using the attached green wire.
	<b>Pinch Hazard</b> This is to alert the user to a risk of pinching by rollers which may cause permanent damage to extremities.		<b>Rotation Hazard</b> This is to alert the user to a risk of injury if rotating parts of the machine are not properly covered with during maintenance or operation.
	<b>Rotation Hazard</b> This is to alert the user to a risk of injury if rotating parts of the machine are not properly covered by during maintenance or operation.		

Sankosha cannot be held legally responsible for any injuries to operators or damages to the machine caused by alterations to the machine or operations not described in the machine manual.



## WARNING

### ■ Installation



Installation and rigging of this product should be performed only by authorized Sankosha distributor or by qualified personnel who has read this manual.

**Improper installation or rigging of this machine may result in shock, injury or burn.**

### ■ Ground Connection



The green wire must be properly grounded.  
The electrical code must be conformed to Single Phase 220V power.

**Incorrect connection may cause electric shock.**

### ■ Fire Hazard



Flammable articles such as gasoline, etc should not be located near the machine.  
**It may cause fire or explosion.**

### ■ Shock Hazard



Do not touch the electric plug or switch.  
**It may cause electric shock.**

### ■ Shock Hazard



Parts must not get wet when cleaning the machine with water.  
**It may cause electric shock.**

### ■ Alteration Hazard



Do not improve or dismantle the machine.  
**It may cause accident.**

### ■ Do not Use During Disrepair



Turn the main power and breaker switches off in case of malfunctions.  
Call authorized service personnel.

**It may result in injury or further damage to the equipment.**

### ■ Shock Hazard



Do not put a finger or metal into the machine or Control Box.

**It may cause electric shock or explosion.**

### ■ In case of flooding



Please call authorized personnel to inspect and repair the machine if necessary.

**It may cause electric shock.**

### ■ Maintenance



Please call authorized service personnel.  
Do not dismantle by yourself.

**It may cause electric shock, injury, fire or accident.**

### ■ Safety Instructions



▪ For your safety, please follow the instructions below.

- Only qualified trained personnel can operate the machine.
- Carefully read this Instruction Manual in full before using the machine.
- Make sure there is no one working near the machine before beginning operation.
- The machine should be operated individually at all times.
- Before conducting the proper maintenance, always keep following instruction: close the air and steam valves and release their residual pressures.



## CAUTION

### ■ Damage by Water



When the machine is damaged by water, do not use. Ask a local distributor or Sankosha for maintenance or repair.

**It may cause electric shock, injury, fire or accident.**

### ■ Cleaning



Both the main power switch and the breaker should be off when cleaning.

**It may cause electric shock without power-off.**

### ■ Check and cleaning



Electric plugs and electric sockets need to be checked and cleaned periodically.

If you find damages, call us or Sankosha distributor.

**Breakage causes electric shock and fire.**

### ■ Adequate space



Adequate space around the machine should be secured for service and maintenance.

**Injury to service/maintenance personnel may result.**

### ■ Inside use only



The machine must be located inside the facility.  
Do not place it in a damp or wet area.

**It may cause an accident.**

### ■ Maintenance of warning labels



The labels need to be cleaned and replaced if necessary.

**It may cause an accident.**

### ■ Not in use abroad



Do not use the machine outside of designated countries.

**It may cause fire due to different electrical supply.**

### ■ Operation Procedure



Please make sure to follow the proper procedure of operations to insure the safety use of the machine.

**It may result in damage to the equipment or injury to the operator.**

### ■ Regular Clean Up



It may cause dust in the machine if you do not clean the machine for a long time.

**It may result improper operation or damage to the equipment.**

# Hazardous Area

## Electrically Live Area

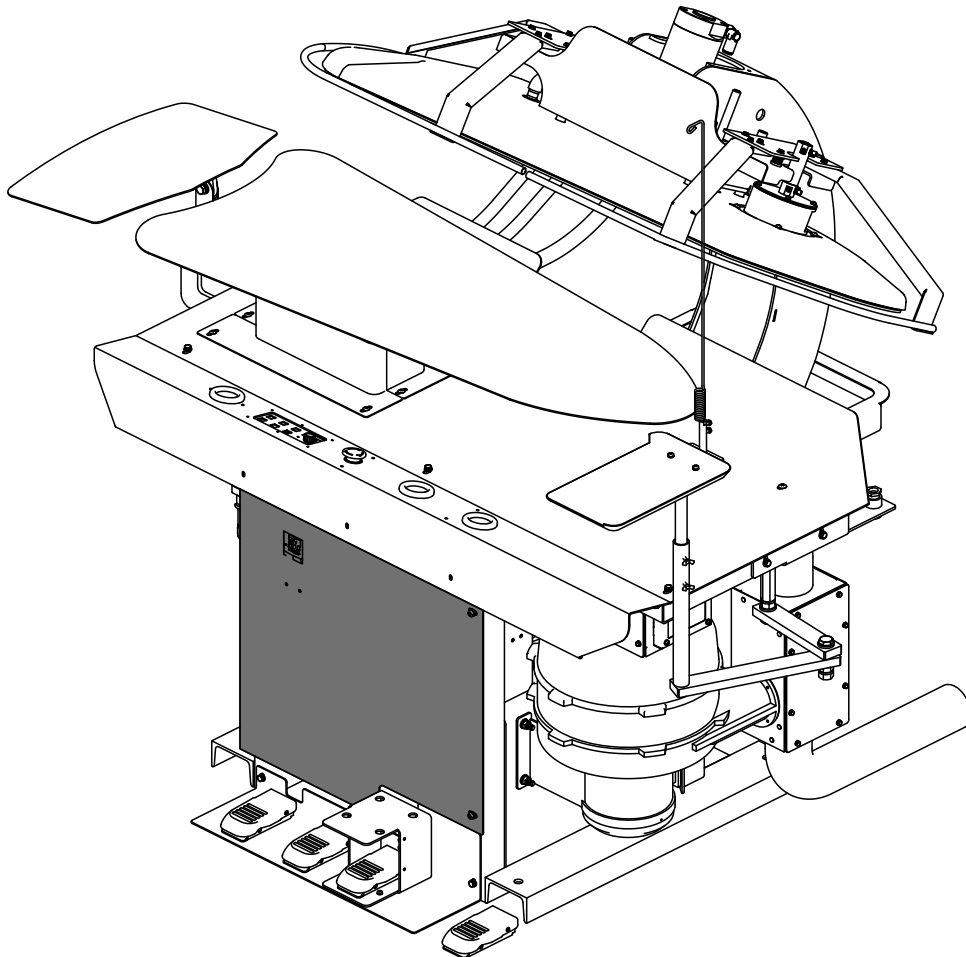
### **DANGER**

Control box has terminals with lethal voltage.

- Only trained maintenance personnel can open the box.

- Turn off the power before opening the box.

Ignoring this warning will result in serious injury or death due to electric shock.

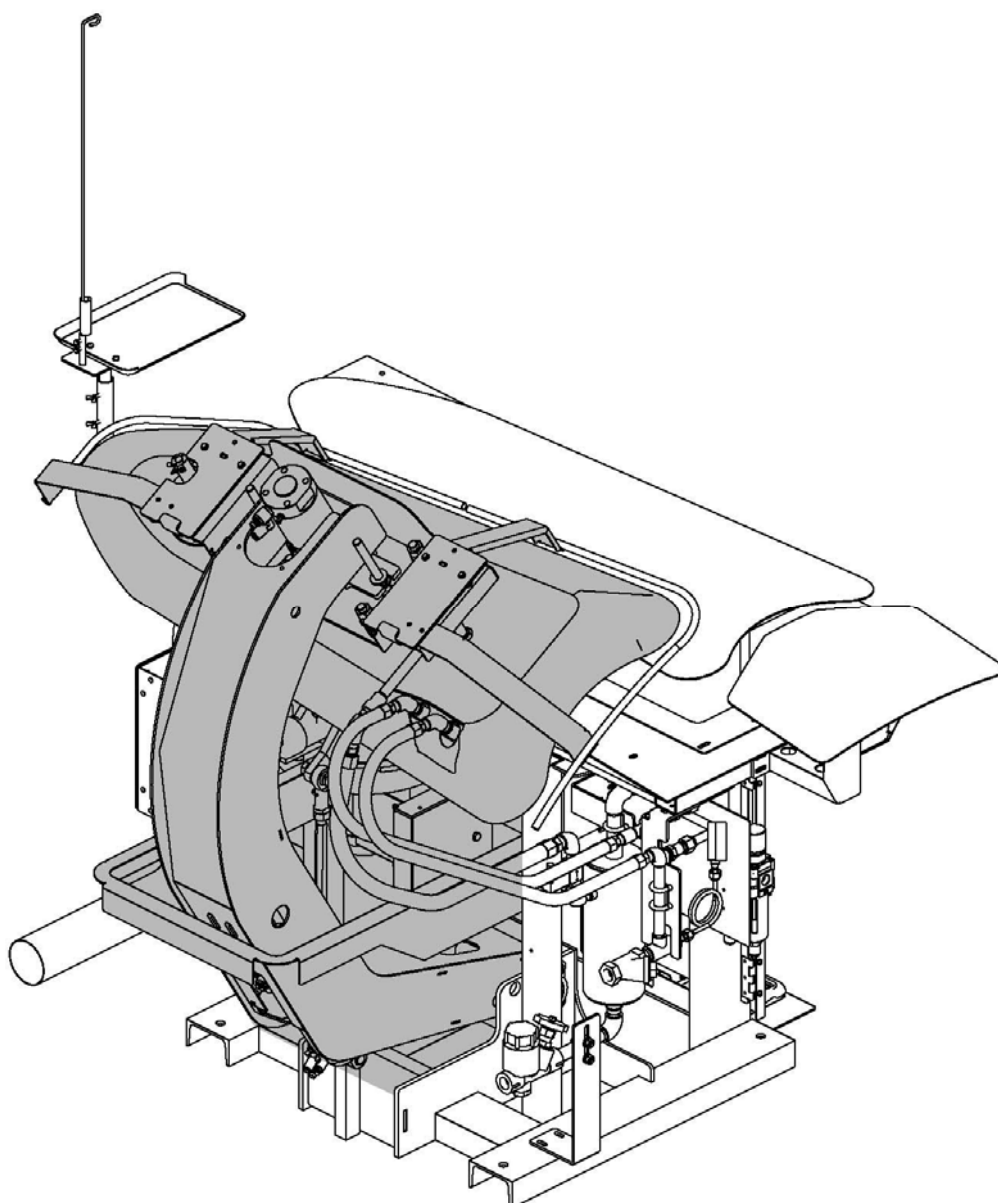




## Range of the Machine in Motion

### WARNING

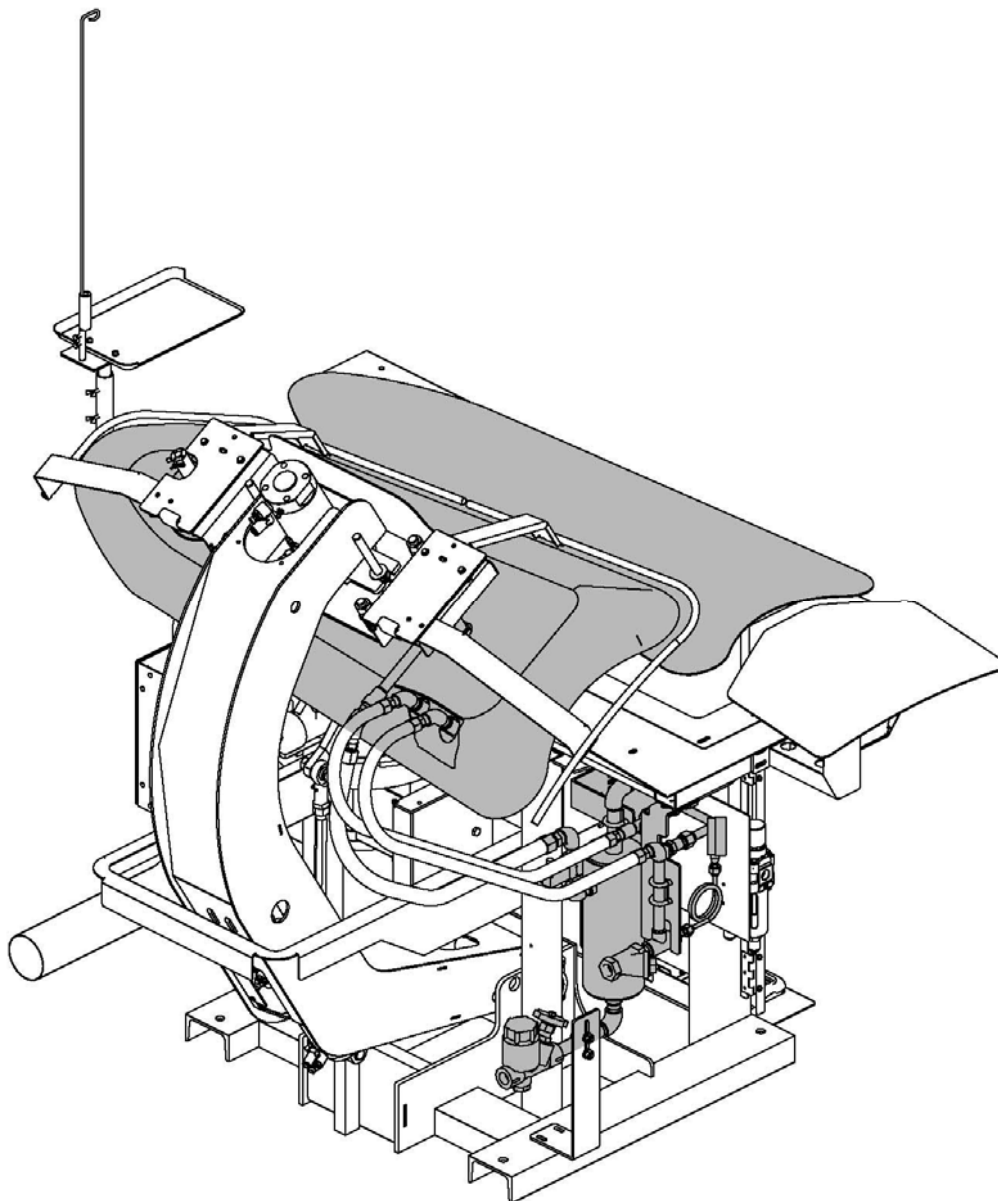
The machine has a certain range of motion.  
Keep your hands away from the range of the machine in motion during operation.  
Before starting check-up or maintenance, turn off the air and power first.  
Ignoring this warning could result in serious injuries.



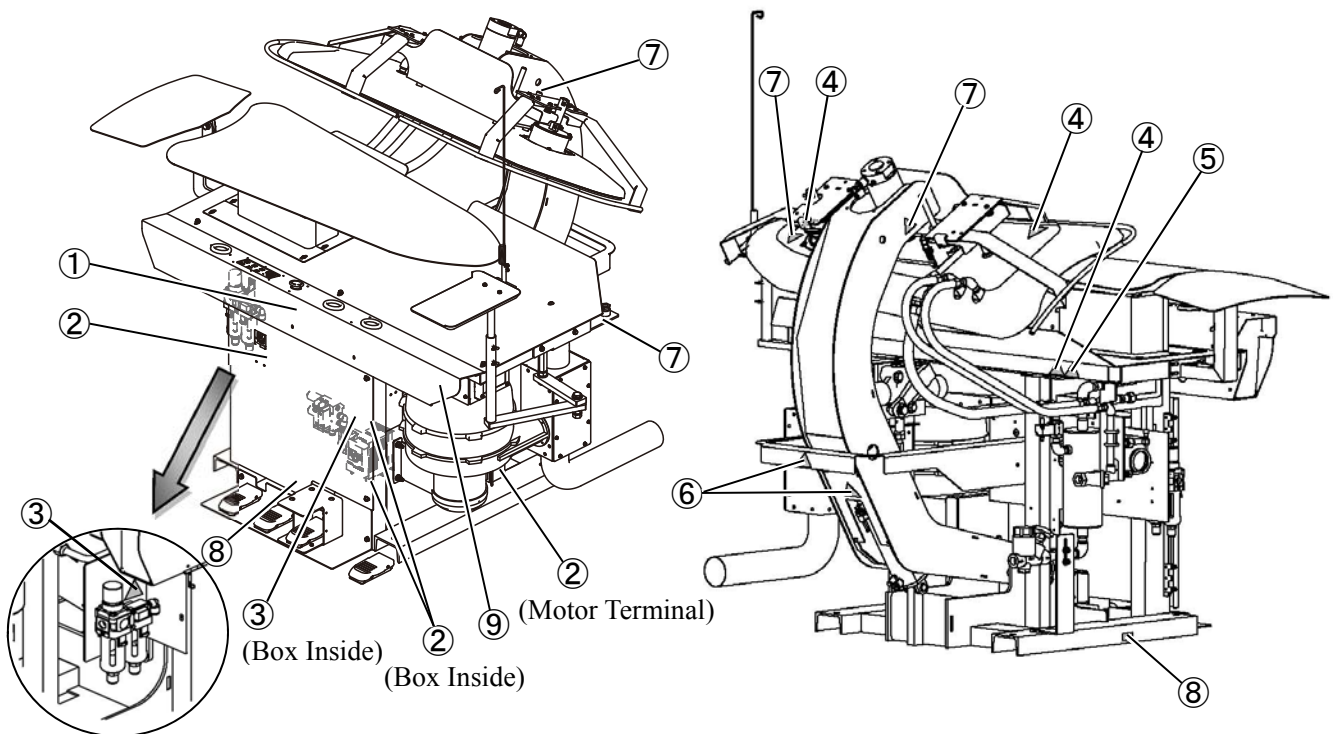
## High Temperature Area

### CAUTION

The machine has Press Heads which get extremely hot during operation. Never touch the pressing surface during operation. Do not also touch these areas for 30 minutes after the steam turns off. Ignoring this warning may result in burns.



