



DF-100E-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 DF-100E-V3 (Rotary Form Finisher).

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	DF-100E-V3
Power	Single phase 230V 50/60Hz 10A
Air Consumption	5 liter / cycle
Steam Consumption	12kg / hour
Air Pressure	0.5MPa
Steam Pressure	0.5MPa
Air Pipe	1/4B
Steam Pipe	Inlet:1/2B , Outlet:1/2B
Noise Level	A Level : 72dB A Level : 82dB
Weight	165kg
Dimensions	
Width × Depth × Height	1110mm×970mm×2170mm(Max)

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Safety Guidelines












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.

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

- Rules are shown in the table below.

	General Sign (for Alertness) This is to alert the user to unspecified caution, warning or danger.		General Sign (for Prohibition) This is to alert the user to unspecified prohibition.
	Shock Hazard This is to alert the user to a risk of electric shock in certain circumstances.		Prohibition of Dismantling This is to alert the user to a risk of injury or shock if the indicated part is dismantled.
	Cut Hazard This is to alert the user to a risk of cutting hands or fingers by a cutter or others. May cause physical handicap.		General Sign (for Compulsion) This is to alert the user to unspecified user's action.
	Burn Hazard This is to alert the user to a risk of burn from heat or steam.		Necessity to Ground This is to indicate that the machine must be properly grounded, using the attached green wire.
	Pinch Hazard This is to alert the user to a risk of pinching by rollers which may cause permanent damage to extremities.		Rotation Hazard 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.
	Rotation Hazard 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 an 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

■ Maintenance of warning labels



The labels need to be cleaned and replaced if necessary.
It may cause an accident.

■ 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.

■ Not in use abroad



Do not use the machine outside of designated countries.
It may cause fire due to different electrical supply.

■ 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 any damage, call us or your Sankosha distributor.
Breakage can cause electric shock and fire.

■ Adequate space



Adequate space around the machine should be secured for service and maintenance.
Potential injury to service/maintenance personnel may result.

Hazardous Area

Electrically Live Area

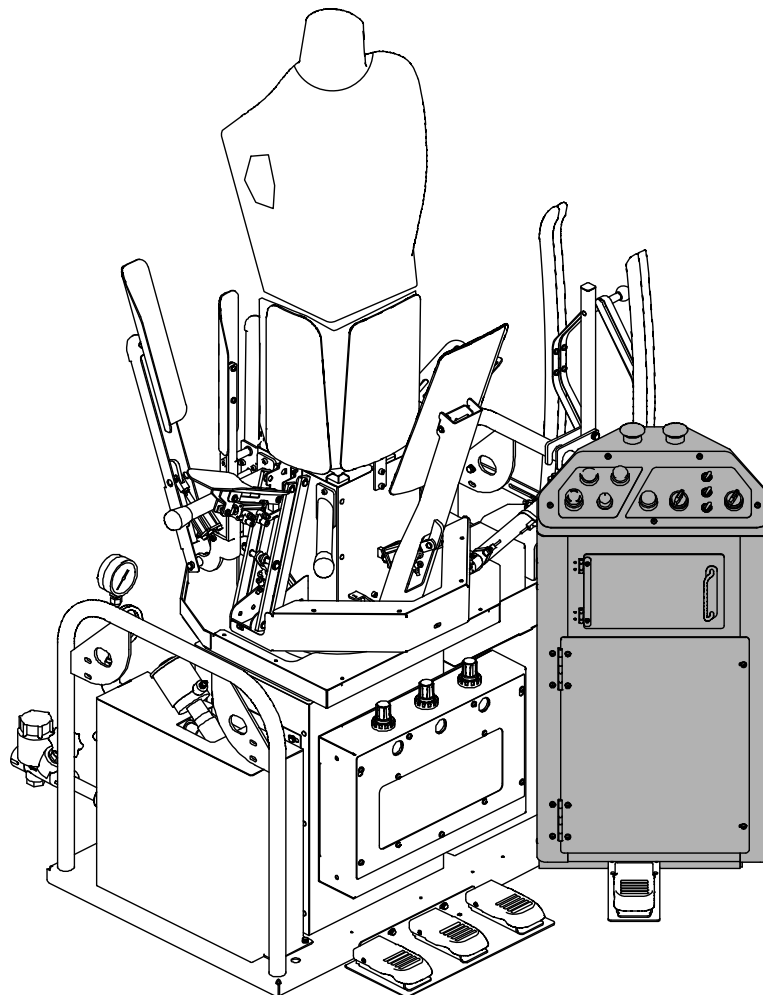
DANGER

Control box has terminals with lethal voltage.

- Only maintenance personnel can open the box.

- Turn off the power before opening the box.

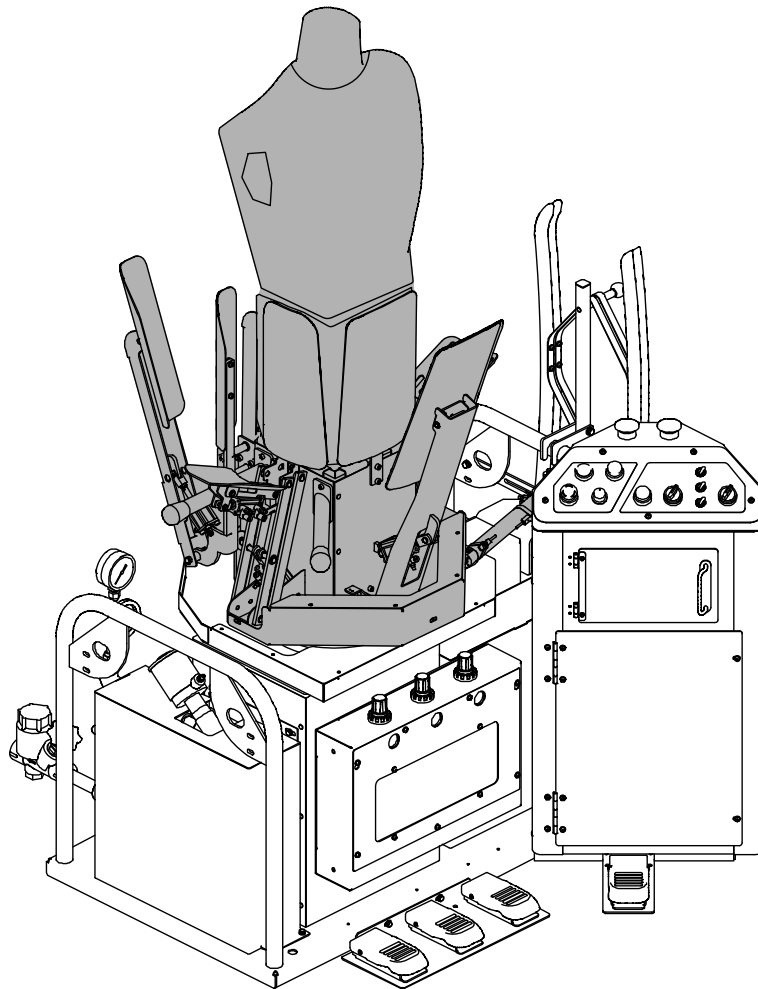
Ignoring this warning will result in serious injury or death due to electrical shock.



Range of the Machine in Motion

WARNING

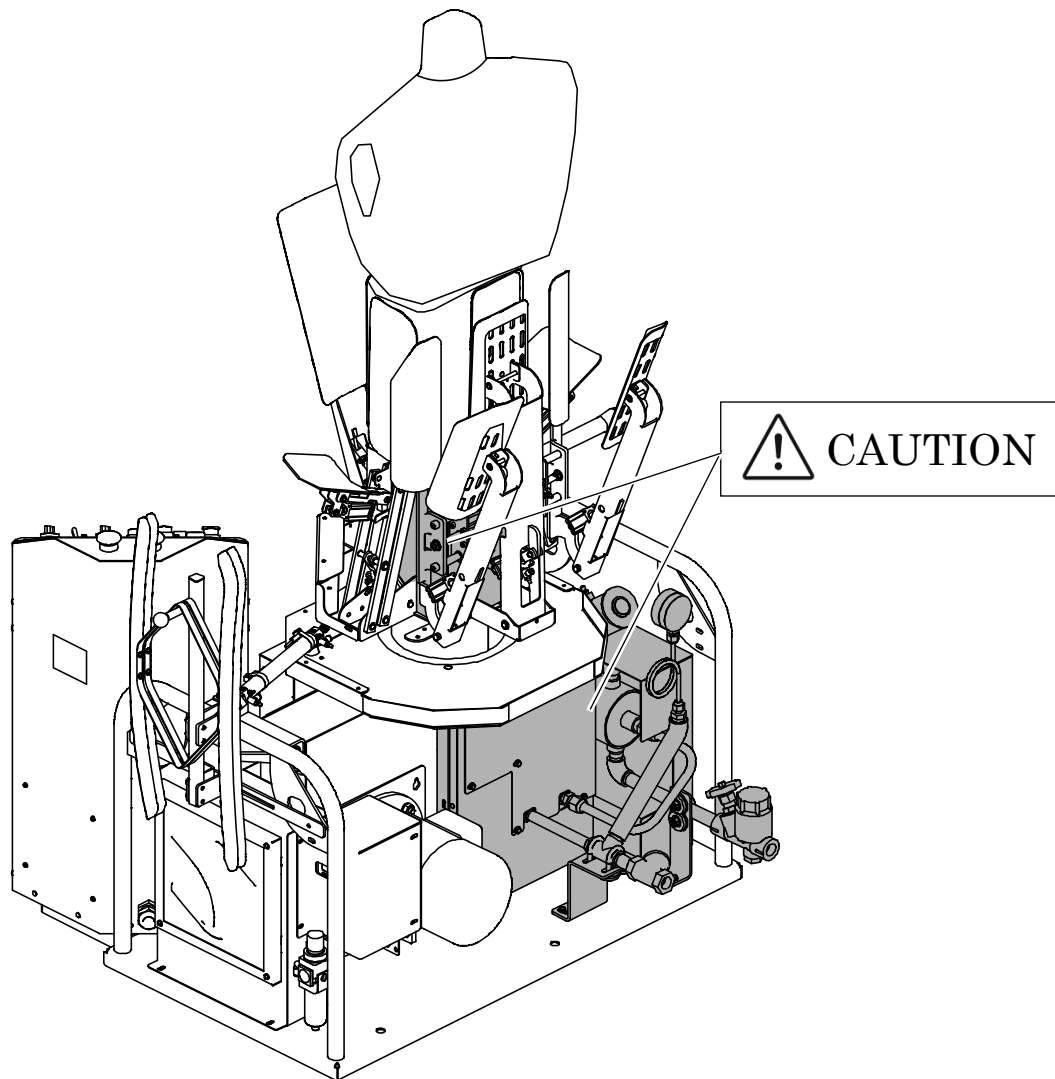
The machine has a certain range of motion.
Keep your hands away from the moving area during operation.
Before starting up or checking for maintenance, turn off the air and power first.
Ignoring this warning could result in serious injuries.



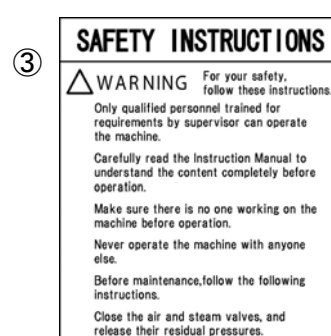
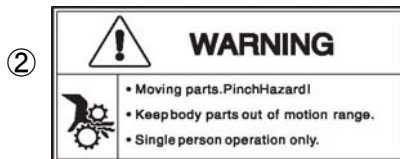
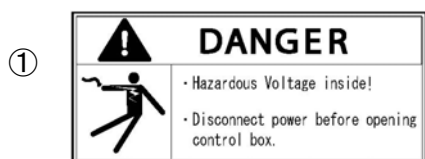
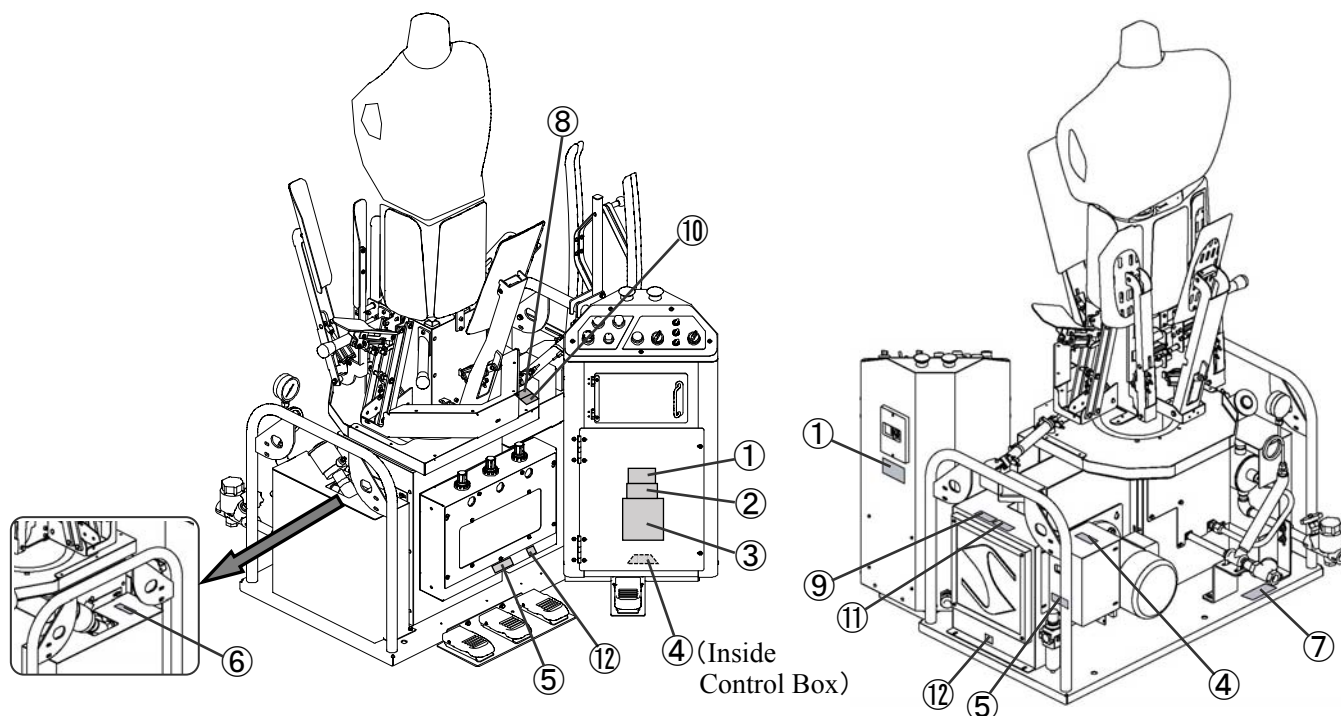
High Temperature Area

CAUTION

The machine has High Temperature Area.
Never touch these area during operation.
Do not also touch these areas for 30 minutes after the steam has been turned off.
Ignoring this warning may result in burns.



