



LP-185U

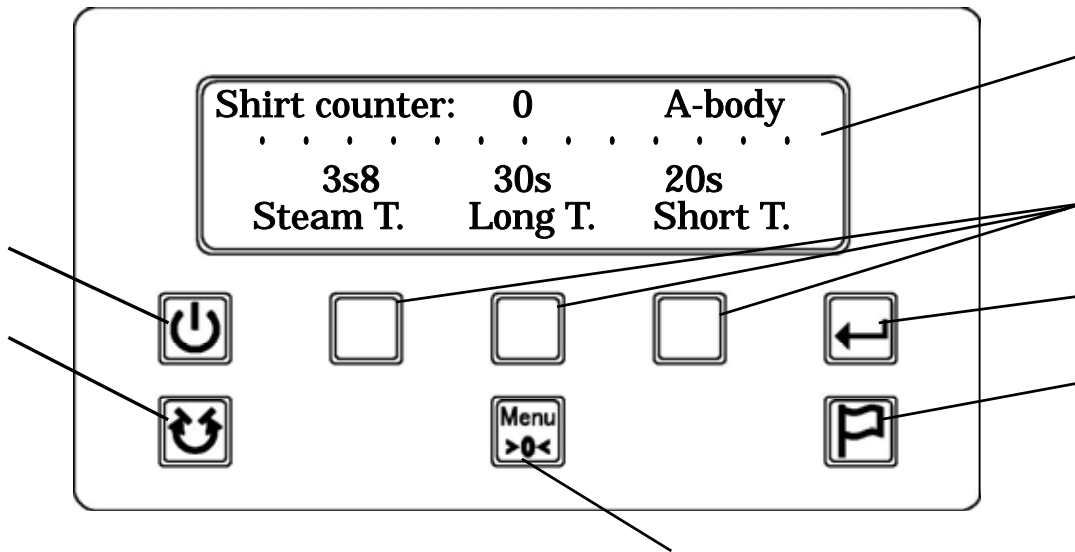
Panel Instruction Manual

For your safety, please read and comprehend carefully
this Instruction manual thoroughly before operation.
If at any time you have any questions, please do not hesitate to contact us.

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Operation Panel



:Display panel

- It displays all instructions such as navigation, timer, counter, error etc.

1st line Information or error type with blinking number.

2nd line Navigation message that will inform you.

3rd and 4th line Menu

:Standby button

- It interrupts press action if the machine is processing a shirt.
- It prepares the machine for switch off. (Arm moves up and it is locked.)

:Rotation button

- If the machine is not processing or shirt setting is not started, it will start rotation.

:Navigation button

- We can select the items that will be displayed on panel.

:Return button

- It is used to return to the previous screen.

:Language selection button

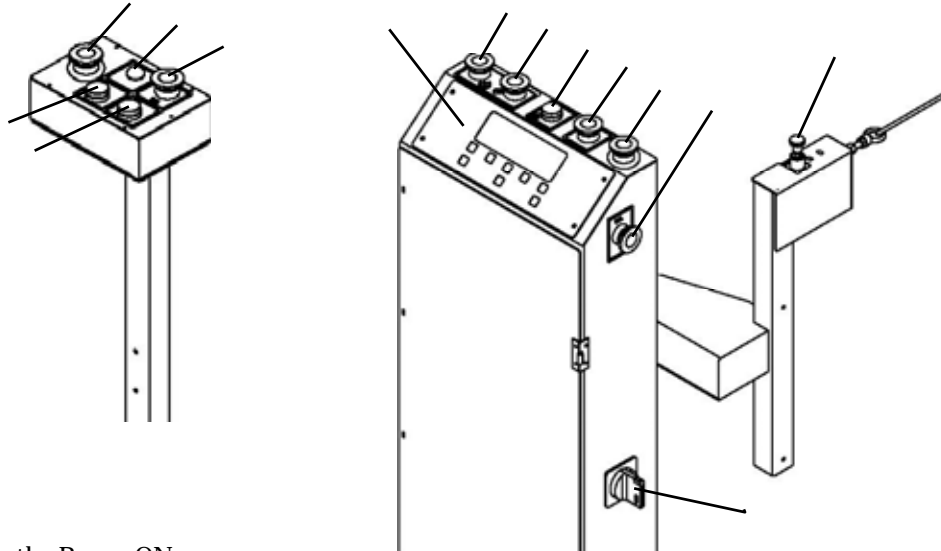
- It changes languages: English Korean French Spanish.

:Menu / Counter clear button

- It displays menu item.
- If we keep pushing this button a little time, shirt counter is reset.

Control Part

Name of Control Box



Main Switch

This Switch turns the Power ON.