# Safety Labels on the Machine



①		Please be sure to check that nobody is on the periphery of the machine while operating the machine. Operate the machine alone.
②		It may cause electric shock. Before opening Control Box/Motor Terminal and Inverter Box, always turn the power off. Do not touch any power switched with wet hands.
③		High pressure air! Before maintenance, close air valve and drain residual pressure.
④		Press head surface is HOT! Do not touch press head, piping and its surrounding area.
⑤		High pressure steam! Before maintenance, close steam valve and let residual steam discharge
⑥		Cut hazard! Keep hands away from the machine. Do not touch while operating.
⑦		Pinch hazard! Keep hands away from the machine. Do not touch while operating.
⑧		Center Mark Indicating the center of gravity of the machine

Make sure that each warning label is placed at the location shown above. If any of the labels is missing, damaged, or illegible, contact your distributor to obtain a new one.

## SAFETY INSTRUCTIONS

**⚠ WARNING** For your safety, follow these instructions.

Only qualified personnel trained for requirements by supervisor can operate the machine.

Carefully read the Instruction Manual to understand the content completely before operation.

Make sure there is no one working on the machine before operation.

Never operate the machine with anyone else.

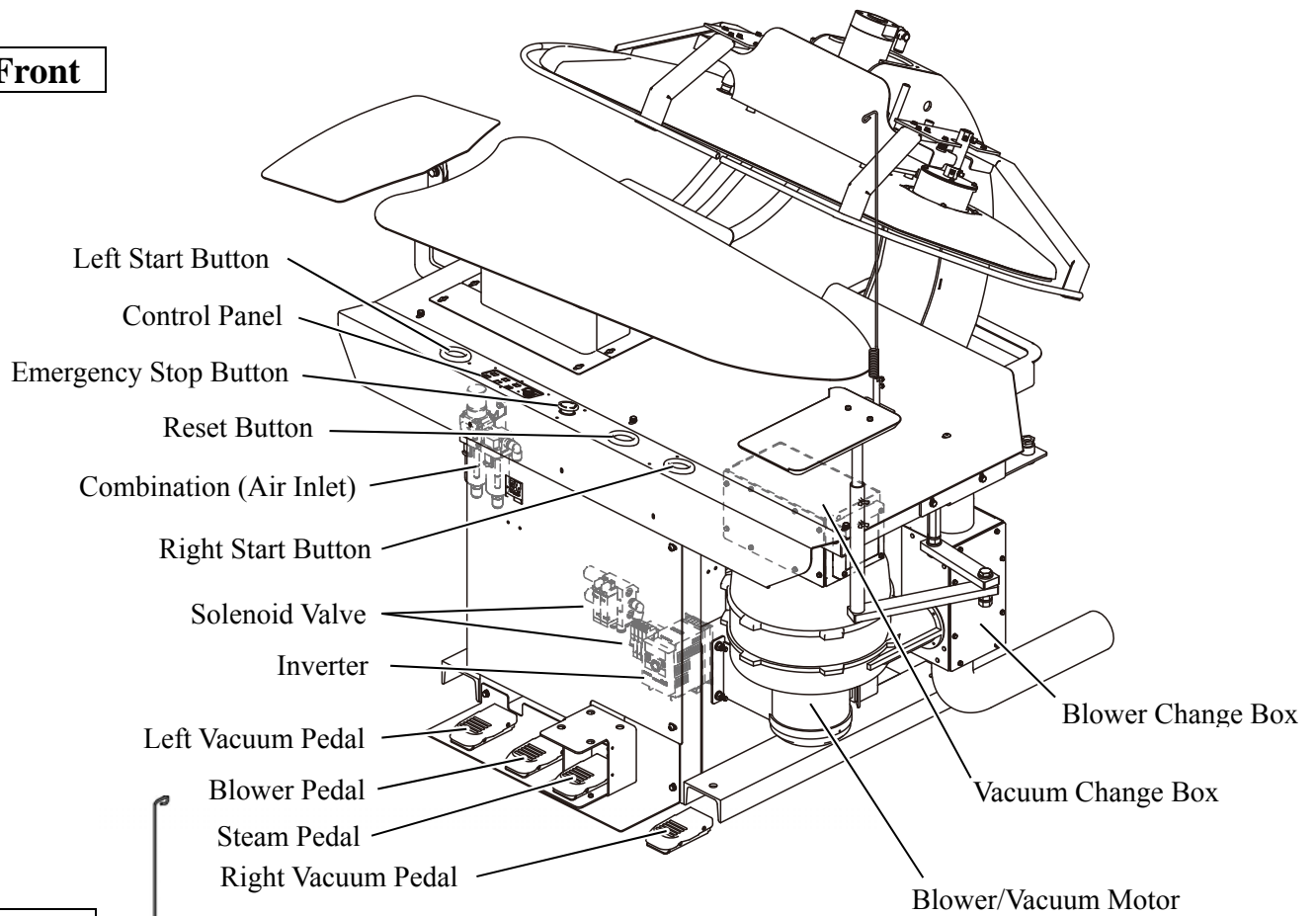
Before maintenance, follow the following instructions.

Close the air and steam valves, and release their residual pressures.

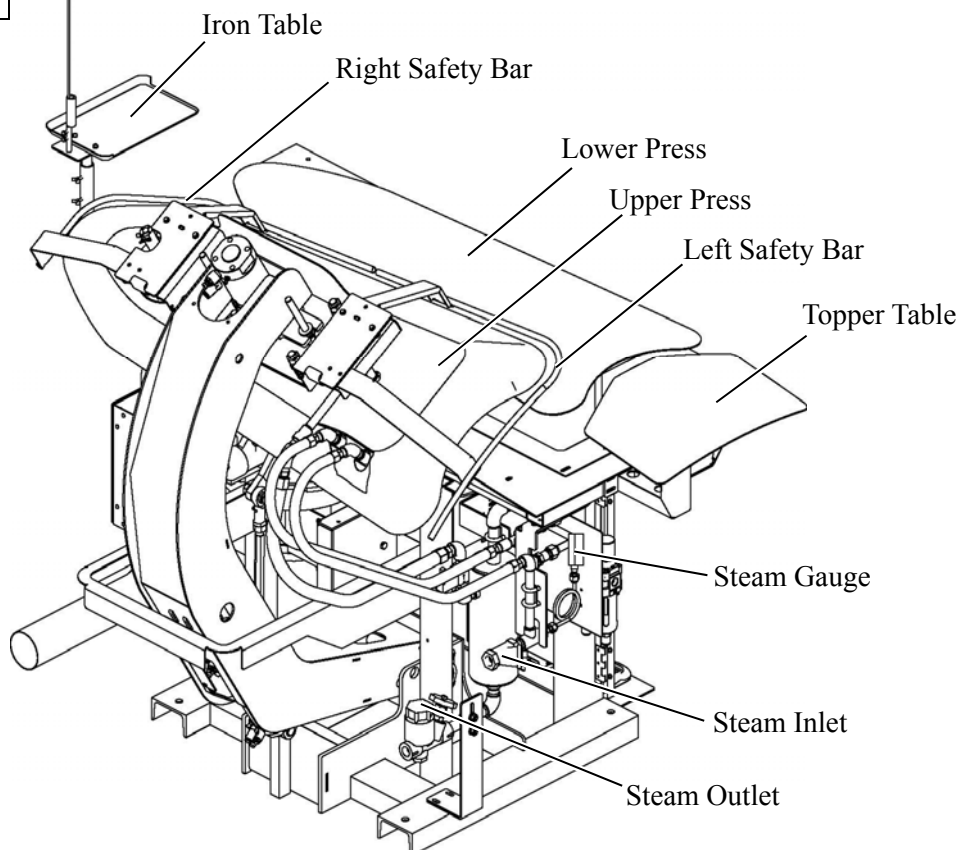
# Main Device

## Main Unit

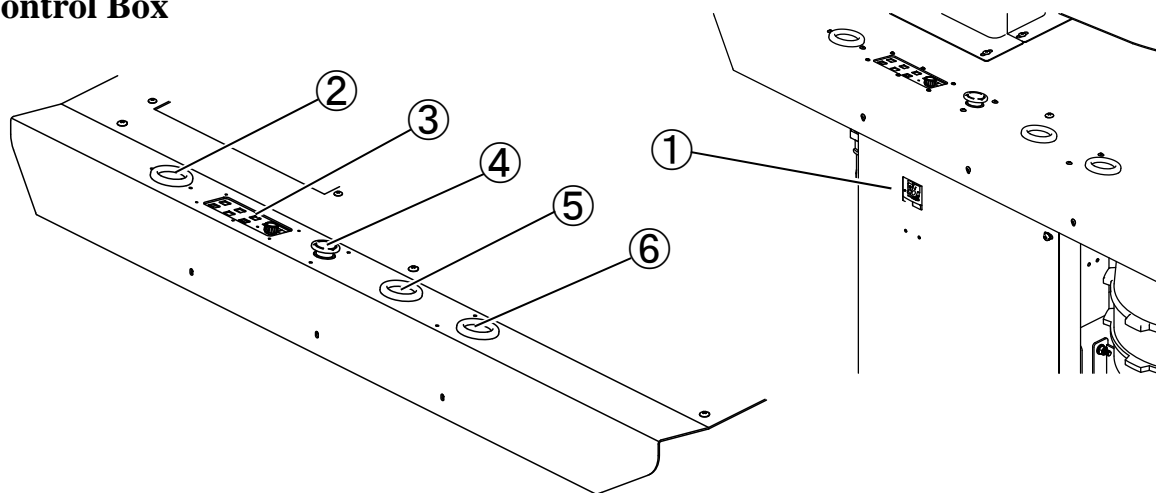
### Front



### Rear



## Control Box



① Power Switch

The switch is for main power.

Power is ON by pushing the black button. Power is OFF by pushing the red button.

② Left Start Button

There are two functions.

1. Upper Press Head works (including steam injection) as long as this button is pushed.
2. By pushing this button and ⑥Right Start Button at the same time, automatic operation starts.

③ Operation Panel

You can change or check the setting. See page 14“Operation Panel” for further details.

④ Emergency Stop Button

Push this button at any stage in order to release the press and safely return to the original position.

Display Window shows “E1” when pushing the Emergency Stop Button. In order to return to normal operation, release the lock by turning the button clockwise. (Display Window will show “— 1”.) Push the Reset Button next. Display Window will show the number of pants count.

⑤ Reset Button

There are four functions.

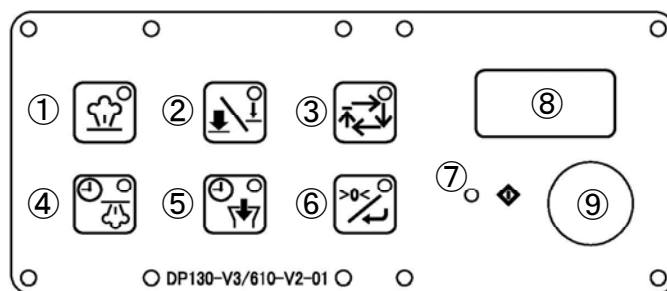
1. By pushing this button after turning the power ON, the machine is ready to work in normal operation.
2. By pushing this button when the machine stops such as in case of emergency, the machine is ready to work in normal operation.
3. By pushing this button while the machine pressing, the machine stops pressing and is ready to work in normal operation.
4. By pushing this button while setting the garment, the vacuum stops.

⑥ Right Start Button

There are two functions.

1. Upper Press Head works (including steam injection) as long as this button is pushed.
2. By pushing this button and ②Left Start Button at the same time, automatic operation starts.

## Operation Panel



- ① Lower Press Steam Button (The lamp turns green when this Mode is ON)  
Steam is injected from Lower Press Head in automatic operation when this button is ON.
- ② Soft Mode Button (The lamp turns green when this Mode is ON)  
You can change order of automatic mode by turning this button ON.
  - Soft Mode(The green lamp turns ON) : 「Press」→「Steam」→「Press Release」→「Vacuum」
  - Normal Mode(The green lamp turns OFF): 「Press」→「Steam」→「Vacuum」→「Press Release」※This function works only in Automatic Mode.
- ③ Auto Button (The lamp turns green when this Mode is ON)  
While this button is ON, auto mode operation works. While this button is OFF, manual mode operation works. Push Right and Left Start Button at the same time when this Mode is ON. Each process: “Press”, “Steam”, “Vacuum”, and “Press Release” works automatically. The order of each process depends on the Mode you select as shown in ①: Soft Mode or Normal Mode.  
Push Right and Left Start Button at the same time while this button is OFF. The process: “Press” and “Steam” works in turn. Upper Press Head keeps on pressing. Release Upper Press Head by pushing the Reset Button.
- ④ Steam Timer Button (The lamp turns green when this Mode is ON)  
Turn this button ON. You can change the steam injection time during the automatic operation. Push this button. The current timer will blink. Turn ⑨”Set/Select Dial”. You can change the timer. Push ⑥”Counter Clear/Enter Button”. You can save the new setting. When you do not want to save the change, push this button again. The Display Window will show the garment counter.
- ⑤ Vacuum Timer Button (The lamp turns green when this Mode is ON)  
Turn this button ON. You can change the vacuum time during the automatic operation. Push this button. The current timer will blink. Turn ⑨”Set/Select Dial”. You can change the timer. Push ⑥”Counter Clear/Enter Button”. You can save the new setting. When you do not want to save the change, push this button again. The Display Window will show the garment counter.
- ⑥ Counter Clear / Enter Button  
This button has two functions.
  1. Counter Clear Function  
Push this button. ⑧”Display Window” blinks. Push this button again. The garment counter returns to “0”. If you do not want to return to “0”, push the Reset Button while blinking.
  2. Setting Save Function (Enter)  
Push this button after changing the timer by either ④”Steam Timer Button” or ⑤ Vacuum Timer Button”. You can save the new setting.

⑦ Power Lamp

The lamp turns red when the power turns ON. The lamp blinks when pushing the Emergency Stop Button.

⑧ Display Window

It shows finished pants quantity, Timer Countdown, Error Number and Menu Item (Number).

⑨ Set/Select Dial

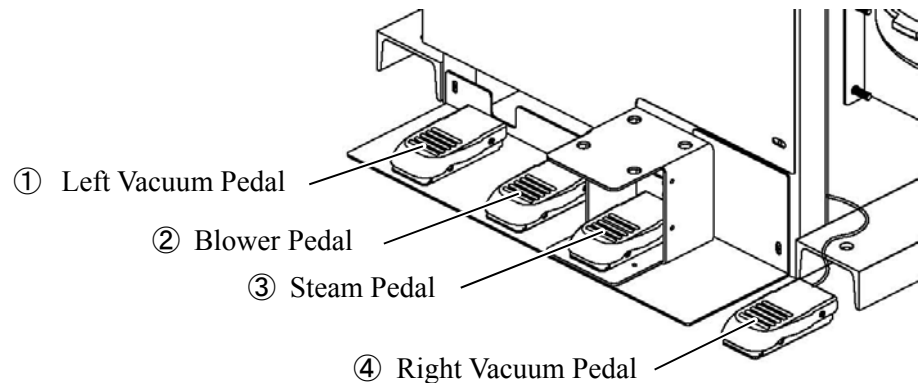
This button has two functions.

1. You can change the setting or select a certain menu.
2. You can change the power of the blower.
  - Turn clockwise : power goes up.
  - Turn counterclockwise : power goes down.

## Foot Pedal

**Caution**

Foot Pedal does not work during the automatic operation.



① Left Vacuum Pedal

Vacuum from the Lower Press Head works while pressing this pedal.  
(Same Function as Right Vacuum Pedal)

② Blower Pedal

Blower from the Lower Press Head works while pressing this pedal.

③ Steam Pedal

Steam from the Lower Press Head is injected while pressing this pedal.

※Steam is also injected even while the press is open. Take precaution against burns.

④ Right Vacuum Pedal

Vacuum from the Lower Press Head works while pressing this pedal.  
(Same Function as Left Vacuum Pedal)

**Caution**

The power may turn off if you use the vacuum foot pedal or blower foot pedal for a long time or step them on and off rapidly in a short period of time. If the power turns off, turn the power on again at least five minutes later.

# Operation Procedures



## CAUTION

Follow the procedure for proper operation.

Improper operation can cause mechanical failure or injury to operators.

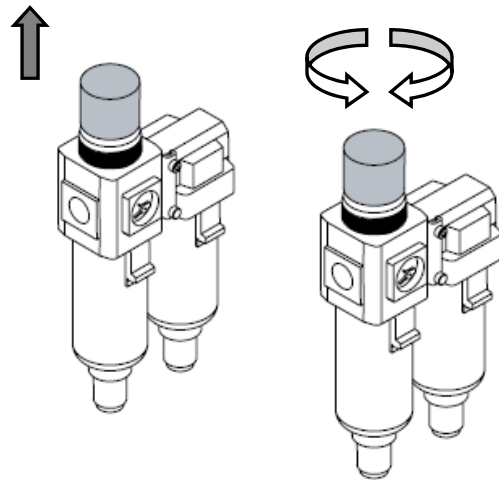
### Provide Air

- Check whether air pressure is set at 0.6MPa.

Low air pressure can cause malfunction. If the pressure does not reach its standard level, set the air pressure properly following the procedure below.

#### ■ How to adjust air pressure

1. Pull the adjustment knob up
2. Turn the knob to adjust air pressure  
Clockwise → Pressure goes up  
Counterclockwise → Pressure goes down
3. Pull the knob down



### Check Point

- Check compressor if the air pressure does not reach 0.6MPa even after the above adjustment.

