

sankosha®
PRESS AND PROGRESS

LP-660E-V2

Instruction Manual

For your safety, please read this Instruction Manual thoroughly.
If at any time you have any questions, please do not hesitate to contact us.

Welcome

Thank you for choosing our Single Collar Cuff Press LP-660E-V2.

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	LP-660E-V2
Power	Single phase 100V/230V 0.8A/0.4A
Air consumption	18 liter / cycle
Steam consumption	10 kg / hour
Air pressure	0.6Mpa
Steam pressure	0.6Mpa
Air Pipe	3/8B
Steam Pipe	1/2B
Weight	200kg
Dimensions	
Width × Depth × Height	740 × 970 × 1610(mm) Max

Table of contents

WELCOME	1
Safety Guidelines	3
Hazardous Area	6
Electrically Live Area	6
Range of the Machine in Motion	7
High Temperature Area	8
Safety Labels on the Machies	9
Main Device	10
Main Unit	10
Control Box	11
Control panel	12
Operation Procedures	14
1. Provide Air	14
2. Provide steam	15
3. Turn the Power On	15
4. Select finish time.	15
5. Set the shirt	16
6. After operation is over	17
About the Collar Cuffs Button	17
Other Operations	18
How to Reset Emergency Stop	18
About a Cover Counter	18
Cover/Pad Change Instruction	19
1.How to change the Collar Cover/Pad	19
2.How to change the Cuff Cover/Pad	22
Service Menu	23
Trouble Shooting	28
DAILY MAINTENANCE	32
Check Item List	32
Check Item (Daily)	33
Check Item (Annual)	34
Item Check List	35
SPARE PARTS LIST	37
Front Diagram	38
Rear Diagram	40
Steam Piping	42
Cover Diagram	44
DIAGRAM	46




Safety Guidelines

Warning labels are placed on the machine in order to prevent the operator and others from injury, and to ensure the correct, safe operation of this machine. For the most part labels are placed on the operational parts 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 find an explanation of the warning labels below. You will find the symbols used along with an explanation of the degree of risk of injury or damage if the manual and or labels are not followed.

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

- Regulations are shown in a table below.

	Generality This is used to note unspecified caution, attention or danger.		General Prohibition This is used to notify of unspecified prohibition.
	Shock Hazard This is used to note the Possibility of electric shock in certain circumstances.		Prohibition of Dismantling This is used to note the possibility of injury or shock if indicated parts are dismantled.
	Cut Hazard This is used to give notice of possibility of wounding of hand and fingers by a cutter and may cause physical handicap.		Attention This is used to draw unspecified attention to user actions.
	Burn Hazard This is used to note the possibility of burns from live or contained steam.		Necessity to Ground This is used to indicate that the machine must be properly grounded, using the attached green wire.
	Pinch Hazard This is used to note the possibility of pinching by rollers which may cause Permanent damage to extremities.		Rotation Hazard This is used to note the possibility of injury if rotating parts of the machine are not properly covered during maintenance or operation.
	Rotation Hazard This is used to note the possibility of injury if rotating parts of the machine are not properly covered during maintenance or operation.		

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



WARNING

■ Installation



Installation and rigging of this product should be performed only by an authorized Sankosha dealer or by qualified personnel.

Incorrect installation or rigging of this machine may result in shock, injury and burn.

■ Ground Connection



The green wire must be properly grounded. The electrical code must be followed for Single 230V power.

Incorrect connection may cause an 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



Don't touch the electric plug or switch.

It may cause an electrical shock.

■ Shock Hazard



Parts must not get wet when cleaning machine with water.

It may cause an electrical shock.

■ Alteration Hazard



Don't improve or dismantle the machine.

It may cause an accident.

■ Don't Use During Disrepair



Turn the main power and breaker switches off when there is a malfunction and call an authorized service person.

Using the machine during repair will result in injury or further damage to the equipment.

■ Shock Hazard



Do not place your hands or any foreign objects in the area.

It may cause an electrical shock or explosion.

■ In case of flooding



Please call authorized personnel to inspect and repair the machine in the case of a flood.

It may cause an electrical shock.

■ Maintenance



Please call authorized service personnel. Don't dismantle the machine by yourself.

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

■ Safety Instructions



• For your safety, follow these instructions.

- Only qualified personnel trained by supervisor can operate the machine.
- Carefully read the Instruction Manual completely before operation.
- Make sure there are no personnel 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.



CAUTION

■ Maintenance of warning labels



The labels need to be cleaned and changed if necessary.

It may cause an accident.

■ Inside use only



The machine must be located inside a facility.
Don't place it in a damp or wet area.

It may cause an accident.

■ Not for use abroad



Don't use the machine abroad.

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 electrical shock without power off.

■ Check and cleaning



An electric plug and an electric socket necessary check and cleaning periodically.
If it was damaged, notify to our distributor or company.

Breakage causes an electrical shock and fire.

■ Adequate space



Room should be allowed around the machine to allow for service and maintenance.

Injury to service/maintenance personnel may result.

Hazardous Area

Electrically Live Area

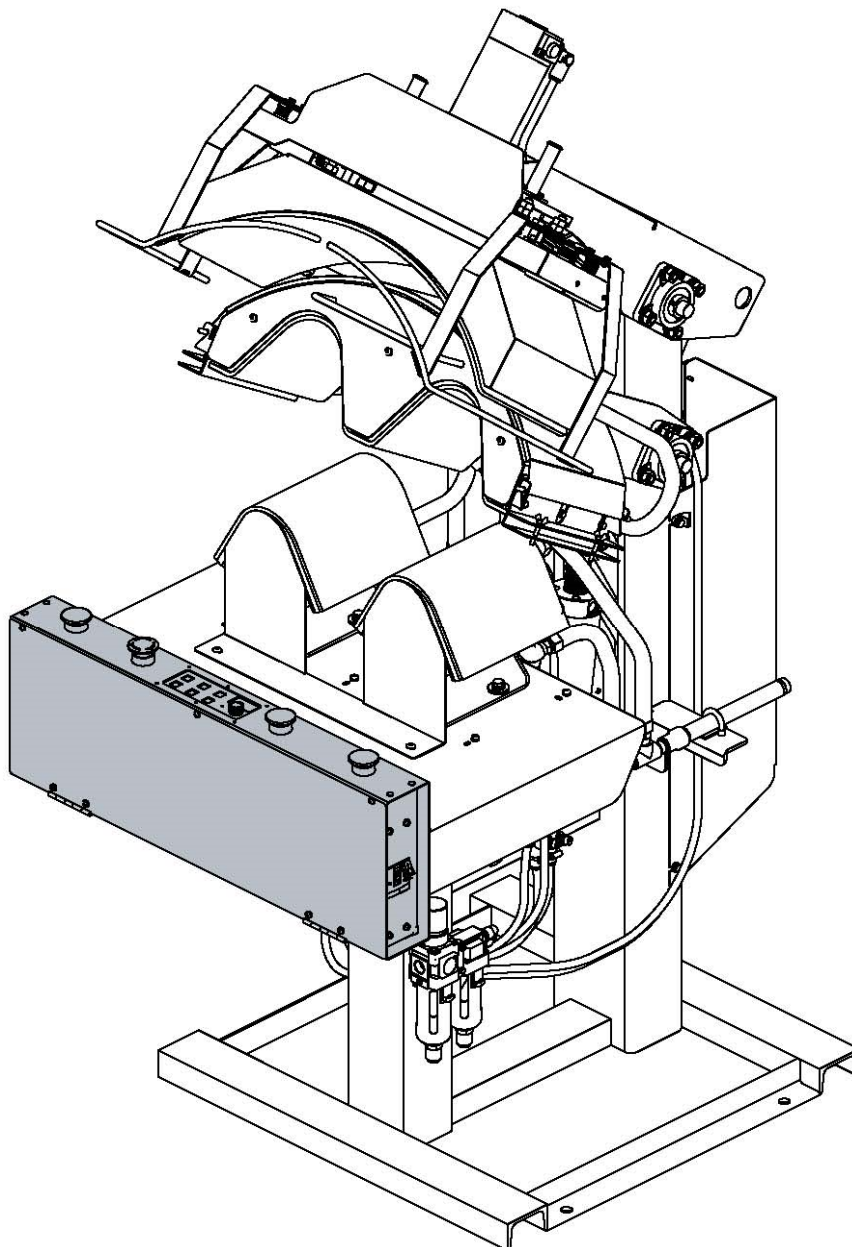
DANGER

Control box has terminals with lethal voltage.

- Only qualified person can open the cover.

- Shut off the power before opening the cover.

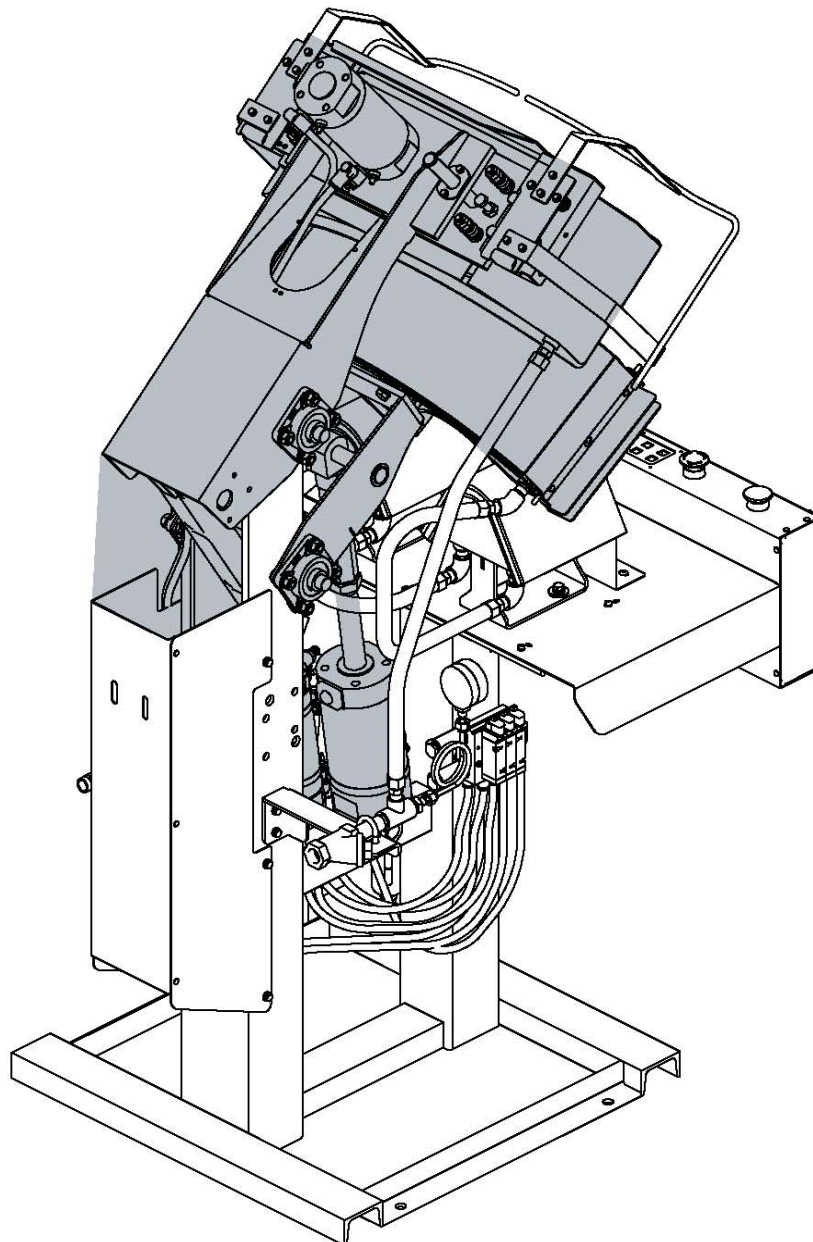
Ignoring this warning will result in serious injury or death due to electrical shock.



Range of the Machine in Motion

WARNING

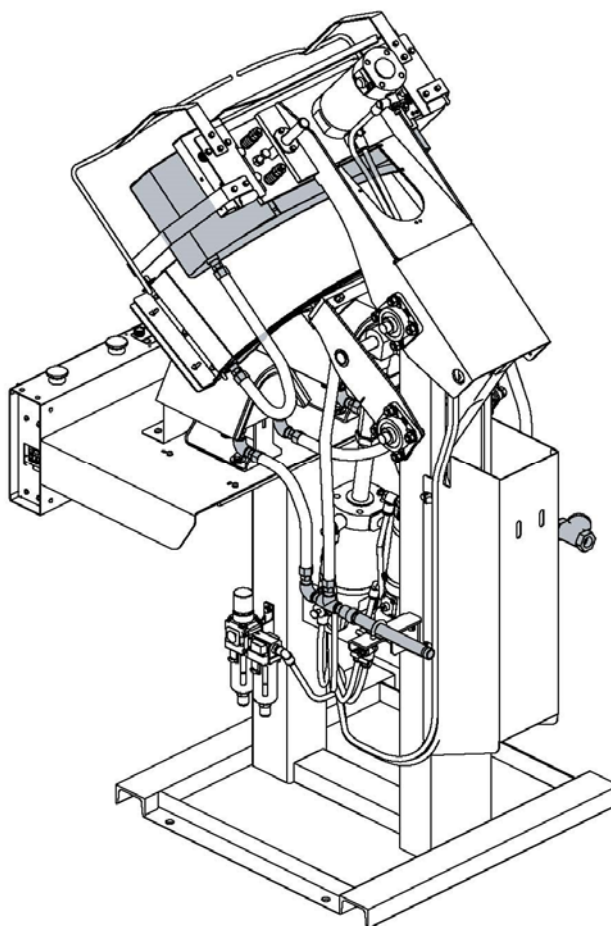
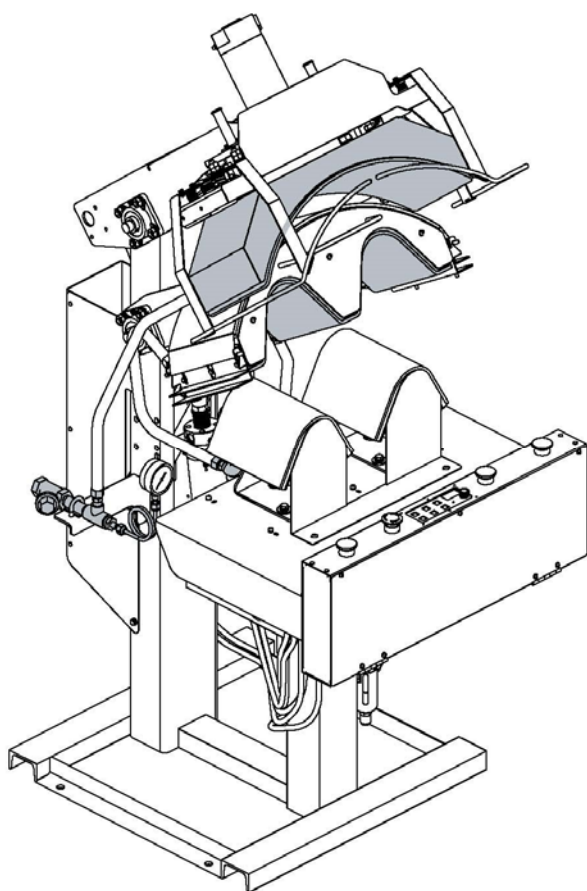
The machine has some moving areas along any portions.
Keep your hands away from moving area during operation.
Before starting check up or maintenance, turn off the air and power first.
Ignoring this warning could result in serious injuries.