Safety Labels on the Machine

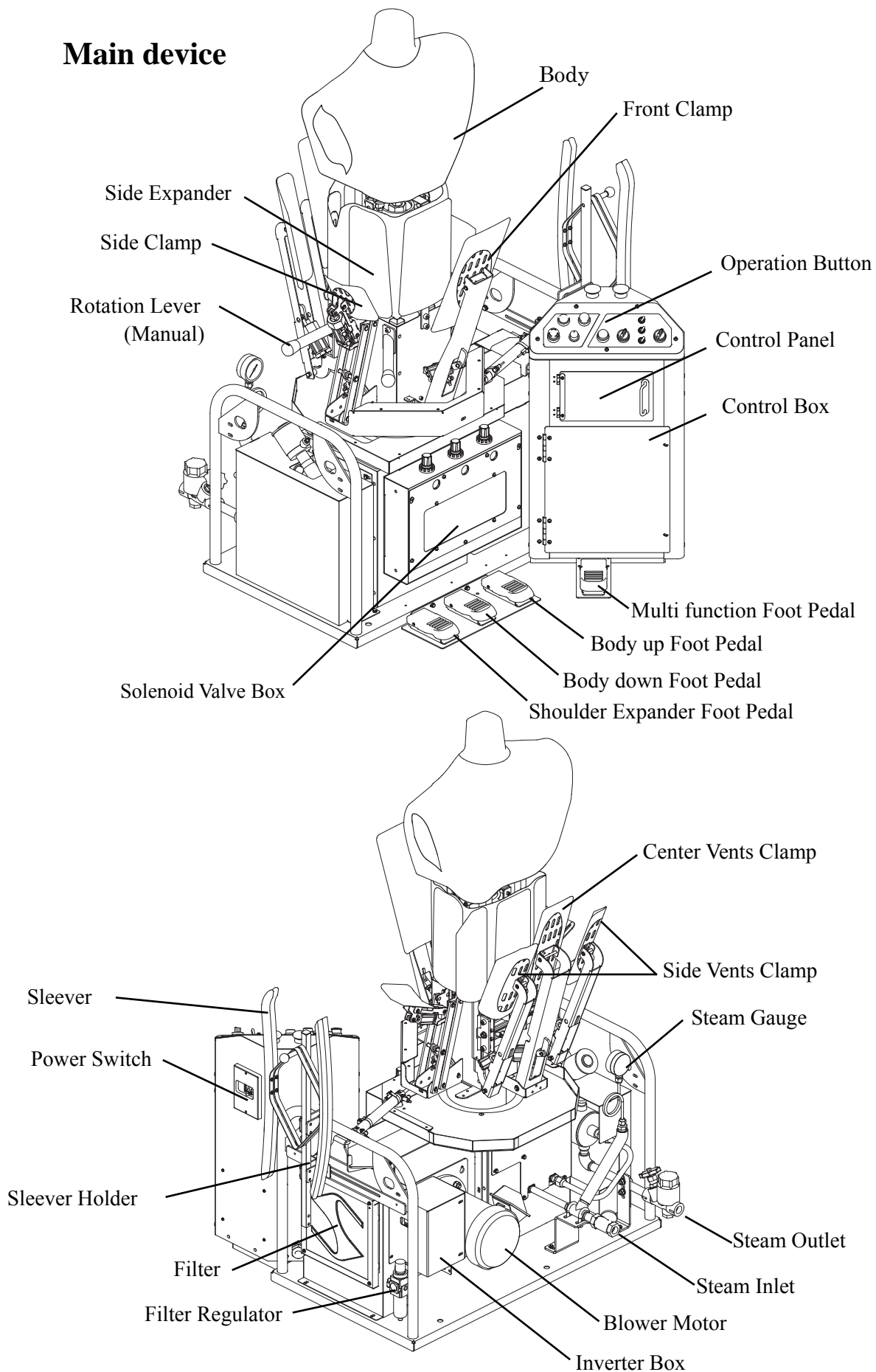


④	Shock Hazard	It may cause electric shock. Before opening Control Box or maintenance, always turn the power off.
⑤	High Pressure Air	High pressure air! Before maintenance, close air valve and drain residual pressure.
⑥	Burn Hazard	Surface is HOT! Do not touch press head, piping and its surrounding area.
⑦	High Pressure Steam	High pressure steam! Before maintenance, close steam valve and drain residual pressure.
⑧	Cut Hazard	Cut hazard! Keep hands away from the machine. Do not touch while operating.
⑨	Pinch Hazard	Pinch hazard! Keep hands away from the machine. Turn the power off during maintenance or cleaning.
⑩	Pinch Hazard	Pinch hazard! Keep hands away from the machine. Do not touch while operating.
⑪	Keep Filter Clean	Clean filter before operation.
⑫		Center Mark Indicating the center of gravity of the machine.

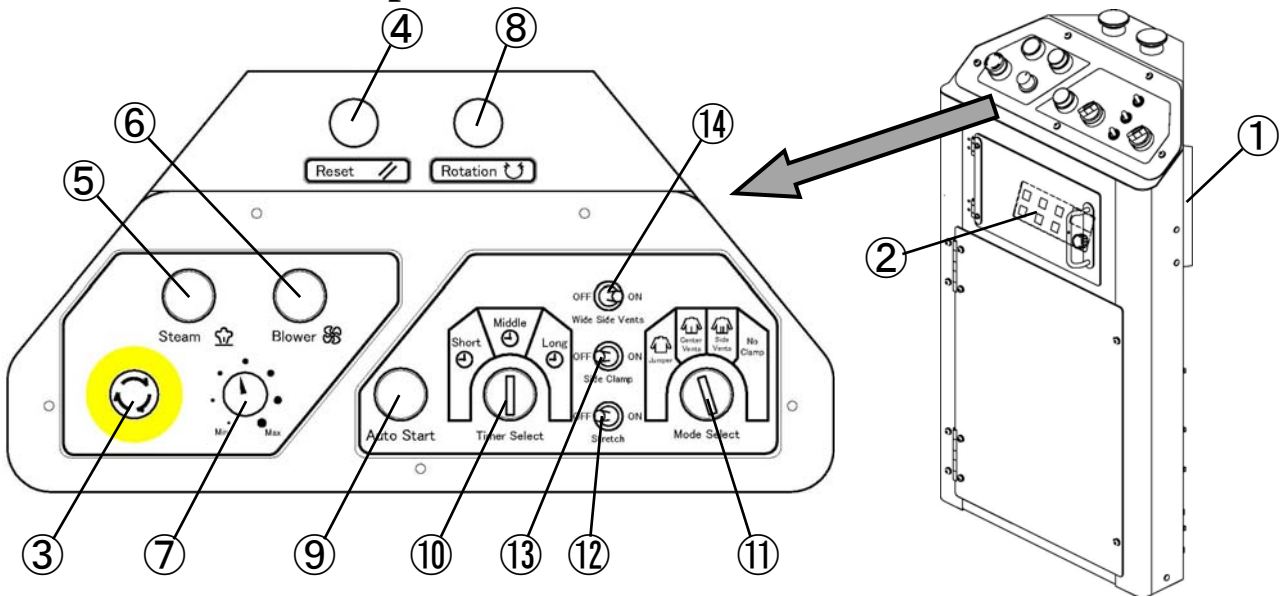
Make sure that each warning label is placed at the location shown above. If any of the labels is missing, damaged, or illegible, contact your distributor to obtain a new one.

Parts Name

Main device



Control box switch position



① Power Switch

The switch is for the main power.

Black Button is for turning the Power ON. Red Button is for turning the Power OFF.

② Control Panel

You can change the setting, confirm the setting, or test each function.

Please see page 14 “Control Panel” for further details.

③ Emergency Stop Button

If you push this button, “E 1” will be displayed and the machine will return to first condition safely whatever process you are in. In this time, buzzer will keep ringing. Turn the emergency button clockwise to release the lock of the button. (Buzzer will stop and “---“will be displayed) If you push the Reset button, machine will return to its normal condition.

④ Reset Button

When you push this button there are four different possible functions.

1. If you push this button after power supply ON, operation will be possible.
2. If you are in the foot pedal process, the machine will return to previous process.
3. If you are in auto operation, each timer will stop.
4. If you push this button when Emergency Stop Button works, the machine will return to its normal condition.

⑤ Steam Button

Steam injects when you keep pushing this button.

※ While in automatic mode, this button does not work.

⑥ Blower Button

If you push this button, the blower motor will turn on.

If you push it again, the blower motor will turn off.

※ This button does not work while the finishing timer is on.

⑦ Blower Power Dial

By turning this dial, you can change the blower power.

Turn the dial clockwise and the power will go up.

Turn the dial counterclockwise and the power will go down.

⑧ Body Rotation Button

This button makes the body rotate automatically.

⑨ Auto Start Button

If you push this button, this machine makes operation automatically whatever process you are in. However shoulder expander, body up and down operations are not made automatically.

⑩ Timer Selection Switch

You can select Steam Timer and Blower Timer from following chart. The chart shows factory initial setting of each timer.

Finishing Timer	Steam Timer	Blower Timer	
		Laundry Button OFF (Dry Mode)	Laundry Button ON (Wet Mode)
• Short	4.0 sec. (Max.8 sec.)	10 sec. (Max.30 sec.)	10 min. (Max.30 min)
• Middle	6.0 sec. (Max.8 sec.)	20 sec. (Max.30 sec.)	20 min. (Max.30 min)
• Long	8.0 sec. (Max.8 sec.)	30 sec. (Max.30 sec.)	30 min. (Max.30 min)

* You can change each timer setting. Please see page 17.

* The blower timer shows “minutes” when the Laundry Button (next page ③) at the Control Box is ON.

⑪ Mode Selection Switch

You can select following mode along with side expander function.

- Jumper Mode Front clamp moves.
- Center Vents Mode Center vents clamp and front clamp move and side expander opens.
- Side Vents Mode Side vents clamp, front clamp move and side expander opens.
- No Clamp All clamps do not move.

⑫ Stretch Selection Switch

While this switch being ON, the body goes up for the time set at Volume (V4) after the automatic process is done under the steam timer.

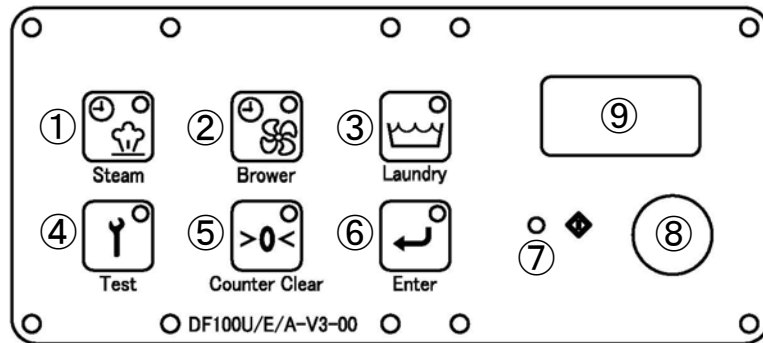
⑬ Side Clamp Selection Switch

When this button is turned on, side clamps move and clamp left and right sleeve.

⑭ Wide Side Vents Selection Switch.

When this switch is ON, the side vent clamps open left and right and you can process a larger size jacket.

Control Panel



- ① Steam Timer Button (The light turns green when the button is ON.)
When this button is turned on, you can change the steam injection time with the ⑧ "Dial".
- ② Blower Timer Button (The light turns green when the button is ON.)
When this button is turned on, you can change the blower time with the ⑧ "Dial".
- ③ Landry Button (The light turns green when the button is ON.)
You can select time unit between minute and second for the blower timer.
When button is turned on, minute unit is selected and turned off, second unit is selected.
- ④ Test Button (The light turns green when the button is ON.)
Push this button to start the test operation for each function.
Please see page 24 "Test Operation" for further details.
- ⑤ Counter Clear Button
Push this button. "0" will blink at ⑨ "Display Window". Push ⑥ the "Enter Button".
You can reset the counter at "0". Push this button again. The window will show the garment counter.
- ⑥ Enter Button (for Timer Remember) (The light turns green when the button is ON.)
Push this button after changing the timer setting for each mode. The time setting for each mode can be saved.
- ⑦ Power Lamp
The red lamp is blinking if it is turned on. Also, it is blinking with Emergency Stop Button. It will flash and go back to its original position with pushing the reset button.
- ⑧ Dial
This Dial can change all timers and select menu numbers.
- ⑨ Display Window
It shows the counter, timer with count down, error number menu number and etc...

Foot pedal

① Shoulder Expander Foot Pedal

When you press this pedal, Shoulder area will expand and you can adjust clothes.
Shoulder size returns when you press again.

② Body Down Foot Pedal

When you keep on pressing this pedal, body will move down.

③ Body Up Foot Pedal

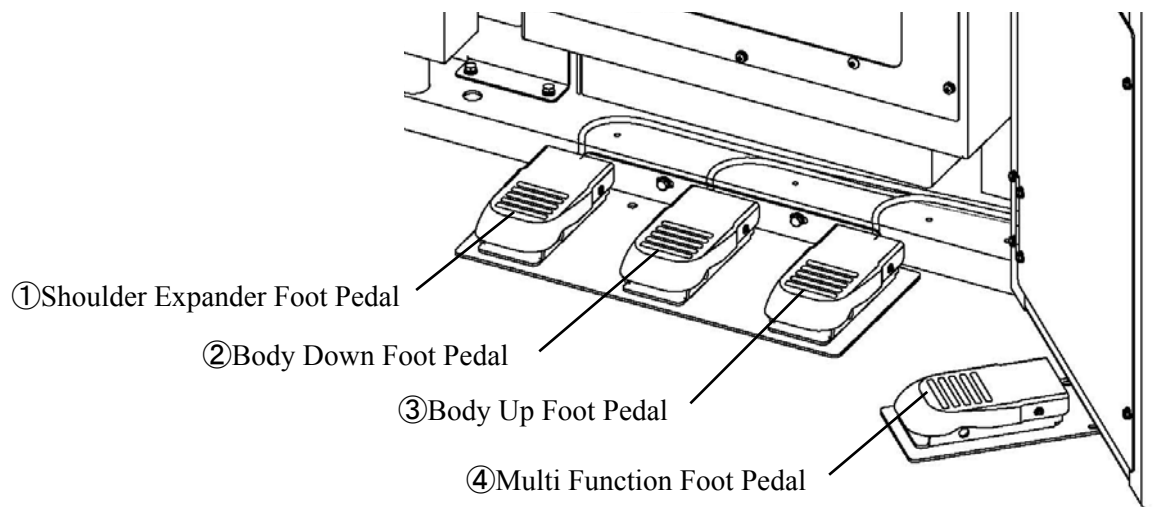
When you keep on pressing this pedal, body will move up.

④ Multi Function Foot Pedal

When you press this pedal, you can advance operation process.

Process number will be displayed on the display window.

Process is Rear clamp(-1-) ⇒ Front clamp(-2-) ⇒ Side expander(-3-) ⇒ Side Clamp(-4-)
⇒ Auto operation.



Operation Procedures



CAUTION

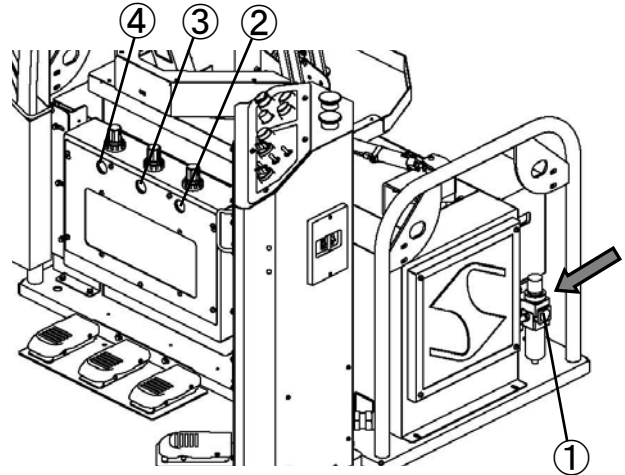
Follow the procedure for proper operation.

Improper operation can cause mechanical failure or injury to operators.

Provide Air

- Check whether air pressure is set at the required level for main regulator and other regulators as below.

- | | |
|------------------------------|-----------|
| ① Main Regulator | ···0.5MPa |
| ② Body Rotation Cylinder | ···0.3MPa |
| ③ Side Expander Cylinder | ···0.2MPa |
| ④ Shoulder Expander Cylinder | ···0.2MPa |
| Body Up/Down Cylinder | |



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

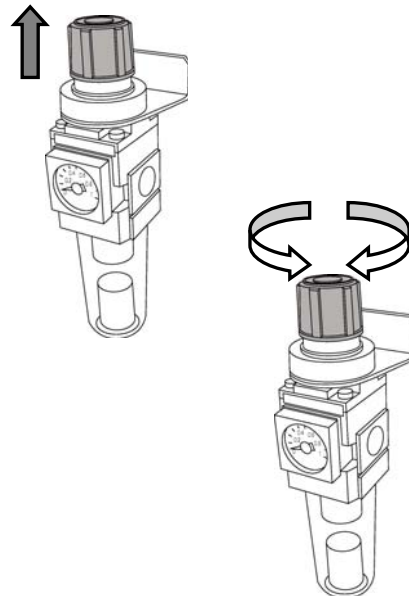
■ How to adjust air pressure

1. Pull the adjustment knob up.
2. Turn the knob to adjust air pressure

Clockwise → Pressure will increase

Counterclockwise → Pressure will decrease

3. Push the knob down.



Check Point

- Check compressor if the main air pressure does not reach 0.5MPa 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 at all times.

Provide Steam

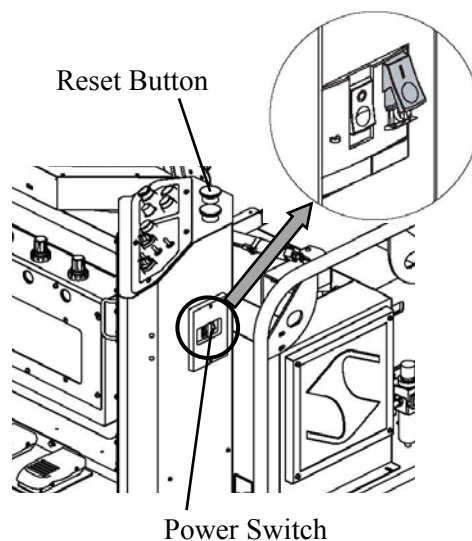
- Check whether steam with the pressure at 0.5MPa or more can be supplied to the machine.
If the steam pressure does not reach the required level, it may adversely affect the garment finishing quality. Always check whether the steam pressure meets its requirement.
- It takes about 15 minutes until press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

Turn the Power On

- (1) The power is ON by pushing the black button at the side of the control box.
→The power lamp at the control panel is blinking, and show “- -” on display.
- (2) Push “Reset” button.
→The lamp will keep lit and it is available to operate.
Also, the display will change to counter.

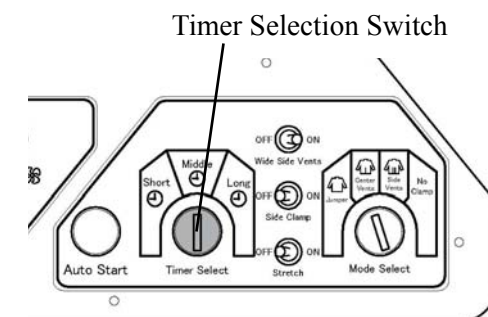
Caution

Any operation is not available without pushing the Reset button.