### Attention!

Run the machine where air can be supplied in a stable condition. Use after-cooler or similar equipment to supply clean air all the time.

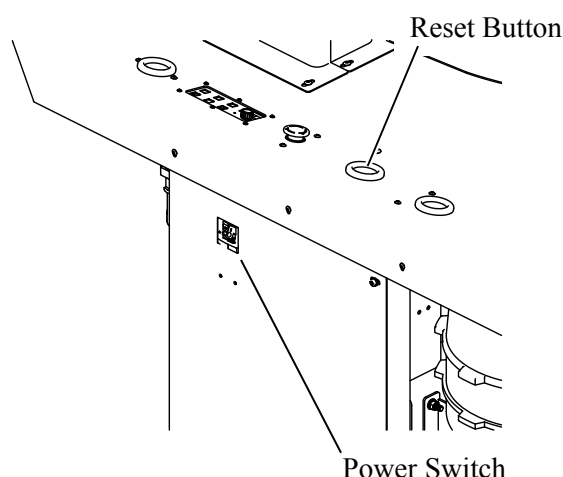
### Provide Steam

1. Check whether steam with the pressure at 0.5MPa or more can be supplied to the machine. If the steam pressure does not reach required level, it may adversely affect shirt finishing quality. Always check whether the steam pressure meets its requirement with steam gauge.
2. It takes about 15minutes until press heads heat up after steam is injected.  
(It may vary depending on the season and the environment.)  
Insufficient heat may adversely affect shirt finishing quality.



## Turn the Power On

1. The power is ON by pushing the Black Switch at the front side of the Control Box.  
→ The power lamp blinks and “— — —” shows up at the Display Window on the Operation Panel.
2. Push the Reset Button.  
→ The power lamp turns ON and the machine is ready to work.  
The Finishing Count shows up at the Display Window.

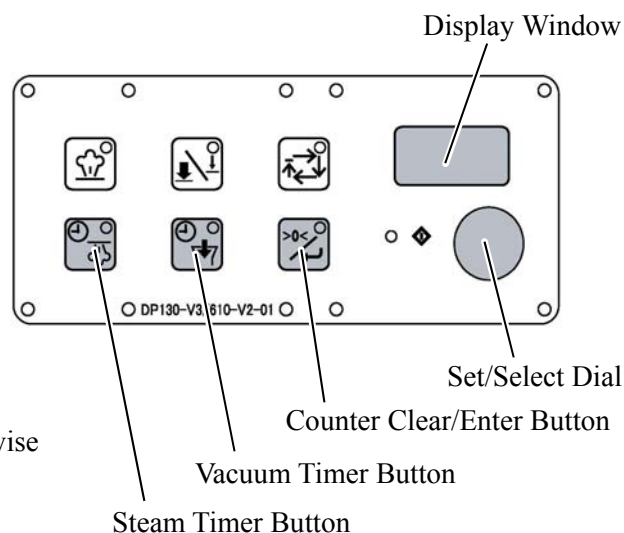


**Caution** The machine does not work until the Reset Button is pushed.

## Set Timer

Change setting of the Steam Timer / Blower Timer depending on material of the pants.

- Push the “Steam Timer Button” or the “Vacuum Timer Button”.  
→ The green lamp goes on the selected button.  
The current timer blinks at the Display Window.
- Turn the “Set/Select Dial” to change the timer.
  - Set the time longer by turning clockwise
  - Set the time shorter by turning counterclockwise
- Push the “Counter Clear/Enter Button” to save the setting.



**Caution** If you do not push the “Counter Clear/Enter Button”, it returns to the previous timer. Please make sure to push the button if you want to save the new setting.

\* Factory Setting (Default Setting) Steam Timer : 2.0 sec  
Vacuum Timer : 2.0 sec

## Set the Pants



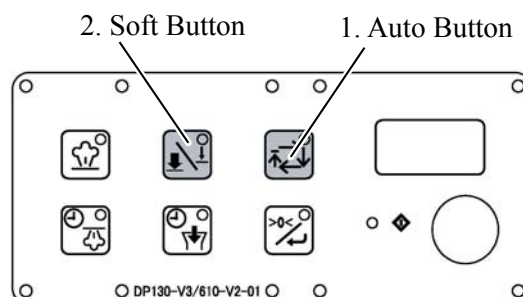
### CAUTION

- Operate the machine carefully so that your hands or garment are not pinched in the machine while in motion.
- Take precautions against burning yourself at metal parts of press heads when setting the garment.

### Automatic Mode

1. In case that the green lamp at the upper right of the Automatic Button turns OFF, Push the button.  
(If the green lamp turns ON, proceed to process No.2)

→The green lamp turns ON at the upper right of this button.



### Information

《※Only Effective under Auto Mode》

The Soft Mode is effective for soft fabric that you do not want to press too much.

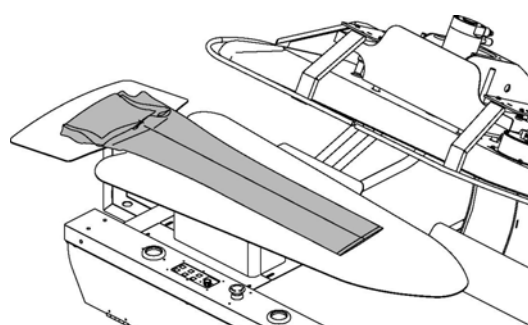
When you push the Soft Button, the lamp turns green at the upper right of the button and the machine turns to the Soft Mode.

The cycle of the Normal Mode and the Soft Mode is as follows:

- Normal Mode(The green lamp turns OFF) : 「Press」→「Steam」→「Vacuum」→「Press Release」
- Soft Mode(The green lamp turns ON) : 「Press」→「Steam」→「Press Release」→「Vacuum」

2. Put one leg of the pants on the Lower Press Head and set it so that any wrinkle is not made.

If it is hard to remove wrinkle, set it by pressing the vacuum pedal. Setting will be easier.



### Information

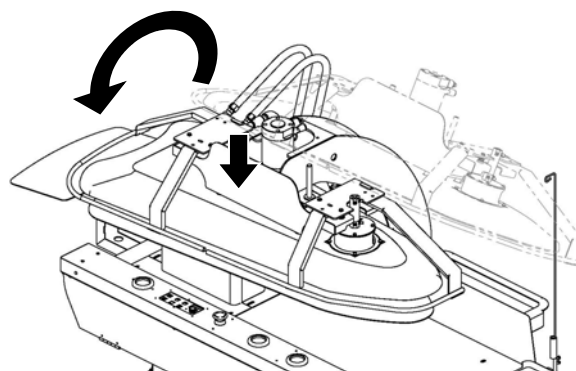
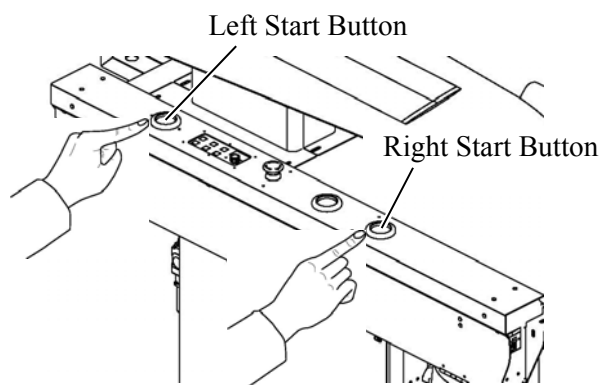
Depending on the pants condition, use steam/vacuum/blower with foot pedal before pressing. The finishing quality will improve.

3. Push Right and Left Start Button at the same time.

### Caution

If you release either Right or Left Start Button before the Upper Press Head closes completely, it returns to the initial position.

- The Upper Press Head presses pants and the automatic operation works.
- When the press is over, the Upper Press Head opens automatically.



4. Turn the pants over and process the other leg of the pants in the same way.

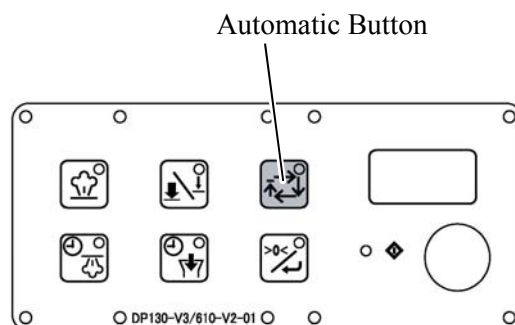
### Caution

The machine has a function to notify a machine problem in advance to prevent machine breakage. In case that the closing speed of the Upper Press Arm or the pressing speed is faster or slower than usual, error number E41~E43 shows up. If either E41, E42 or E43 shows up on the Display Window in pressing process, see "Trouble Shooting" on page 32 and take the necessary actions. (Although these errors show up, you can continue to operate the machine. When the Upper Press Arm returns to the initial position, the error is released.)

### Manual Mode

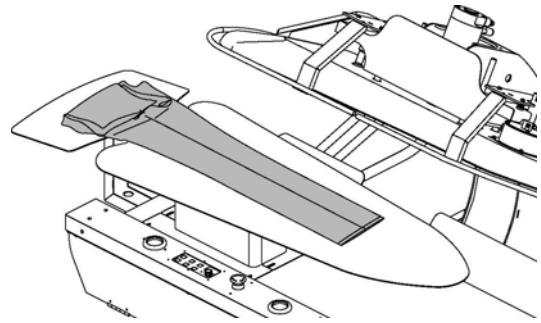
1. In case that the green lamp at the upper right of the Auto Mode Button turns ON, push the button.  
(If the green lamp turns OFF, proceed to process No.2)

- The green lamp turns OFF at the upper right of this button.



- Put one leg of the pants on the Lower Press Head and set it so that any wrinkle is not made.

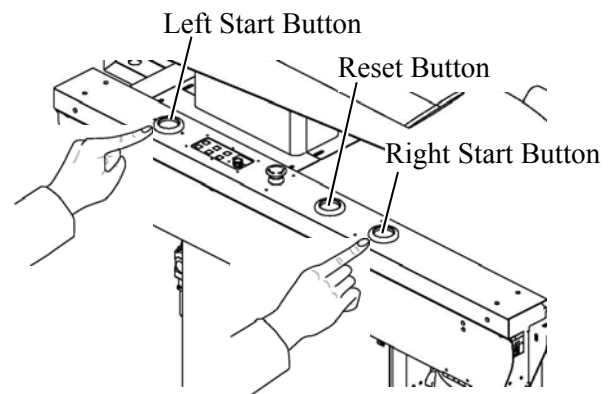
If it is hard to remove wrinkle, set it by pressing the vacuum pedal. Setting will be easier.



- Push Right and Left Start Button at the same time.

**Caution**

If you release either Right or Left Start Button before the Upper Press Head closes completely, it returns to the initial position.



→ After the Upper Press Head presses pants and steam is injected, it keeps on pressing.

- Release the Upper Press Head by pressing the Reset Button after certain period of time.

→ The Upper Press Head opens

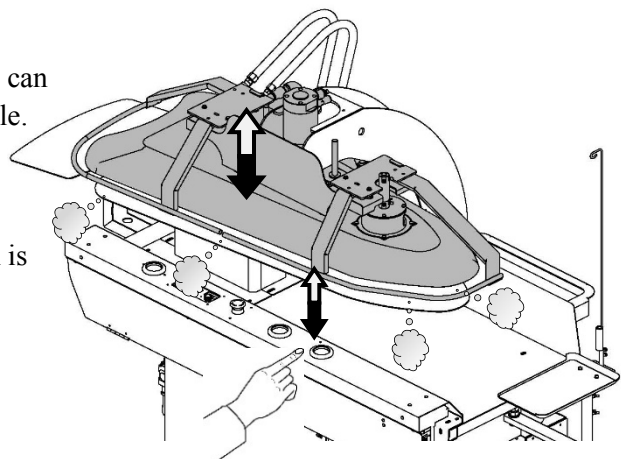
**How to use One Touch Start Function**

When a wrinkle of the pants is not removed, you can use this function to add steam to remove the wrinkle.

- Push either Right or Left Start Button.

→ The Upper Press Head presses pants and steam is injected.

- It opens when the button is released.



When you push either Right or Left Start Button repeatedly, the machine turns in pumping motion. After removing wrinkles, push Right and Left Start Button at the same time. The press starts to work.

### Information

If you do nothing for a certain period of time after either automatic or manual operation is over, Vacuum/Blower Motor stops automatically. You can change “auto stop time” by “Volume 1” of the Service Menu. Please see “4. Volume Function” on page 29 for further details.

## Turn the Power OFF

- The power is OFF by pushing the Red Switch at the front side of the Control Box.

→The Power Lamp at the operation panel is turned off.

## Other Operations

### How to Reset the Emergency Stop

When the Emergency Stop Button is pushed, “E1” shows at the Display Window and the machine safely return to the initial position from any process of the operations. In order to resume normal operation, turn the button clockwise. The lock will be released. (The Display Windows shows “— 1”) Push the Reset Button next. Normal operation will resume.

### How to Adjust Blower Power

By turning the “Set/Select Dial”, you can change the power of blower when operated by the blower pedal.

#### Caution

You cannot change it during the automatic operation.

- Turn clockwise: the power goes up
- Turn counterclockwise: the power goes down

### How to Adjust Vacuum Power

By turning the “Volume setting V9”, you can change the power of vacuum when operated by the vacuum pedal.

Range of value : From 1(Min) to 7(Max)

Please see “4. Volume Function” on page 29 for further details.

#### Caution

You cannot change it during the automatic operation.

# How to Replace Cover & Padding



## Caution

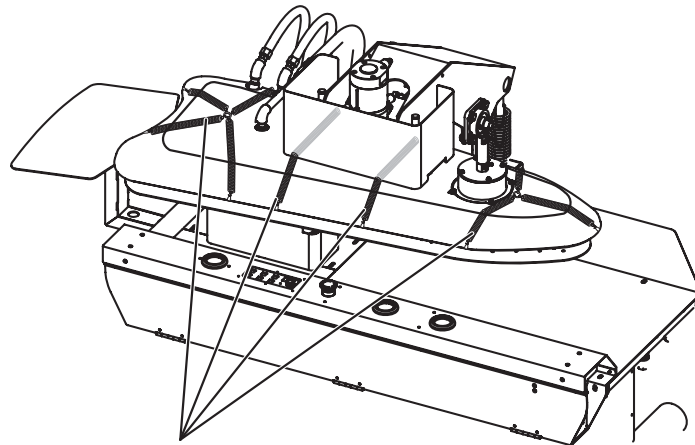
Turn off the power when replacing cover & padding.  
Let the machine cool down completely before replacing cover & padding.  
Ignoring this warning may result in burns.

## Upper Press Mat Replacement

- ① Remove Mat Extension Springs (3pcs). Loosen string and remove Upper Press Mat. (Figure-1)

### Caution

Mat extension springs get hot. Let the press and mat extension springs cool down completely before replacing the mat.



Cover Extension Spring(Accessories of Hard Pad)

Figure-1

- ① Cover the upper press head with a new cover, and install the cover extension spring as seen in Figure-1. Please also install the hard pad and the cover extension spring as seen in Figure-2.

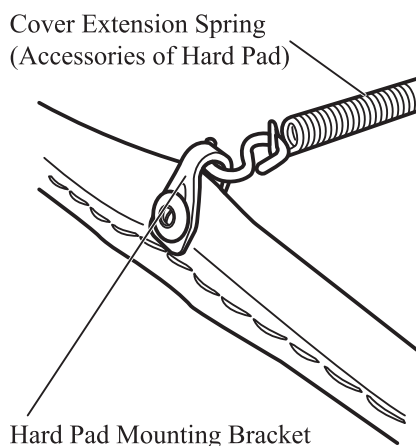


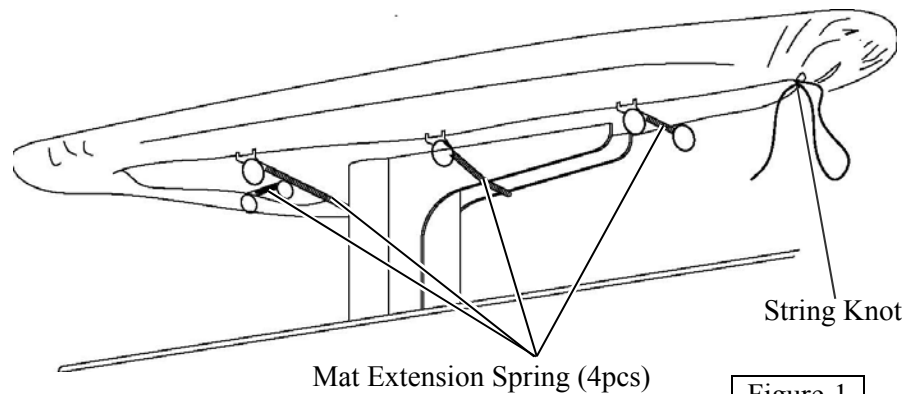
Figure-2

## Lower Press Mat Replacement

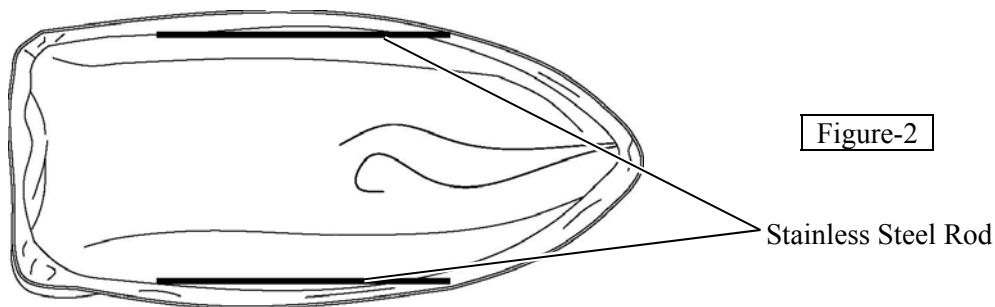
- ① Remove the Mat Extension Springs (4pcs). Loosen the string and remove the Lower Press Mat. (Figure-1)

**Caution**

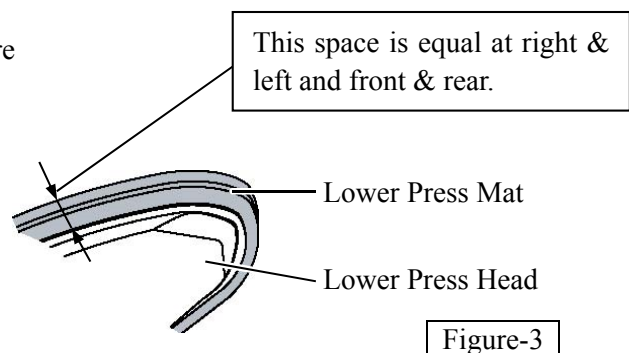
Mat extension springs get hot.  
Let the press and cover extension springs cool down completely before replacing mat.