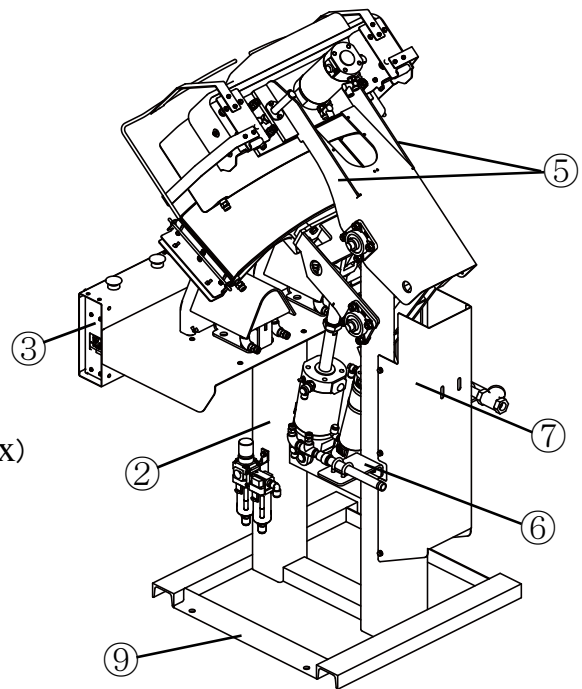
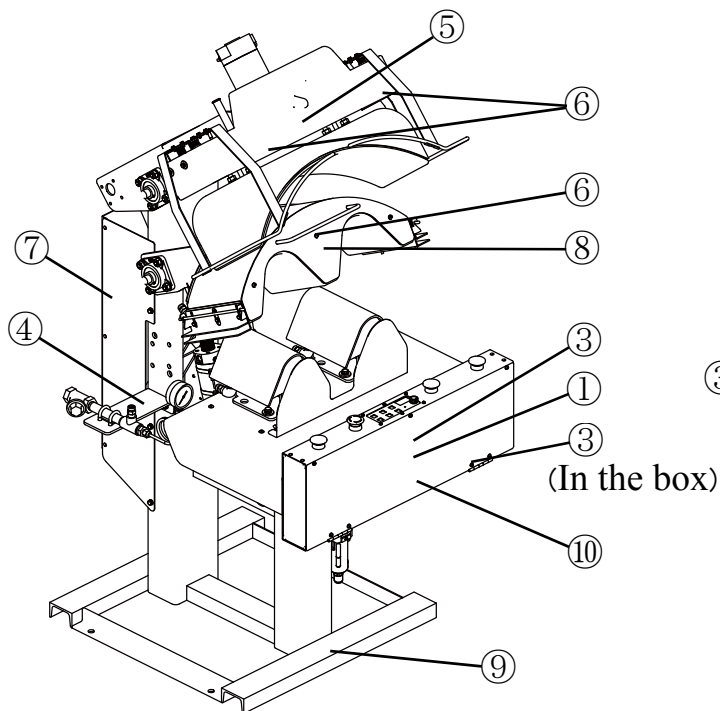
High Temperature Area

CAUTION

The machine has hot surfaces, which get extremely hot during operation. Never touch hot surfaces during and for 30 minutes after the steam has been turned off. Ignoring this warning may result in burns.



Safety Labels on the Machines



①		Please be sure to check that nobody is on the periphery of the machine while operating the machine. Operate the machine alone.
②		High-pressure air! Before maintenance, close air valve and drain residual pressure.
③		It may cause electric shock. Before opening Control Box/Motor Terminal and Inverter Box, always turn the power off. Do not touch any power switch with wet hands.
④		High-pressure steam! Before maintenance, close steam valve and let residual steam discharge
⑤		Pinch hazard! Keep hands away from the machine. Do not touch while in operation.
⑥		Press surface is HOT! Do not touch press head, piping and its surrounding area.
⑦		Be careful! There is a high risk of catching your fingers while the machine is in operation. Please do not remove attached covers. When the machine is in operation do not place your hands anywhere in or on the machine.
⑧		Clean pressing surface with cloth etc. every day. (See “Daily Check Manual” on page 37)
⑨		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.

⑩

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.

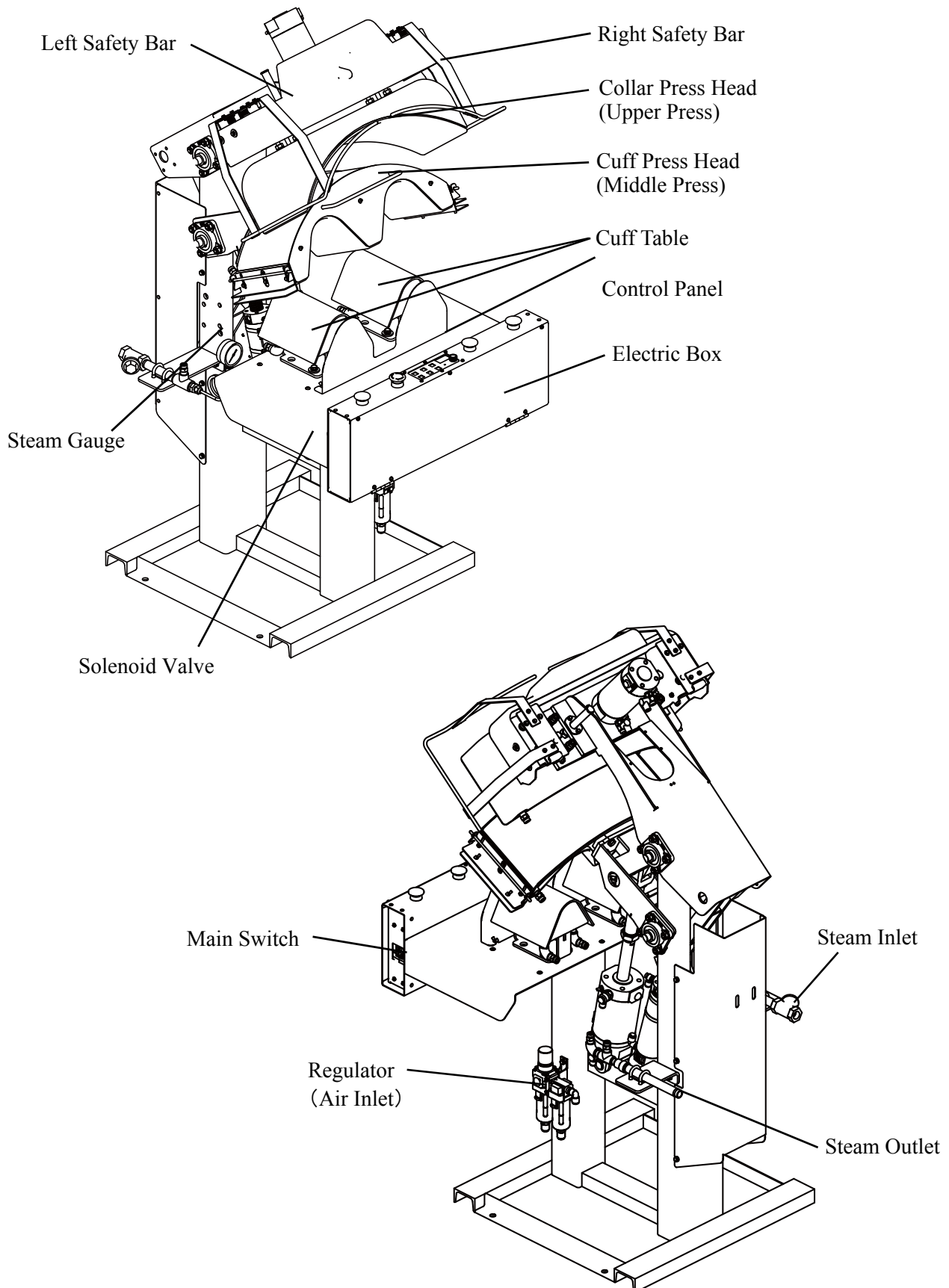
Never operate the machine with anyone else.

Before maintenance, follow the following instructions.

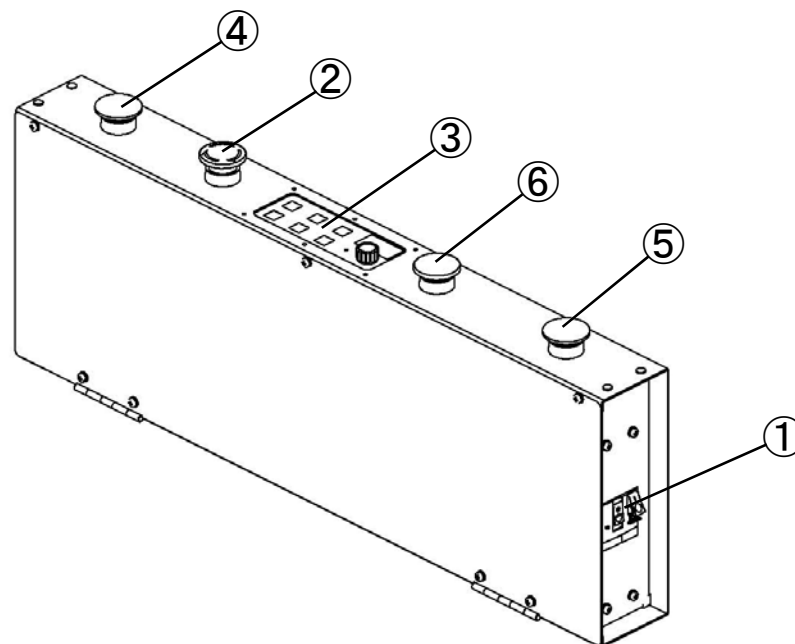
Close the air and steam valves, and release their residual pressures.

Main Device

Main Unit



Control Box



① Main Switch

If you push black button, the machine will turn ON and you can use the machine.

② Emergency Stop Button

When you push the emergency stop button, the machine will return to its original position, during any process, safely. "E1" will be displayed and when returning to the original operation, rotate the button clockwise and the button will be released and "--1" will appear on the display. Then push the reset button. The display will then return to the normal count display.

③ Control Panel

Finish mode and timer setup can be changed. Refer to 14-page "control panel part".

④ Left Start Button

When you push this button and the right start button simultaneously, the machine presses clothes. The pressing time can be selected by pressing either the set long timer button / short timer button on control panel.

⑤ Right Start Button

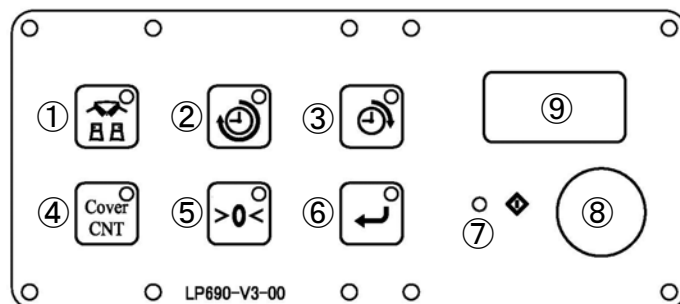
When you push this button and left start button simultaneously, the machine presses clothes. The pressing time can be selected by pressing either the set long timer button / short timer button on control panel.

⑥ Reset Button

This button has 3 functions depending on the process.

1. To return frame to original position after power is turned on.
2. To return to normal operation after emergency stop button or safety bar has been worked.
3. To return to the original position after the stop button has been pressed.

Control panel



① Collar+Cuff Button (If you push this button, the green light will turn on.)

When this button is pushed, both the cuff (Middle press) and collar (Upper press) will press.

When turning this button off (green light goes off), only the collar area (upper press head) works. This function can be available such as for a one-point press on front side of the shirt.

② Long Timer Button (If you push this button, the green light will turn on.)

The setting can be changed using this button.

1. The shirt will be pressed only for the period of time shown on the long timer. A green light will appear, the pressing time will be displayed as a countdown on the display window⑨.

2. By pushing this button the long timer setting can be changed using the set/select dial⑧.
(After a period of operation it will return to the count display)

③ Short Timer Button. (If you push this button the green light will turn on.)

The setting can be changed using this button.

1. The shirt will be pressed only for the period of time shown on the short timer. A green light will appear, the pressing time will be displayed as a countdown on the display window⑨.

2. By pushing this button the short timer setting can be changed using the set/select dial⑧.
(After a period of no operation, it will return to the count display)

④ Cover Counter Button

Pressing this button and turning the control dial will allow access to two counters,

1. Cover Counter: This counter will display the number of times the current attached cover has been pressed. After changing covers, it is important to reset this. More information on Page 20.
2. Press Counter: This counter displays how many times the machine has gone through the pressing process. Reset of this function is not possible.

Tips!

● Selecting the Counter

Press the Cover CNT button will bring up a flashing display.

Turning the dial will allow the user to switch between and .

When you press enter while either one is selected, the corresponding count will be shown.

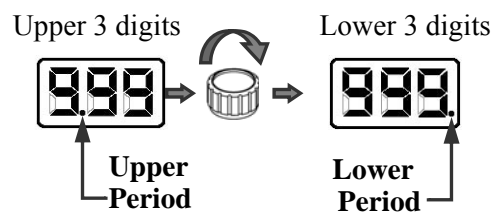
- About the display of cover counter and press counter

Maximum counter is 9,999,999.

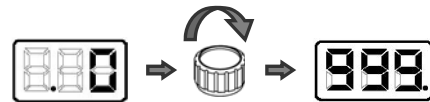
The counter shows twice due to the limited space of Display Window.

First it shows upper 3 digits. Turn the Set/Select Dial to the right next. It shows lower 3 digits next. When displaying the upper 3 digits, there will be a period placed in the window to denote which set of numbers the user is currently viewing. Below contains a diagram of how this works.

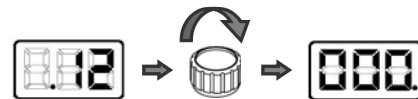
- Example of Maximum Counter (999,999)



- Example of a display in case a counter is 999 times

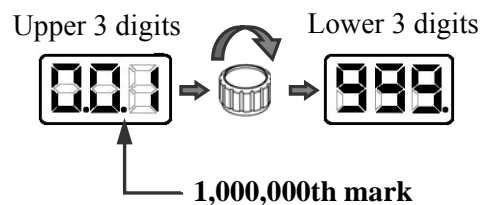


- Example of a display in case a counter is 12,000 times

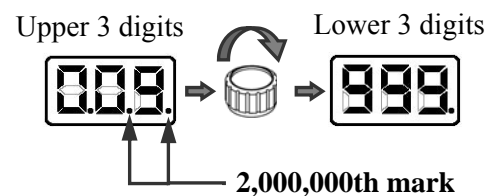


- ⊙ In the case of the Press Counter, when the counter reaches 1,000,000 times, a period will be placed in the Upper Number section, beside the number closest to the right. After exceeding 2,000,000, another period will be placed beside the next number in line in the Upper Number section.

- Example : 1,001,999



- Example : 2,009,999



⑤ Counter Clear Button

Press this button. "0" will blink at ⑨ "Display Window". Press ⑥ the "Enter Button".

You can reset the counter at "0". Press this button again. The window will show garment counter.

⑥ Enter Button (The light turns green when the button is ON.)

Press this button after changing the timer setting for each mode. The time setting for each mode can be saved.

⑦ Power Lamp

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

⑧ Set/Select Dial

This dial can change timer settings and select menu numbers.

⑨ Display Window.

Operation process number, timer countdown, error number, menu item (number) and so on are displayed.

Operation Procedures



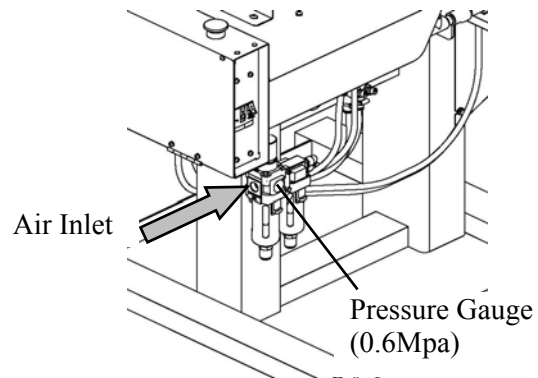
CAUTION

Follow the procedure for proper operation.