Select finish time

- By using the Timer Selection Switch, you can select the Steam Timer and the Blower Timer from 3 different modes: “Short”, “Middle”, and “Long”.
You can change each timer setting.
Please see page 13 ⑩ Timer Selection Switch for factor initial setting.



◎The setting change method of each timer

- ① Select a mode you want to use by Timer Selection Switch
- ② Push the Steam Timer Button or the Blower Timer Button.
→The green lamp on the upper right of selected button turns on, and the selected Timer shows at the Display Window.
- ③ Change Timer by turning the “Dial” on the Control Panel.
 - Turn clockwise. Timer will increase.
 - Turn counterclockwise. Timer will decrease.
- ④ Push the “Enter Button” to save the setting.
→Also, the display will change to counter.

Caution

- If you do not push the "Enter Button", it returns to the previous timer.
Please make sure to push the button if you want to save the new setting.
- If the Blower Timer setting is shorter than the Steam Timer setting, the Blower Timer setting is automatically changed to the same as the Steam Timer setting.

! CAUTION

- Make sure there is no one working near the machine before beginning operation.
- Beware of pinching hands or garment by moving part during the operation.

Set the clothes on the body

«In case of finishing center vents/side vents»

- (1) Turn the body back with rotation button (auto) or rotation lever (manual).

It makes setting the garments easier.

Rotation Lever (Manual)

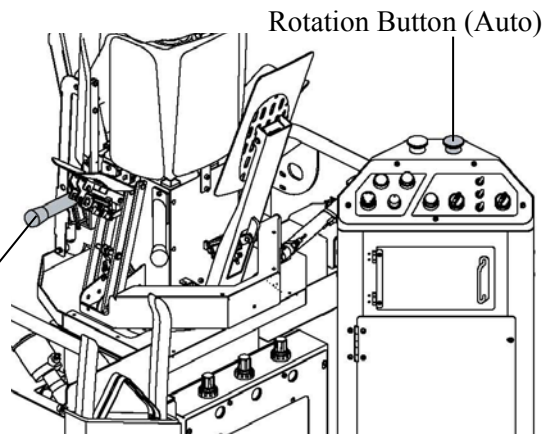


Figure-1

- (2) Change Mode Selection Switch according to the garment you want to process.

Wide Side Vents Selection Switch

- (3) Set the garments on the body and straighten shoulder position.

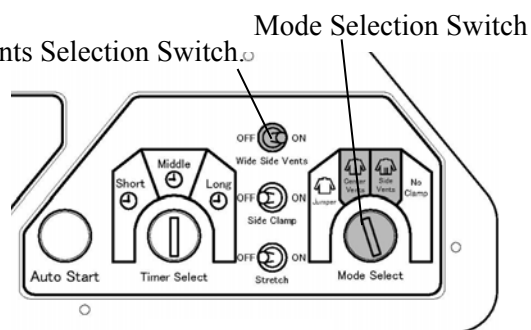


Figure-2

- (4) Press the body up foot pedal.
→Body will move up. Adjust body to garment height with body up and body down foot pedal.

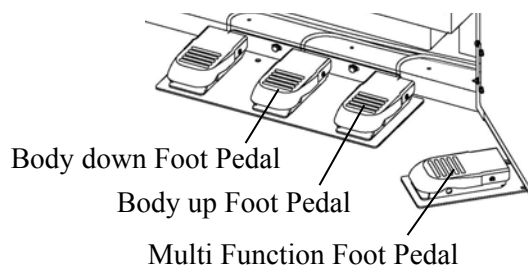


Figure-3

- (5) Straighten center and side vents positions and press multi function foot pedal
→Rear side of the garments will be clamped.
(-1-is displayed)

Tips!

- * When the Wide Side Vents Selection Switch is ON, the side vent clamps opens left and right. It is useful for finishing a larger garment.
- * You can change how to clamp the center vent and side vent by using the DIP function in the Service Menu (Please see 29page).

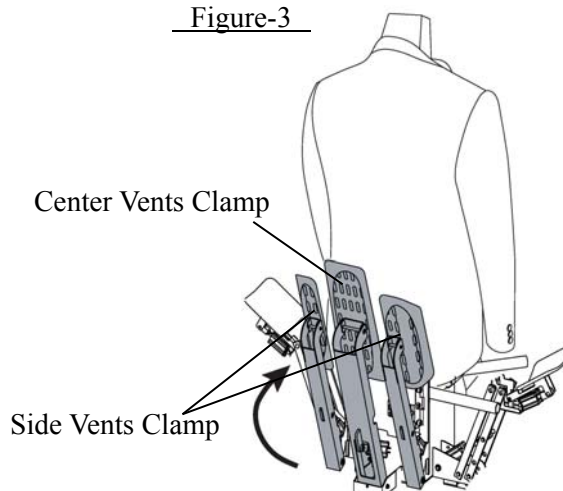


Figure-4

- (6) Turn the body to the front side by using the rotation button (auto), or rotation lever (manual)
(Please see the page 18 Figure-1.)

- (7) Press the shoulder expander foot pedal.
→ Expander will expand according to garments shoulder line.
Straighten shoulder line if it is needed.

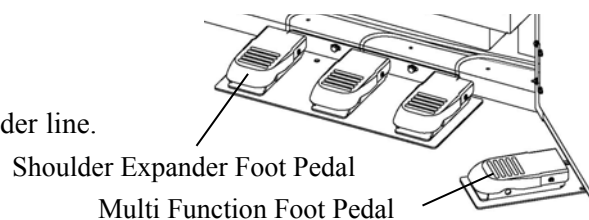


Figure-5

- (8) Straighten front placket and press the multi function pedal.
→ Front side of the garments will be clamped. (- 2 - is displayed)

* If the setting is not correct, push the reset button.
The machine will return to its previous position.

- (9) Press the multi function foot pedal.
→ Side expander will expand according to garments line.
(- 3 - is displayed)

* If the setting is not correct, push the reset button.
The machine will return to its previous position.



Figure-6

- (10) Press the multi function foot pedal.
→ Left and right side will be clamped. (- 4 - is displayed)

* If the setting is not correct, push the reset button.
The machine will return to its previous position.

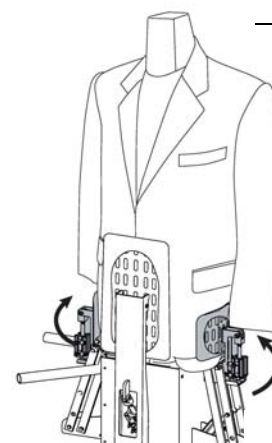


Figure-7

- (11) Press the multi function foot pedal.
→ The automatic operation will start.

* Auto operation procedure.

Steam Injection ⇒ Body going up (while Stretch Selection Switch being ON) ⇒ Steam/Blower
⇒ Blower (Dry) ... (Time of each process is counted in display window)

→ When the finishing process is over, the front/rear clamp, the left/right clamp, and the body will stop working.

- (12) Press the Multi Function Foot Pedal twice while holding the both sides of the shoulder of the garment.
→ The first step releases the front/rear clamp and the left/right clamp. The second step makes the body go down. You can then easily take off the garment.

Tips!

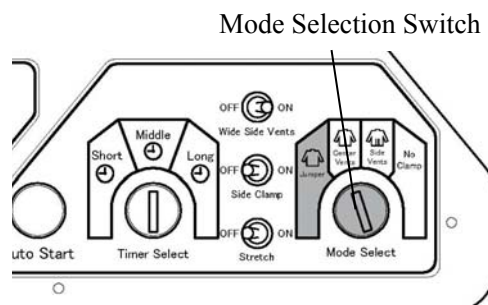
* If you turn the DIP function "d 5" ON, all of the motions (releasing the front/rear clamp and left/right clamp and the body going down) take place by using this only one step. (Please see page 29)

«In case of the jumper finishing»

- (1) Turn the body back with the rotation button (auto) or rotation lever (manual)
(It makes setting the garment easier.)

- (2) Change the Mode Selection Switch to the “Jumper Mode”.

- (3) Set garment on the body and straighten its shoulder position.



- (4) Press Body up or Body down foot pedal.
→Body will move up. Adjust body to correct garment height with Body up and Body down foot pedal.

- (5) Turn the body to front side with the rotation button (auto), or rotation lever (manual)

Shoulder Expander Pedal

- (6) Press the shoulder expander foot pedal.
→Shoulder area of the body will expand according to the shoulder line. Straighten the shoulder position if it is needed.

Body Down Pedal

Body Up Pedal

Multi Function Pedal

- (7) Press the multi function foot pedal.
→The front side will be clamped.(- 2 - is displayed)

* If the set is not correct, push reset button. The machine will return to its previous position.

- (8) Press the multi function foot pedal.
→The automatic operation will start.

* Auto operation process.

Steam Injection ⇒ Body going up (while Stretch Selection Switch being ON) ⇒ Steam/Blower
⇒ Blower (Dry) ... (Time of each process is counted in display window)

→When the finishing process is over, the front/rear clamp, the left/right clamp, and the body stop working.

- (9) Press the Multi Function Foot Pedal twice while holding the both sides of the shoulder of the garment
→The first step releases the front/rear clamp and the left/right clamp. The second step makes the body go down. You can then easily take off the garment.

Tips!

* If you turn the DIP function “d 5” ON, all of the motions (releasing the front/rear clamp and left/right clamp and the body going down) take place by using this the only one step. (Please see page 29)

Turn the power off.

- Turn the power OFF by pushing the red button at right side of the Control Box.

→The power lamp will be turned off.

* When switching back on, make sure there is nothing displayed.

Other Operations

How to Reset Emergency Stop

When the Emergency Stop Button is pushed, “E1” shows on the Display Window and the machine safely returns 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 Window shows “— — 1”)

Push the Reset Button next.

The normal operation will resume.

Cover/Pad Change Instruction



CAUTION

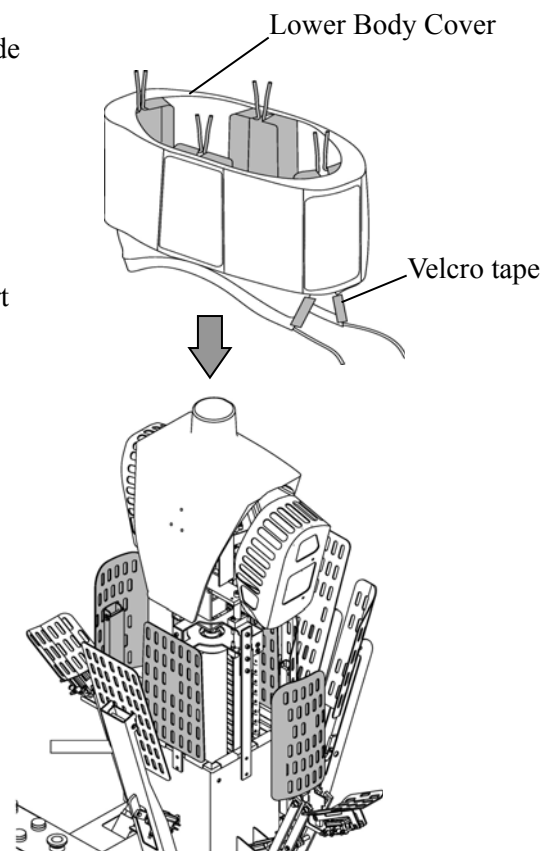
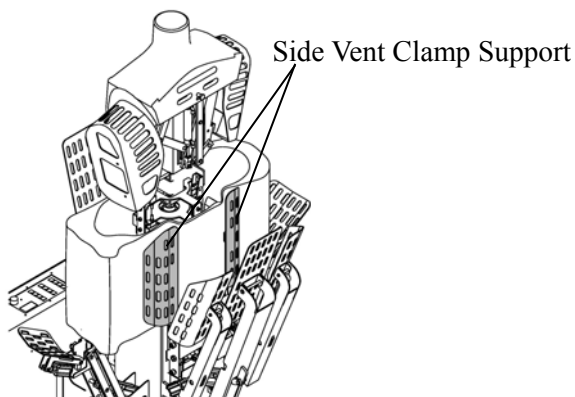
Let the machine cool completely before changing the cover.
Otherwise it may burn whoever is operating the machine.
Turn the power off before doing this operation.

For optimal performance use a factory original cover made only by Sankosha.
Using another company's cover may give a bad finish. Sankosha takes no responsibility if you do not use factory original covers & padding.

1. Lower Body Cover setting

- ① Put Lower Body Cover on body and attach both side Velcro tapes which are in the bottom of cover.

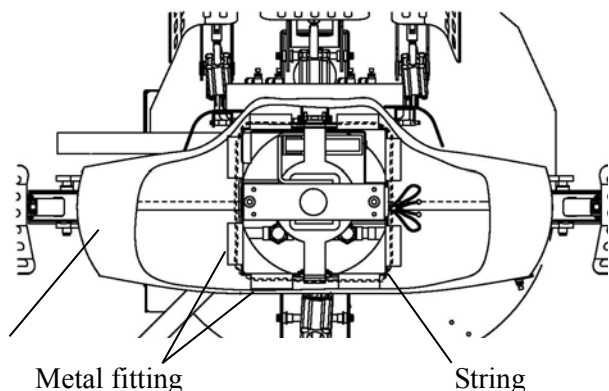
• Don't put side vent clamp support inside of the cover in cover setting.



- ② There are the covers for front and rear clamp support plate and side expander plates inside of the Lower Body Cover. Loosen strings of those covers and put the covers on each plate. Then tie the strings.

- ③ Pull strings which are attached on bottom of Lower Body Cover under the metal fitting and tie them not to leak blower outside.

Lower Body Cover

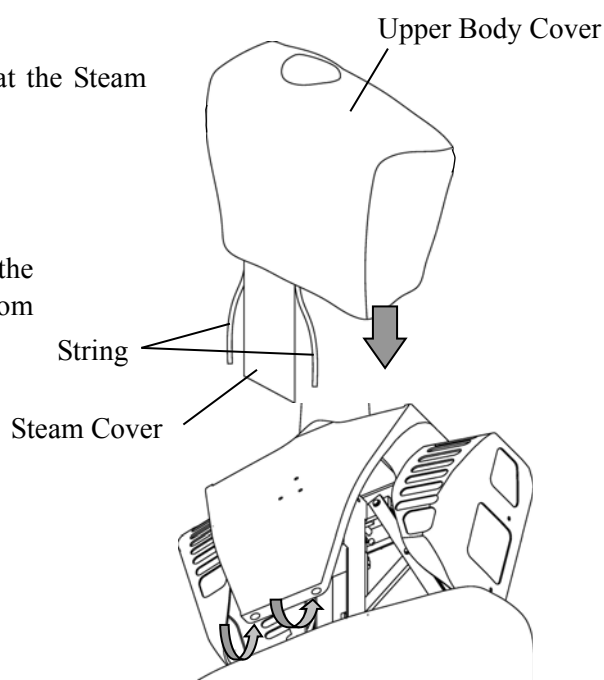


Metal fitting

String

2. Upper Body Cover setting

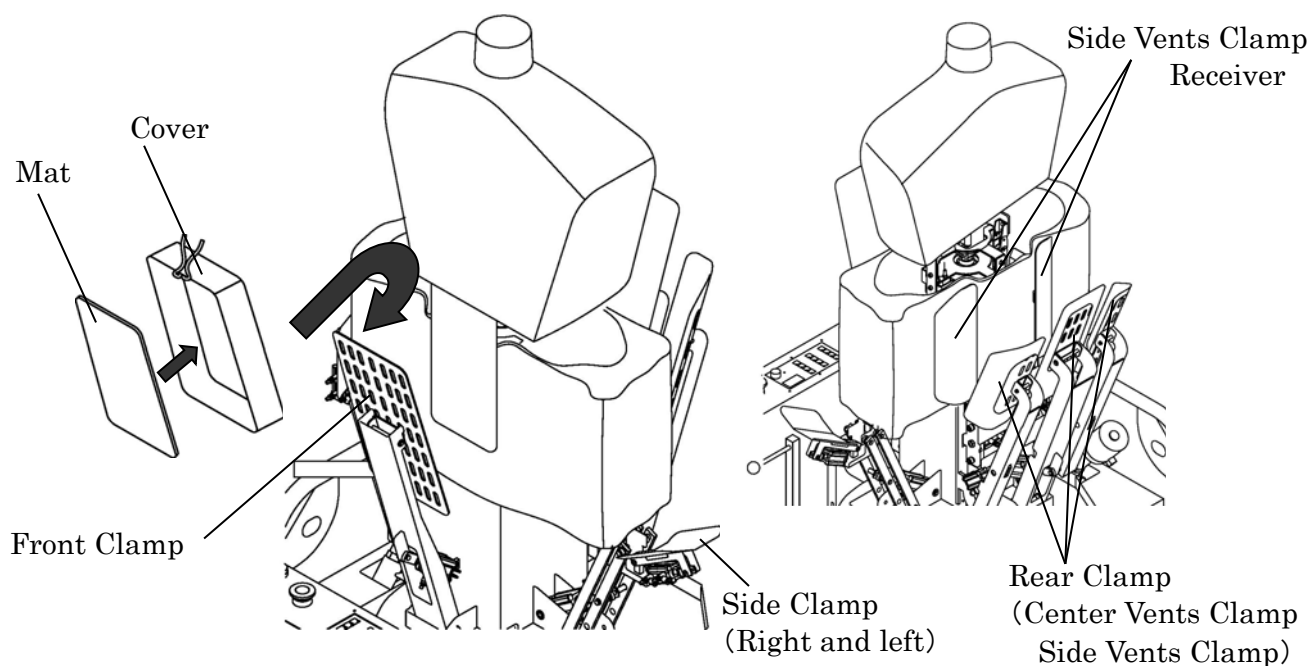
- ① Put Upper Body Cover on the body so that the Steam Cover is in the front position.
- ② Pass the string which is attached inside of the Steam Cover through the hole of body from outside and tie it in the body.