- ② Remove the Stainless Steel Rods (2pcs) from the existing mat and insert them into the new mat. (Figure-2)



- ③ See from the lower view and make sure that right & left and front & rear side of the mat are evenly set against the press head. Tie the string firmly. (Figure-3)



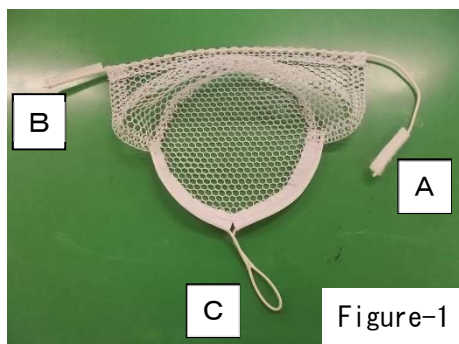
- ④ Hitch the Cover Extension Spring to the Stainless Steel Rod. Make sure that there is no wrinkle or slack on the press head. (See Figure-1 for the position of the Mat Extension Spring.)

## Replacement of Motor Net

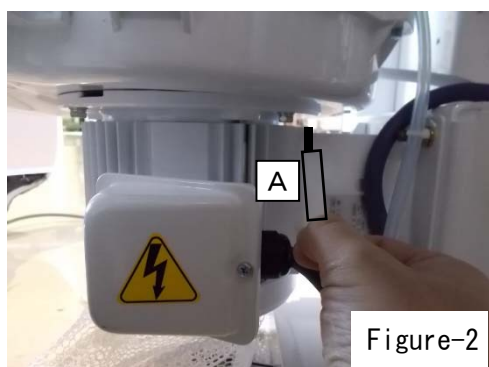
This net is for preventing suction of clothes at the bottom of the motor.

**! When putting the net on, be sure to turn off the power.**

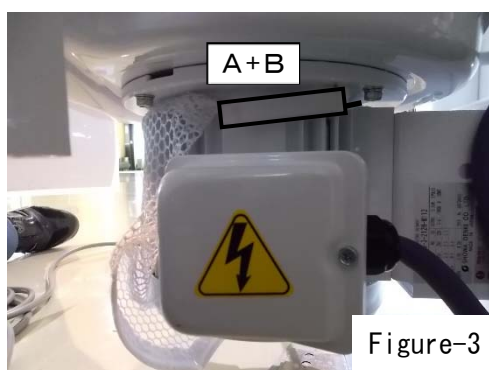
Motor Net



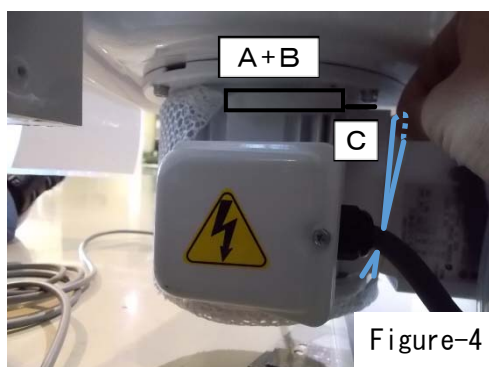
Mounting Image



From the rear of the machine, put Velcro A through between the machine and the motor to the position of Figure-2.

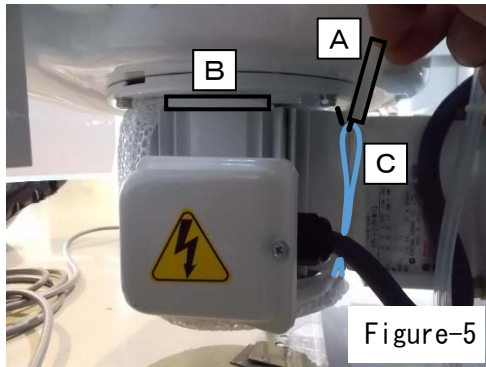


Temporarily stick Velcro A and B as Figure-3.

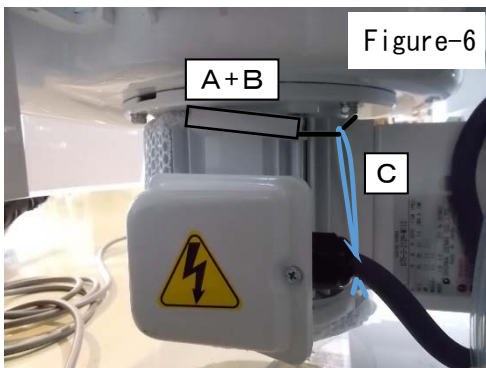


Grab string C as Figure-4.

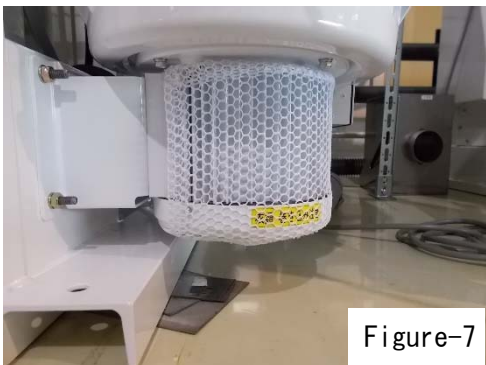




As Figure-5, detach Velcro A from Velcro B and pass the Velcro A through the loop of string C.



As Figure-6, attach tightly Velcro A and Velcro B.



Check from the front if lower part of the motor is firmly covered with the Net as Figure-7.

# Service Menu



## Warning

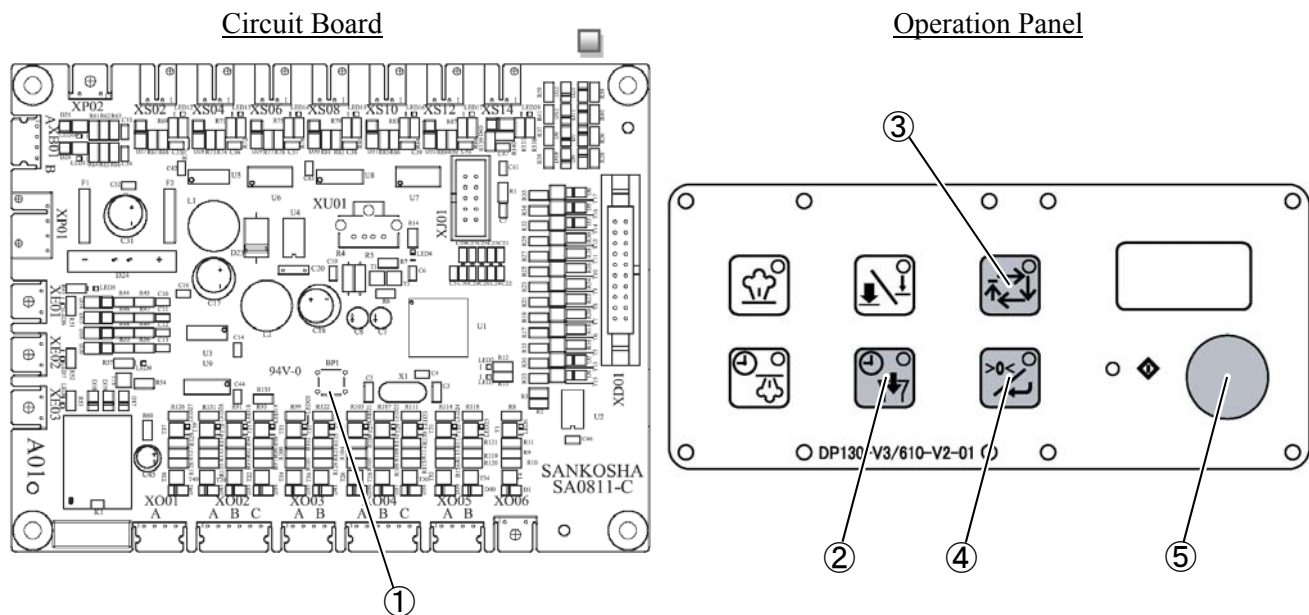
It is extremely dangerous in Control Box.  
Do not touch anywhere unless otherwise specified.

## Caution

**The initial setting will be changed without prior notice at the time of model**

When you push the Service Button (BP1) on the circuit board in the Control Box, you can check "Input Test", "Output Test", "Volume Setting", "DIP Setting", "Output Timer Setting" as well as "Initial Setting", "Program Version" and accumulated working hours of the circuit board.

■ The location of the Service Button and the function of each Menu Button:



### ① Service Button

Push this button. "in1" shows up and Service Menu will start to work.

### ② Vacuum Timer Button

This button works as the Return Button while the Service Menu is working.

### ③ Auto Button

At Input Test 1 or 2, the lamp of this button goes on while the Test Mode is on.  
The lamp goes off when the Test Mode is over.

### ④ Counter Clear / Enter Button











While the Service Menu works, this button works to change or select the Menu/Setting.

### ⑤ Set /Select Dial


While the Service Menu works, this dial works to select Menu, proceed to the next Menu, and change the Setting.

- Turn right : Proceed to the next Menu. The number goes up when setting.
- Turn left : Return to the previous Menu. The number goes down when setting.

■ Service Menu List (See “Service Menu Explanation” on page 28 for further detail.)

Indication	Indication	Function
	<b>in1</b>	“Input Test 1”
	<b>in2</b>	“Input Test 2”
	<b>out</b>	“Output Test”
	<b>VoL</b>	Set each Volume
	<b>diP</b>	Set DIP function
	<b>tou</b>	Set the time when setting or number is displayed in Display Window
	<b>dEF</b>	Return to the Initial Setting for all the modes
	<b>VEr</b>	Display the version of the program
	<b>run</b>	Display the accumulated working hours of the circuit board
	<b>tSt</b>	Test Mode

■ Operation Procedures

1. Push ①the ”Service Button” on the circuit board. →  shows on the Display Window.
  2. Turn ⑤the ”Set/Select Dial” and select Service Menu that you want to work.
  3. Push ④the ” Counter Clear / Enter Button” to start the selected Service Menu.
  4. Work or set in accordance with the selected Service Menu. See the “Service Menu Explanation” for further details.
  5. After completion of the Service Menu, push ②the ” Vacuum Timer Button”, and it will return to its normal operation.
- ※Normal operation will resume after a certain period of time goes by even without pushing this button.

## ■ Service Menu Explanation

### 1. in1 (Input Test 1)



- Follow Operation Procedures 1 and  shows up. Push ④the “Counter Clear / Enter Button” to select. Push each Input Button/Pedal as seen in Chart-1. The number for each Button/Pedal shows up. The lamp of ③the “Auto Button” turns ON while the test is ON.

Chart-1 “Input Test 1” List

Button/Pedal/Sensor	No.	Button/Pedal/Sensor	No.
Reset Button	b1A	Left Vacuum Pedal	S 6
Right Start Button	b1b	Blower Pedal	S 8
Inverter Alarm	b3b	Steam Pedal	S 10
Arm Close Sensor*	S 2	Right Vacuum Pedal	S 12
Press Close Sensor*	S 4	Left Start Button	S 14

\*Regarding a sensor, the number shows up if the sensor turns ON and OFF.

### 2. in2 (Input Test 2)

- Follow Operation Procedure 1 and 2, and  shows up. Push ④the “Counter Clear / Enter Button” to select.
- Turn ⑤the “Set/Select Dial”. The number in Chart-1 shows up in turn. The lamp of ③the “Auto Button” turns ON at the number which indicates a certain function in motion.

### 3. out (Output Test)

#### ! Caution

Shut down steam and air during Output Test. It may cause malfunction or burns.

※Please see page 31 “10. tSt” when providing air.



- Follow Operation Procedure 1 and 2, and  shows up. Push ④the “Counter Clear / Enter Button” to select.
- Turn ⑤the “Set/Select Dial”, and select the number as seen in Chart-2. Push ④the “Counter Clear / Enter Button”. The selected test will start to work.

Chart-2 “Output Test” List

No.	Output	Remarks
1A	Inverter ON	Contactorm KM01
2A	Lower Press Head Steam Solenoid Valve	Solenoid Valve No.3
2b	Upper Press Head Steam Solenoid Valve	Solenoid Valve No.4
2C	Blower Solenoid Valve	Solenoid Valve No.5
3A	Vacuum Solenoid Valve	Solenoid Valve No.6
4A	Motor ON	Inverter F Input
4b	Select Frequency-1	Inverter S1 Input
4C	Select Frequency-2	Inverter S2 Input
5A	Press Arm Solenoid Valve	Solenoid Valve No.1
5b	Press Solenoid Valve	Solenoid Valve No.2
6A	Select Frequency-3	Inverter R Input

#### 4. VoL (Volume Setting)

- Follow Operation Procedure 1 and 2, and  shows up. Push ④the “Counter Clear / Enter Button” to select.
- Turn ⑤the “Set/Select Dial”, and select the number as seen in Chart-3. Push ④the “Counter Clear / Enter Button”. The Current volume setting will show up.
- Turn ⑤the “Set/Select Dial” to change the volume setting. Push ④the “Counter Clear / Enter Button” again. The new timer is now set.

Chart—3 “Volume Function” List

No.	Setting	Initial Setting (sec)
V 1	Time until the motor turns OFF in case the motor switch does not turn ON again.	10 (Max 60)
V 2	Time until upper press arm starts to return to the initial position after Upper Press Head finishes pressing under of automatic operation.	1.0 (Max 2.6)
V 3	Time until upper press arm starts to return to the initial position after Upper Press Head finishes pressing under One Touch Start Function.	1.0 (Max 2.6)
V 4	Time of “After Vacuum” * in case of automatic operation.	3.0 (Max 10)
V 5	Time until “After Vacuum” * starts when vacuum is over in case of automatic operation.	0.8 (Max 1.0)
V 6	Time until vacuum starts after steam injection begins to work in case of automatic operation.	0.8 (Max 2.0)
V 7	Blower Time during steam is injected from Lower Press Head in case of automatic /manual operation (when Lower Press Steam Button is ON.)	0.1 (Max 0.9)
V 8	Time until open Upper Press Head after steam injection is over in case of automatic operation by the soft mode.	0.3 (Max 0.5)
V 9	The power of vacuum when operated by the vacuum pedal.	7 (Max7)

\*After Vacuum: This vacuum works to avoid the pants moving upward when the upper press arm opens after automatic operation is over.

## 5. diP (DIP Function)


- Follow Operation Procedure 1 and 2, and  shows up. Push ④the “Counter Clear / Enter Button” to select.
- Turn ⑤the “Set / Select Dial”, and select the number as seen in Chart-4.
- Push ④the “Counter Clear / Enter Button”. The current setting will show up. Turn ⑤the “Set / Select Dial” to change ON or OFF. Push ④the “Counter Clear / Enter Button” again. The new setting is now saved.

Chart-4 “DIP Function” List

No.	ON/OFF	Setting	Initial Setting
d1	ON	The motor is working as long as the Power is ON.	OFF
	OFF	The motor turns OFF in case the motor switch does not turn ON within the time set by Volume Function V1.	
d2	ON	Vacuum does not work during upper press steam is injected in case of automatic operation.	ON
	OFF	Vacuum works during upper press steam is injected in case of automatic operation	
d3	ON	Either Right or Left Start Button can work as One Touch Start Function.	ON
	OFF	Left Start Button cannot work as One Touch Start Function.	
d4	ON	While the power is ON, the automatic operation is selected as the initial setting.	ON
	OFF	While the power is ON, the manual operation is selected as the initial setting.	
d5	ON	While the power is ON, Soft Mode is selected as the initial setting.	OFF
	OFF	While the power is ON, Normal Mode is selected as the initial setting.	
d6	ON	While the power is ON, lower press head steam is available as the initial setting.	OFF
	OFF	While the power is ON, lower press head steam is not available as the initial setting.	

## 6. tou (Timer Setting on Display Window)



- Follow Operation Procedure 1 and 2, and  shows up. Push ④the “Counter Clear / Enter Button” to select.
- Turn ⑤the “Set/Select Dial”, and select the number as seen in Chart-5. Push ④the “Counter Clear / Enter Button”. Current timer setting will now show up.
- Turn ⑤the “Set/Select Dial” to change the timer setting. Push ④the “Counter Clear / Enter Button” again. The new timer is now set.

Chart-5 “Timer” List

No.	Setting
t 1	Not in Use
t 2	Not in Use
t 3	Not in Use
t 4	Change time to return to the initial display if you do nothing with Service Menu.
t 5	Change time to return to the initial display if you do nothing with Input Test.


7. dEF (Initial Setting)

- Follow Operation Procedure 1 and 2, and  shows up. Push ④ the “Counter Clear / Enter Button” to select.
- “OFF” shows up at Display Window. Turn ⑤ the “Set/Select Dial”, and “ON” shows up. Push ④ the “Counter Clear / Enter Button” again, and all the settings return to the initial settings.