Improper operation can cause mechanical failure or injury to operators.

1. Provide Air

- The standard air pressure of this machine is set at 0.6Mpa. Please make sure with the pressure gauge that the air pressure is 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

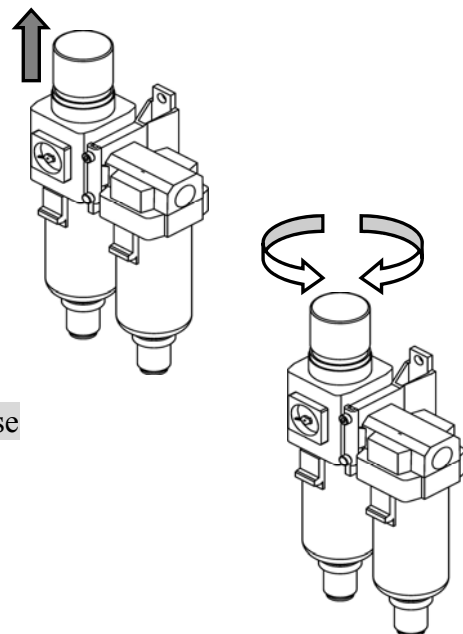
1. Pull the adjustment knob up

2. Turn the knob to adjust air pressure

Clockwise → Pressure will increase

Counterclockwise → Pressure will decrease

3. Pull the knob down



Check Point

- Check compressor if the main 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 at all times.



CAUTION

- Be careful to insert a hand or a shirt during work.
- Be careful not to touch the metal parts on garment setting up.
It may cause burn.

5. Set the shirt

- ① Set the cuffs on the cuff tables. See picture on right.
When setting a short-sleeved shirt, set sleeve on the cuff table.

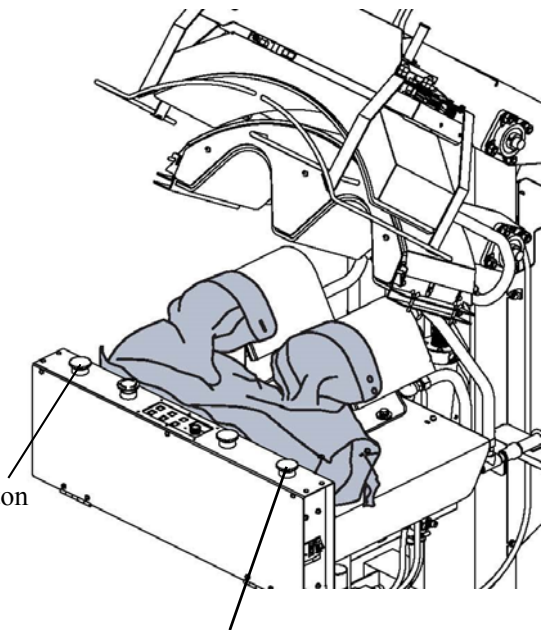
- ② Select long or short on panel.
Push the button on and a green light will appear.

- ③ Press both start buttons at once.

→ Cuff press head will come down and press the cuffs.

Left start button

Right start button



Caution

- * Do not release the start button until the press head is completely down, otherwise it will release the press head.

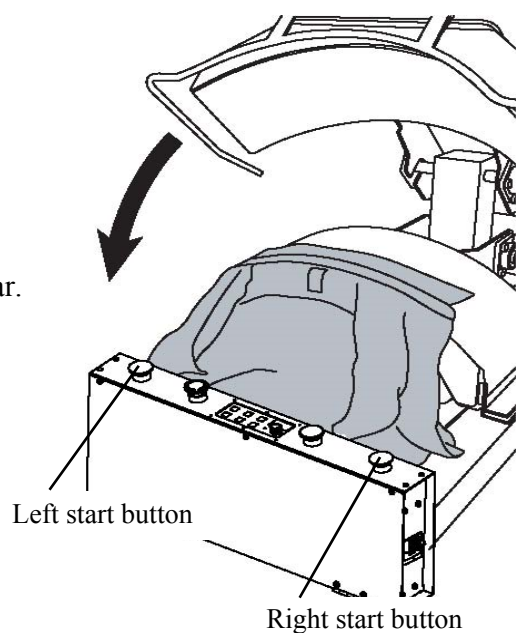
- ④ Set the collar on the collar press table. See on right.

- ⑤ Press both start buttons at once.

→ Collar Press Head will come down and press the collar.

Caution

- * Do not release the start button until the collar press head is completely down, otherwise it will be released the press head.



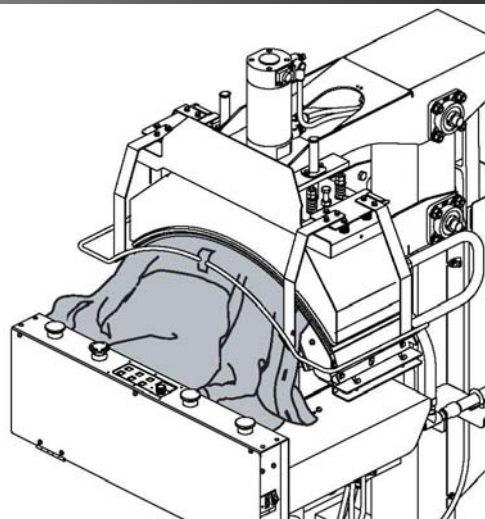
Left start button

Right start button

Tips

- * If long timer is selected during press, long timer lamp button will light. If short timer is selected during press, short timer lamp button will light.
- * Press the reset button to release the press position.

- ⑥ Collar and cuff press head will be released automatically after the timer complete.
- ⑦ Remove the shirt from the press, then place the next shirt and setup again.



Useful Tip

When you want to reset the counter indicator,
Please push the "Counter Clear" Button of a console panel. "0" will blink at "Display Window".
Press the "Enter Button".
You can reset the counter at "0". Press this button again.

6. After operation is over

- Push the red button on the side of the control box.

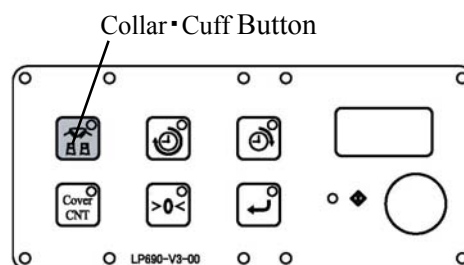
→Power lamp will turned off after a while.

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

About the Collar Cuffs Button

When you turn the Collar and Cuffs button off on the control panel (The green lamp will turn off when you do,) it is possible to press shirts with only the upper press. Therefore, areas like the placket of the shirt can be easily processed.

- ① Press the collar and cuffs button on the control panel to turn off the green lamp. This will allow the use of the upper press only process.
- ② Press both the right and left start buttons at the same time. The middle press will now descend.
- ③ Set the area that you want to press onto the machine, and press both right and left start buttons again. This time, the upper press will come down and start the pressing process. After the timer is expired, only the upper press will ascend.
- ④ With this function on, you can continuously use the upper press only option until you return the machine to standard function.
- ⑤ To return to standard functioning, press the collar and cuffs button once more, and the green lamp will once again light up. The middle press will rise, and standard operation will now resume.



Other Operations

How to Reset Emergency Stop

Pressing the emergency stop button or safety bars will make all operations stop and will return the machine to the start position. The display will display “E 1” (Emergency button) “E 2” (Left safety bar) and “E 3” (Right safety bar).

How to Release

- If you push the emergency stop button, turn the emergency stop button clockwise to release the lock on the button. (“— — 1” will be displayed.)
Push the reset button and the machine will return to its normal condition.
- If you push safety bar, Push reset button and the machine will return to its normal condition.

*** If you don't push reset button, the machine will not work.**

About a Cover Counter

The Cover Counter was created to make it easy for the customer to know when to change the cover and insure the proper finish quality. If the cover counter exceeds 10,000 times, there will be an error displayed (EC1) when the power is turned on, and the machine will not start.

※ THEREFORE, AFTER CHANGING THE COVER, ALWAYS RESET THE COUNTER


Please use the following instructions when resetting the cover counter.

- ① After changing the cover, turn the machine on and press the blue reset button for an extended time.
Doing this will cancel the error.

Caution

It IS possible to use the machine after completing this step. However, if the counter is not reset, the reset button must be pressed again the next time the machine is turned on.

- ② Press the ‘Cover CNT’ button on the control panel. Turn the dial until  is displayed. Press the enter button.

→The display will show  (This is the display for 10,000 times)

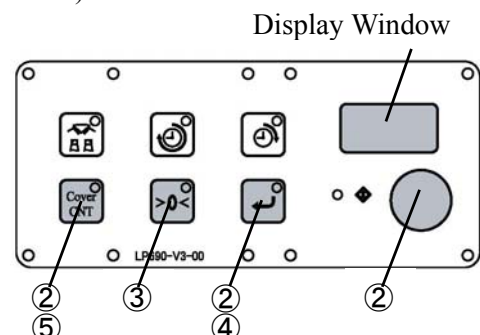
- ③ Press the Counter Clear button on the control panel.

→The display will show , and the 0 will start flashing.

- ④ Press Enter on the control panel.

→The display will show a solid 0 with no flashing.
The Reset is finished.

- ⑤ Press the Cover CNT button once more to return to standard operation.



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.

Use a cover supplied by Sankosha.

Using another company's cover may give a bad finish; Sankosha can take no responsibility if this is done.

1. How to change the Collar Cover/Pad

- ① Push both start buttons without shirt on the machine.
(Figure-1)
- ② Turn OFF the power supply after setting the air pressure to 0 MPa. (See page 15)
- ③ Remove the guard plate in front of middle press head.
(Figure-2)

Guard plate
Fixed screw
(3 Pcs.)

Figure-2

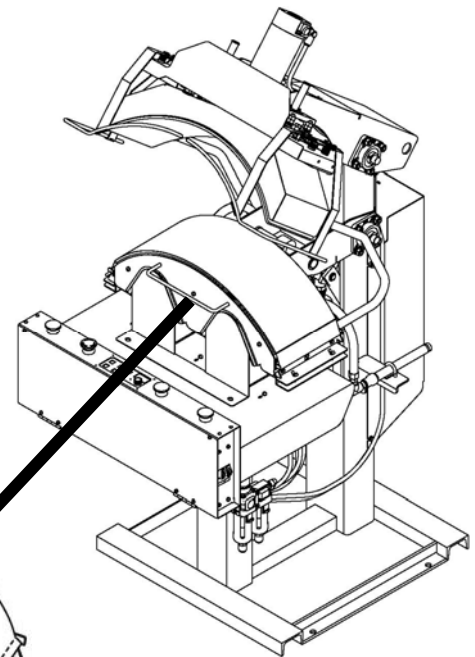


Figure-1

Stainless rod

- ④ Loosen equally two wing bolts which see from the front and are in right-hand side.
Color cover loosens. Remove a stainless rod from a hook and remove a color cover. (Figure-3)

Caution

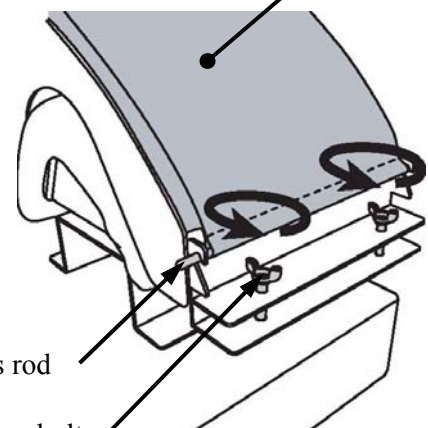
There are 3 stainless rod in old cover, remove them and install in the new cover.

Color cover

Stainless rod

Wing bolts

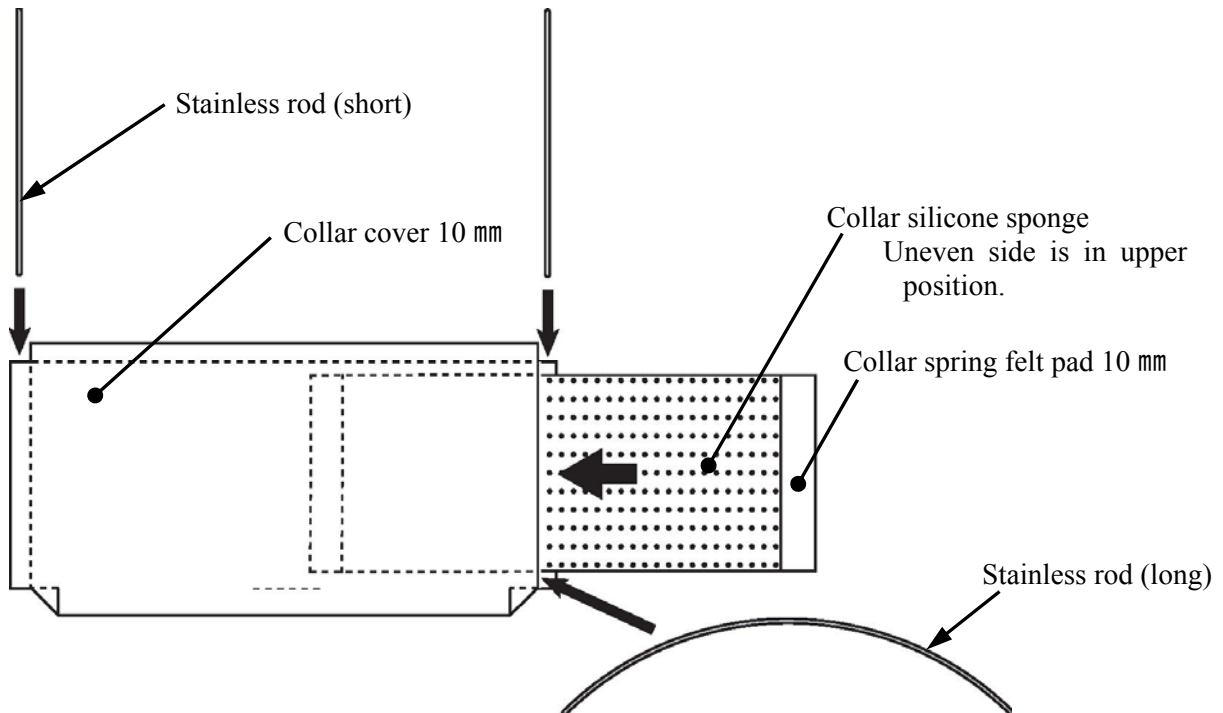
Figure-3



- ⑤ Fit the collar silicon sponge and collar spring felt pad 10 mm, then install them to collar cover without wrinkles.

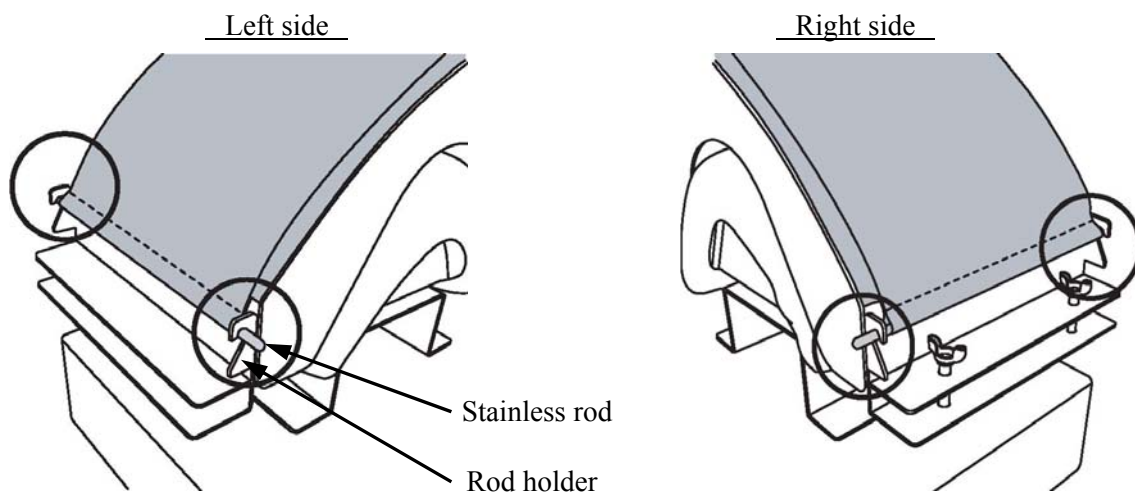
Place the silicon sponge at the lower side than the spring felt pad 10 mm.