Pass strings from arrow direction and tie them inside.

3. Mat and cover setting of front and rear clamp / left and right side clamp

- ① Set mats on front, rear clamp cover and set them on front, rear clamp plate and tie strings so that there is no wrinkle.
- ② Set mats on left, right side clamp cover and set them on left, right side clamp plate and tie strings so that there is no wrinkle.



Test Operation

! WARNING

Before using the test operation, make sure there is no one working near the machine.

The Test mode operation enables the machine to run each process while the machine runs all the functions continuously on the normal operation.

Operation Procedures

Step 1: Push the "Test" Button on the control panel.

→ The Green lamp will light up, and show "o01" on the display.

Image of display for test "o01"



Test No.

Step 2: Select the test number with the "Dial"

→ Test number will go up with clockwise, and the number goes down with counterclockwise
(The number is displayed with order of Test Number List at page 25.)

Step 3: Push the "Enter Button".

→ Test mode is now ON, and the function starts working. The "Enter" Button is blinking while the test is ON.

* Push the "Enter Button" again to stop the test operation.

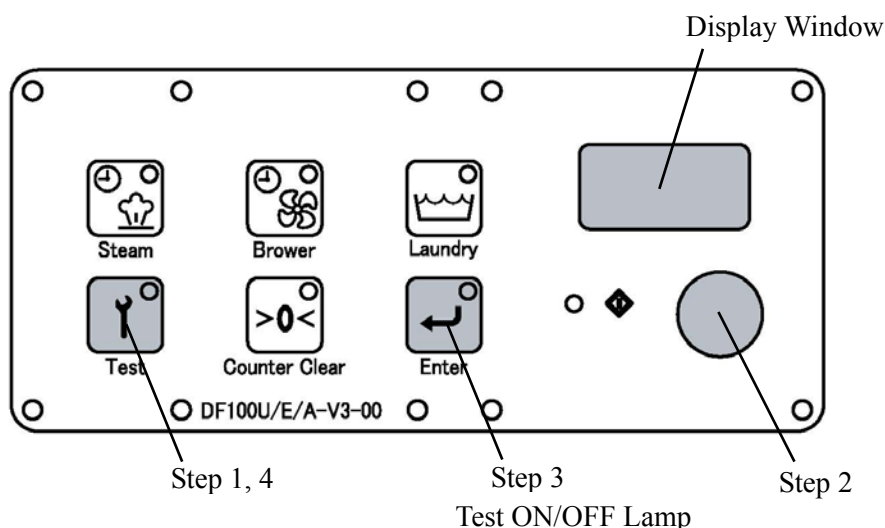
Caution

Please finish the test operation; otherwise it will not work for another test.

Step 4: Push the "Test" Button when you finish the test.

→ The Test Button lamp goes off.

The Display Window shows shirt counter and the normal operation is ready to work.



Test Number List

Test No.	Test Item	Remarks
o 0 1	Steam Injection Solenoid (No.1)	•It will work 0.3 seconds when steam button is ON.
o 0 2	Center Vents Clamp Solenoid (No.2)	•Buzzer sounds 1.0 second later when Center Vents Clamp closes. Buzzer sounds 0.7 seconds later when it opens. Adjust the speed to the beep.
o 0 3	Front Clamp Solenoid (No.3)	•Buzzer sounds 1.0 second later when Front Clamp closes. Buzzer sounds 0.7 seconds later when it opens. Adjust the speed to the beep.
o 0 4	Side Expander Open/Closes Solenoid (No.4/No.5)	•Buzzer sounds 2.5 second later when Side Expander opens. Buzzer sounds 1.5 seconds later when it closes. Adjust the speed to the beep.
o 0 5	Side Clamp Solenoid (No.6)	•Buzzer sounds 0.7 second later when Side Clamp closes. Buzzer sounds 1.3 seconds later when it opens. Adjust the speed to the beep.
o 0 6	Body Up/Down Solenoid (No.7/No.8)	•Buzzer sounds 2.5 second later when the Body goes up. Buzzer sounds 1.5 second later when Body goes down. Adjust the speed to the beep.
o 0 7	Wide Side Vents Solenoid (No.9)	•Buzzer sounds 0.5 second later when Side Vents spreads right and left. Buzzer sounds 0.5 seconds later when it shrunk. Adjust the speed to the beep.
o 0 8	Side Vents Clamp Solenoid (No.10)	•Buzzer sounds 1.0 second later when Side Vents Clamp closes. Buzzer sounds 0.7 seconds later when it opens. Adjust the speed to the beep.
o 0 9	Shoulder Expander Open/Closes Solenoid(No.11/No.12)	•Buzzer sounds 1.0 second later when Shoulder Expander opens. Buzzer sounds 1.0 seconds later when it closes. Adjust the speed to the beep.
o 10	Body Rotation Start/End Solenoid(No.13/No.14)	•While rotating, rotating time shows at the Operation Panel.
o 11	Blower Motor(INV01)	
o 12	Buzzer (BZ01)	

Service Menu



WARNING

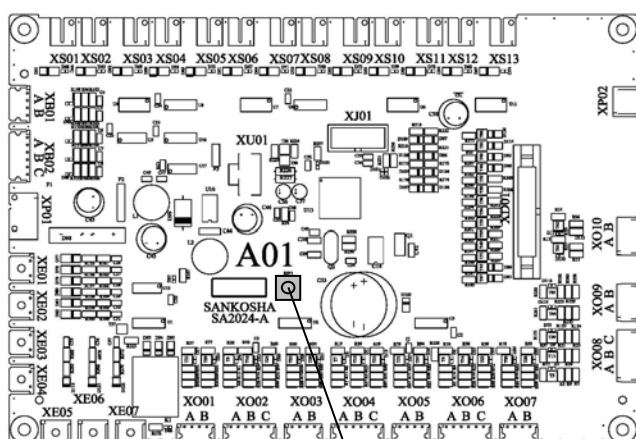
It is extremely dangerous in Control Box.

Do not touch anywhere unless otherwise specified.

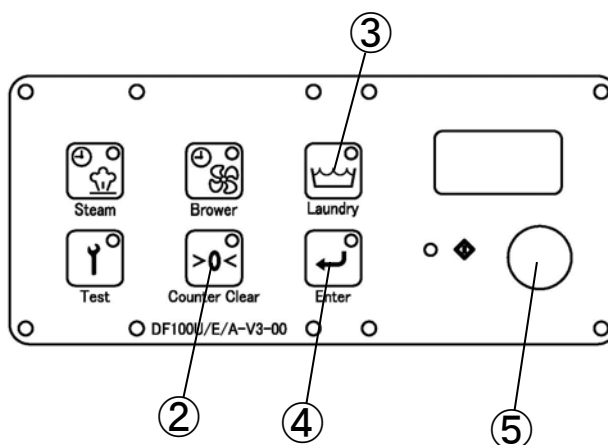
Push the Service Button (BP1) on the main circuit board in the control box; you can check the “Input Test”, “Output Test”, “Volume Setting”, “Dip Setting” and “Timer Setting”. Furthermore, you can reset all the settings to factory initial setting and check the software version.

- The location of the Service Button on the main Circuit Board, all the Button for Service Menu and their functions are as follows.

Main Circuit Board



Control Panel



- ① Service Button
Push this button. “In1” shows up and the Service Menu is ready to work.
- ② Counter Clear Button
When the Service Menu works, this button functions as the return button.
- ③ Landry Button
On Input Test 2, the light turns ON when the test is ON. The light turns OFF when the test is OFF.
- ④ Enter Button
Push this button in order to determine the selected menu or change the setting.
- ⑤ Dial
Turn this Dial to select each Menu or change the setting.
 - Turn to the right: going forward and the number increases.
 - Turn to the left: going back and the number decreases.

■ Service Menu List (Please see “Service Menu Explanation” for further details.)

Display	Displayed word	Function
	in1	Input test 1 is operated.
	in2	Input test 2 is operated.
	out	Output test is operated.
	VoL	Each volume setting.
	diP	Dip function setting.
	tou	Time setting displayed in display window.
	dEF	Initialization of volume setting is operated.
	VEr	Running program version display.

■ Operation process

1. Push ① “Service Button”.→ shows on the Display Window.
2. Turn ⑤ ”Dial” and select the Service Menu you want to work.
3. Push ④ ”Enter Button” to start the selected Service Menu.
4. Work or set on the selected Menu. See “Service Menu Explanation” for further details.
5. After completion of the Menu, push ② “Counter Clear Button”, and return to the normal operation. (Normal operation will resume after a certain period of time goes by without pushing this button.)

■ Service menu explanation

1. in1 (Input Test 1)

- Display by Operation Procedure 1. Push ④ the “Enter Button” to select.
- If you push each Button/Pedal (Chart-1), the number shows up.


Chart-1 “Input Test 1” List

Input Button／Sensor Name	No.	Input Button／Sensor Name	No.
Reset Button	b1A	Auto Start Button	b2C
Rotation Button	b1b	Short Time Select Switch	b4A
Blower Button	b2A	Long Time Select Switch	b4b
Steam Button	b2b		

Chart-1 “Input Test 1” List (continue from the previous page)

Input Button/Sensor Name	No.	Input Button/Sensor Name	No.
Shoulder Expander Foot Pedal	S 1	Wide Side Vents Selection Switch	S 8
Body Down Foot Pedal	S 2	Side Clamp Selection Switch	S 9
Body Up Foot Pedal	S 3	Stretch Selection Switch	S10
Multi Function Foot Pedal	S 4	Rotation end sensor	S11
Jumper Mode Selection Switch	S 5	Rotation middle sensor	S12
Side Vents Mode Selection Switch	S 6	Inverter Alarm	S13
Free mode Selection Switch	S 7		

2. in2 (Input Test 2)

- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- Turn ⑤ the "Dial". The number (Chart -1) and its status (ON or OFF) shows up one by one. When it is ON, the lamp of ③ the "Laundry Button" also turns ON.

3. out (Output Test)

! CAUTION

An output test should stop air and steam.
There is possibility of machine failure or burn.


- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- Turn ⑤ the “Dial”. Select the number (Chart-2) you want to test, then push ④ the “Enter Button”. The selected test menu is ready to work.

Chart-2 “Output Test” List

No.	Output Name	Remarks	No.	Output Name	Remarks
1A	Motor ON	Inverter	3A	Side Expander Open Solenoid	Solenoid No.4
2A	Steam Injection Solenoid	Solenoid No.1	3b	Side Expander Closes Solenoid	Solenoid No.5
2b	Center Vents Clamp Solenoid	Solenoid No.2	4A	Side Clamp Solenoid	Solenoid No.6
2C	Front Clamp Solenoid	Solenoid No.3	4b	Body Up Solenoid	Solenoid No.7
4C	Body Down Solenoid	Solenoid No.8	7b	Shoulder Expander Closes Solenoid	Solenoid No.12
5A	Wide Side Vents Solenoid	Solenoid No.9	9A	Body Rotation Start Solenoid	Solenoid No.13
5b	Side Vents Clamp Solenoid	Solenoid No.10	9b	Body Rotation End Solenoid	Solenoid No.14
7A	Shoulder Expander Open Solenoid	Solenoid No.11	10A	Buzzer	

4. VoL (Volume Setting)


- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- Turn ⑤ “Dial”. Select the number (Chart-3) you want to change, then push ④ the “Enter Button”. The timer of the selected Volume Setting shows up.
- Change the timer by turning ⑤ the “Dial”. Set the timer by pushing ④ the “Enter Button” once again.

Chart-3 “Volume Setting” List

No.	Setting	Default Setting
V 1	The time of both steam injection and blower while working simultaneously in automatic mode	2.0sec.(Max 6.0sec)
V 2	The time from Rotation Middle Sensor (SQ02) turning ON to switching Solenoid Valve (No. 10 and No. 11)	0.12sec.(Max 1.0sec)
V 3	The time of Shoulder Expander Solenoid Valve being ON after pressing the Shoulder Pedal	1.0sec.(Max 2.0sec)
V 4	The time of the body going up after Steam Timer is over while in automatic mode	0.2sec.(Max 1.0sec)
V 5	The time of Side Expander Solenoid Valve (No. 4) from ON to OFF	3.0sec.(Max 5.0sec)
V 6	Pedal reaction time to prevent from chattering of the multi function pedal.	0.2sec.(Max 0.5sec)
V 7	The time of interval of process to process while in automatic mode	2.0sec.(Max 5.0sec)

5. diP (DIP Setting)


- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- Turn ⑤ the “Dial”. Select the number (Chart-4) you want to change, then push ④ the “Enter Button”. The selected DIP Setting shows up.
- Push ④ the "Enter Button". The current setting will show up. Turn ⑤ the "Dial" to change ON or OFF. Push ④ the "Enter Button" again. The new setting is now saved.

Chart-4 “DIP Setting” List

No.	Setting		Default Setting
d 1	Select Laundry Button ON (Wet)/Off(Dry) (Initial Setting) while power being ON	ON : Wet Mode	OFF
		OFF : Dry Mode	
d 2	When Wet Mode, select Center Vent or Side Vent Clamp	ON : Both Clamp ON	ON
		OFF : Only the selected mode ON	
d 3	When Dry Mode, select Center Vent or Side Vent Clamp	ON : Both Clamp ON	OFF
		OFF : Only the selected mode ON	
d 4	Select Clamp release and body going down after automatic mode is over (Multi function foot pedal or a reset button)	ON : They work separately	ON
		OFF : They work at the same time.	
d 5	Select Clamp release and body going down after automatic mode is over. (Multi function foot pedal only) (Reset button is operation of always OFF.)	ON : They work at the same time.	ON
		OFF : They work separately	

6. tou (Timer Setting)



- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- Turn ⑤ the “Dial”. Select the number (Chart-5) you want to change, then push ④ the “Enter Button”. The selected timer shows up.
- Change the timer by turning ⑤ the “Dial”. Set the timer by pushing ④ the “Enter Button” once again.


Chart-5 “Timer” List

No.	Setting
t 1	Not in Use (Nothing happens even though you change the time)
t 2	Not in Use (Nothing happens even though you change the time)
t 3	Not in Use (Nothing happens even though you change the time)
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 (Default Setting)

- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- "OFF" shows up at the Display Window. Turn ⑤”Dial” to set it "ON".
- Push ④Enter Button again, All the settings return to the factory original setting.

8. VEr (Program Version)

- Display  by Operation Procedure 1 and 2. Push ④ the “Enter Button” to select.
- The version number of the current program shows up.

Trouble Shooting

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



WARNING

It is extremely dangerous in Control Box.

Do not touch anywhere unless otherwise specified.



CAUTION

If any of [EEE], [EE1], [EE2], [EE3], [EE4], or [EE5] shows up, Turn the power OFF and turn the power ON again **more than 5 seconds later**.
Call your dealer or Sankosha if the normal operation does not resume.

Information

- * Please 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 27)

Error No.	1. Error Item
	2. Error Description
	3. Check Point
E1	1. Emergency Stop Button
	2. The button is staying activated.
	3. (1) The Emergency Stop Button is not released. Insuring safety, release the Emergency Stop Button by turning the Button clockwise (→ direction), and push the Reset Button. (2) Wiring may be the cause if E1 displays even after releasing it. Check the Button itself or check if the wire is cut.
E10	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. (More than 2 minutes) 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.

Error No.	1. Error Item 2. Error Description 3. Check Point
E11	1. Rotation Start Overtime Error 2. Middle sensor (SQ02) is not detected after more than 4sec. From body rotation start. 3. (1) If the red light of the sensor does not turn on when you put a magnet over the rotation middle sensor, the sensor is in error. Check if the sensor is broken, or the wire connection is loose or disconnected (2) Check air pressure. (Body Rotation Cylinder Pressure: 0.3MPa, reference Page 16)
E12	1. Rotation End Overtime Error 2. End sensor (SQ01) is not detected after body rotates more than half and more than 4sec. 3. (1)When you put a magnet over the rotation end sensor, the red light of the sensor: ①does light ... it is considered the wrong position of the sensor. Please loosen the band of it, and find the lighting zone. Please place center of lighting zone and fix it. ②doesn't light ... it is sensor problem. Check if the sensor is broken, or the wire connection is loose or disconnected (2) Check air pressure. (Body Rotation Cylinder Pressure: 0.3MPa, reference Page 16)
E20	1. Reset Button Error 2. Reset Button remains ON more than 15 seconds. 3. (1) In the case of keep pushing the button, please release the button. Also, please remove anything which is pushing the button. If you push the button again, the machine will return to its original position. (2) Even if the button is not pushed, if it is showing "E20" error, it is a button problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E21	1. Blower Button error 2. Blower Button stays activated if the button is staying pushed by something when the main power is ON, or the machine is at the original position. 3. (1) In the case of keep pushing the button, please release the button. Also, please remove anything which is pushing the button. If you push the Reset button again, the machine will return to its original position. (2) Even if the button is not pushed, if it is showing "E21" error, it is a button problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E22	1. Steam Button error 2. Steam Button stays activated if the button is staying pushed by something when the main power is ON, or the machine is at the original position. 3. (1) In the case of keep pushing the button, please release the button. Also, please remove anything which is pushing the button. If you push the Reset button again, the machine will return to its original position. (2) Even if the button is not pushed, if it is showing "E22" error, it is a button problem. Please check whether the switch is broken or a wire connection is loose or disconnected.