The power is ON when main switch is turned right and it is OFF when it is turned left.

Before turning off the power, push standby button on the display panel so that the sleeve arm is closed and locked.

If the main switch is turned OFF first, the sleeve arms will still be open and it could damage the presses.

When day's operation is finished or before maintenance is started, be sure to turn OFF the main switch.

Emergency Stop Button

In the case of emergency, push this button. All operations will stop and all press (shoulder, body, tuck) will open. To return the machine to normal operation, turn the button clockwise and push the reset button.

Reset Button

This button has 3 different functions.

1. If operation is advanced by using the foot pedal, pushing the reset button will return the machine to the previous operation.
2. If the safety bar or emergency stop button has worked (Lock is already released), the machine will return to normal operation with this button.
3. If error message is displayed, it clears the error.

Cuff Cancel Button

When this button is pushed, the light of this button will be turned ON and tuck will not be pressed.

If you push this button again, the light will be turned OFF and tuck will be pressed.

Short Start Button

This button has 3 different functions.

1. If this button and shoulder start button are kept pushing at the same time after neck and tail setting, shoulder press closes and shoulder press action starts during short timer setting time.
2. If this button and right start button are pushed at the same time after shirt setting, body rotates and press action starts during short timer setting time. (Rotation starts when hands are released from the buttons for the operator safety.)
3. If only this button is pushed in right sleeve setting, right cuff or right short sleeve is clamped. (The cuff is clamped when hand is released from the button or after the button is kept pushing more than 0.5 sec.)

Long Start Button

This button has 3 different functions.

1. If this button and shoulder start button are kept pushing at the same time after neck and tail setting, shoulder press closes and shoulder press action starts during long timer setting time.
2. If this button and right start button are pushed at the same time after shirt setting, body rotates and press action starts during long timer setting time. (Rotation starts when hands are released from the buttons for the operator safety.)
3. If only this button is pushed in right sleeve setting, right cuff or right short sleeve is clamped. (The cuff is clamped when hand is released from the button or after the button is kept pushing more than 0.5 sec.)

Right Start Button

This button has 2 different functions.

1. If this button and the short or long start button are pushed at the same time after shirt setting, body rotates and press action is done during operator setting time. (Rotation starts when hands are released from the buttons for the operator safety.)
2. If only this button is pushed in right sleeve setting, right cuff or right short sleeve is clamped. (The cuff is clamped when hand is released from the button or after the button is kept pushing more than 0.5 sec.)

Shoulder Start Button

This button has 2 different functions.

1. If this button and short or long start button are kept pushing at the same time until shoulder press fully closes after neck and tail setting, shoulder will press start. Pressing time can be selected with short or long button.
2. If only this button is pushed in left sleeve setting, left cuff or left short sleeve is clamped. (The cuff is clamped when hand is released from the button or after the button is kept pushing more than 0.5 sec.)

Shoulder Press Indicator

Lamp of this indicator is turned ON while shoulder is closing. Lamp blinks during press action.

When press action finishes, lamp is turned OFF.

Large Short Sleeve Mode Button

When this button pushed, light of this button will be turned on and short sleeve clamp will move to front position (The tuck press is not done).

If you push this button again, light will be turned off and the machine will return to long sleeve mode.

Short Sleeve Mode Button

When this button is pushed, light of this button will be turned on and Short sleeve clamp will move to front position and close a little. (The tuck press is not done). If you push this button again, light will be turned off and the machine will return to long sleeve mode.

Rope Switch

This device is installed to protect the operator from access to the machine dangerous area.

When this rope is pushed, all operations will stop.

Pull rope switch lever to release lock and push reset button.

Operation Panel (Press navigation system)

Navigation about machine operation, setting change, function selection, test operation and so on are displayed on this panel.

Warm-up Mode

To prevent finishing quality down because of such as drain discharge or body wet, we recommend to process warm-up the machine at the beginning of the day.

STEP

When power is turned on, "STANDBY MODE" is displayed. (Screen 1) Push reset button.

Arm will close, it will be locked and the machine will initialize body position.

Then, "WARM-UP MODE" is displayed. (Screen 2) To start warm-up mode, push short or long start button and right start button at the same time. If you push reset button, screen advances to main menu.