Insert the stainless rod to the collar cover. (3 Rods)

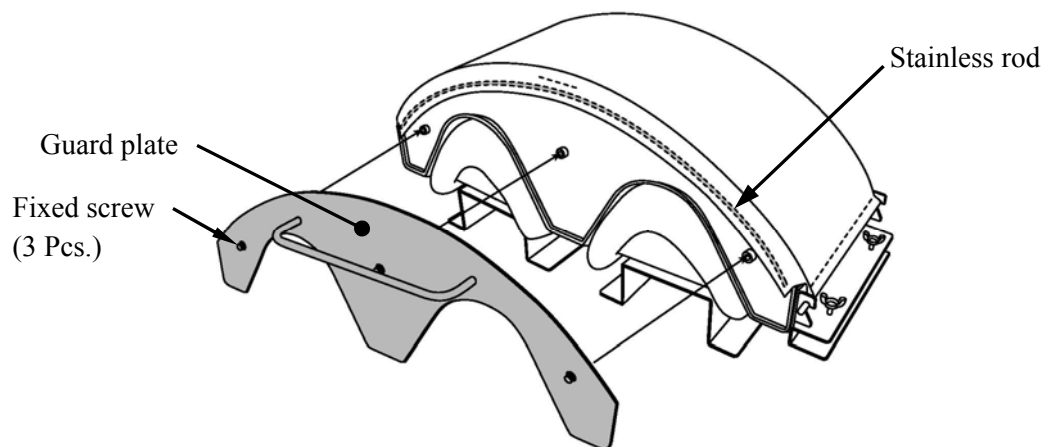


- ⑥ Color cover is put on middle press so that a color silicone sponge side may be turned down and a stainless rod (long) may become the front.

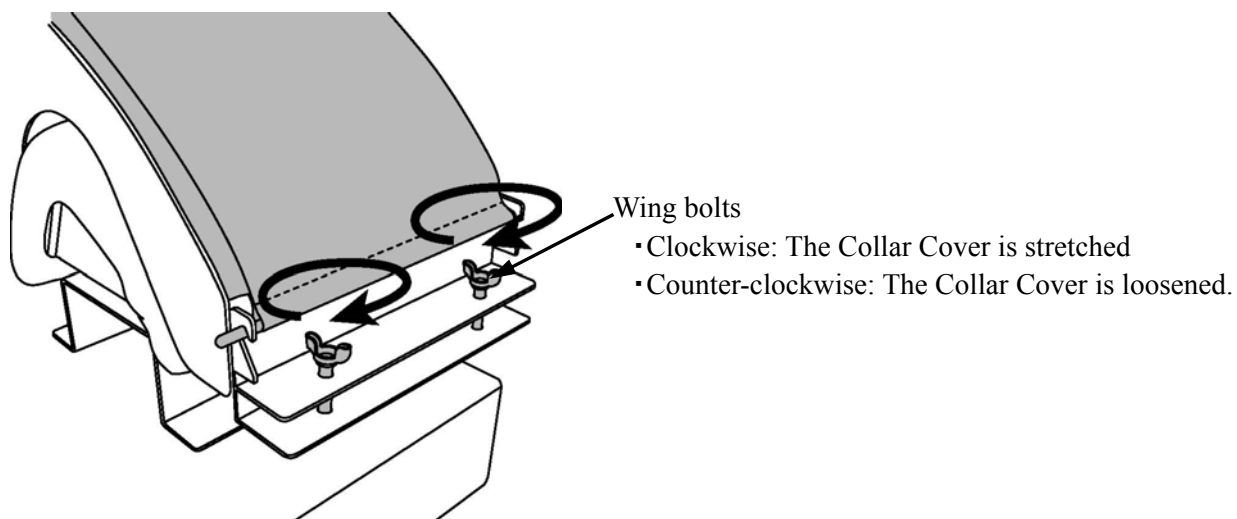
- ⑦ Hook the stainless rod to the rod holder on the left side from the front view.
Then, hook the stainless rod to the rod holder on the right side from the front view.



- ⑧ Attach with the screws to fix the stainless rod with guard plate.



- ⑨ Then, tighten both of wing bolts equally.
It will be pulled the color cover gradually.



©Install without any wrinkles. That's all for the cover change.

2. How to change Cuff Cover/Pad

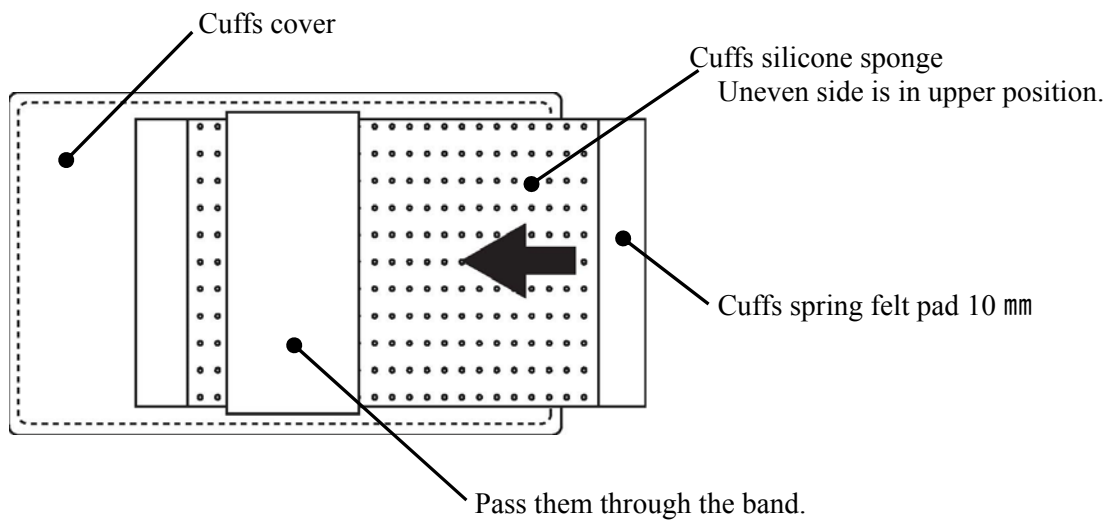
When working continuously from changing the collar cover, provide air to raise up Middle Press to upper position.

Tips

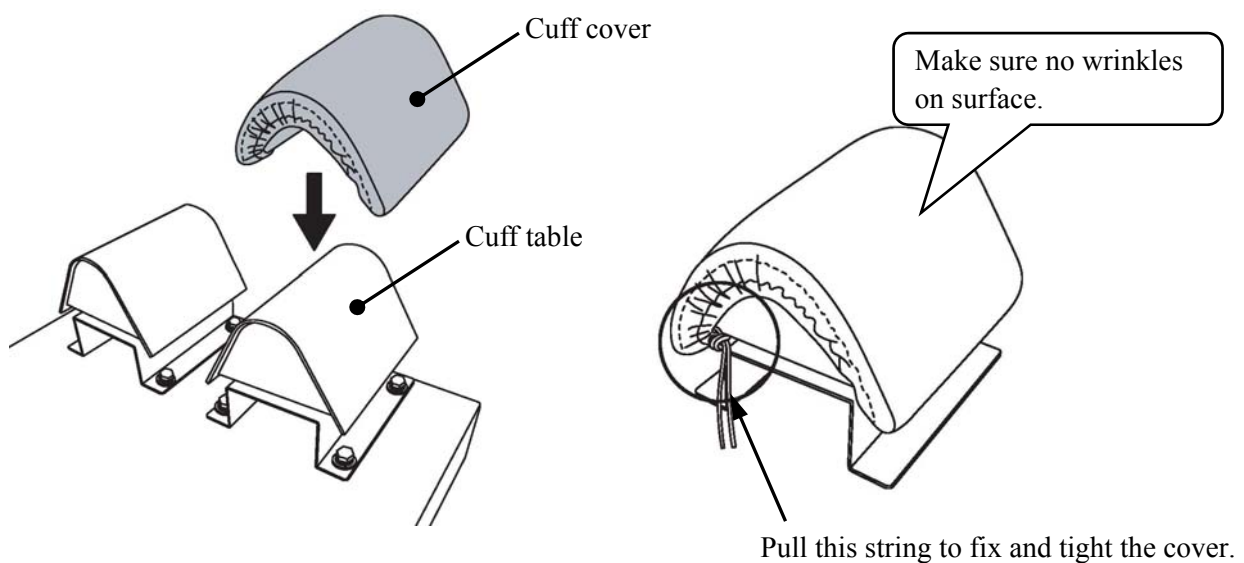
A cuffs cover has right and left.

Please attach so that a name tag and a string become outside.

- ① Fit the cuffs silicon sponge and cuffs spring felt pad 10 mm, then install them to cuffs cover.



- ② Place the cuff cover on the cuff table, and then tight it, the cover will be fixed on the press table. Make sure no wrinkles on the surface, then tight and make a knot.



Service Menu



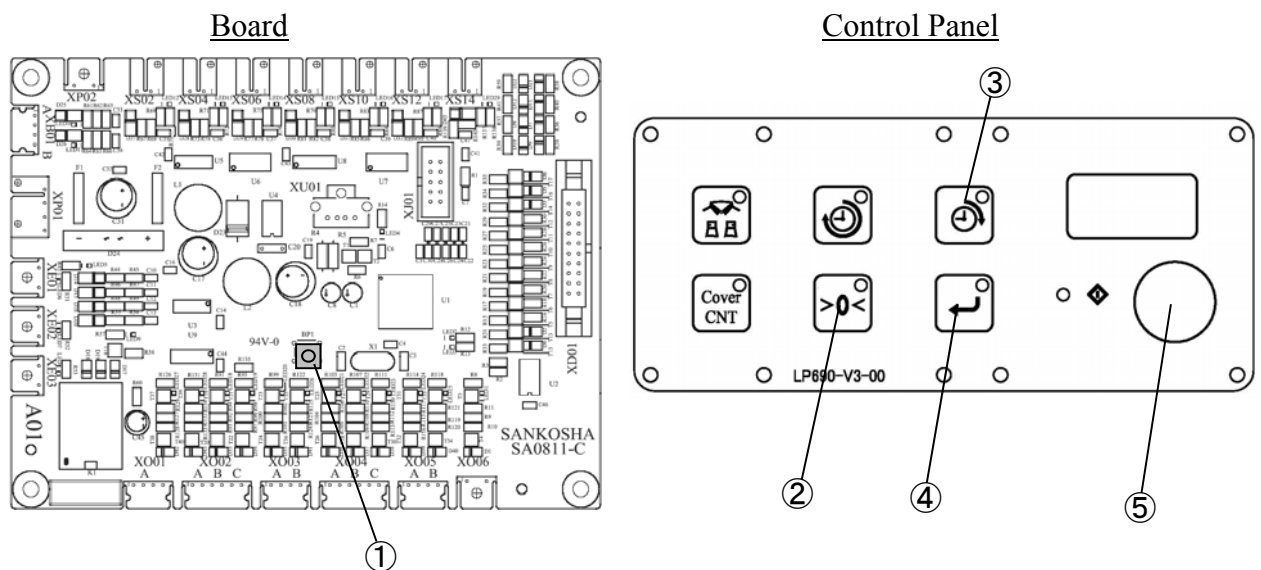
WARNING

It is extremely dangerous in Control Box.

Do not touch anywhere unless otherwise specified.

When service button (BP1) on board in control box is pushed, initialization of volume setting and check of program version and running time are possible as well as input test, output test, volume function setting, dip function setting, and timer setting.

■ Followings are service button position on board and functions of buttons in service menu.



① Service Button

When this button is pushed, "In1" is displayed and service menu starts.

② Counter Clear Button

This button functions as return button in service menu.

③ Short Button

Lamp of this button is turned ON/ OFF when test operation is ON/ OFF in Input test.

④ Enter Button







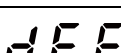

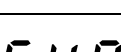
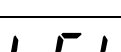
If this button is pushed, selected menu or changed setting is decided.

⑤ Set/Select Dial


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

- Turn clockwise: Proceed to the next Menu. The number will increase when setting.
- Turn counterclockwise: Return to the previous Menu. The number will decrease when setting.


■ 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.
	run	Board run time is displayed.
	tSt	Test Mode

■ Operation process

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


■ Service menu explanation

- In1(Input test 1)
 - After process 1, when  is displayed, push ④Enter button.
When each Input button is pushed or device works, number of working button or device is displayed.

Table—1 Input test 1 List

Input button／Sensor name	Display number	Input button／Sensor name	Display number
Reset button	b1A	Close Middle Press End	S 4
Left start button	S10	Close Upper Press Arm	S 6
Right start button	S12	Close Upper Press Arm End	S 8

2. In2 (Input test 2)


- After 1,2 process, when  is displayed, push ④Enter button.
- When ⑤Set/Select Dial is turned, input display number registered in software (Table -1) is displayed by turns. The lamp of ③Short button will be turned on if displayed input sensor is in ON setting.

3. out(output test)



CAUTION


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

- After 1,2 process, when  is displayed, push ④Enter button.
- Select display number of (table- 2) with ⑤Set/Select Dial. When ④Enter button is pushed, test operation starts.

Table—2 Output test list

Display number	Output name	Notes
2A	Close Middle Arm	Valve ①
2b	Close Upper Press Arm	Valve ②
2c	Close Upper Press	Valve ③


4. VoL (Volume function setting)

- After 1, 2 process, when  is displayed, push ④Enter button.
- After display number (table3) is selected with ⑤Set/Select Dial, when ④Enter button is pushed, present setting time is displayed. Setting time is changed with ⑤Set/Select Dial and push ④Enter button to save it.

Table—3 Volume list

Display number	Setting contents	Factory setting time
V 1	Time from cuff press move to until down.	1.8sec. (Max.3.0 sec.)
V 2	Time between collar press head rising and collar press arm, cuff press arm rising.	0.0sec. (Max.1.0 sec.)
V 3	Time between cuff press operation and starting of collar /cuff mode.	1.0sec. (Max.10.0 sec.)
V 4	Time between collar press head finishing and collar mode starting.	1.0sec. (Max.10.0 sec.)
V 5	Time between collar press head rising and cuff press rising.	0.5sec. (Max.1.0 sec.)


5. diP (dip function setting)

- After 1, 2 process, when  is displayed, push ④Enter button.
- After display number (table4) is selected with ⑤Set/Select Dial, when ④Enter button is pushed, present setting is displayed. Setting is changed with ⑤Set/Select Dial and push ④Enter button to save it.

Table—4 Dip function list

Display number	ON/OFF	Setting contents	Initial Setting
d 1	ON	While the power is ON, Long Timer is selected as the initial setting.	ON
	OFF	While the power is ON, Short Timer is selected as the initial setting.	
d 2	ON	While the power is ON, Collar/Cuff Mode is selected as the initial setting.	ON
	OFF	While the power is ON, Collar Mode is selected as the initial setting.	


6. tou (Time setting in display window.)