Error No.	1. Error Item
	2. Error Description
	3. Check Point
E23	1 Rotation Button Error
	2. Steam Button stays activated if the button is staying pushed by something when the main power is ON, or the machine is at the original position.
	3. (1) In the case of keep pushing the button, please release the button. Also, please remove anything which is pushing the button. If you push the Reset button again, the machine will return to its original position. (2) Even if the button is not pushed, if it is showing "E23" error, it is a button problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E24	1. Multi Function Foot Pedal Error
	2. Multi Function Foot Pedal stays activated if the pedal is staying pressed by something when the main power is ON, or the machine is at the original position.
	3. (1) In the case of keep pushing button, please release the pedal. Also, please remove anything which is pushing the pedal. If you push the Reset button again, the machine will return to its original position. (2) Even if the pedal is not pressed, if it is showing "E24" error, it is a switch (FP03) problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E25	1. Shoulder Expander Foot Pedal Error
	2. Shoulder Expander Foot Pedal stays activated if the pedal is staying pressed by something when the main power is ON, or the machine is at the original position.
	3. (1) In the case of keep pushing button, please release the pedal. Also, please remove anything which is pushing the pedal. If you push the Reset button again, the machine will return to its original position. (2) Even if the pedal is not pressed, if it is showing "E25" error, it is a switch (FP01) problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E26	1. Body Down Foot Pedal Error
	2. Body Down Foot Pedal stays activated if the pedal is staying pressed by something when the main power is ON, or the machine is at the original position.
	3. (1) In the case of keep pushing button, please release the pedal. Also, please remove anything which is pushing the pedal. If you push the Reset button again, the machine will return to its original position. (2) Even if the pedal is not pressed, if it is showing "E26" error, it is a switch (FP04) problem. Please check whether the switch is broken or a wire connection is loose or disconnected.

Error No.	1. Error Item
	2. Error Description
	3. Check Point
E27	1. Body Up Foot Pedal Error
	2. Body Up Foot Pedal stays activated if the pedal is staying pressed by something when the main power is ON, or the machine is at the original position.
	3. (1) In the case of keep pushing button, please release the pedal. Also, please remove anything which is pushing the pedal. If you push the Reset button again, the machine will return to its original position. (2) Even if the pedal is not pressed, if it is showing "E27" error, it is a switch (FP02) problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E28	1. Auto Start Button Error
	2. Auto Start Button stays activated if the pedal is staying pressed by something when the main power is ON, or the machine is at the original position.
	3. (1) In the case of keep pushing the button, please release the button. Also, please remove anything which is pushing the button. If you push the Reset button again, the machine will return to its original position. (2) Even if the button is not pushed, if it is showing "E28" error, it is a button problem. Please check whether the switch is broken or a wire connection is loose or disconnected.
E99	1. 24V Error
	2. The abnormalities of the emergency stop circuit of a substrate.
	3. The error will be released when you push the Reset button. When occurring many times, call your dealer or Sankosha

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 monthly, 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

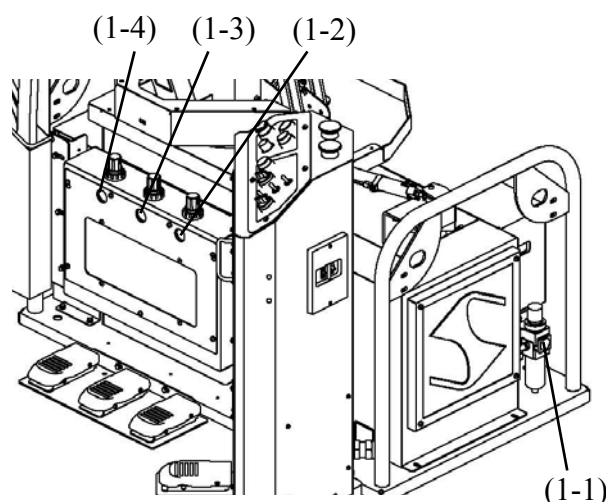
Check Item	Daily	Annual
1. Air Pressure	○	
2. Filter Regulator / Mist Separator	○	
3. Steam Pressure	○	
4. Steam Trap	○	
5. Cover	○	
6. Emergency stop	○	
7. Blower filter	○	
8. Regulator / Sludge filter		○

Check Item (Daily)

1. Air Pressure: Figure-1

Check whether air pressure is set at the required level for main regulator and other regulators.

(1-1) Main Regulator	...0.5MPa
(1-2) Body Rotation Cylinder	...0.3MPa
(1-3) Side Expander Cylinder	...0.2MPa
(1-4) Shoulder Expander Cylinder	...0.2MPa
Body Up/Down Cylinder	



[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

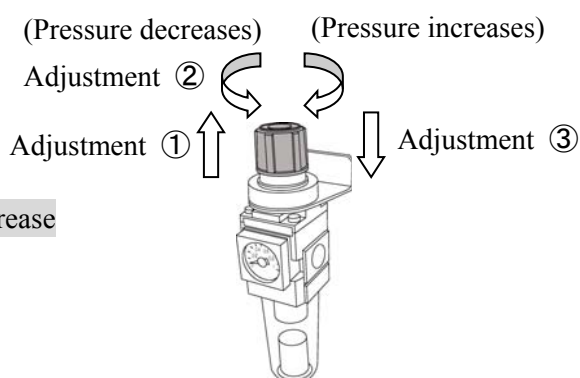


Figure-1

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 Drain Outlet under the Regulator to the left and let the drain discharge.

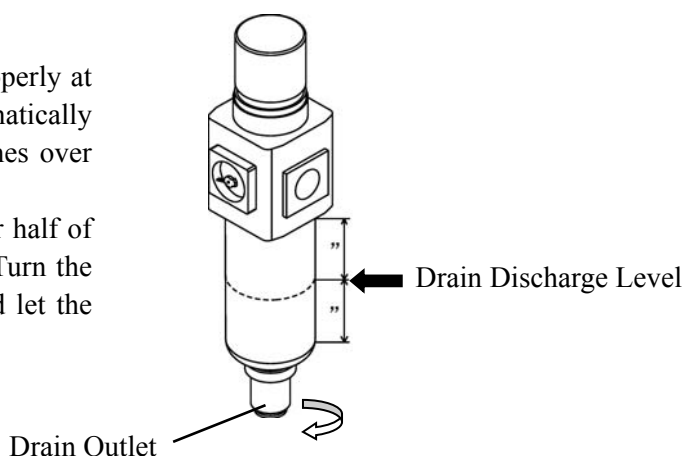


Figure-2

3. Steam Pressure: Figure-3

Check the steam pressure gauges (0.5MPa).

※ If the steam pressure does not reach the required level, it may adversely affect the garment finishing quality.

4. Steam trap check: 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 cock and discharge the drain. Close the faucet after discharge.

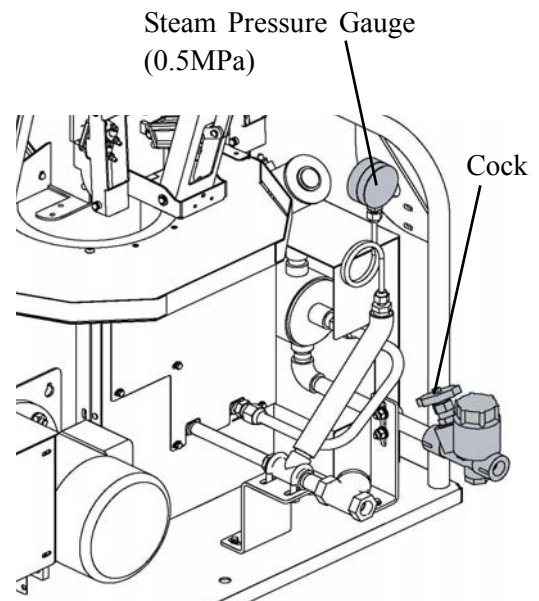


Figure-3

5. Cover check: Figure-4

Check to see if it is dirty, torn or not. (Body, front clamp, rear clamp, side clamp, side vent clamp and lower body cover) Dirt and any type of tear can negatively affect finish quality.

6. Emergency stop check: Figure-4

Push the emergency stop button to ensure that the machine stops.

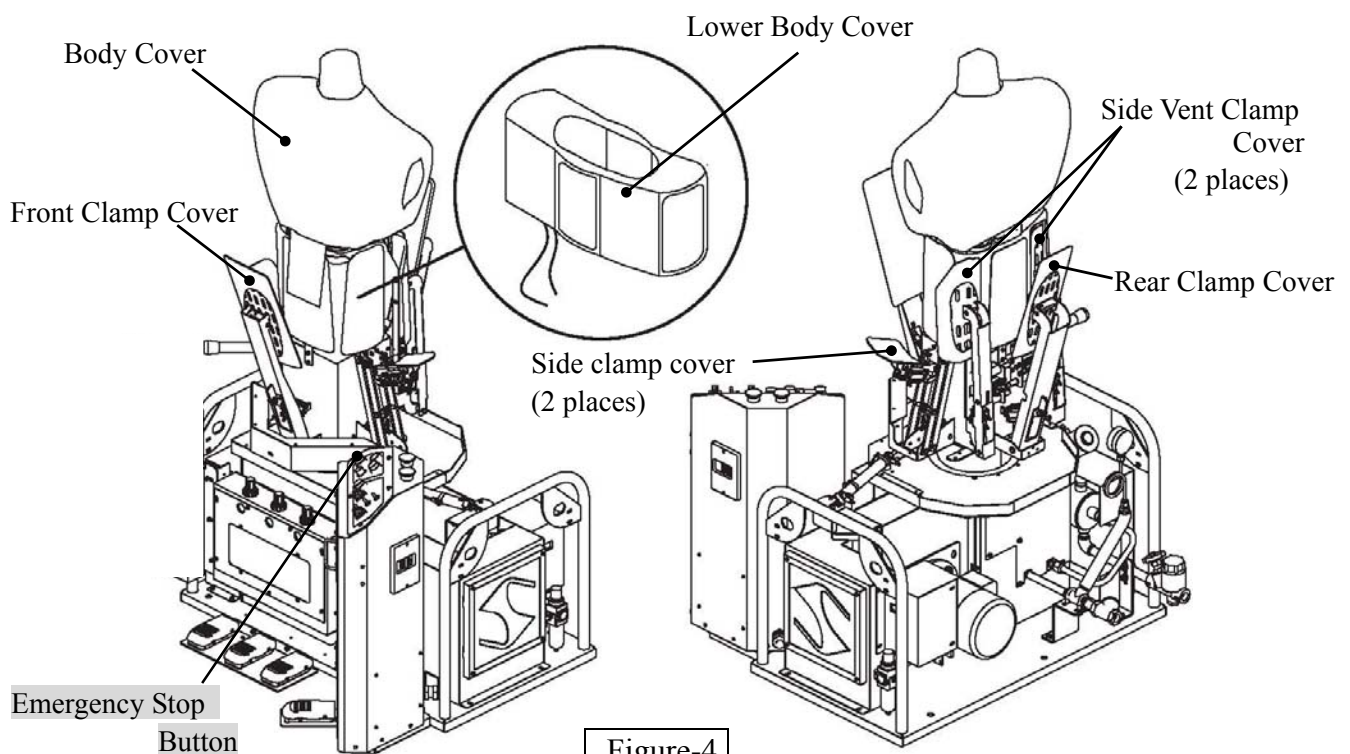


Figure-4

7. Blower filter check: Figure-5

Check to make sure the Blower Filter is not clogged by any dirt and dust. If so, clean immediately. If you keep using the filter without cleaning, this can cause poor finishing quality as well as a decrease in the blower power.

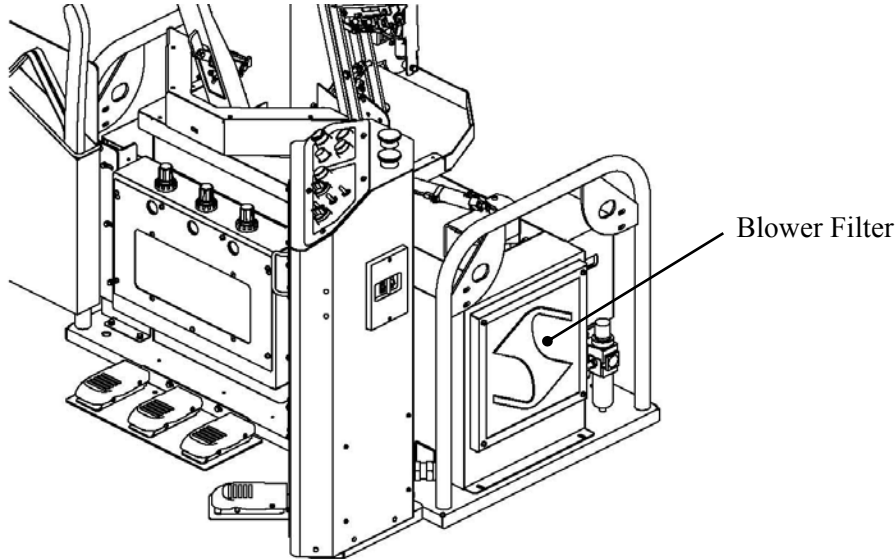


Figure-5

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 (Annual)

8. Regulator Cleaning: Figure-6

Clean the filter of the Regulator. Change the Filter Element if any pressure descent frequently takes place.

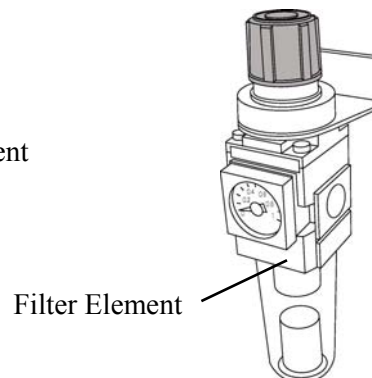


Figure-6

Maintenance 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															
3	Steam Pressure															
4	Steam Trap															
5	Cover															
6	Emergency stop															
7	Blower filter															

No	Item	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Air Pressure																
2	Regulator																
3	Steam Pressure																
4	Steam Trap																
5	Cover																
6	Emergency stop																
7	Blower filter																

Check Item (Annual)