8. VEr (Version of the Program)

- Follow Operation Procedure 1 and 2, and  shows up. Push ④ the “Counter Clear / Enter Button” to select.
- The current program version shows up.

9. run (Accumulated Working Hours of Circuit Board)

- Follow Operation Procedure 1 and 2, and  shows up. Push ④ the “Counter Clear / Enter Button” to select.
- The accumulated working hours of circuit board shows up. (The total running hours of the power being ON)

10. tSt (Test Mode)


- Follow Operation Procedure 1 and 2, and  shows up. Push ④ the “Counter Clear / Enter Button” to select.
- Turn ⑤ the “Set/Select Dial”, and select the number as seen in Chart-6. Push ④ the “Counter Clear / Enter Button”. Test Mode starts to work. To return to the previous display, push ② the “Vacuum Timer Button”.

Chart-6 “Test” List

No.	Test
tE1	<ul style="list-style-type: none"> <li>• Press Test</li> <li>1. When Right and Left Start Buttons are pushed at the same time, Upper Press Arm closes. Upper Press Arm opens by the Reset Button.</li> <li>2. Push the Right and Left Start Buttons at the same time again. Vacuum turns ON. Push the Reset Button. The vacuum is over and the press now opens.</li> <li>* Each time for the Upper Press Arm close and pressing shows up on the Display Window. Use this Test Mode to adjust the speed of upper press arm cylinder and the upper press cylinder.</li> </ul>

# Trouble Shooting

- ⊙ During the operation, if something is wrong, an error number will show up at the Display Window on the Operation Panel. Check the below List and take the necessary action. Call your dealer or Sankosha if normal operation does not resume.



## WARNING

**It is extremely dangerous in Control Box.**

Do not touch anywhere unless otherwise specified.

## Information

- See the “Sensor Diagram” on the last page for the location of each cylinder sensor or button.
- You can make sure of the cylinder sensor or button through “Input Test 1” in Service Menu. (Page 28)



## CAUTION

If any of [EEE], [EE1], [EE2], [EE3], [EE4], or [EE5] shows up, turn the power OFF and then turn the power ON again **more than 5 seconds later**.

Call your dealer or Sankosha if the normal operation does not resume.

Error No.	1. Error Item
	2. Error Description
	3. Check Point
<b>E1</b>	1. Emergency Stop Button
	2. Emergency Stop Button is being pushed.
	3. (1) Release the Emergency Stop Button by turning the Button clockwise (to the “→” direction). Display shows “- - 1”. Push Reset Button. (2) Wiring may be the cause if E1 displays even after releasing it. Check the Button itself or check for a possible short circuit in the wire.
<b>E2</b>	1. Left Safety Bar
	2. Left Safety Bar Switch is being pushed.
	3. (1) If you hold the safety guard, error is released when you remove your hand away from it. (“- - 2” shows up on the display window) Make sure the Switch is being pushed due to a hitch of the Safety Guard. (2) The switch may be out of order if E2 displays even though you don’t hold it. Check the Switch itself or check wire (short circuit)
<b>E3</b>	1. Right Safety Bar
	2. Right Safety Bar Switch is being pushed.
	3. (1) If you hold the safety guard, error is released when you remove your hand away from it. (“- - 3” shows up on the display window) Make sure the Switch is being pushed due to a hitch of the Safety Guard. (2) The switch may be out of order if E3 displays even though you don’t hold it. Check the Switch itself or check wire (short circuit)



Error No.	1. Error Item
	2. Error Description
	3. Check Point
<b>E10</b>	1. Inverter Error
	2. Something is wrong with Inverter
	3. If the machine stops because of an inverter problem, turn the power off. Then leave the machine until inside of the inverter has cooled. ( <b>More than 2 minutes</b> ) Turn the machine on again. The inside parts of inverter get hot. If the power turns ON immediately, the problem could happen again. If the inverter does not work (Error is not released) even after the above operation, call your dealer or Sankosha.
<b>E11</b>	1. Upper Press Arm Close Time Error (Too fast)
	2. Upper press arm closes too fast.
	3. (1) Make sure if the air pressure is set at the required level (0.6MPa) Check and adjust the regulator referring to "Provide Air" of Operation Procedures on page 16. (2) Check the oil amount of the oil damper. (See page 39 "Daily Maintenance 7. Oil Quantity Check for Oil Damper".) (3) Adjust speed by turning the rod side speed controller of upper press arm cylinder clockwise. If speed does not change even after this adjustment, speed controller may be broken.
<b>E12</b>	1. Upper Press Arm Close Time Error (Too slow)
	2. Upper press arm closes too slowly.
	3. (1) Make sure if the air pressure is set at the required level (0.6MPa) Check and adjust the regulator referring to "Provide Air" of Operation Procedures on page 16. (2) Check if the air does not leak from upper press arm cylinder or solenoid valve (No.4). (3) Adjust speed by turning the rod side speed controller of upper press arm cylinder counterclockwise. If speed does not change even after this adjustment, speed controller may be broken.
<b>E13</b>	1. Upper Press Head Close Time Error (Too slow)
	2. Upper Press Head closes too slowly.
	3. (1) Make sure if the air pressure is set at the required level (0.6MPa) Check and adjust the regulator referring to "Provide Air" of Operation Procedures on page 16. (2) Check if the air does not leak from upper press arm cylinder or solenoid valve (No5) (3) Adjust speed by turning the rod side speed controller of upper press cylinder counterclockwise. If speed does not change even after this adjustment, speed controller may be broken.

Error No.	1. Error Item
	2. Error Description
	3. Check Point
<b>E20</b>	1. Left Start Button Error (When DIP 3 is OFF)
	2. Left Start Button remains ON more than 0.5 seconds.
	3. (1) Check if the Button is being pushed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E21</b>	1. Reset Button Error
	2. Reset Button remains ON more than 15 seconds.
	3. (1) Check if the Button is being pushed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E22</b>	1. Left Start Button Error (When DIP 3 is ON)
	2. Left Start Button remains ON more than 15 seconds.
	3. (1) Check if the Button is being pushed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E23</b>	1. Right Start Button Error
	2. Right Start Button remains ON more than 15 seconds.
	3. (1) Check if the Button is being pushed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E24</b>	1. Steam Pedal Error
	2. Steam Pedal remains ON more than 15 seconds.
	3. (1) Check if the Pedal is being pressed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E25</b>	1. Left Vacuum Pedal Error
	2. Left Vacuum Pedal remains ON more than 3minutes.
	3. (1) Check if the Pedal is being pressed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E26</b>	1. Blower Pedal Error
	2. Blower Pedal remains ON more than 3minutes.
	3. (1) Check if the Pedal is being pressed. (2) Check the Button itself or if there could be short circuit in the wire.
<b>E27</b>	1. Right Vacuum Pedal Error
	2. Right Vacuum Pedal remains ON more than 3minutes.
	3. (1) Check if the Pedal is being pressed. (2) Check the Button itself or if there could be short circuit in the wire.

Error No.	1. Error Item
	2. Error Description
	3. Check Point
<b>E41*</b>	1. Upper Press Arm Close Time Error (Fast) ※Although an error number shows up, you can run the machine.
	2. Upper press arm closes faster than normal.
	3. (1) Make sure if the air pressure is set at the required level (0.6MPa) Check and adjust the regulator referring to “Provide Air” of Operation Procedures on page 16. (2) Check oil amount of the oil damper. (See page 39 “Daily Maintenance 7. Oil Quantity Check for Oil Damper”.) (3) Adjust the speed by turning the rod side speed controller of upper press arm cylinder clockwise. If speed does not change even after this adjustment, speed controller may be broken.
<b>E42*</b>	1. Upper Press Arm Close Time Error (Slow) ※Although error number shows up, you can run the machine.
	2. Upper press arm closes slowly than normal.
	3. (1) Make sure if the air pressure is set at the required level (0.6MPa) Check and adjust the regulator referring “Provide Air” of Operation Procedures on page 16. (2) Check if the air does not leak from the upper press arm cylinder or the solenoid valve (No.1). (3) Adjust the speed by turning the rod side speed controller of upper press arm cylinder counterclockwise. If speed does not change even after this adjustment, the speed controller may be broken.
<b>E43*</b>	1. Upper Press Close Time Error (Slow) ※Although error number shows up, machine operation is possible.
	2. Upper Press closes more slowly than normal.
	3. (1) Make sure if the air pressure is set at the required level (0.6MPa) Check and adjust the regulator referring “Provide Air” of Operation Procedures on page 16. (2) Check if the air does not leak from upper press arm cylinder or solenoid valve (No2) (3) Adjust the speed by turning the rod side speed controller of upper press cylinder counterclockwise. If speed does not change even after this adjustment, the speed controller may be broken.
<b>E98</b>	1. Display board external input error
	2. Input of the display board failed to work properly.
	3. (1) Confirm whether or not the entry connector doesn't have a malfunction by the display board. (2) Confirm whether or not there is not garbage on the display board. Clean a board by air blow-dry and so on. (3) It is necessary to exchange a display substrate when even if it does not improve (1),(2).
<b>E99</b>	1. 24V Error
	2. Either safety bar operated in an instant in the vibration and so on.
	3. The error will be released when you push the reset button. When occurring many times, adjust a speed controller at the part where the impact is big.

**\*E41~E43**

Although these errors show up, you can continue to operate the machine. When the upper press arm returns to its initial position, the error is released. The error is also released when the Reset Button is pushed.

# Daily Maintenance

## CAUTION

In order to provide the proper maintenance on your Sankosha equipment, please read and comprehend carefully this Daily Check Manual thoroughly before operation. Keep this manual in a safe place for easy access at all times. The Checking cycle will differ: daily, or annually, according to the item or area that requires maintenance. Use “Item Check List” for checking the correct service procedures. If at any time you have any questions, please do not hesitate to contact your Sankosha dealer or us.

## Check Item List

Check Item	Daily	Monthly	Annual
1. Air Pressure	○		
2. Filter Regulator / Mist Separator	○		
3. Steam Pressure	○		
4. Steam Trap	○		
5. Cover & Padding	○		
6. Emergency Stop	○		
7. Oil Damper		○	
8. Upper Press Arm / Upper Press		○	
9. Filter Regulator / Mist Separator			○
10. Inverter Cleaning			○

# Check Item (Daily)

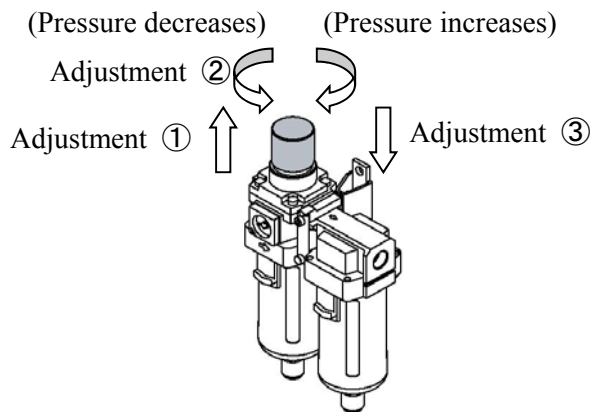
## 1. Air Pressure: Figure-1

Please make sure if the air pressure gauge at the regulator is at the standard level. See “Main Devices” and “Operation Procedure\* Provide Air” in the Instruction Manual for the installation location and standard pressure level.

[How to Adjust Pressure]

- ① Pull the adjustment knob up
- ② Turn the knob to adjust air pressure
  - Clockwise → Pressure will increase
  - Counterclockwise → Pressure will decrease
- ③ Pull the knob down

※There are various regulators. (See Figure-1). They are all the same as for how to adjust.



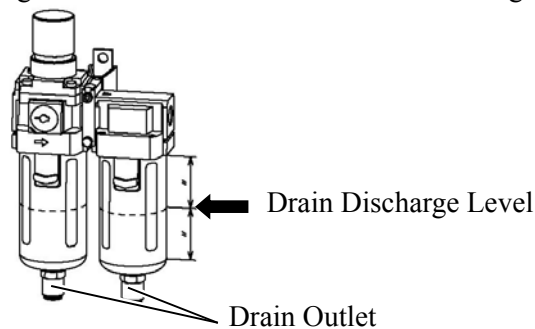
Combination

Figure-1

## 2. Regulator/Mist Separator: Figure-2

Check if the automatic drain function works properly at the Regulator/Mist Separator. The drain is automatically discharged when the quantity of the drain reaches over half of the drain case.

If the drain cannot be discharged even after over half of the drain case is filled, it might malfunction. Turn the dial under the Regulator to the left and let the drain discharge.



Combination

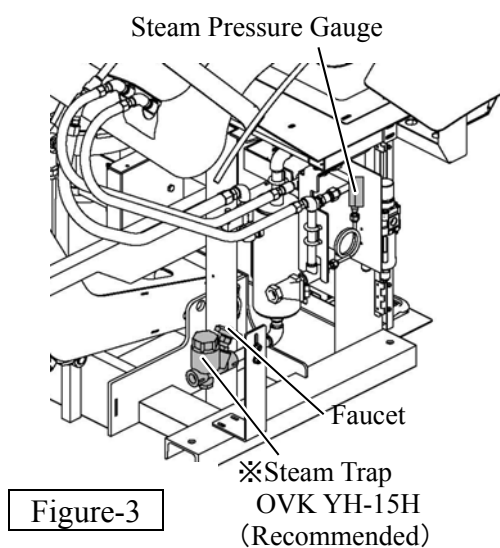
Figure-2

### 3. Steam Pressure: Figure-3

Please make sure if the steam pressure gauge is at the standard level. See “Product Specifications” and “Main Devices” in the Instruction Manual for the installation location and standard pressure level.

### 4. Steam Trap: Figure-3

Check to see if the Steam Trap works properly. If not, it may malfunction. If the trap is our recommended OVK’s trap, open the faucet and discharge the drain. Close the faucet after discharge.

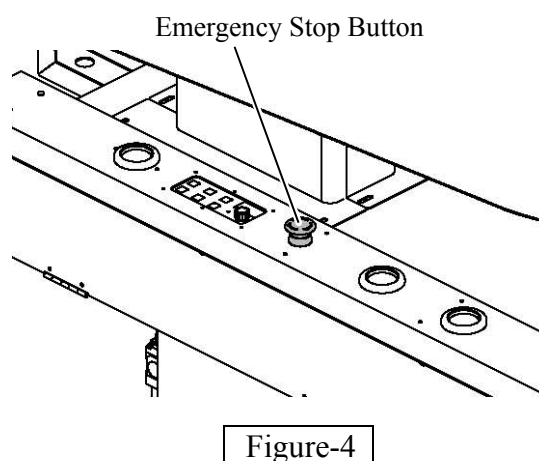


### 5. Cover and Padding

Check for any dirty spots or snags on the body, rear clamp, cuff cover, etc. Dirty spots or snags may cause poor finishing quality.

### 6. Emergency Stop Button: Figure-4

Push the Emergency Stop Button (red button with arrows engraved), and check if the machine stops.



## Start Operation

After checking the above items, start operation after warming up the machine sufficiently (for 15 to 20 minutes after the steam is turned on).

# Check Item (Monthly)

## 7. Oil Quantity Check for Oil Damper : Figure-5

Remove oil replenish bolts and make sure that the oil level is not less than 5mm from Oil Inlet. If oil level is less than 5mm, replenish oil (Mobil DTE 768 or the oil which fitted in with ISO VG68) till 5mm from Oil Inlet. Make sure the oil does not leak.

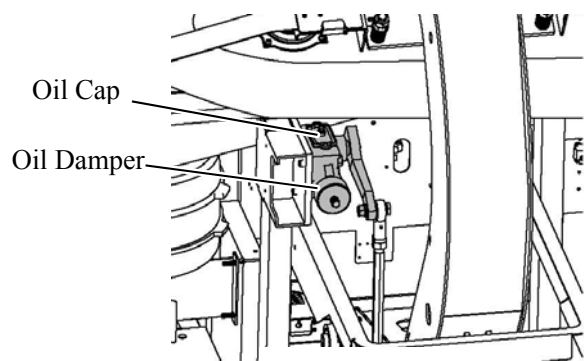
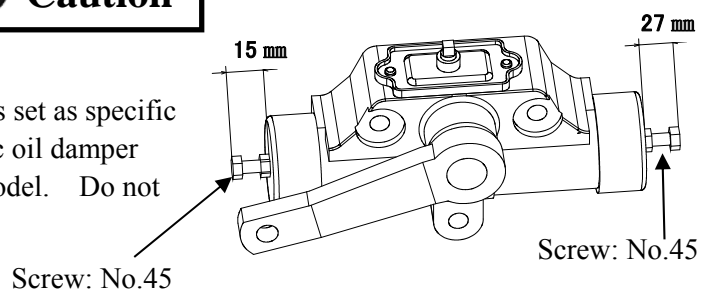


Figure-5

### ! Caution

#### Caution for Oil Damper

The oil damper has designated screws set as specific length model by mode. The specific oil damper can be only applicable to a certain model. Do not change the length of each screw.



## 8. Speed Check for Upper Press Arm and Upper Press

Make sure if the close speed of Upper Press Arm and the press speed of Upper Press Head are proper. Push Left and Right Start Button at the same time. When Upper Press Arm closes, check whether error number “E41” or “E42” shows up or not at Display Window. Push Right and Left Start Button at the same time. When Upper Press Head performs pressing, check whether error number “E43” shows up or not at the Display Window.

In case that error number shows up, see “Error E41~E43 of Trouble Shooting” on page 35 of the Instruction Manual and take the necessary action.

# Check Item (Annual)

## 9. Regulator/Mist Separator Cleaning : Figure-6

Clean the inside of the filter case. If the air pressure goes down frequently, replace the Filter Element.