- After 1,2 process, when  is displayed, push ④Enter button.
- Display number is selected with ⑤Set/Select Dial and when ④Enter button is pushed, present setting time is displayed. Setting time is changed with ⑤Set/Select Dial and push ④Enter button to save it.

Table—5 Timer list


Display number	Setting contents
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	Time to finish service menu if any button is not touched in this menu.
t 5	Time to return to normal display from input test.

7. Def(Volume setting initialization)


Display  by Operation Procedure 1 and 2. Press ④Enter Button to select.

- "OFF" shows up at the Display Window. Turn ⑤Set/Select Dial to set it "ON".
- Press ④Enter Button again, All the settings return to the factory original setting.

8. Ver(program version display)

- After 1,2 process, when  is displayed, push ④Enter button.
- If you push ④Enter button again, present program version is displayed.

9. run(board running time display)

- After 1,2 process, when  is displayed, push short button.
- If you push ④Enter button again, board running time until now (Machine power ON time) is displayed.

10. tSt (Test Mode)


- Follow Operation Procedure 1 and 2, and  shows up. Press ④Enter Button to select.
- Turn ⑤Set / Select Dial, and select the number as seen in Chart-6. The Test Mode will turn on. When test is done, press ②Counter Clear button. Return to Service Menu selection.

Chart-6 "Test" List

No.	Test
tE1	<ul style="list-style-type: none"> • Press Test 1. Middle press arm closes when pressing Start Button Left and Right simultaneously. Middle press arm opens when pressing Reset Button. 2. Press Start Button Left and Right simultaneously again. Upper press arm closes. Upper press arm opens when pressing Reset Button. 3. Press Start Button Left and Right simultaneously again. Press starts. Press is released when pressing Reset Button. * Time (seconds) of closing of middle press arm & upper press arm shows at the Display Window. It is useful for the adjustment of middle press arm cylinder & upper press arm cylinder.

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 number	(1) Error description
	(2) Error detail
	(3) Check contents
E1	1. Emergency stop button
	2. Emergency stop button is pushed.
	3. (1) Turn Emergency stop button clockwise to release lock and the display(— —1) will appear. Push reset button to return to normal condition. (2) If error is displayed although emergency stop button lock is released, this is button problem. Check the emergency button itself and it's wiring.
E2	1. Left safety bar
	2. Switch (XE02) of left safety bar is pushed.
	3. (1) When pushing the safety bar by hand if the bar is released the “error “ mark will disappear and the display(— —2) will appear. Check that the safety bar is not caught anywhere. (2) If error (E2) is displayed and the safety bar is not being pushed there is a problem with the safety bar switch or wiring.
E3	1. Right safety bar
	2. Switch (XE03) of right safety bar is pushed.
	3. (1) When pushing the safety bar by hand if the bar is released the “error “ mark will disappear and the display(— —3) will appear. Check that the safety bar is not caught anywhere. (2) If error (E3) is displayed and the safety bar is not being pushed there is a problem with the safety bar switch or wiring.

Error number	(1) Error description
	(2) Error detail
	(3) Check contents
E11	1. Middle press close overtime error
	2. Time until middle press presses is over time set up by Vol.1.
	3. (1)When you touch magnet to sensor at the head side of cylinder, the red light of sensor ... ①does light ... it is considered wrong position of sensor. Please loosen the band of it, and find lighting zone. Please place center of lighting zone and fix it. ②doesn't light ... it is sensor problem. Check sensor is broken, or wire connection (such as looseness or disconnection).
	(2) Check air pressure. (Main Pressure: 0.6MPa , reference Page 16)
E12	1. Middle press end sensor (SQ04) error
	2. Pressing middle press but sensor don't turn on. (Abnormalities of close middle press end sensor or Solenoid valve (No.2))
	3. (1) It is considered wrong position of sensor. Please loosen the band of it, and find lighting zone. Please place center of lighting zone and fix it.
	(2) Check air pressure. (Main Pressure: 0.6MPa , reference Page 16)
E13	1. Middle press end sensor (SQ04) open overtime error
	2. After middle press go up, if 2 seconds or more, sensor is still ON. (Abnormalities of close middle press end sensor or Solenoid valve (No.2))
	3. Check cylinder sensor. •Start "Input test 1" of service menu. •If a magnet is placed on the rod side of the middle press cylinders and the red sensor does not display or "S4" does not appears on the display panel. There is a problem with the cylinder sensor. Check the sensor's wiring has not become disconnected, etc. If no problem is found then the cylinder sensor itself is broken. When "S4" appears on the display panel this may be become there is a problem with the valve (No.2) Check valve and air pressure.
E14	1. Upper press end sensor (SQ08) open over time error
	2. After middle press go up, if 2 seconds or more, sensor is still ON. (Abnormalities of close upper press arm end sensor or Solenoid valve (No.3))
	3. Check cylinder sensor. •Start "Input test 1" of service menu. •If a magnet is placed on the rod side of the upper press cylinders and the red sensor does not display or "S8" does not appears on the display panel. There is a problem with the cylinder sensor. Check the sensor's wiring has not become disconnected, etc. If no problem is found then the cylinder sensor itself is broken. When "S8" appears on the display panel this may be become there is a problem with the valve (No.3) Check valve and air pressure.
E20	1. Left start button error
	2. Start the button remains down when the power supply is turned on.
	3. (1) If the left start button is released this error should disappear, if it does not check that nothing is holding down the button.
	(2) If nothing is holding the left start button down and an error is displayed it is possible that there is a problem with the actual button. Check that there is no problem with the wiring or that there are no loose connections.

Error number	(1) Error description
	(2) Error detail
	(3) Check contents
E21	1. Right start button error
	2. Right start button remains pushed when power supply is turn on.
	3. (1) If the right start button is released this error should disappear, if it does not check that nothing is holding down the button. (2) If nothing is holding the right start button down and an error is displayed it is possible that there is a problem with the actual button. Check that there is no problem with the wiring or that there are no loose connections.
E24	1. Close middle press end sensor (SQ04) error
	2. When a power supply is turn on, or at the time of middle press start middle press cylinder end sensor turns on. (Abnormalities of end sensor of middle press cylinder or middle press cylinder.)
	3. Check cylinder sensor. ▪ Start “ Input test 1” of service menu. ▪ If a magnet is placed on the head side of the middle press cylinders and the red sensor does not display or "S4" does not appears on the display panel. There is a problem with the cylinder sensor. Check the sensor's wiring has not become disconnected, etc. If no problem is found then the cylinder sensor itself is broken. When "S4" appears on the display panel this may be become there is a problem with the valve. Check valve and air pressure.
E25	1. Close upper press arm sensor (SQ06) error
	2. When a power supply is turn on, or at the time of upper press start upper press cylinder arm sensor turns on. (Abnormalities of close upper press end sensor or upper press cylinder.)
	3. Check cylinder sensor. ▪ Start “ Input test 1” of service menu. ▪ If a magnet is placed on the head side of the upper press cylinders and the red sensor does not display or "S6" does not appears on the display panel. There is a problem with the cylinder sensor. Check the sensor's wiring has not become disconnected, etc. If no problem is found then the cylinder sensor itself is broken. When "S6" appears on the display panel this may be become there is a problem with the valve. Check air pressure.
E26	1. Close upper press arm end sensor (SQ08) error
	2. When a power supply is turn on, or at the time of upper press start upper press cylinder end sensor turns on. (Abnormalities of upper press cylinder or upper press cylinder end sensor.)
	3. (1)When you touch magnet to sensor at the head side of cylinder, the red light of sensor ... ①does light ... it is considered wrong position of sensor. Please loosen the band of it, and find lighting zone. Please place center of lighting zone and fix it. ②doesn't light ... it is sensor problem. Check sensor is broken, or wire connection (such as looseness or disconnection). (2) Check air pressure. (Main Pressure: 0.6MPa , reference Page 16)

Error number	(1) Error description
	(2) Error detail
	(3) Check contents
E27	1. Middle press speed error
	2. Sensor turns on within 0.60 second after middle press goes down.
	3. (1) Check the air manometer shows (0.6MPa) and adjustment air. (Refer to 16page) (2) Turn speed controller on the side of the middle press cylinder head side clockwise to adjust the speed. If not change occurs check the speed controller and if necessary replace the controller.
E28	1. Upper press speed error
	2. Sensor turns on within 0.70 second after upper press goes down.
	3. (1) Check the air manometer shows (0.6MPa) and adjustment air. (Refer to 16page) (2) Turn speed controller on the side of the middle press cylinder head side clockwise to adjust the speed. If not change occurs check the speed controller and if necessary replace the controller.
E98	1. Display board external input error From software version 2.02 onward
	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 not improved even if it does (1),(2).
E99	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 press the reset button. When occurring many times, adjust a speed controller at the part where the impact is big.
EC1	1. Warning for cover change timing.(Standard)
	2. Time to change covers. You have done 10,000 presses/finishes since last time.
	3. Press and hold Reset Button for more than 1 second. Error message will be cancelled. After cover change, be sure to reset the cover counter referring to "Cover Counter" of page 20.

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	Annual
1. Air Pressure	<input type="radio"/>	
2. Filter Regulator / Mist Separator	<input type="radio"/>	
3. Steam Pressure	<input type="radio"/>	
4. Steam Trap	<input type="radio"/>	
5. Cover	<input type="radio"/>	
6. Press surface	<input type="radio"/>	
7. Emergency stop	<input type="radio"/>	
8. Regulator / Sludge filter		<input type="radio"/>

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

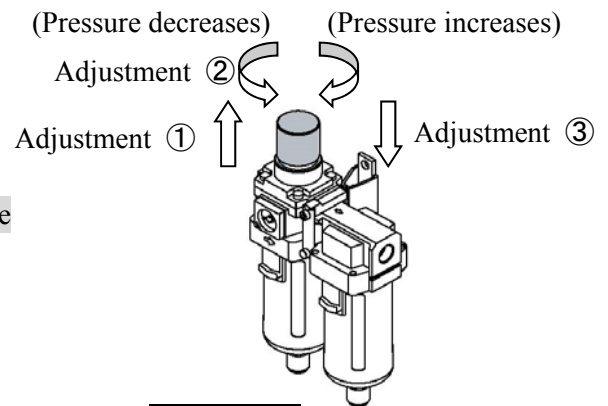


Figure-1

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.

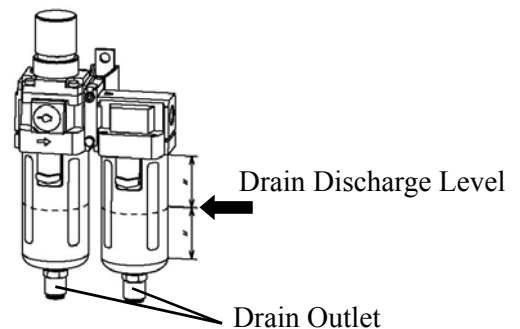


Figure-2

2. Steam Pressure: Figure-3

Check the steam pressure gauges (0.6MPa).

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

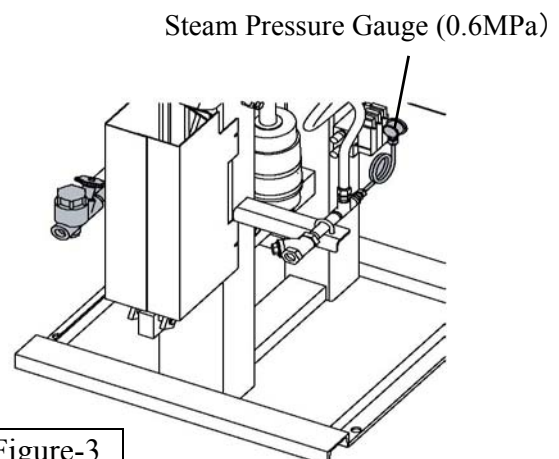


Figure-3

3. Steam Trap: Figure-4

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.

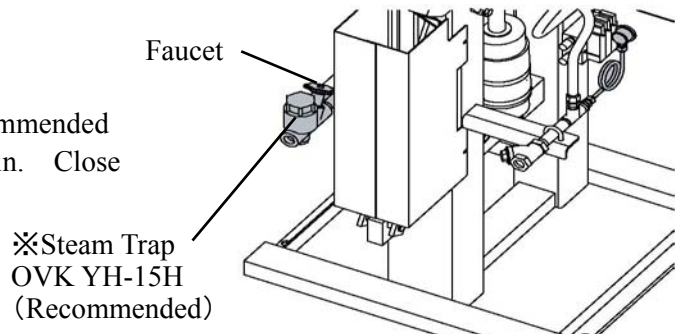


Figure-4

4. Cover and Padding: Figure-5

Check to see if it is dirty, tear or not.
(Collar cover, Cuffs cover)
Dirt and tear can affect quality.

5. Check and clean press surface :Figure-5

Clean the upper press and middle press surface to remove dirty and detergent deposit. (After stopping steam) Clean it when it is hot.
Clean is required to prevent the deposit from burning and to keep ironing quality.

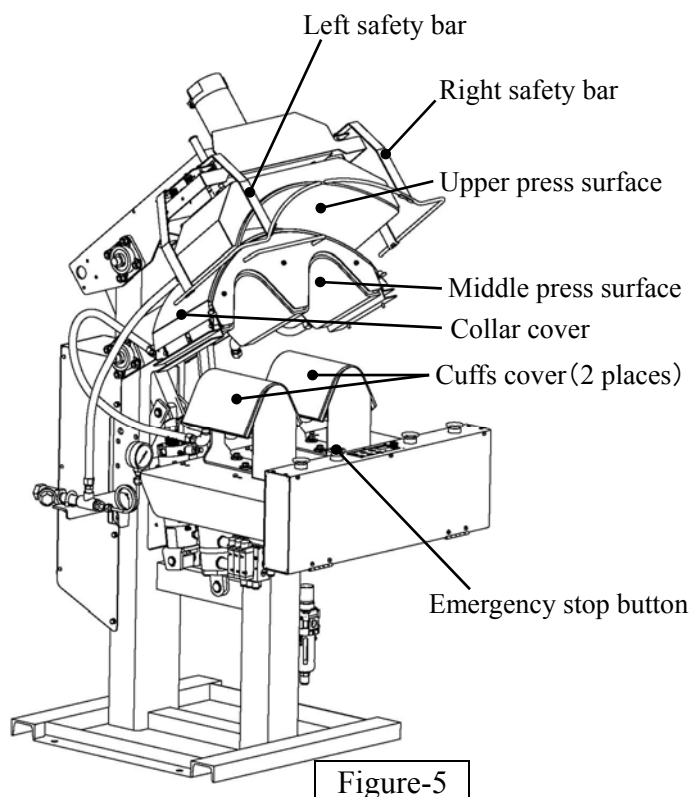


Figure-5

6. Emergency Stop Button: Figure-5

Press the emergency stop button, right safety bar and left safety bar to ensure that 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 (Annual)

7. Regulator/Mist Separator Cleaning: Figure-6

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

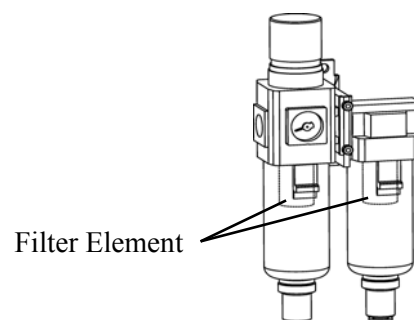


Figure-6

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															
6	Press surface															
7	Emergency stop															

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																
6	Press surface																
7	Emergency stop																

Check Item (Annual)