No	Item	1	2	3	4	5	6	7	8	9	10	11	12	13
8	Regulator filter													

Photocopy this checklist for ongoing maintenance

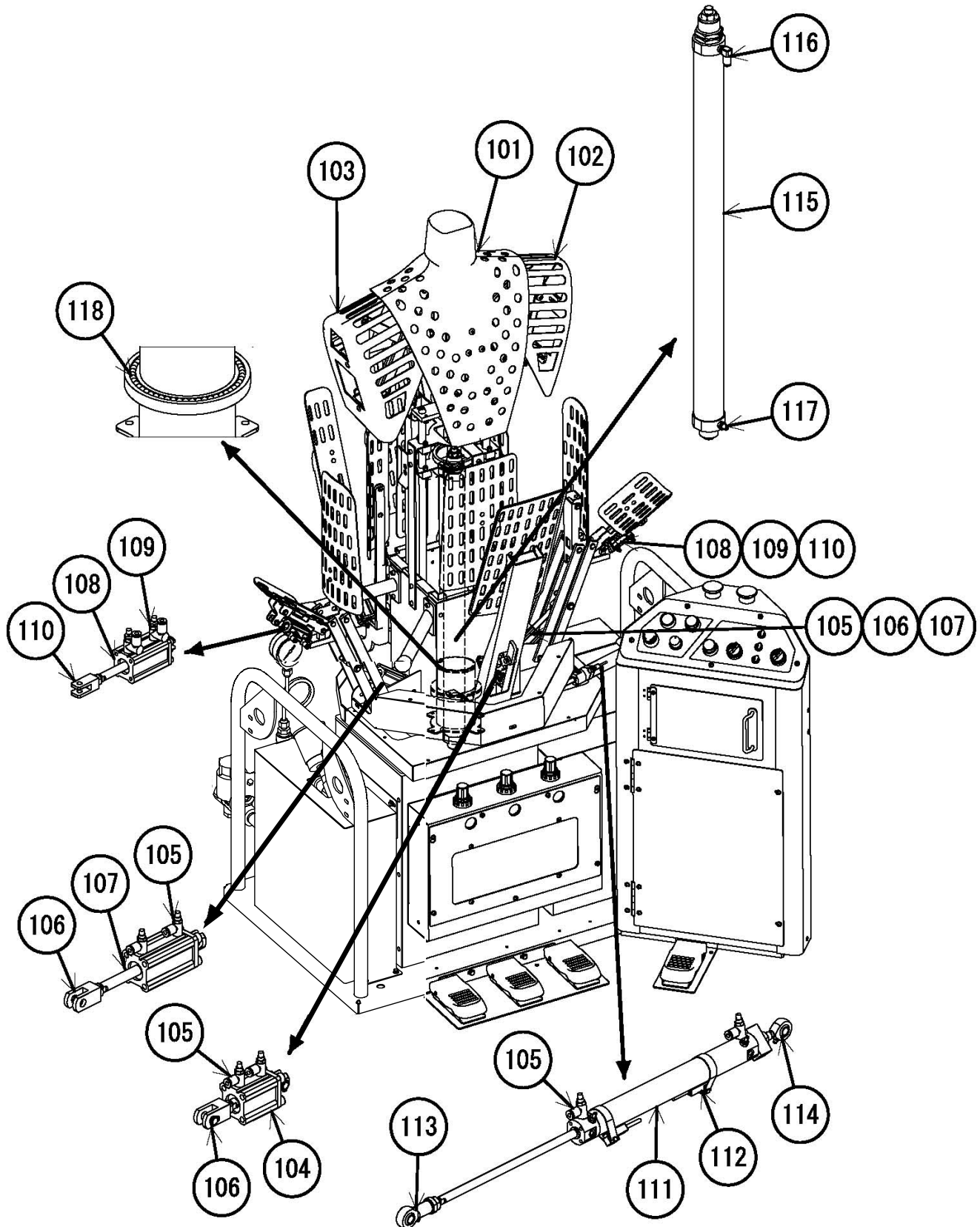
Spare Parts List

Index

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

1 : Front Diagram

REV:3



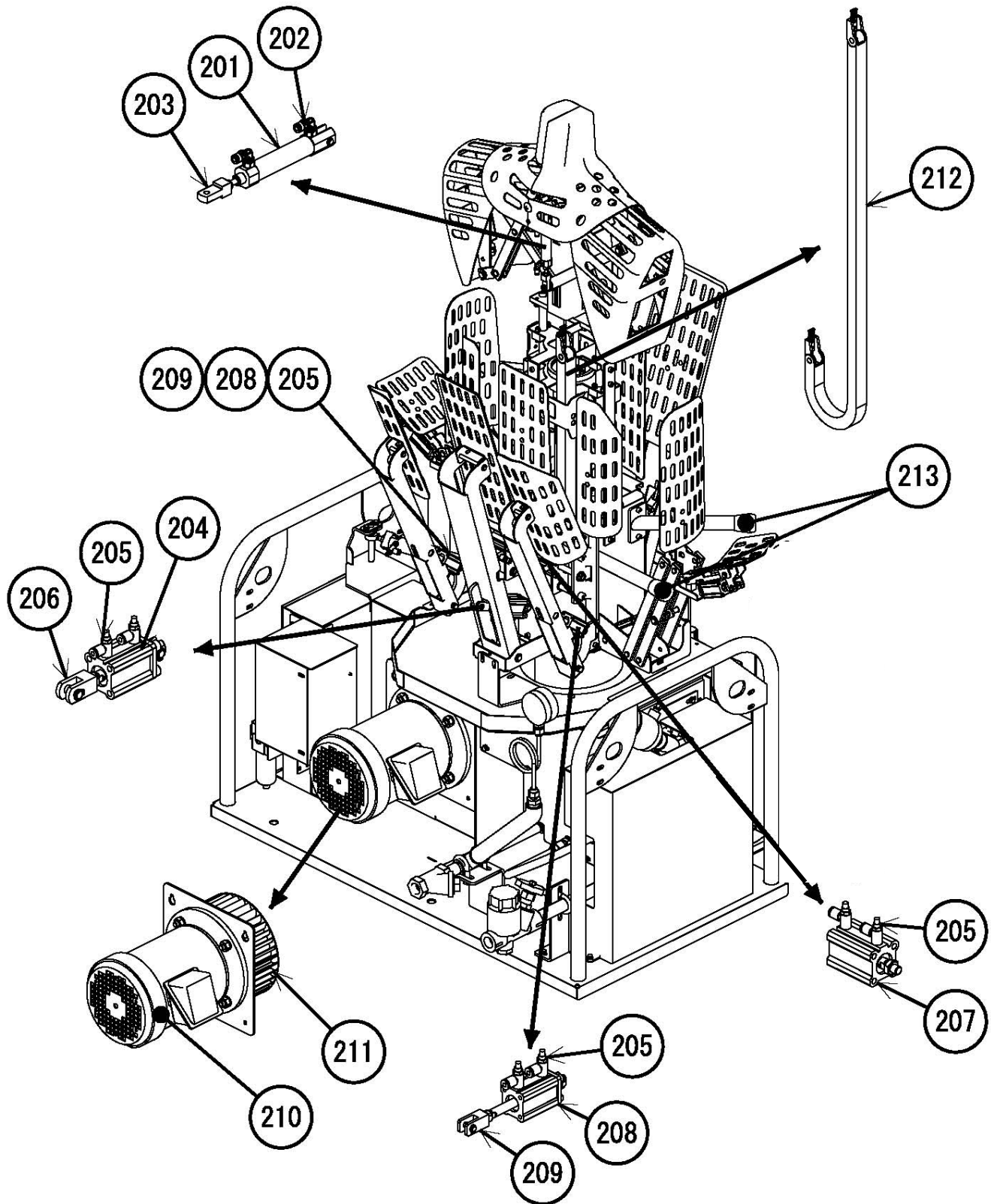
Front Diagram

REV:3

No.	Part Name	Part number	Q'ty	Remark
101	BODY FRP	Q0D210	1	
102	Shoulder (Right) FRP	Q0D211	1	
103	Shoulder (left) FRP	Q0D212	1	
104	Cylinder	B1C003	1	Front Clamp
	Cylinder packing set	B6H012	1	
105	Speed Controller	C1A002	8	
106	Knuckle Joint	B6B001	3	
107	Cylinder	B1C006	2	Side Expander
	Cylinder packing set	B6H012	2	
108	Cylinder	B1C001	2	Side Clamp
	Cylinder packing set	B6H041	2	
109	Speed Controller	C1A005	4	
110	Knuckle Joint	B6B006	2	
111	Cylinder	B0J010	1	BODY Rotation
	Cylinder packing set	B6H002	1	
112	Cylinder sensor	B5A003	2	
	Sensor band	B5B001	2	
113	Rod end	E5A003	1	
114	Rod end	E5B006	1	
115	Cylinder	B2H002	1	BODY Up/Down
116	Joint	C0C050	1	
117	Joint	C0E001	1	
118	Steel ball	Q0A006	54	

2 : Rear Diagram

REV:3

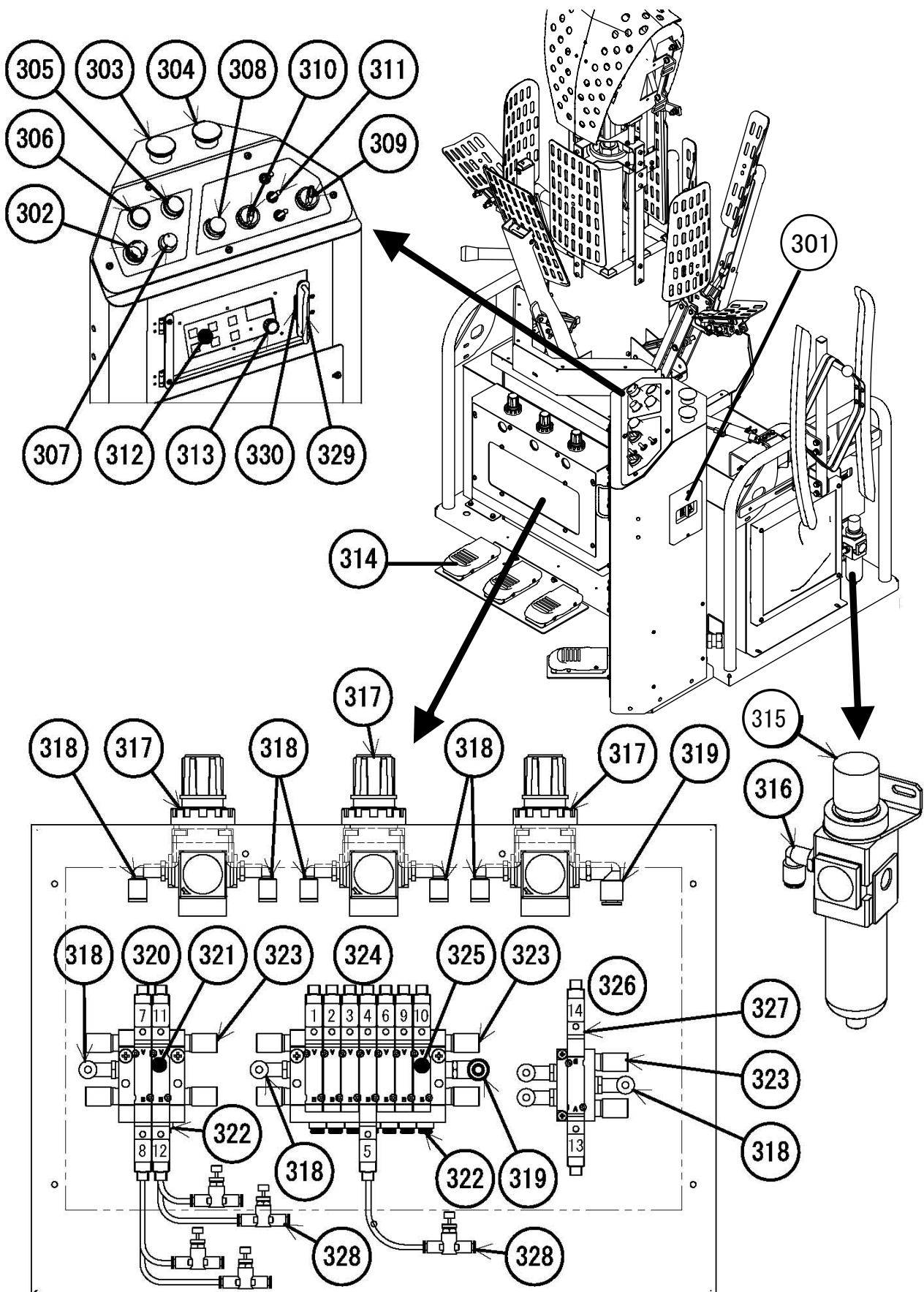


Rear Diagram

REV:3

No.	Part Name	Part number	Q'ty	Remark
201	Cylinder	B1L004	1	Shoulder Expander
202	Joint	C0B010	2	
203	Knuckle Joint	B6A007	1	
204	Cylinder	B1C011	1	Center Vents Clamp
	Cylinder packing set	B6H012	1	
205	Speed Controller	C1A002	10	
206	Knuckle Joint	B6B001	1	
207	Cylinder	B1A016	2	Wide Side Vents
	Cylinder packing set	B6H017	2	
208	Cylinder	B1C013	2	Side Vents Clamp
	Cylinder packing set	B6H052	2	
209	Knuckle Joint	B6B006	2	
210	Motor	G0H005	1	No.~DF100EV3-0011
		G0E034	1	No.DF100EV3-0012~
		G0E049	1	No.DF100EV3-0062~
211	Blower Fan	G2B023	1	
212	Cable bear	K1B039	1	
213	Rubber	E5V008	2	

3 : Switch/Solenoid Valve Diagram REV:3

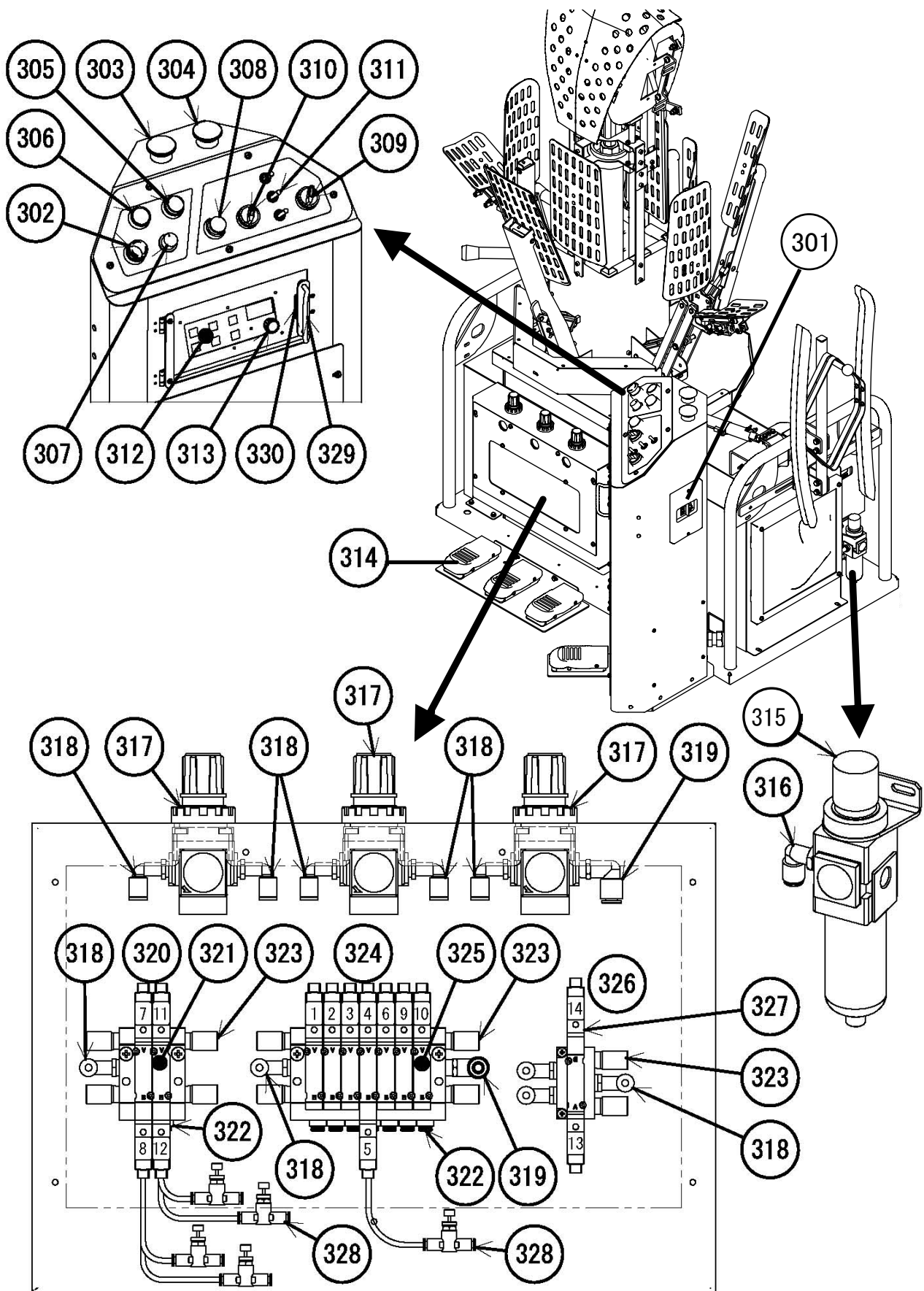


Switch/Solenoid Valve Diagram

REV:3

No.	Part Name	Part Number	Q'ty	Remark
301	Breaker Switch	21C007	1	
302	Push Button Switch	21I151	1	Emergency
303	Push Button Switch	21I111	1	Reset
	Push button cap	21I044	1	
304	Push Button Switch	21I168	1	Rotation
305	Push Button Switch	21I166	1	Blower
306	Push Button Switch	21I090	1	Steam
307	RESISTOR	21J003	1	Blower Power Adjustment
	Blower Power Dial	21D010	1	
308	Push Button Switch	21I148	1	Auto Start
309	Selection Switch	20O001	1	Mode Selection
310	Selection Switch	20O007	1	Timer Selection
311	Toggle Switch	20L013	3	
312	Control Panel	11U417	1	
313	Dial	21D006	1	
314	Foot Pedal Unit	FP-UNT-025	4	
	Micro Switch	21E003	4	
	Foot Pedal Spring	H0D019	4	
315	Filter Regulator	D0C004	1	
316	Joint	C0C019	1	
317	Regulator	D0E026	3	
318	Joint	C0C016	10	
319	Joint	C0C018	1	
320	Manifold Valve	A0F153	1	
321	Solenoid Valve	A0E013	1	No.7:Body Up No.8:Body Down
	Solenoid Valve	A0E013	1	No.11: Shoulder Expander Open No.12: Shoulder Expander
322	Joint(φ4)	A0J007	17	
323	Silencer	C0A003	10	