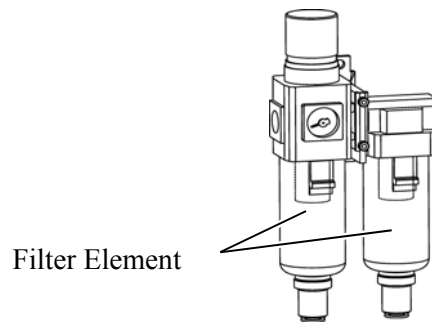


Figure-6

## 10. Inverter Cleaning: Figure-7

**※Caution: Voltage is extremely high. Turn the power off before operation.**

1. Open the front cover under the Control BOX.
2. Remove any dust or dirt around the inverter.
3. Close the cover of the front cover

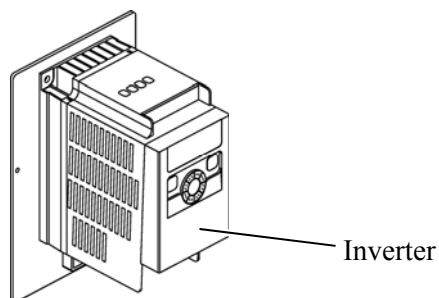


Figure-7



# Item Check List

## Check Item (Daily)

No	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Air Pressure															
2	Regulator /Mist Separator															
3	Steam Pressure															
4	Steam Trap															
5	Cover & Padding															
6	Emergency Stop Button															

No	Item	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Air Pressure																
2	Regulator /Mist Separator																
3	Steam Pressure																
4	Steam Trap																
5	Cover & Padding																
6	Emergency Stop Button																

## Check Item (Monthly)

No	Item	1	2	3	4	5	6	7	8	9	10	11	12
7	Oil Damper												
8	Upper Press Arm / Upper Press												

## Check Item (Annual)

No	Item	1	2	3	4	5	6	7	8	9	10	11	12	13
9	Filter Regulator / Mist Separator													
10	Inverter Cleaning													

Make a photo copy of a blank Item Check list for checking and providing the correct service and maintenance.



# Spare Parts List

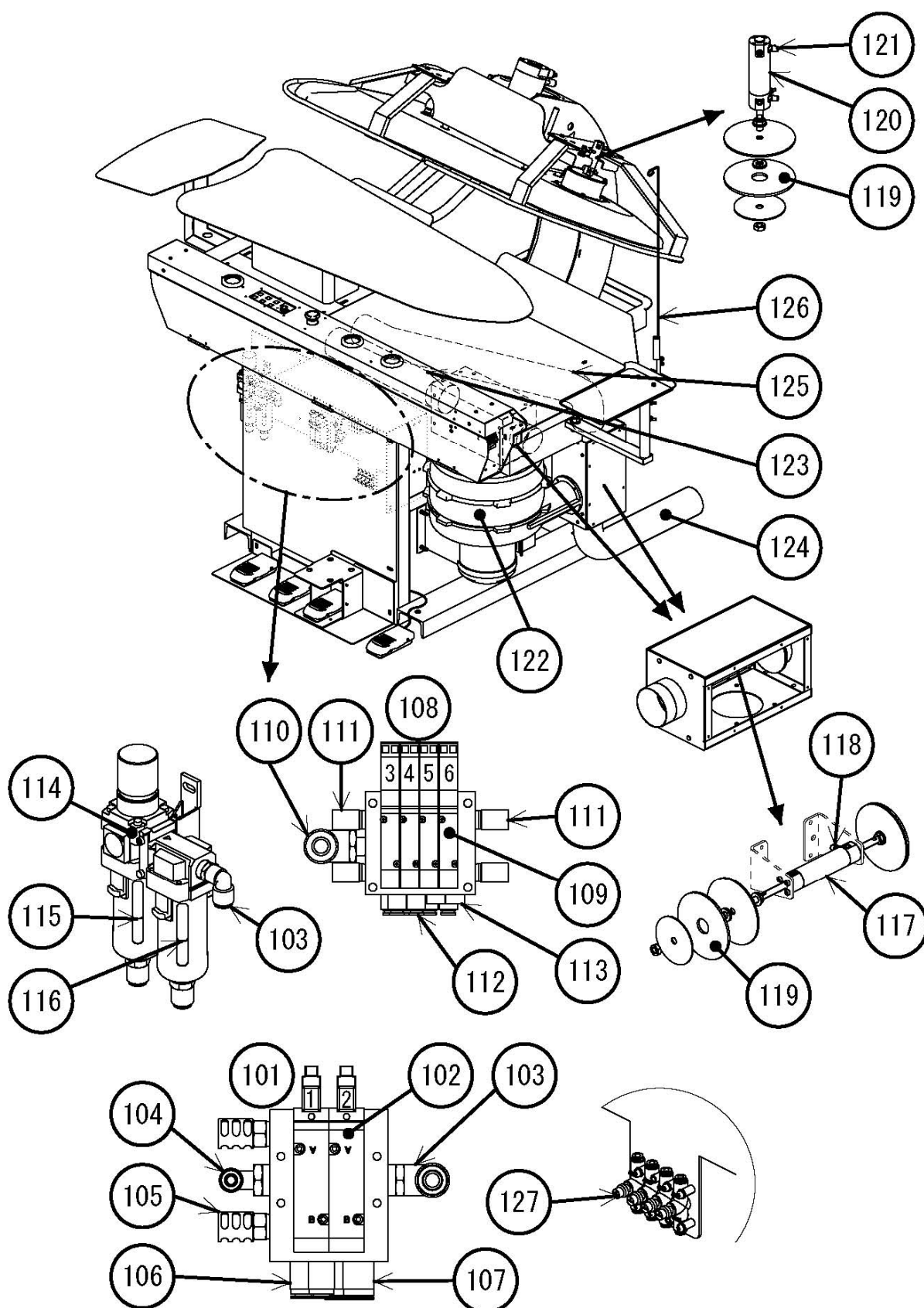
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## Index

- 1 : Front Diagram**
- 2 : Rear Diagram**
- 3 : Steam Piping**
- 4 : Switch Diagram**
- 5 : Cover Diagram**

# 1 : Front Diagram

REV:1



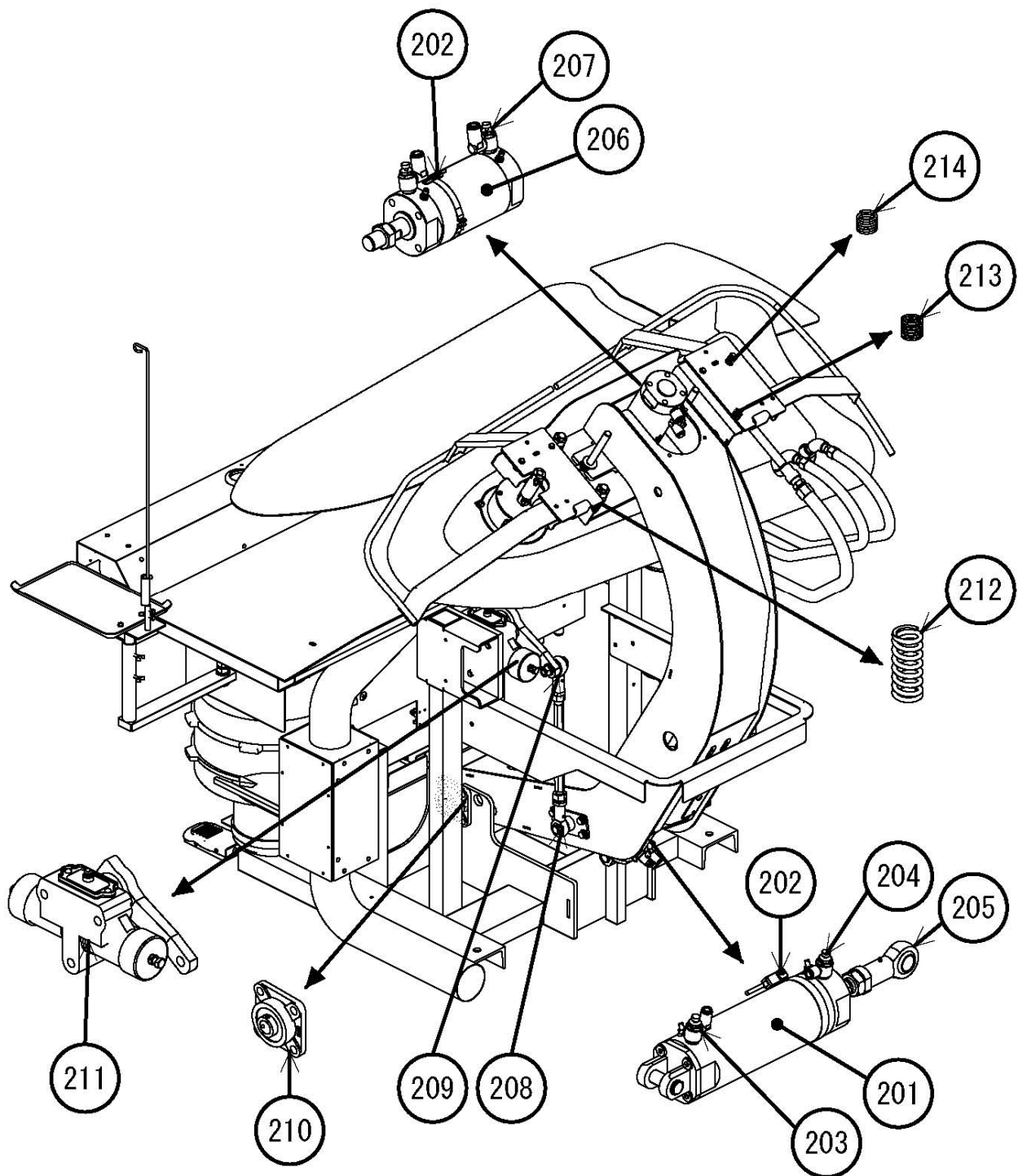
# 1 : Front Diagram

REV: 1

No.	Part Name	Part Number	Q'ty	Remark
101	Manifold Valve	A0M006	1	
102	Solenoid Valve	A0N004	1	No.1:Press Arm
	Solenoid Valve	A0N004	1	No.2:Press
103	Joint	C0H017	2	
104	Joint	C0H025	1	
105	Silencer	C0A019	2	
106	Joint( $\phi$ 8)	C0I004	2	
107	Joint( $\phi$ 10)	D0I005	2	
108	Manifold Valve	A0M007	1	
109	Solenoid Valve	A0N002	1	No.3:Lower Steam
	Solenoid Valve	A0N002	1	No.4:Upper Steam
	Solenoid Valve	A0N002	1	No.5:Blower
	Solenoid Valve	A0N002	1	No.6:Vacuum
110	Joint(525)	C0H003	1	
111	Silencer	C0A018	4	
112	Joint( $\phi$ 4)	C0I001	6	
113	Joint(Plug)	C0I003	2	
114	Combination	D0H024	1	
115	Diaphragm Element	D1A028	1	
	Bowl Assembly	D1A029	1	
116	Mantle Assembly	D1A038	1	
	Bowl Assembly	D1A037	1	
117	Cylinder	B2I021	2	Vacuum/Blower Changing
118	Joint	C0E001	4	
119	Packing	MP410-238	5	
120	Cylinder	B2I020	1	
121	Joint	C0E003	2	
122	Blower Motor	G1A044	1	
123	Vacuum Flex,Hose	K1C001	1	400mm
124	Vacuum Flex,Hose	K1C001	1	500mm
125	Vacuum Flex,Hose	K1C001	1	900mm
126	Iron Spring	H0D041	1	
127	Speed Controller	C1G006	4	

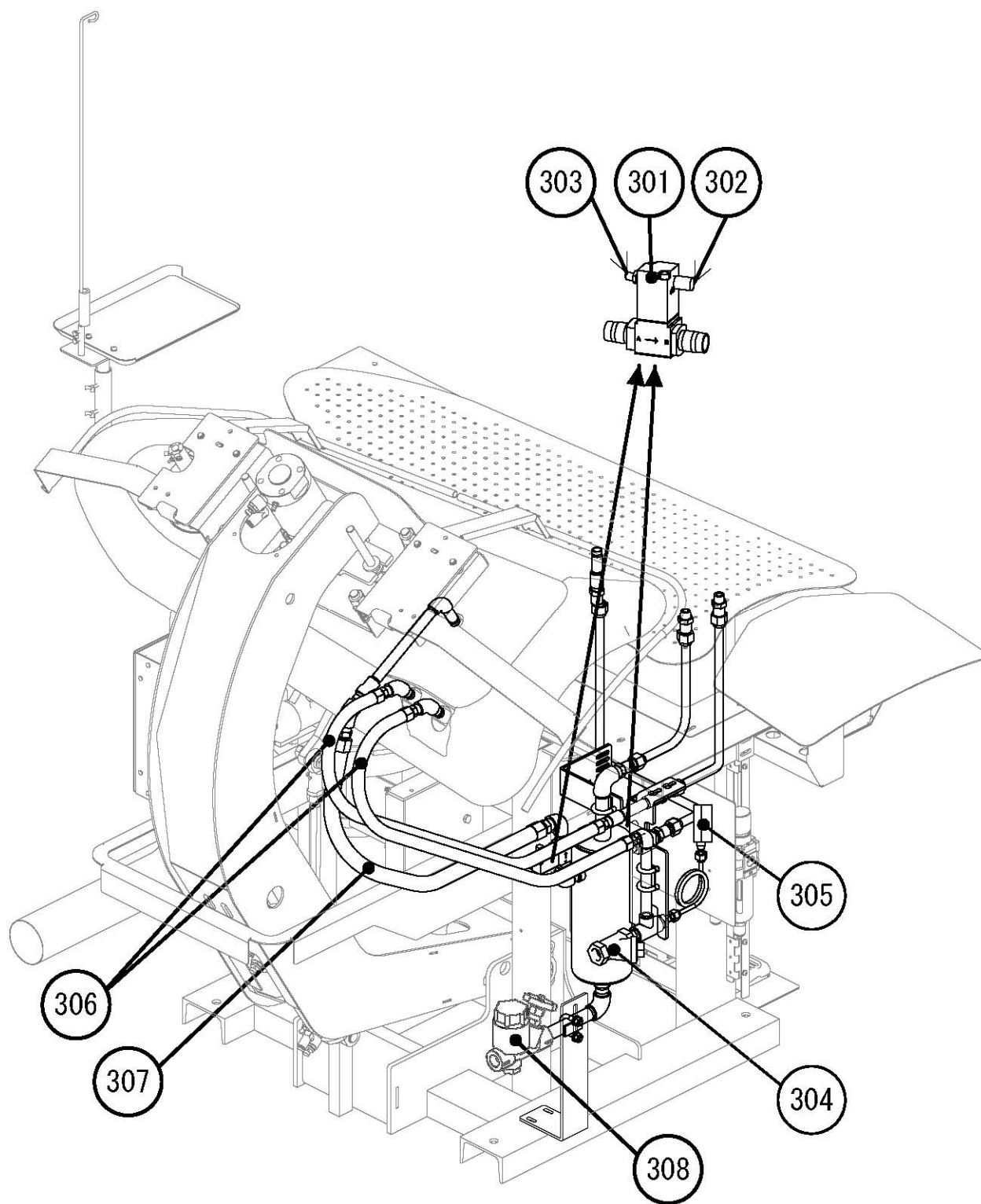
## 2 : Rear Diagram

REV:1



**2 : Rear Diagram****REV: 1**

No.	Part Name	Part Number	Q'ty	Remark
201	Cylinder	B2I018	1	Upper Press
202	Cylinder Sensor	B5A006	2	
203	Speed Controller	C1A074	1	
204	Speed Controller	C1A079	1	
205	Rodend	E5A014	1	
206	Cylinder	B2I019	1	Upper Press Arm
207	Speed Controller	C1A058	2	
208	Rodend	E5A011	1	
209	Rodend	E5A012	1	
210	Bearing Unit	E4A001	2	
211	Oil Dumper	OIL-DP-15	1	R=No.45 , L=No.45
212	Upper Press Adjust Spring	H0D021	4	
213	Emergency Spring A	H0D001	2	
214	Emergency Spring B	H0D002	2	