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

Photocopy this checklist for ongoing maintenance

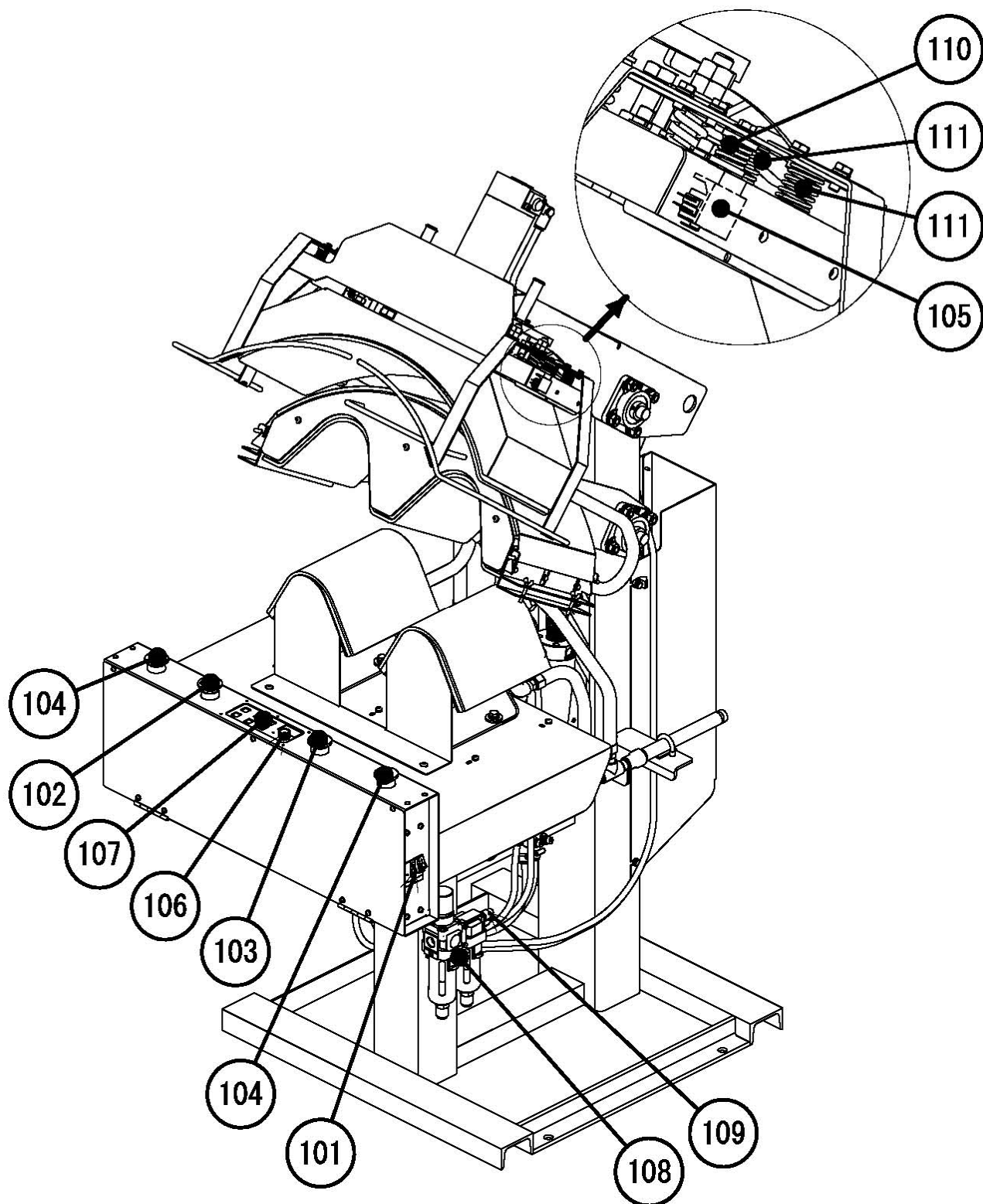
Spare Parts List

Index

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

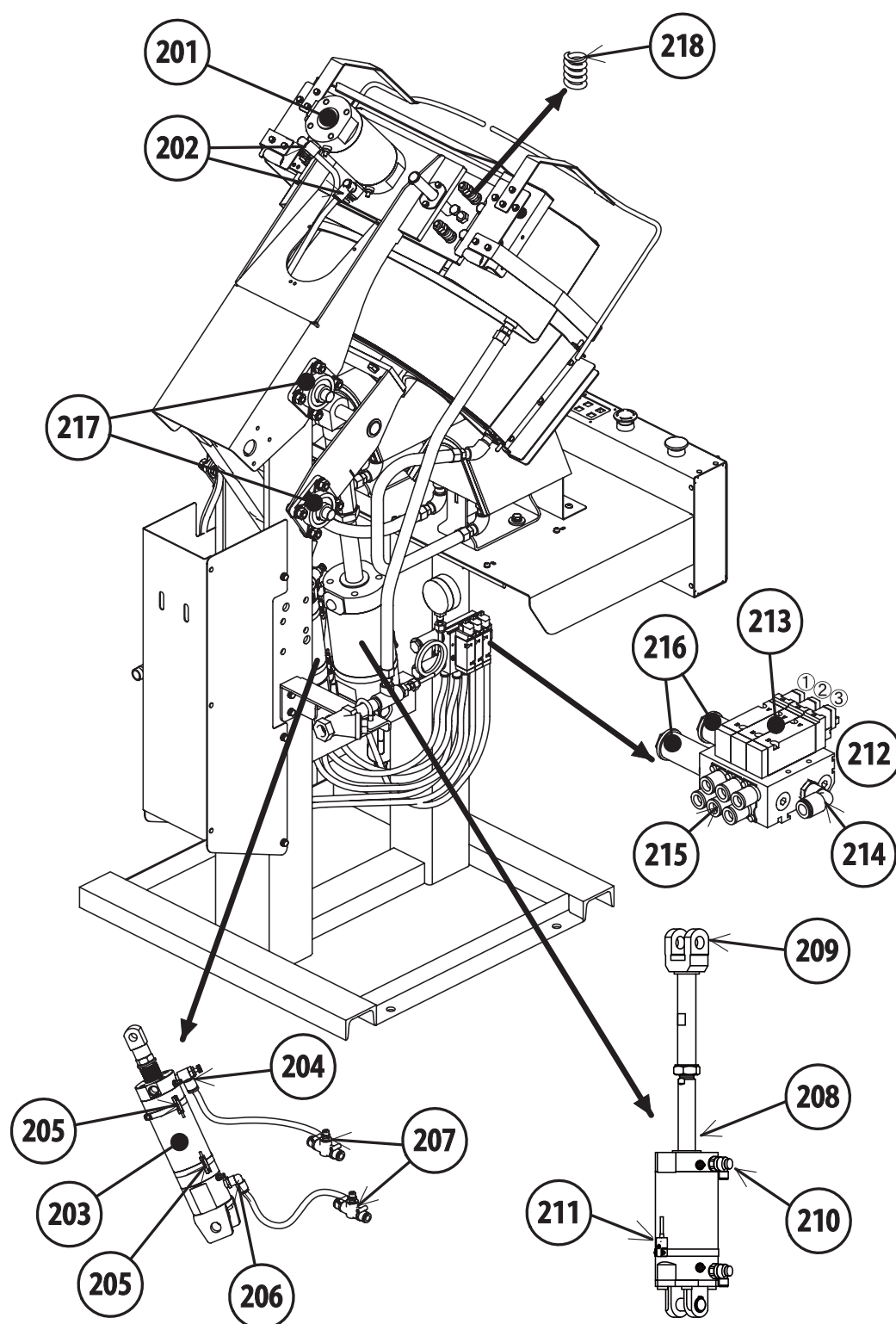
1 : Front Diagram

REV:1



Front Diagram**REV: 1**

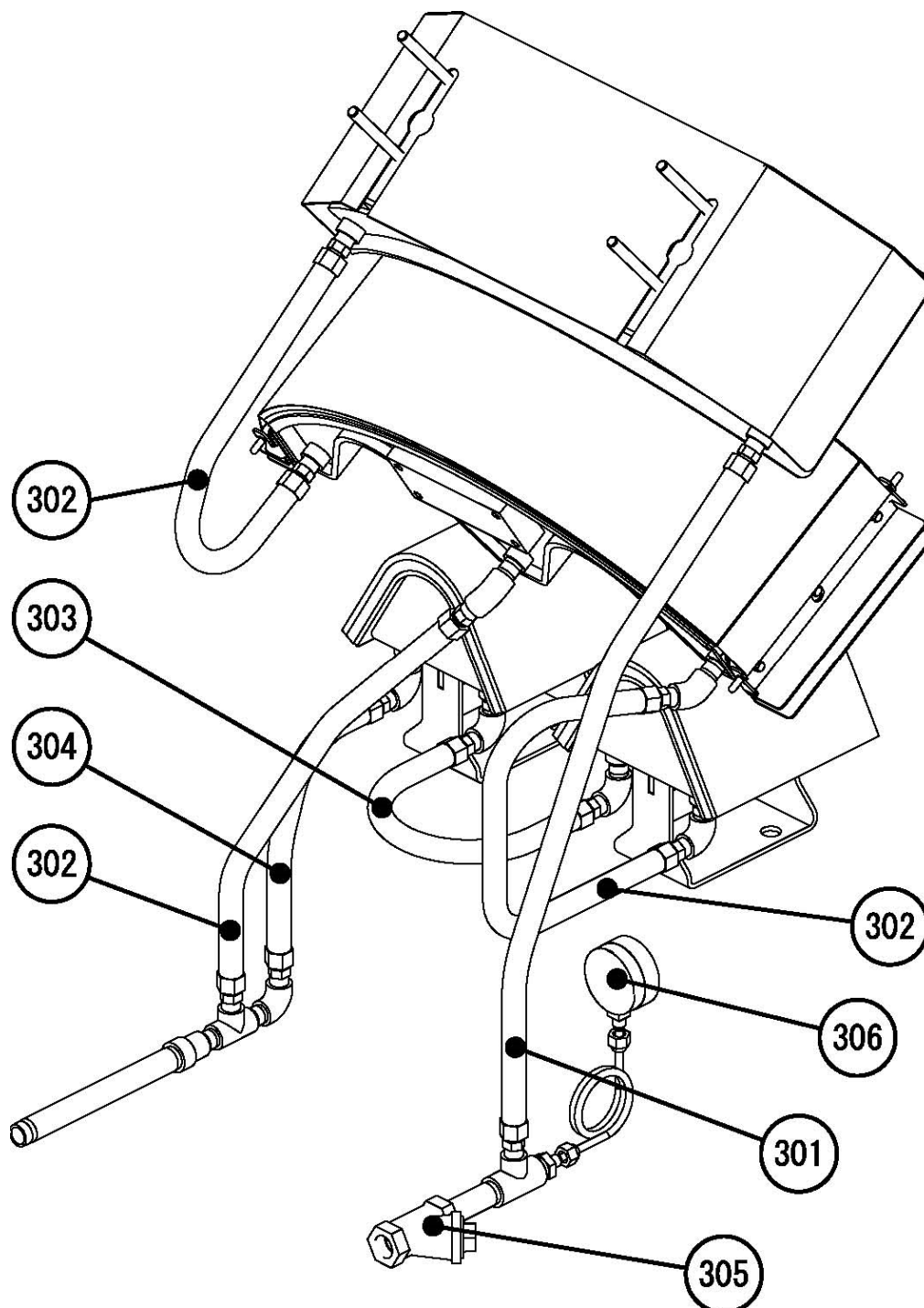
No.	Part Name	Part Number	Q'ty	Remark
101	Breaker Switch	21C004	1	
102	Push Button Switch	21I171	1	EMG SW (Red)
103	Push Button Switch	21I170	1	Reset (Blue)
104	Push Button Switch	21I169	2	Right/left start (Green)
105	Push Button Switch	21I085	2	EMG Bar
106	Knob	21D006	1	
107	Panel Sheet	20U111	1	
108	Combination	D0H024	1	
109	Joint	C0H017	1	
110	Emergency Speing A	H0D001	2	
111	Emergency Speing B	H0D002	4	



Rear Diagram

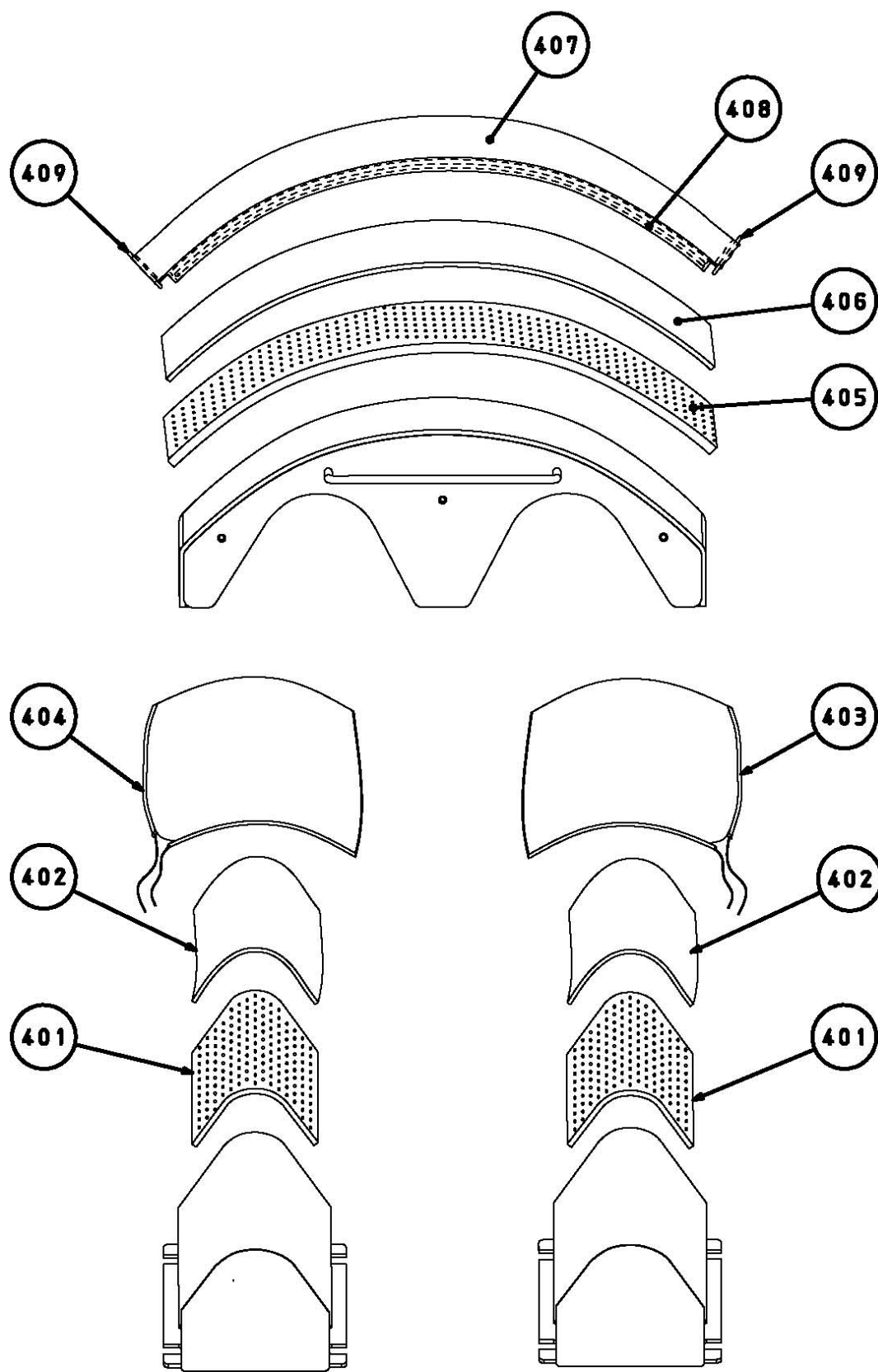
REV: 1

No.	Part Name	Part Number	Q'ty	Remark
201	Silenser	B0W019	1	Upper Press
	Cylinder Packing Set	B6H050	1	
202	Speed Controller	C1A058	2	
203	Lock Silenser	B2I074	1	Upper Press Arm
	Cylinder Packing Set	B6J038	1	
204	Speed Controller	C1A059	1	
205	Cylinder Sensor	B5A022	2	
	Sensor Band	B5D005	2	
206	Joint	C0H019	1	
207	Speed Controller	C1G015	2	
208	Silenser	B0W014	1	Middle Press Arm
	Cylinder Packing Set	B6H045	1	
209	Knuckle Joint	B6A020	1	
210	Speed Controller	C1A056	1	
211	Cylinder Sensor	B5A015	1	
	Sensor Band	B5C002	1	
212	Manifold Valve	A0M011	1	
213	Solenoid Valve	A0N004	1	①: Middle Press Arm
	Solenoid Valve	A0N004	1	②: Upper Press Arm
	Solenoid Valve	A0N004	1	③: Upper Press
214	Joint	C0H017	1	
215	Joint	C0I005	6	
216	Silencer	C0A019	2	
217	Bearing Unit	E4A001	2	
218	Cushion Spring	H0D017	4	