3 : Switch/Solenoid Valve Diagram REV:3



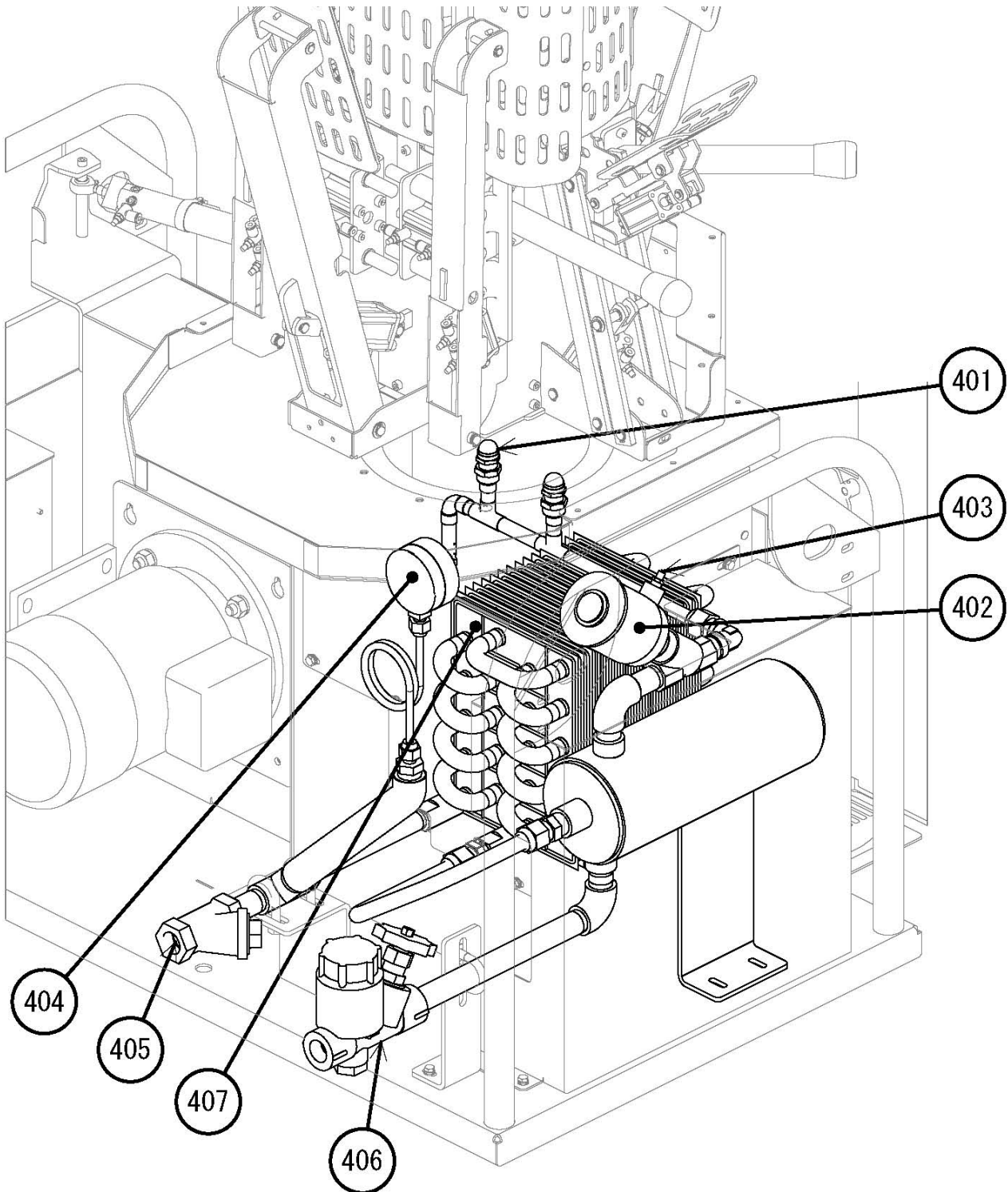
Switch/Solenoid Valve Diagram

REV: 3

No.	Part Name	Part number	Q'ty	Remark
324	Manifold valve	A0F154	1	
325	Valve	A0E012	1	No.1:Open Steam
	Valve	A0E012	1	No.2: Close Center Vents Clamp
	Valve	A0E012	1	No.3:Close Front Clamp
	Valve	A0E018	1	No.4:Open Side Expander No.5:Close Side
	Valve	A0E012	1	No.6:Close Side Clamp
	Valve	A0E012	1	No.9:Wide Side Vents Clamp
	Valve	A0E012	1	No.10:Close Side Vents Clamp
326	Manifold valve	A0F055	1	
327	Valve	A0E018	1	No.13:Start Body Rotation No.14:End Body Rotation
328	Manifold valve	C1A007	5	
329	Pulls	E5V051	1	
330	Magnetic Catch	E5V053	1	

4 : Steam Piping Diagram

REV:3

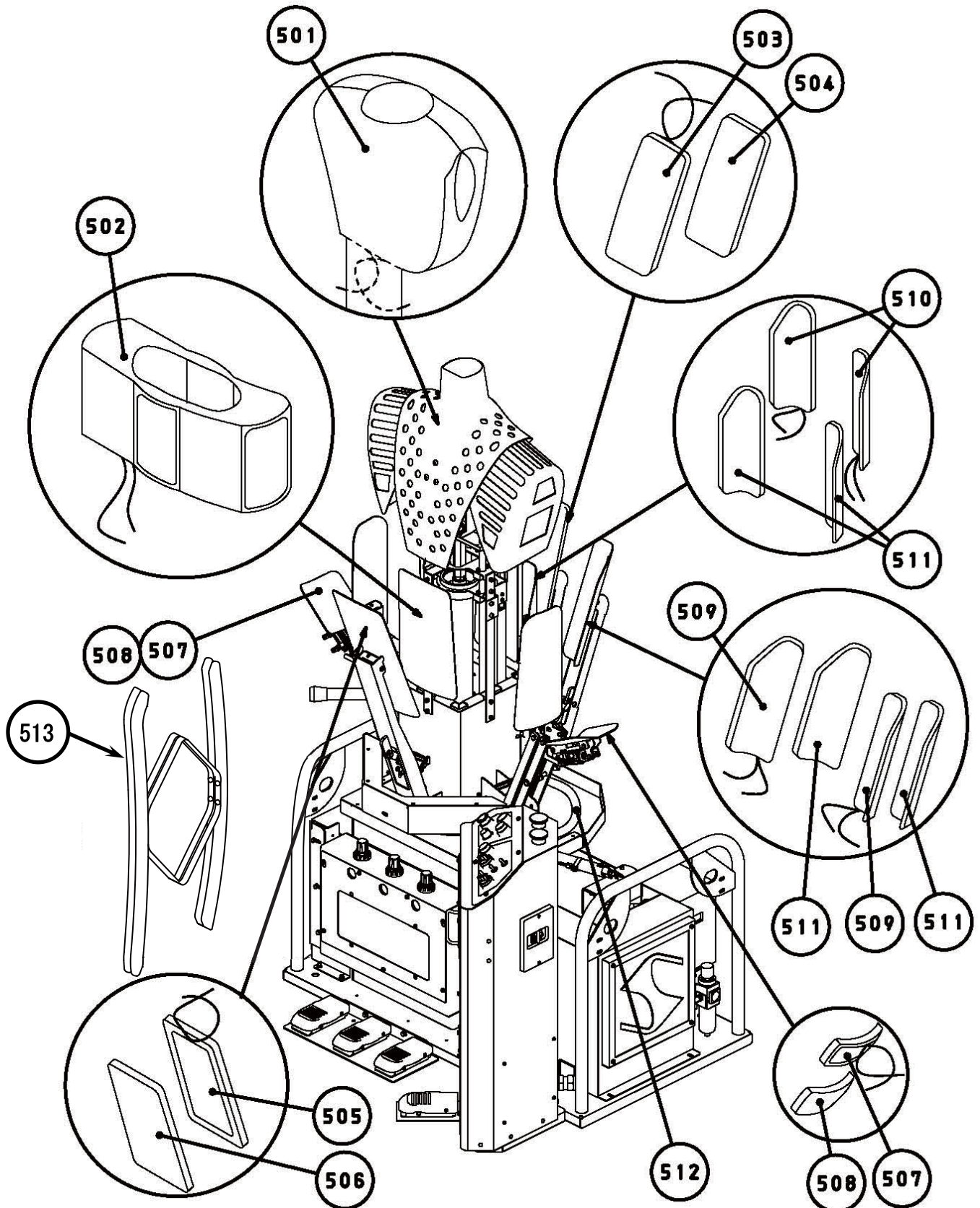


Steam Piping**REV:3**

No.	Part Name	Part Number	Q'ty	Remark
401	Air Muffler	J0A001	2	
402	Piston Valve	A0G003	1	
403	Joint	C0E001	1	
404	Steam Gauge	J0A003	1	
405	Y Type Strainer	J2M007	1	
406	Steam trap	J2N001	1	
407	Radiator	RD180-000	1	

5: Cover Diagram

REV:3



Cover Diagram**REV:3**

No.	Part Name	Part Number	Q'ty	Remark
501	Upper Body Cover	S1D549	1	
502	Lower Body Cover	S1D550	1	
503	Wire Fillet Rear Clamp Cover	S1D059	1	
504	Rear Clamp Mat	S1D051	1	
505	Wire Fillet Front Clamp Cover	S1D058	1	
506	Front Clamp Mat	S1D035	1	
507	Wire Fillet Side Clamp Cover	S1D060	2	
508	Side Clamp Mat	S1D053	2	
509	Wire Fillet Side Vents Clamp Cover(Left/Right)	S1D061	1s	
510	Side Vents Clamp Holder Cover(Left/Right)	S1D551	1s	
511	Side Vents Mat	S1D056	4	
512	Tube Cover	S1D063	1	
513	Wooden Sleever	Q0A013	1s	Left/Right set