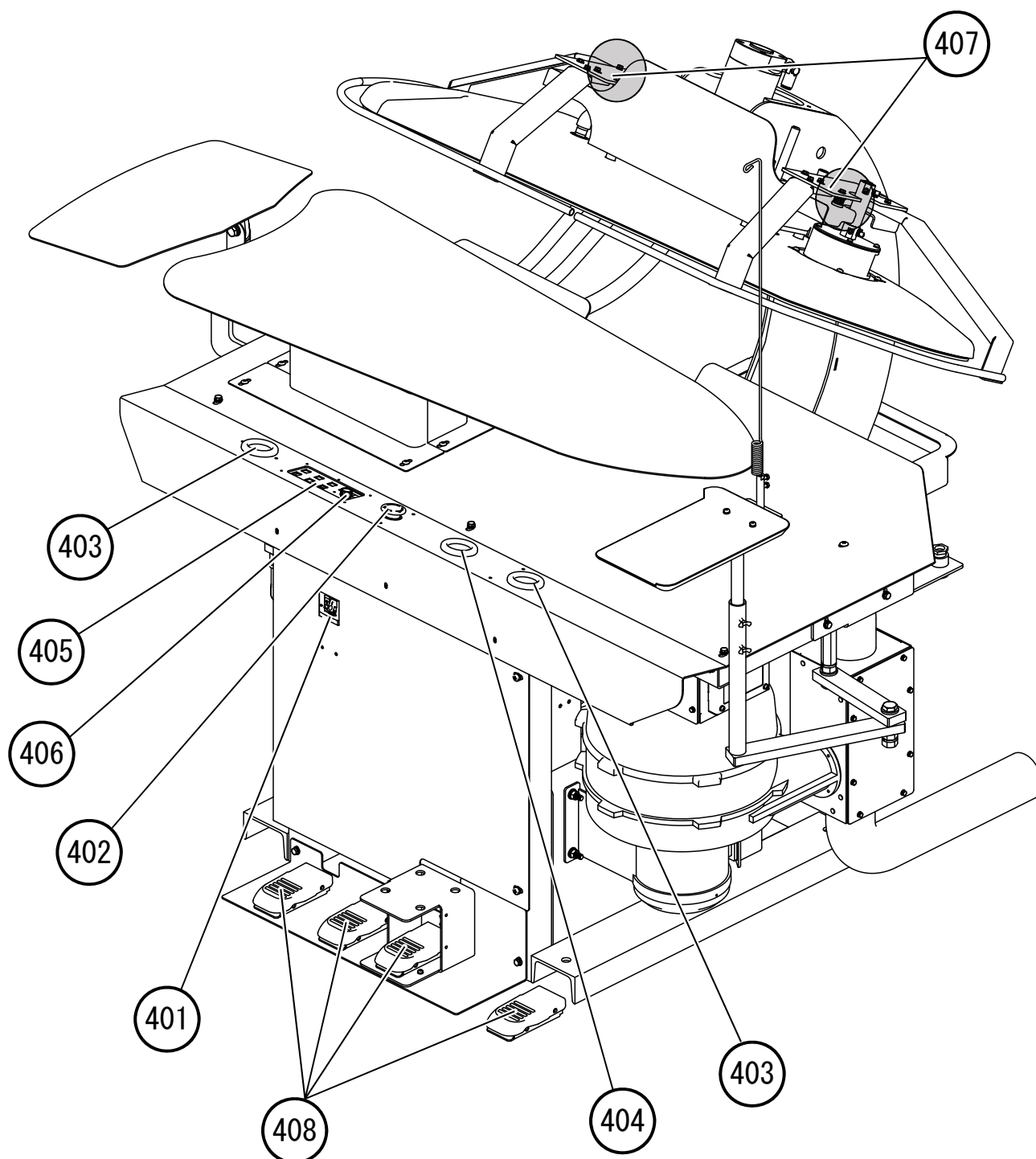


**3 : Steam Piping****REV: 1**

No.	Part Name	Part number	Q'ty	Remark
301	Steam Valve	A0G013	2	
302	Silencer	C0A001	2	
303	Joint	C0E001	2	
304	Y Type Strainer	J2M014	1	
305	Steam Gauge	J0A003	1	
306	Flex. Hose	A6B020	2	
307	Flex. Hose	A6A009	1	
308	Steam Trap	J2N001	1	

## 4 : Switch Diagram

REV:1

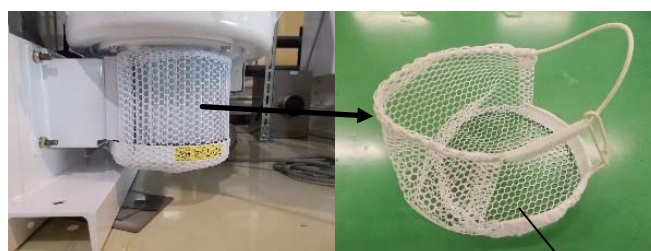
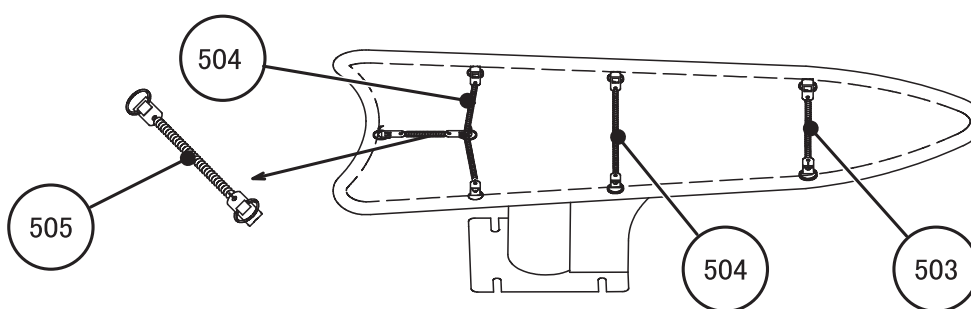
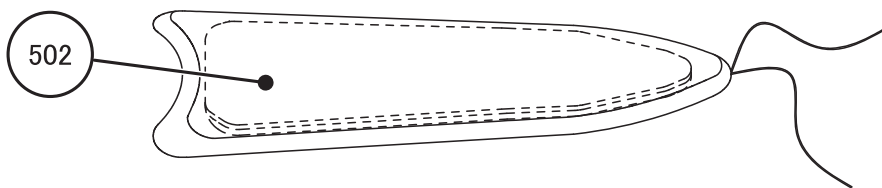
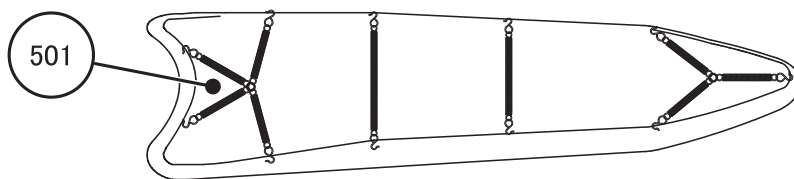
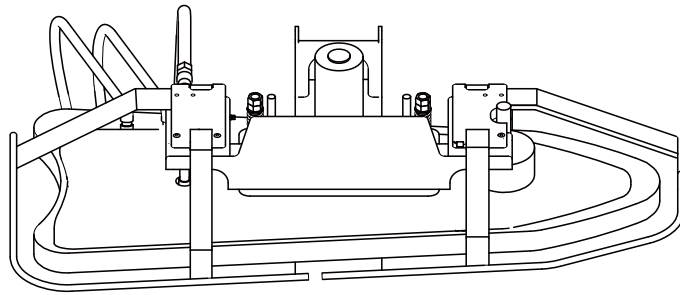


**4 : Switch Diagram****REV: 1**

No.	Part Name	Part number	Q'ty	Remark
401	Breaker Switch	21C006	1	Power
402	Push Button Switch	21I107	1	EMG SW
403	Push Button Switch	21I169	2	Start SW (L/R)
404	Push Button Switch	21I170	1	Reset
405	Panel Sheet	DP130RJ-V3-00	1	
406	Knob	21D006	1	
407	Push Button Switch	21I072	2	EMG Bar
408	Foot Pedal Unit	FP-UNT-023	4	
	Micro Switch	21E001	4	
	Foot Pedal Spring	H0D019	4	

## 5 : Cover Diagram

REV:2



506

## 5 : Cover Diagram

REV:2

No.	Part Name	Part number	Q'ty	Remark
501	Upper Press Mat	S1D556	1	
502	Lower Press Mat	S1D511	1	
503	Cover Spring Unit	CSP-UNT-007	1	
504	Cover Spring Unit	CSP-UNT-008	2	
505	Cover Spring Unit	CSP-UNT-009	1	
506	Motor Net	S1D203	1	

# Diagram

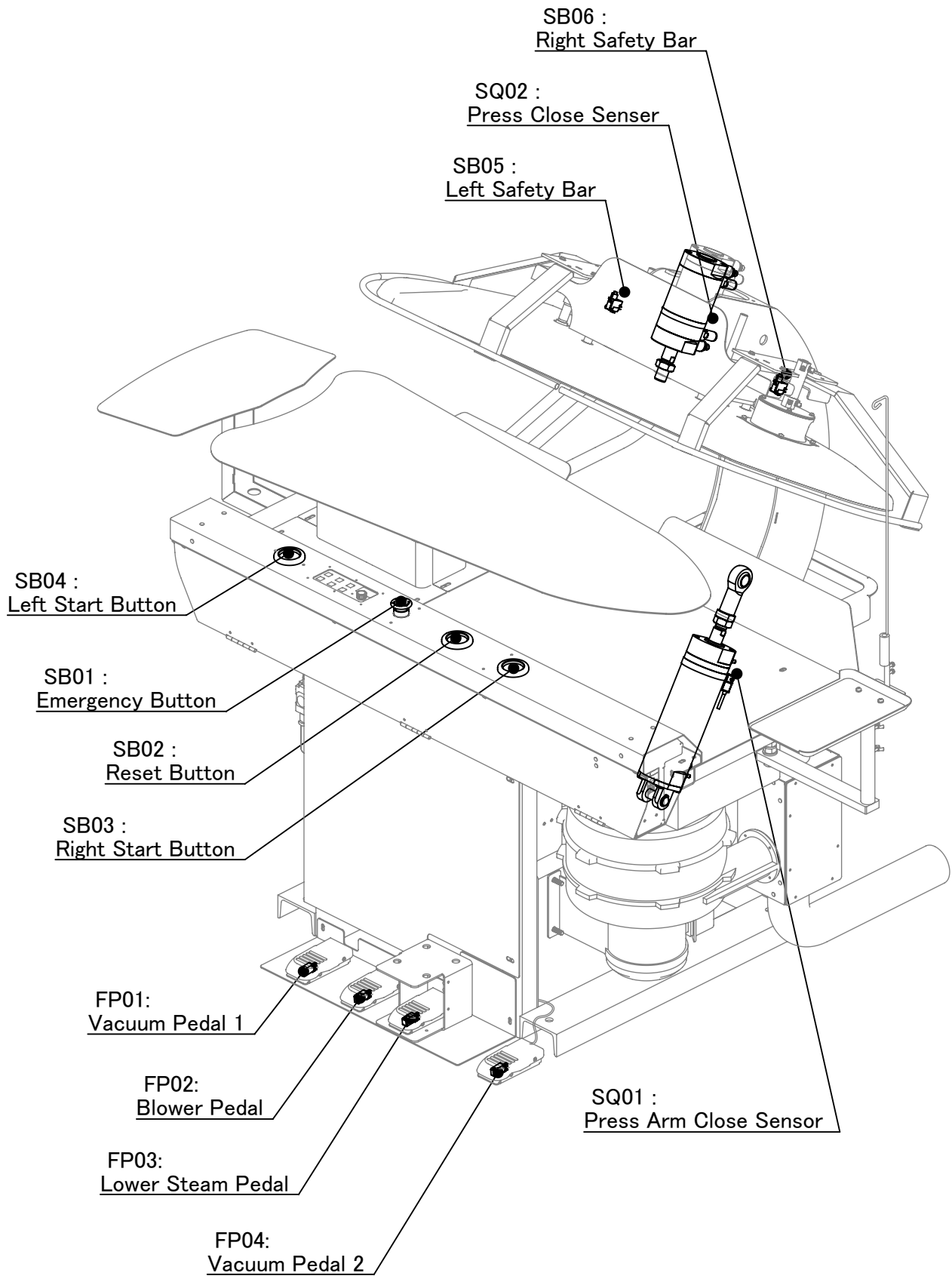
**Sensor (Push Button) Diagram**

**Electric Connection Diagram 1/4~4/4**

**Steam Piping Diagram**

**All Air System**

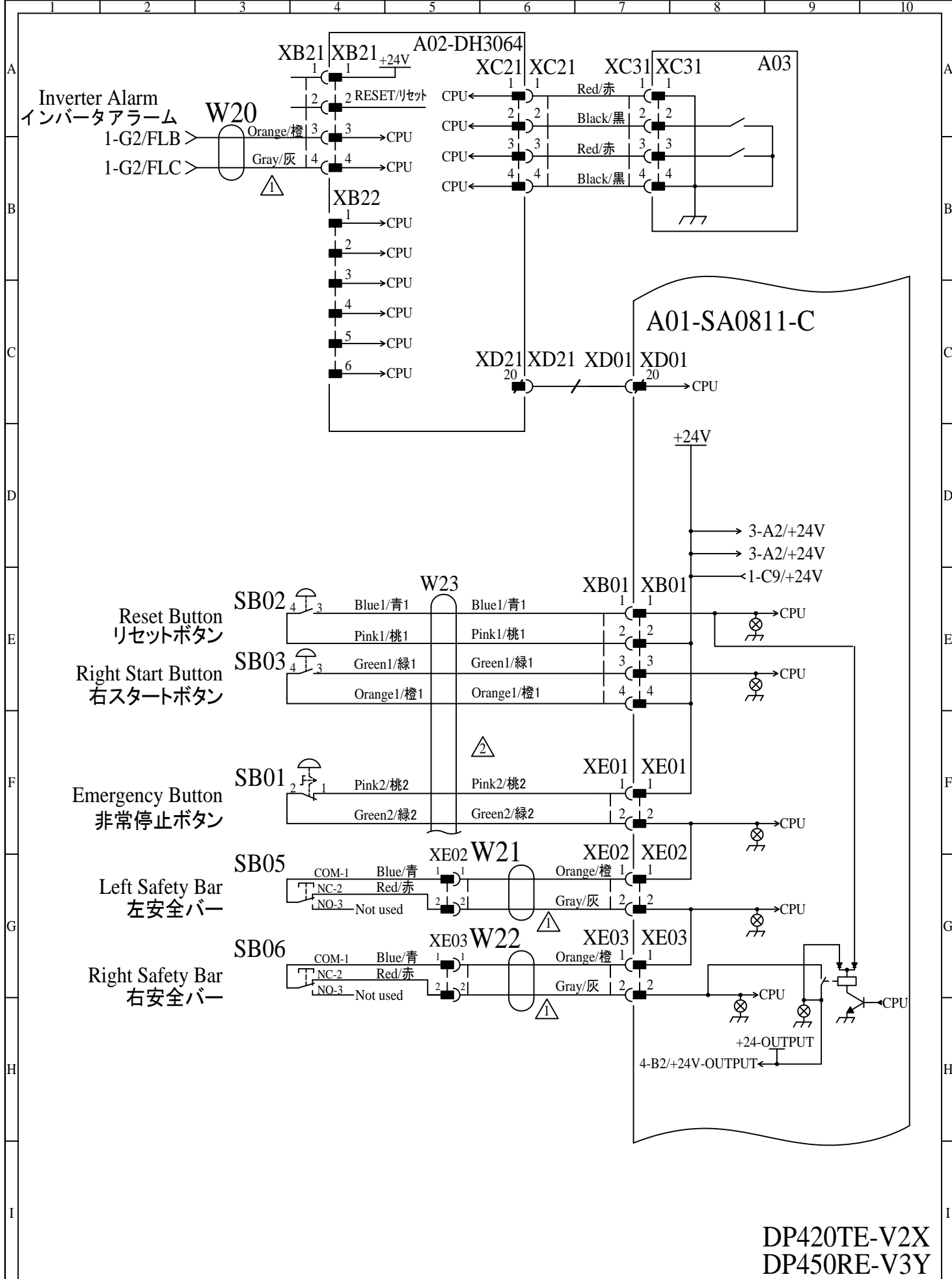
# Senser (Push Button) Diagram





Model	DP-610TE		Type	DP610TE-V2X	Date(YYYY/MM/DD)	2016/04/29	Page	1/4
Approved	Checked	Designed	③		Software	3.10	~	
J	Maki	Maki	Kouzu	②	W10 move. 2017/4/27	Serial No.	~	
				①	Chaging the color of the wire.	Drawing No.	01-4	
					Revision	SANKOSHA 三幸社		

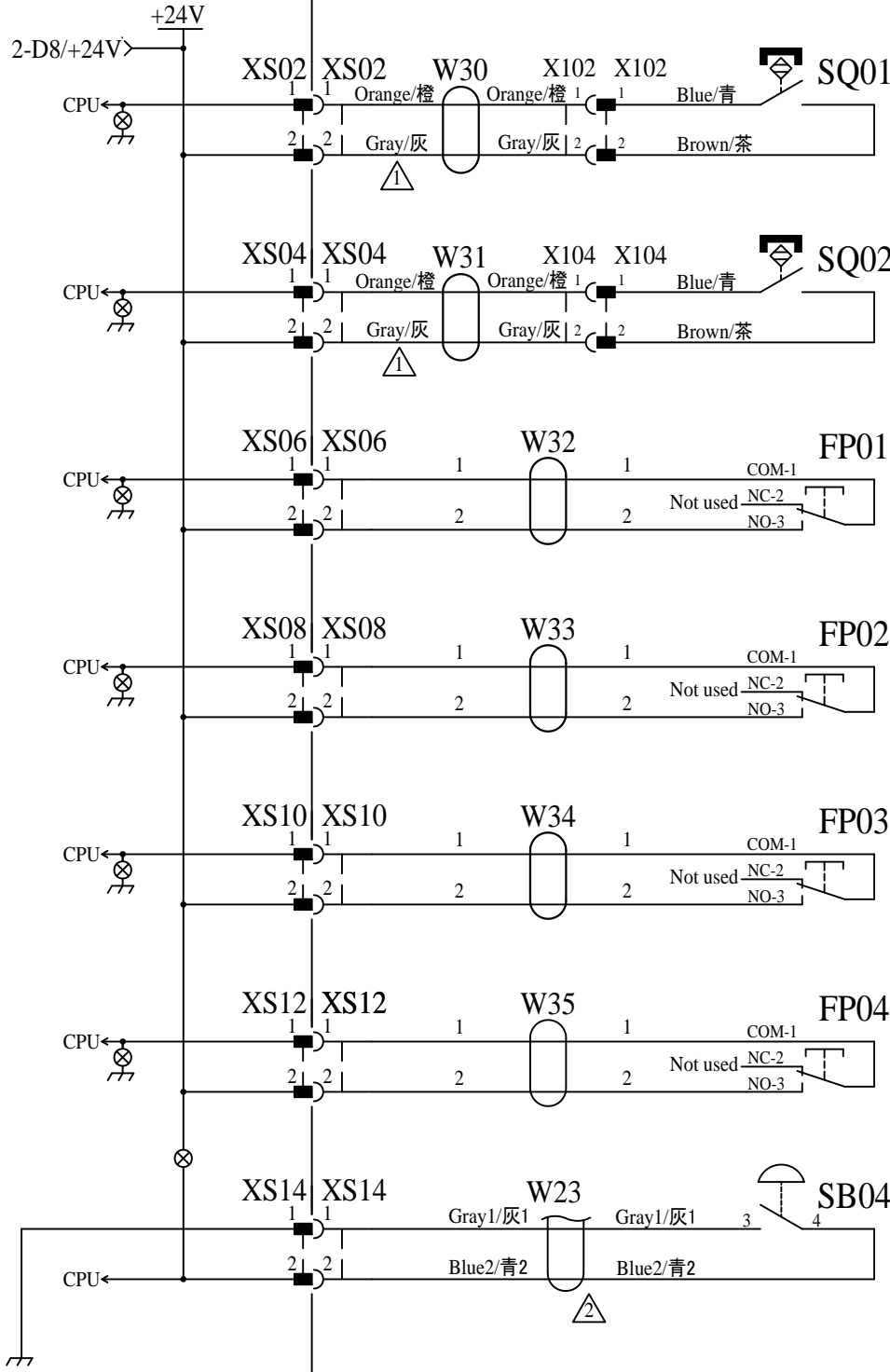




DP420TE-V2X  
DP450RE-V3Y

Model	DP-610TE	Type	DP610TE-V2X	Date (YYYY/MM/DD)	2016/04/29	Page	2/4
Approved	Checked	Designed	③	Software	3.10	~	
J	Maki	Maki	Kouzu	②	Serial No.	~	
			①	Chaging the color of the wire.	Drawing No.	01-4	
				Revision	SANKOSHA 三幸社		