Steam Piping**REV: 1**

No.	Part Name	Part number	Q'ty	Remark
301	Flex. Hose	A6B022	1	
302	Flex. Hose	A6B016	3	
303	Flex. Hose	A6B015	1	
304	Flex. Hose	A6B021	1	
305	Y Type Strainer	J2M009	1	
306	Steam Gauge	J0A003	1	



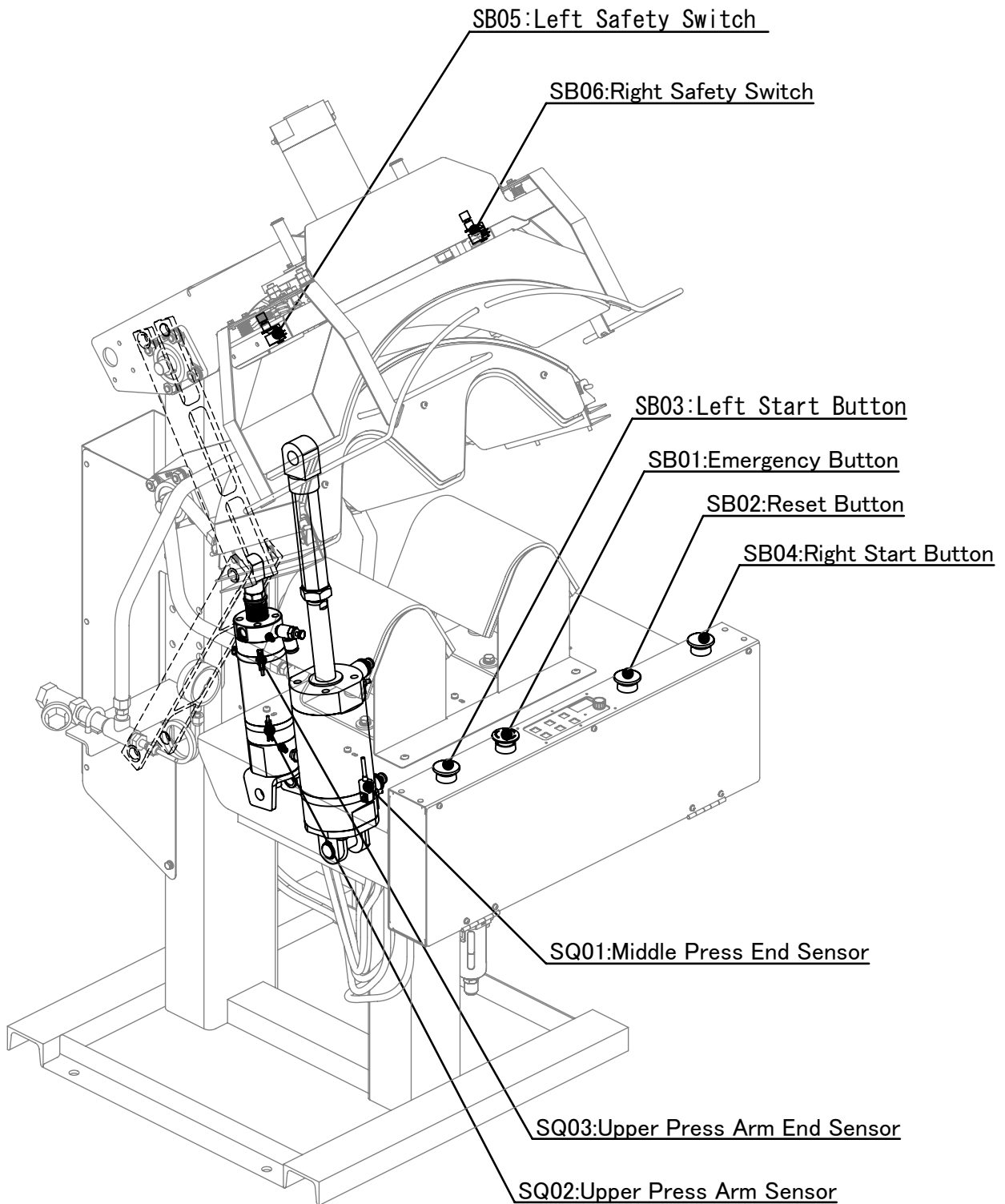
Cover Diagram**REV: 1**

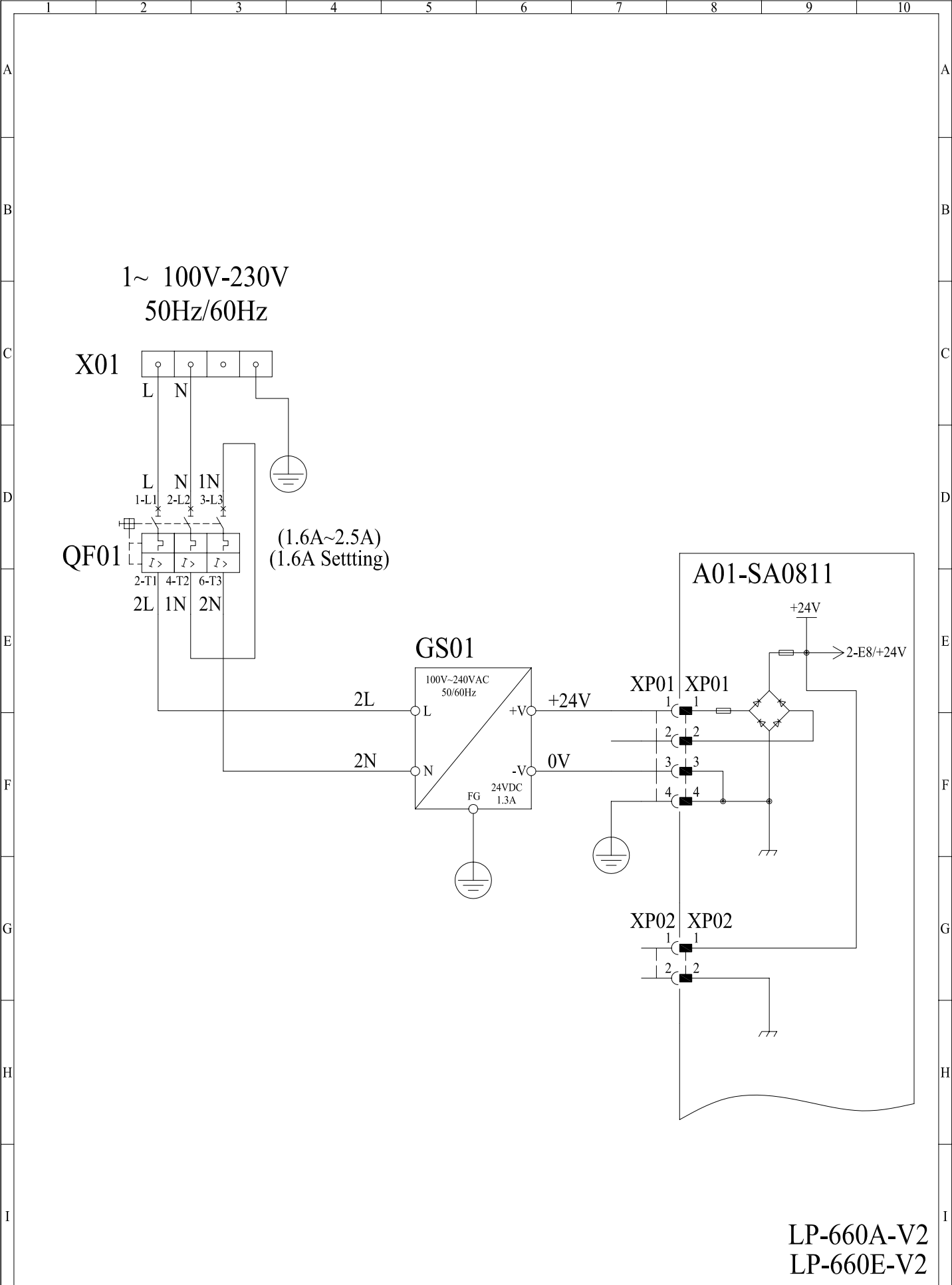
No.	Part Name	Part number	Q'ty	Remark
401	Cuff Silicon Sponge 30	S1C064	2	
402	Cuff Spring Felt Pad 10mm	S1C061	2	
403	Cuff Cover(Right)	S1C059	1	
404	Cuff Cover(Left)	S1C060	1	
405	Collar Silicon Sponge 30	S1C058	1	
406	Collar Spring Felt Pad 10mm	S1C056	1	
407	Collar Cover	S1C055	1	
408	Cover Extension Rod (Short)	MT-01-AA22240	1	
409	Cover Extension Rod (Long)	MT-13-AA13399	2	

Diagram

- Sensor Diagram
- Electric Connection Diagram 1/4 ~ 4/4
- Steam Piping Diagram
- All Air System

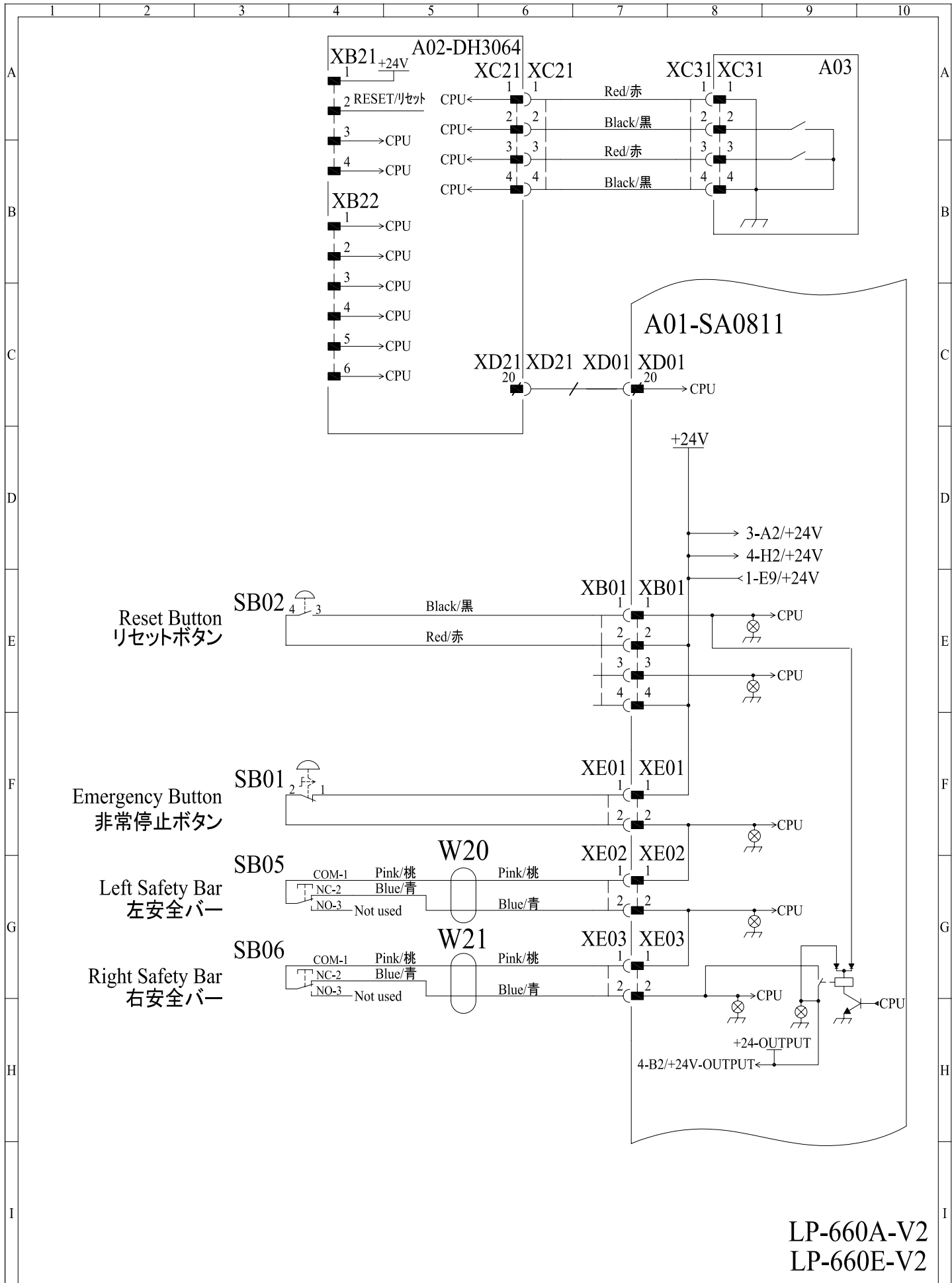
Sensor Diagram





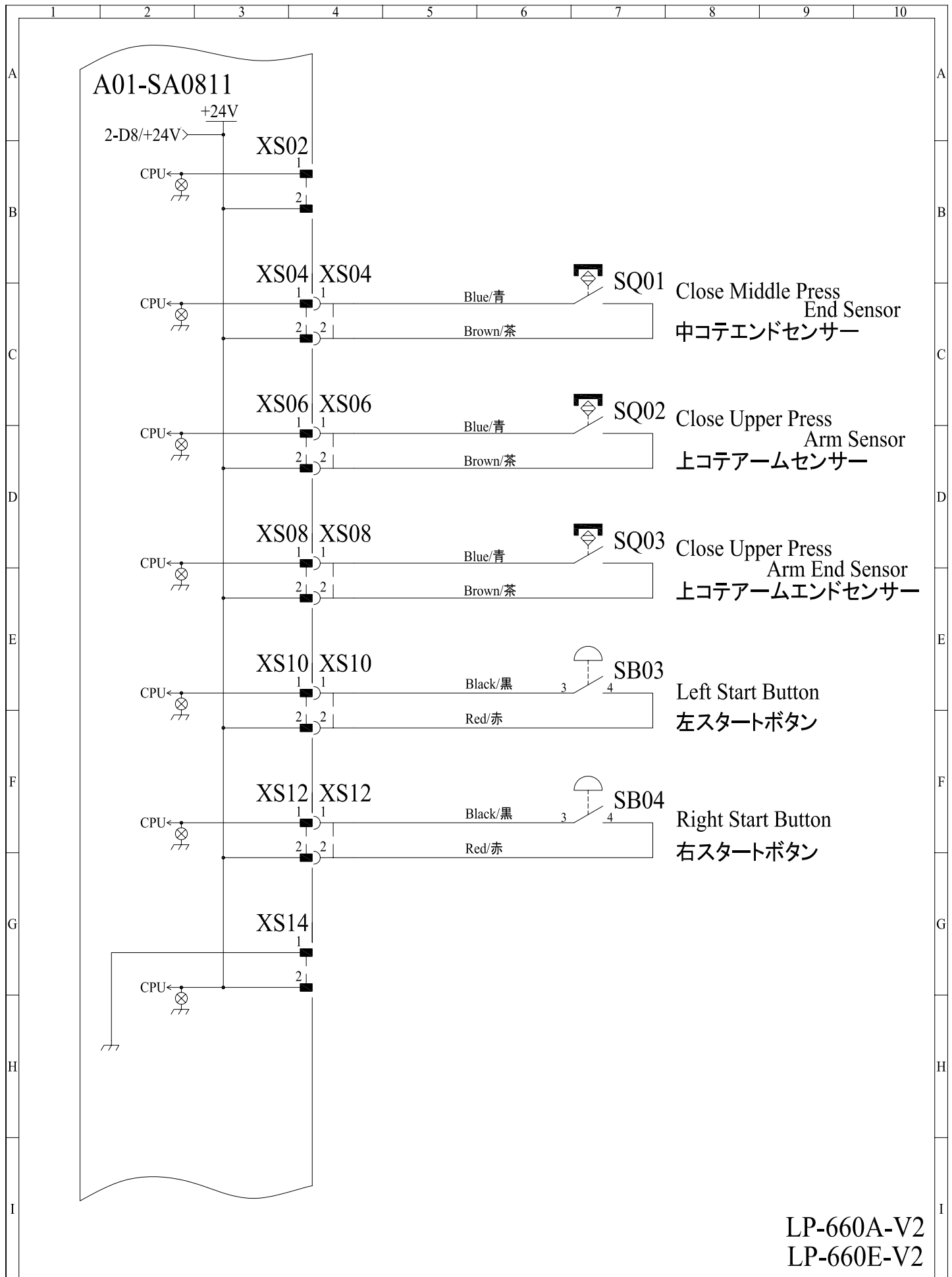
LP-660A-V2
LP-660E-V2

Model	LP-660U-V2	Type	LP660U-V2	Date(YYYY/MM/DD)	2012/12/05	Page	1/4
Approved	Checked	Designed	3	Software	4.01	~	
			2	Serial No.		~	
Koiso	Koiso	Sasaya	1	Change of Device No.	Drawing No.	01-1	
				Revision	SANKOSHA	三幸社	