Attached Diagram

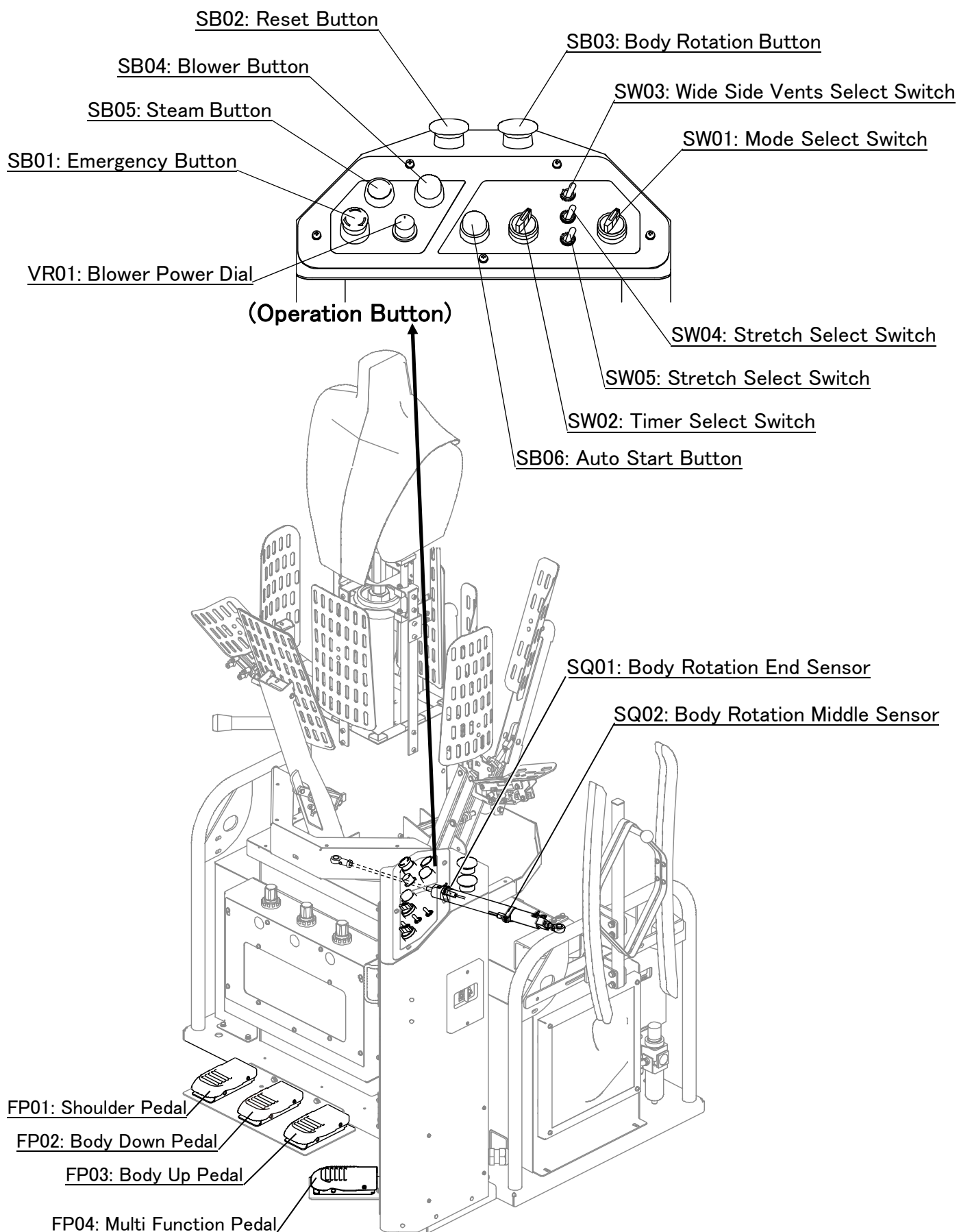
Sensor Diagram

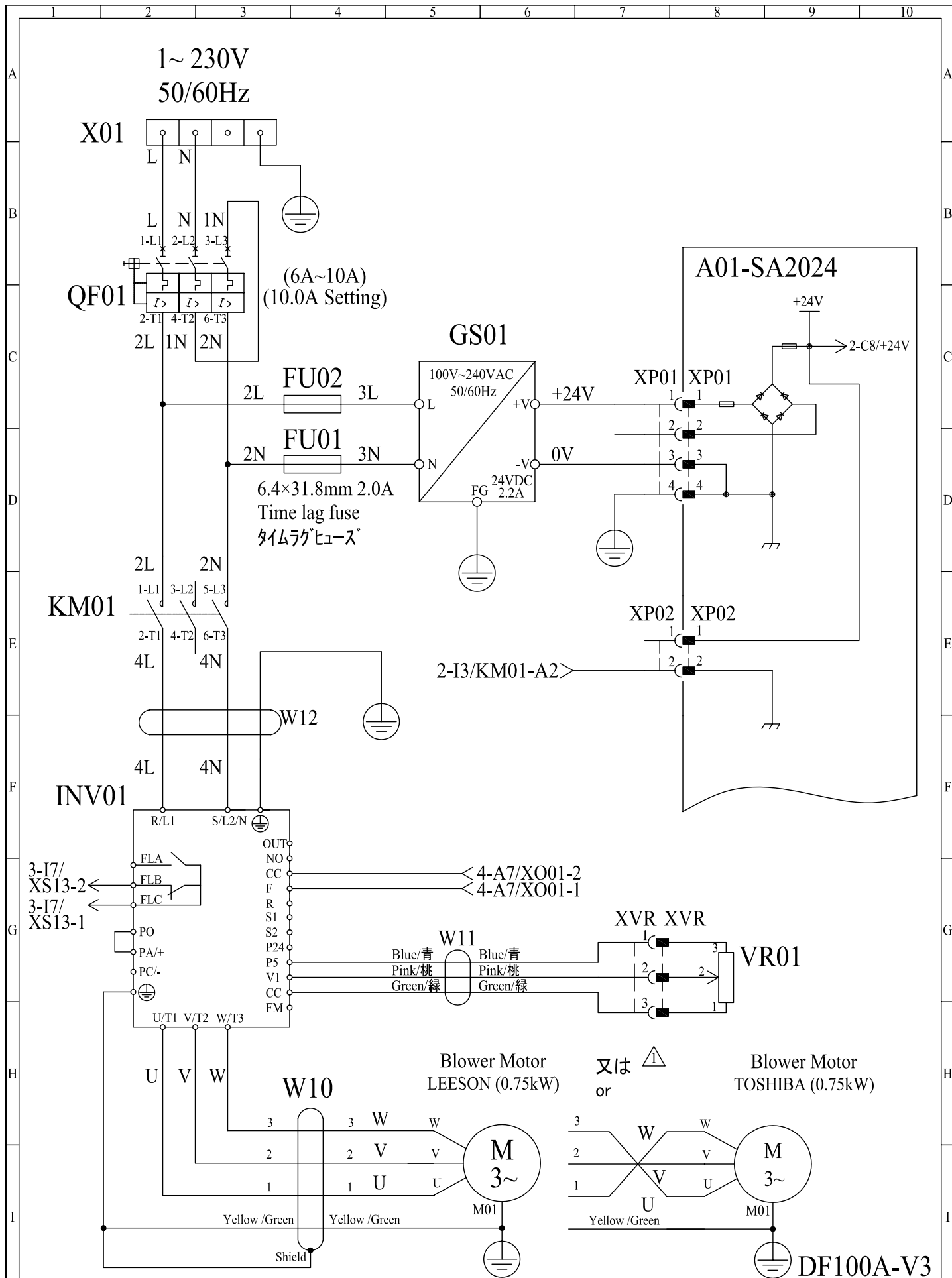
Electric Connection Diagram 1/4 ~ 4/4

Steam Piping Diagram

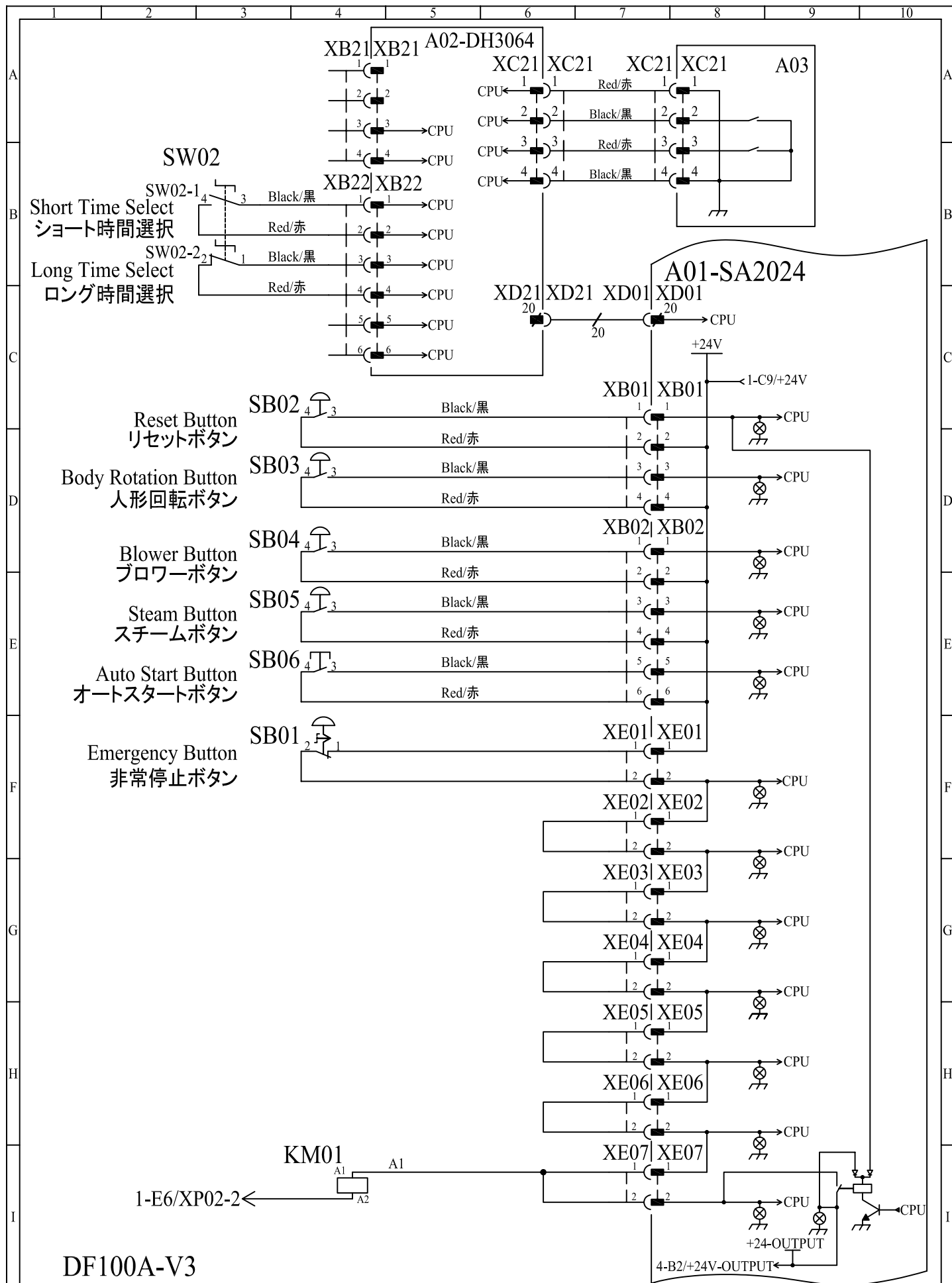
Air Connection Diagram

Sensor(Operation Button) Diagram

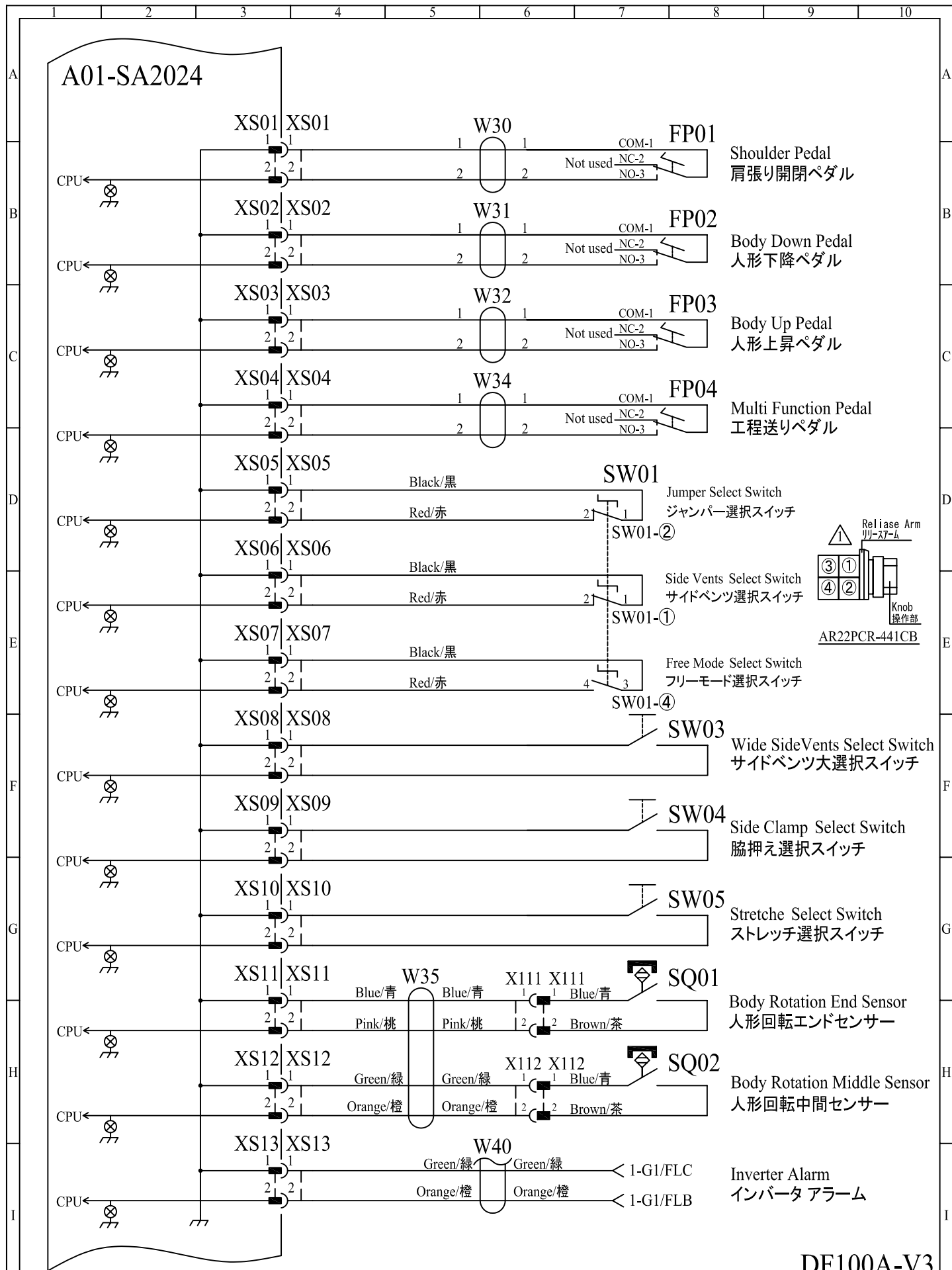




Model	DF-100E-V3	Type	DF100E-V3	Date(YYYY/MM/DD)	2013.08.07	Page	1/4
Approved	Checked	Designed	△	Software	Ver 1.03	~	
J			△	Serial No.		~	J
Koiso	Koiso	Maki	△	Drawing No.	01-1		
			△	Alternate Toshiba Motor	2014/3/3		
				Revision	SANKOSHA 三幸社		



Model	DF-100E-V3	Type	DF100E-V3	Date(YYYY/MM/DD)	2013.08.07	Page	2/4
Approved	Checked	Designed	△	Software	Ver 1.03	~	
Koiso	Koiso	Maki	△	Serial No.		~	
			△	Drawing No.	01-0		
				Revision	SANKOSHA 三幸社		

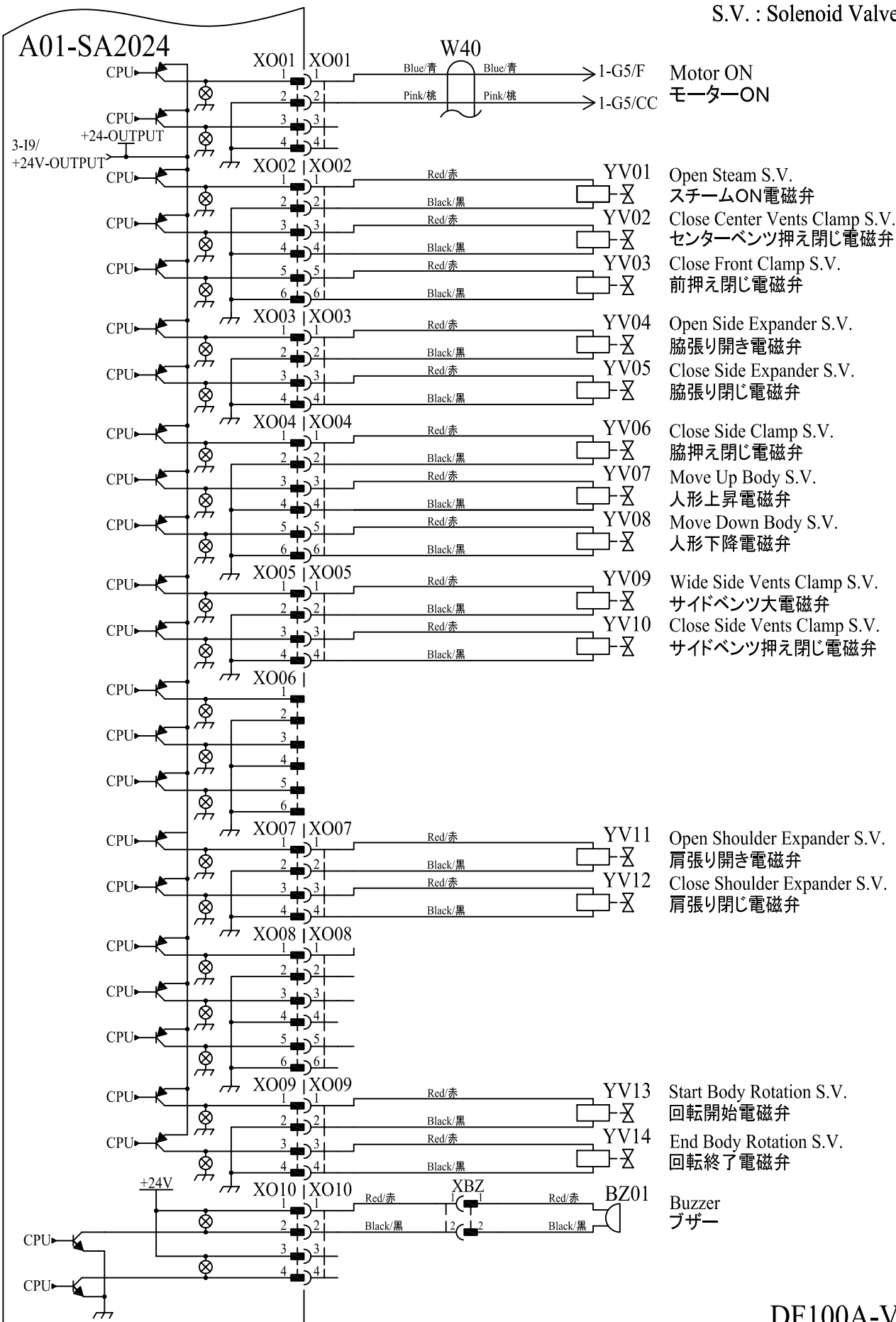


DF100A-V3

Model	DF-100E-V3	Type	DF100E-V3	Date(YYYY/MM/DD)	2013.08.07	Page	3/4
Approved	Checked	Designed	③	Software	Ver 1.03	~	
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Koiso	Koiso	Maki	①	Drawing No.	01-0		
Revision				SANKOSHA 三幸社			

A01-SA2024

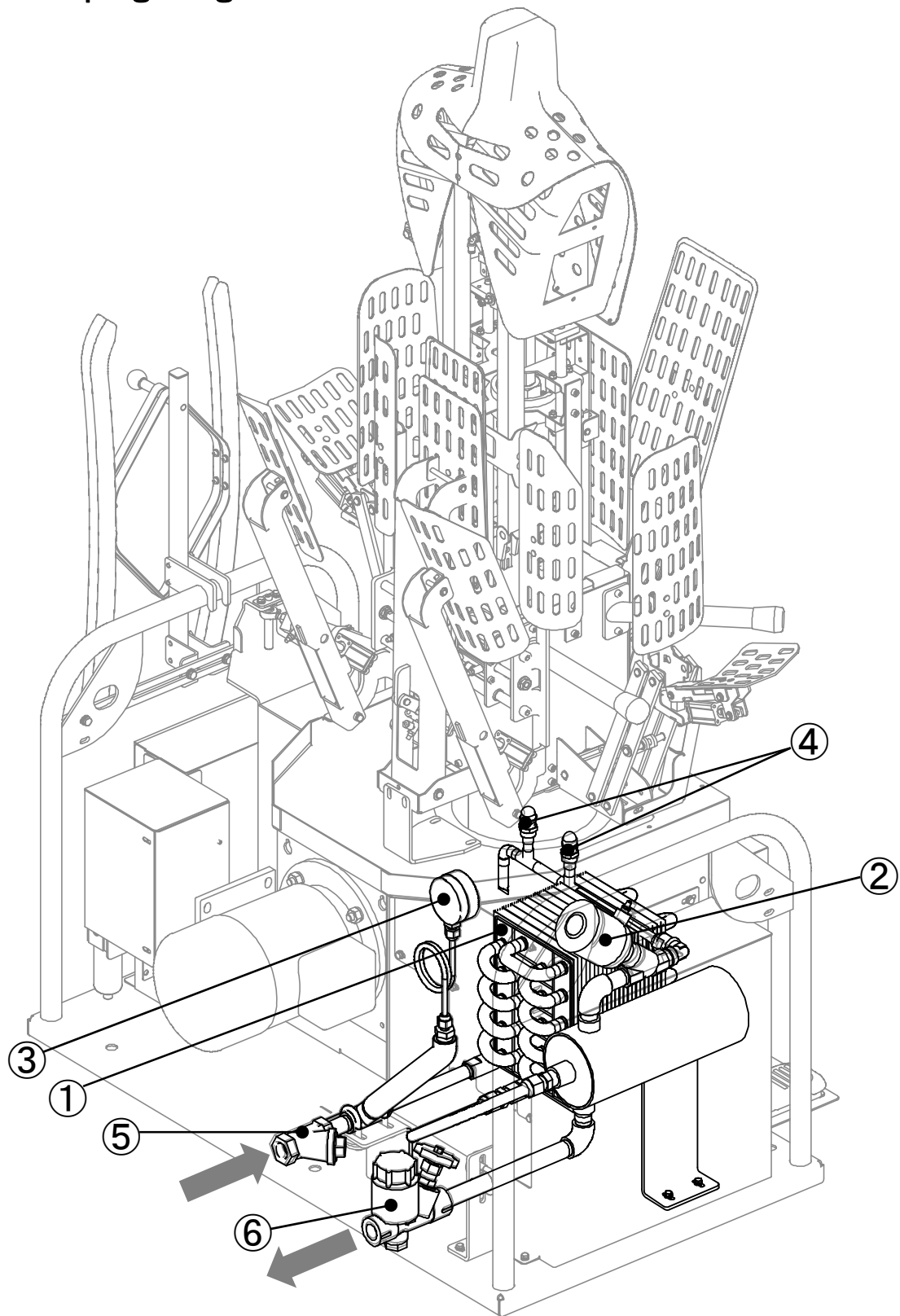
S.V. : Solenoid Valve



DF100A-V3

Model	DF-100E-V3	Type	DF100E-V3	Date(YYYY/MM/DD)	2013.08.07	Page	4/4
Approved	Checked	Designed	③	Software	Ver 1.03	~	
			②	Serial No.		~	
Koiso	Koiso	Maki	①	Drawing No.	01-0		
Revision				SANKOSHA 三幸社			

Steam Piping Diagram



- | | |
|------------------|-------------------------|
| ① Radiator | : RD180-000 |
| ② Piston Valve | : D290A399 |
| ③ Pressure Gauge | : AMT7/16 60φ 1.6MPa |
| ④ Steel Muffler | : SBN-38 |
| ⑤ Y Strainer | : FC KY-4G4 15A 100Mesh |
| ⑥ Steam Trap | : YH-15A |