# A01-SA0811-C



Press Arm Close Sensor  
プレスアーム閉じセンサー

Press Close Sensor  
プレス閉じセンサー

Vacuum Pedal Left  
左バキュームペダル

Blower Pedal  
ブローペダル

Lower Steam Pedal  
下コテスチームペダル

Vacuum Pedal Right  
右バキュームペダル

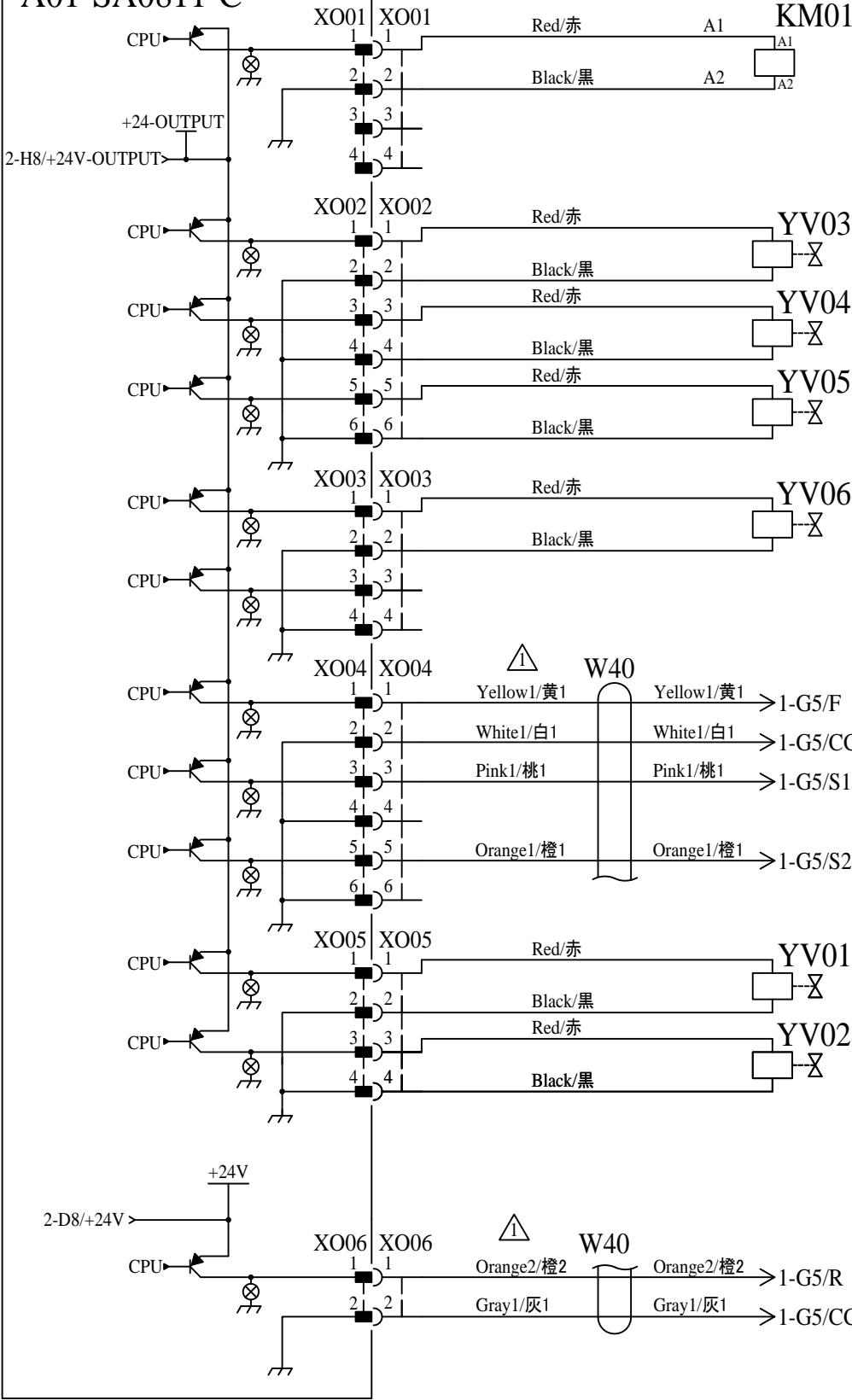
Left Start Button  
左スタートボタン

DP420TE-V2X  
DP450RE-V3Y

Model	DP-610TE	Type	DP610TE-V2X	Date(YYYY/MM/DD)	2016/04/29	Page	3/4
Approved	Checked	Designed	△	Software	3.10	~	
			△	Serial No.		~	
Maki	Maki	Kouzu	△	Drawing No.	01-4		
			△	Revision	SANKOSHA 三幸社		

S.V. : Solenoid Valve

A01-SA0811-C



Power On Inverter  
インバーターON

Open Lower Steam S.V.  
下コテスチームON電磁弁

Open Upper Steam S.V.  
上コテスチームON電磁弁

Open Blower S.V.  
ブロワー電磁弁

Open Vacuum S.V.  
バキューム電磁弁

Motor ON  
モーターON

Select Frequency-1  
速度選択信号-1

Select Frequency-2  
速度選択信号-2

Close Press Arm S.V.  
プレスアーム電磁弁

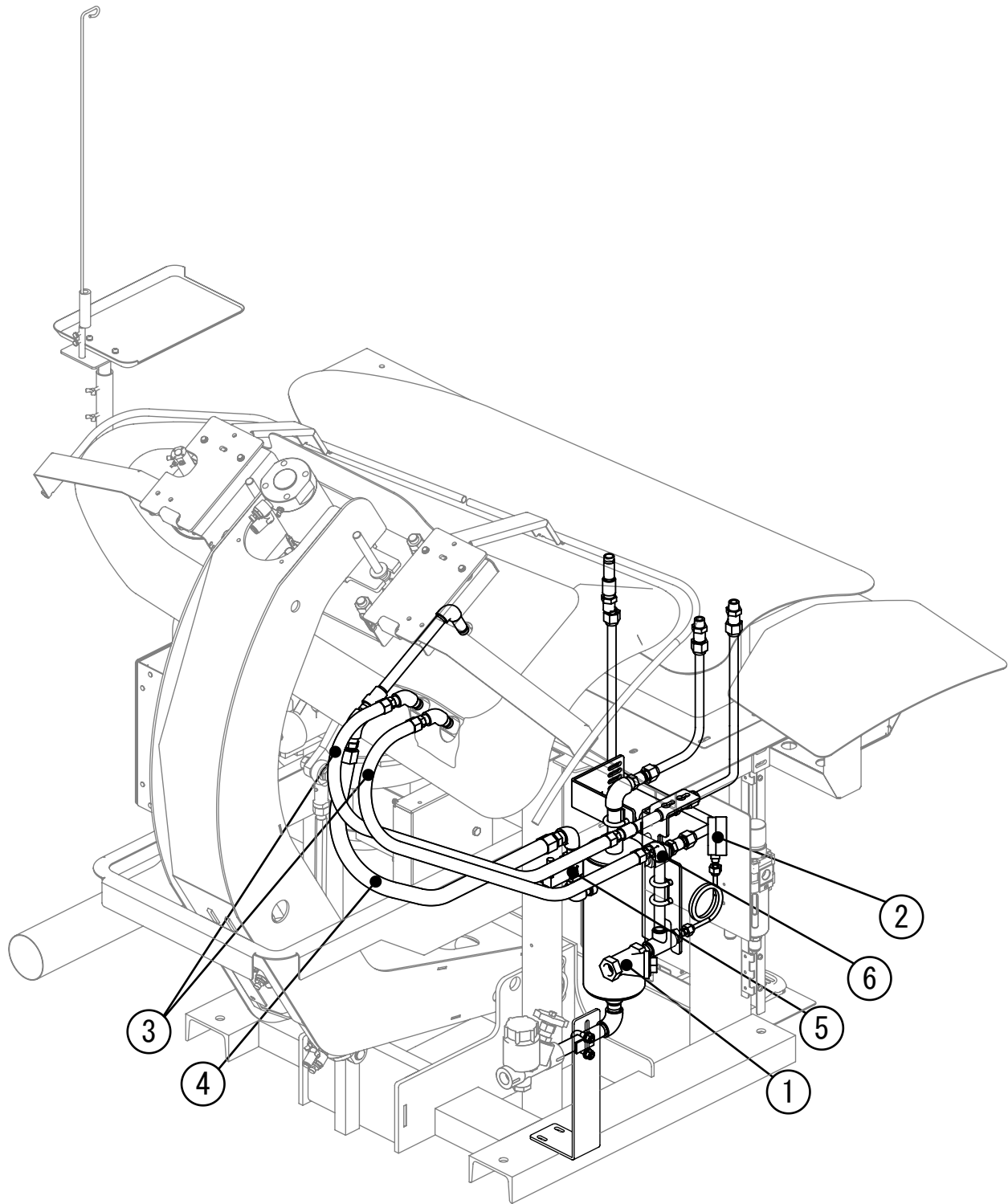
Close Press S.V.  
プレス電磁弁

Select Frequency-3  
速度選択信号-3

DP420TE-V2X  
DP450RE-V3Y

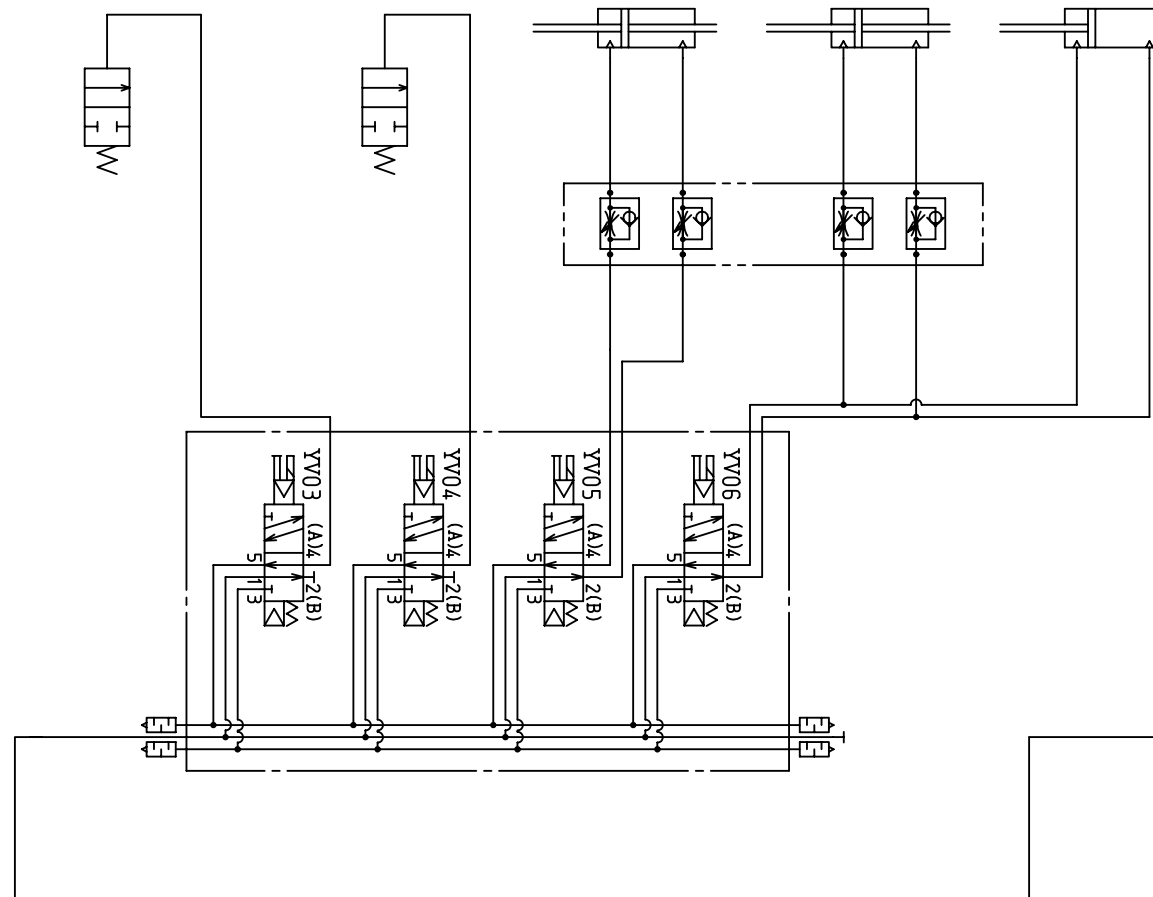
Model	DP-610TE	Type	DP610TE-V2X	Date(YYYY/MM/DD)	2016/04/29	Page	4/4
Approved	Checked	Designed	△	Software	3.10	~	
Maki	Maki	Kouzu	△	Serial No.		~	
			△	Chaging the color of the wire.	Drawing No.	01-4	
				Revision	SANKOSHA 三幸社		

# Steam Piping Diagram



- |                  |                                 |
|------------------|---------------------------------|
| ① Y Strainer     | : SY-5 80Mesh 15A               |
| ② Pressure Gauge | : AM7/16 60 1.6MPa              |
| ③ Flexible Hose  | : 3/8x800 (B)                   |
| ④ Flexible Hose  | : 1/2x800 (B)                   |
| ⑤ Piston Valve   | : VND104D-10A (For Upper Press) |
| ⑥ Piston Valve   | : VND104D-10A (For Lower Press) |

Lower Press Head  
Steam Valve      Upper Press Head  
Steam Valve      Blower Change  
Cylinder      Vacuum Change  
Cylinder      Upper Press Head  
Vacuum Cylinder

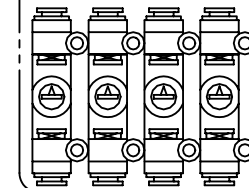


① Blower-off Side

② Blower-on Side

③ Vacuum-off Side

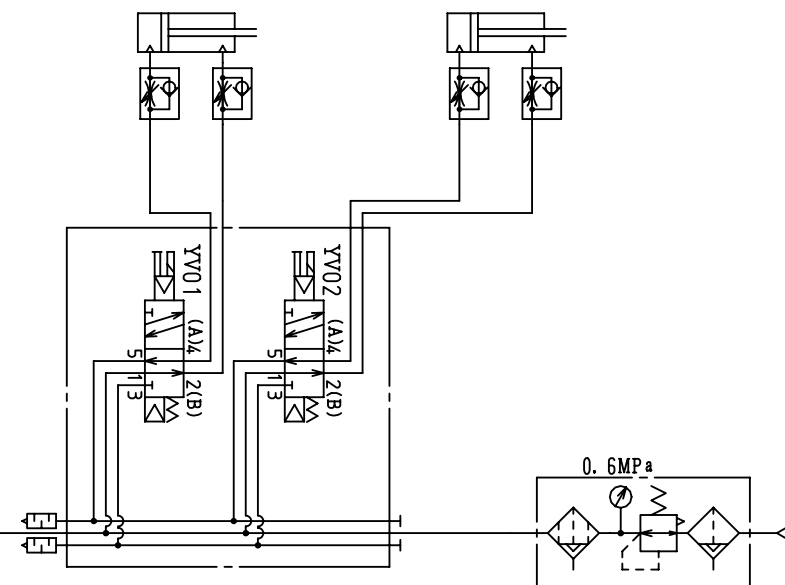
④ Vacuum-on Side



Cylinder Speed Controller Layout

Upper Press Head  
Arm Cylinder

Upper Press Head  
Cylinder



MODEL	DP-450RE-V3		
TYPE	DP450RE-V3		ALL AIR SYSTEM
DATE	2012/09/28	SANKOSHA	
Signature			

**Sankosha Manufacturing Co.,Ltd.**

988 Kanoya Cho, Hachioji, Tokyo 193-0815 JAPAN

T e l: 81-42-621-1181

F a x: 81-42-620-0751

URL: <http://overseas.sankosha-mfg.com/>



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Rev. 10

2019. 10