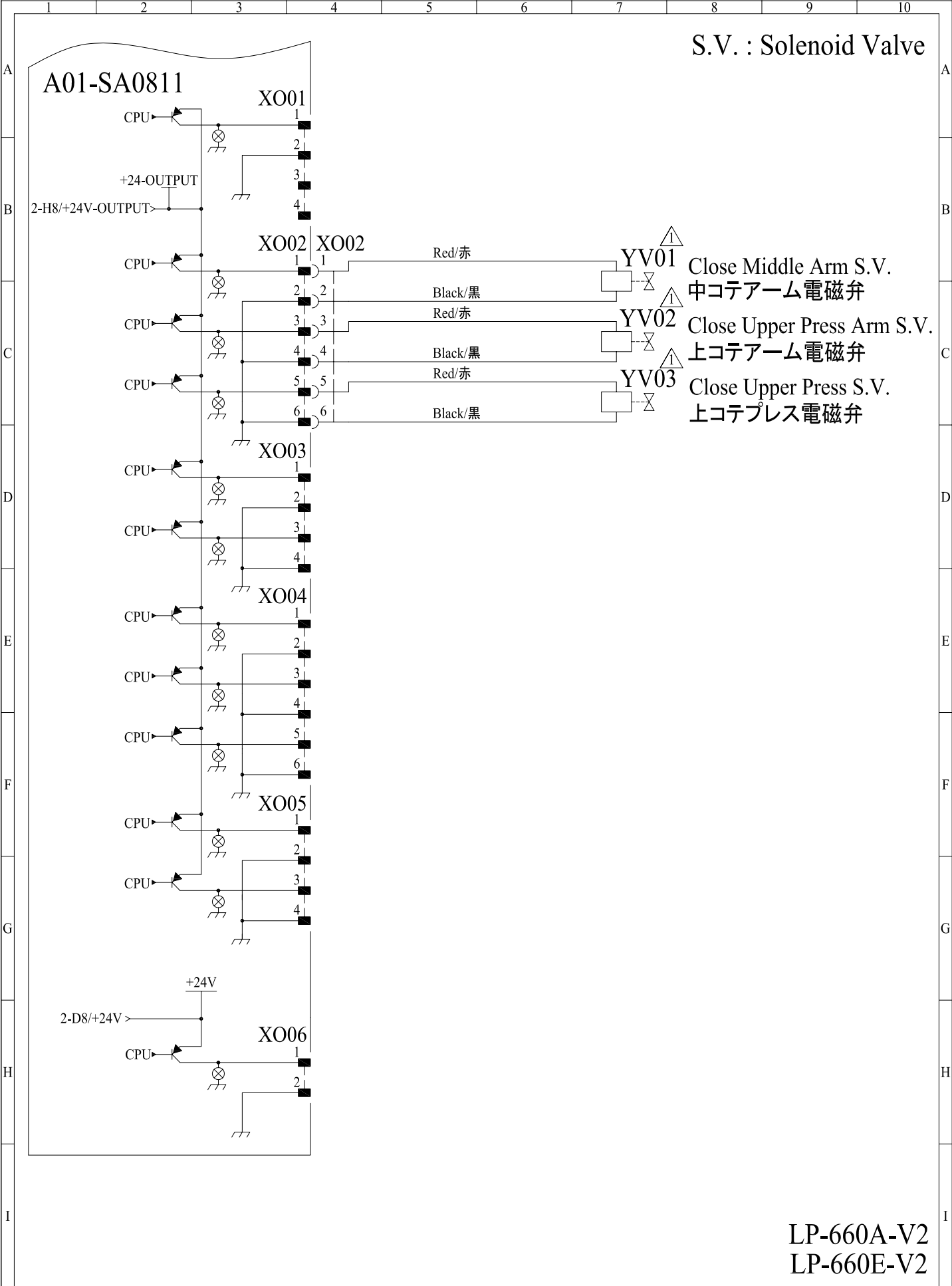
LP-660A-V2
LP-660E-V2

Model	LP-660U-V2	Type	LP660U-V2	Date(YYYY/MM/DD)	2012/12/05	Page	2/4
Approved	Checked	Designed	△	Software	4.01	~	
			△	Serial No.		~	
Koiso	Koiso	Sasaya	△	Change of Device No.	Drawing No.	01-1	
				Revision	SANKOSHA	三幸社	



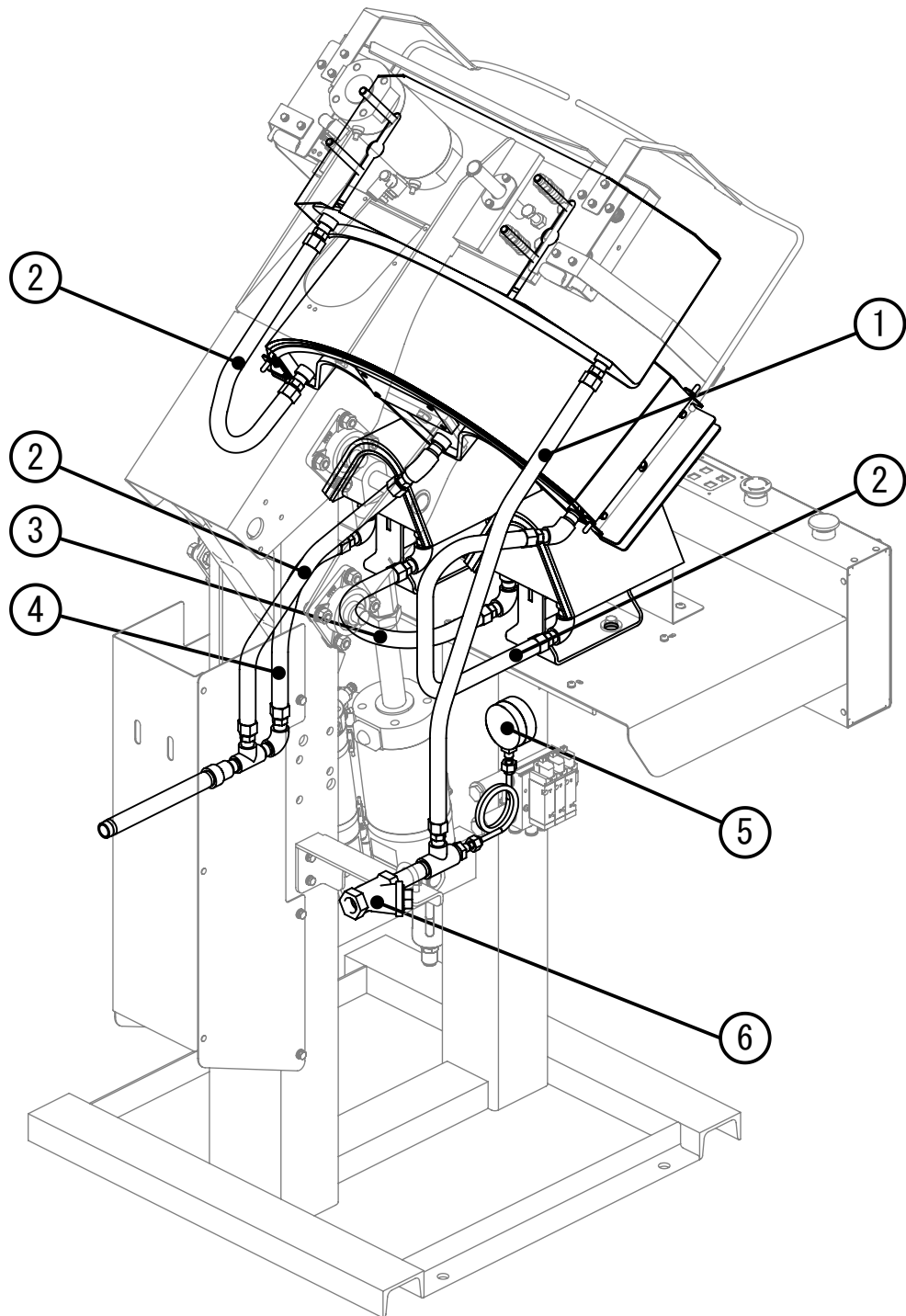
LP-660A-V2
LP-660E-V2

Model	LP-660U-V2		Type	LP660U-V2		Date(YYYY/MM/DD)	2012/12/05	Page	3/4
Approved	Checked	Designed	△3			Software	4.01	~	
			△2			Serial No.		~	
Koiso	Koiso	Sasaya	△1	Change of Device No.		Drawing No.	01-1		
				Revision		SANKOSHA 三幸社			

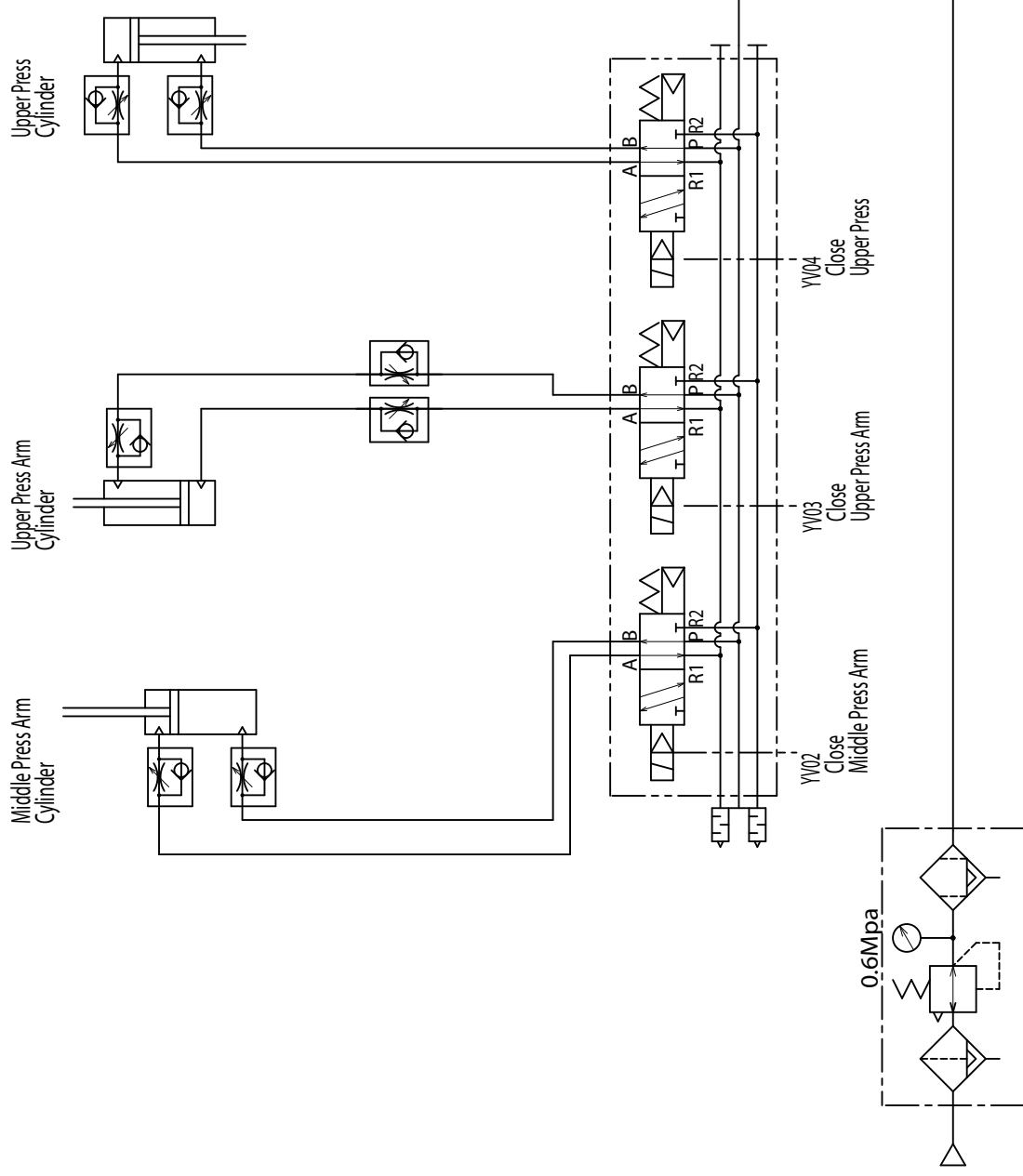


Model		LP-660U-V2		Type	LP660U-V2		Date(YYYY/MM/DD)	2012/12/05		Page	4/4								
Approved	Checked	Designed	△3				Software	4.01		~									
J	Koiso	Koiso	Sasaya	△2				Serial No.	~										
				△1	Change of Device No.			Drawing No.	01-1										
					Revision			SANKOSHA 三幸社											
1		2		3		4		5		6		7		8		9		10	

Steam Piping Diagram



- | | | |
|------------------|---|---------------------|
| ① Flexible Hose | : | 3/8 × 650L(B) |
| ② Flexible Hose | : | 3/8 × 470L(B) |
| ③ Flexible Hose | : | 3/8 × 350L(B) |
| ④ Flexible Hose | : | 3/8 × 250L(B) |
| ⑤ Pressure Gauge | : | AMT7/16 60φ 1.6MPa |
| ⑥ Y Strainer | : | FCKY4—G3 15A 80Mesh |



MODEL	LP-660-V2	
TYPE	LP660A-V2	ALL AIR SYSTEM
DATE	2016/02/19	
Signature		
SANKOSHA		

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/>



Distributor

LP-660E-V2(X)

Rev. 2

2019. 11