Warm-up mode is performed in following step:

- 1: Blower box warm-up (WARM-UP IN PROGRESS STEP 1/5)

The machine heats blower box for 60 seconds. Remaining time is displayed. (Screen 3)

- 2: Body warm-up (WARM-UP IN PROGRESS STEP 2/5~5/5)

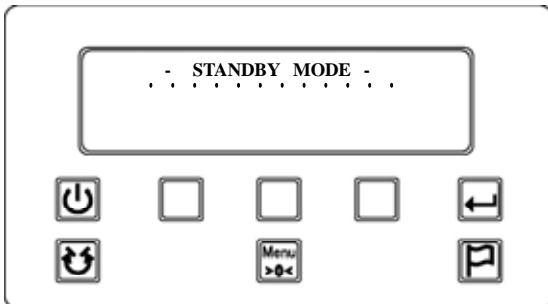
Body press closes and body is heated by ironing and blower for 180 seconds. (Screen 4)

This operation is performed in each body 2 times one after the other.

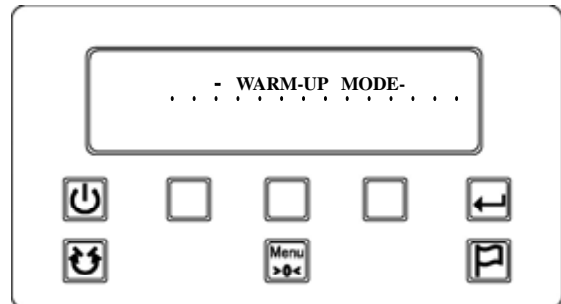
Push reset button to cancel warm-up.

When warm-up finishes, screen turns to main screen.

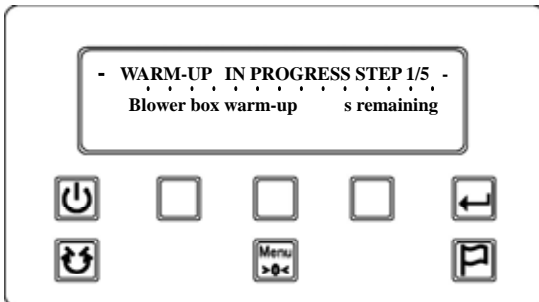
Screen 1



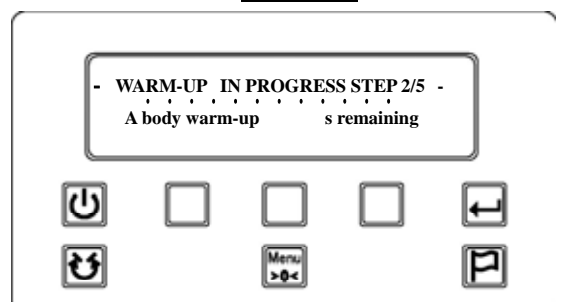
Screen 2



Screen 3



Screen 4



Password Setting

To manage menu button operation (volume setting, dip setting, manual test, password setting, information menu) 4digit password setting is possible. Set password in following process.

Keep the password you set with your responsibility.
Initial setting is "0000"(No password setting).

Process

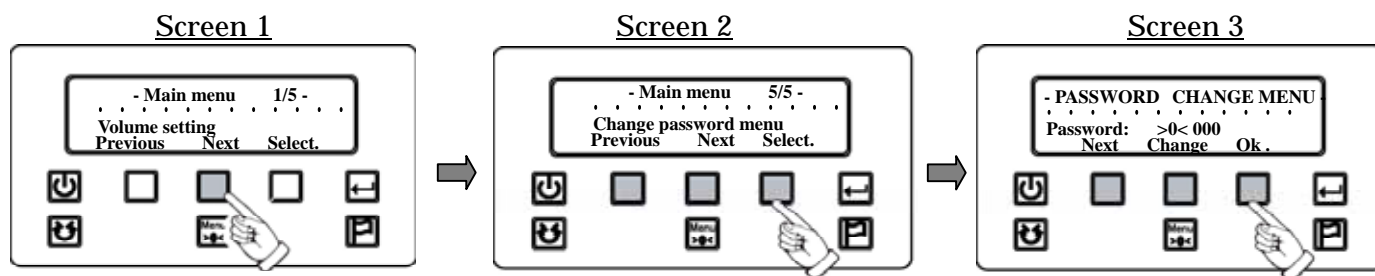
Push menu button Screen 1 「Main menu 1/5 :Volume setting」 is displayed.

Push next button 3times. Screen 2 「Main menu 5/5 :Change password menu」 is displayed.

Push Select button. Screen 3 「PASSWORD CHANGE MENU」 is displayed.

To change the value of present digit, push "change" button. To advance to the next digit, push "Next" button. To validate the password, push "OK" button.

Return to Screen 2 「Main menu 5/5 :Change password menu」
(If you want to disable the password function set password "0000".)
Push menu button. Return to previous screen.



Volume Setting

The following list of volume can be adjusted with this menu.



Push Menu button. Screen 1 “Main menu 1/5 :Volume setting” is displayed.

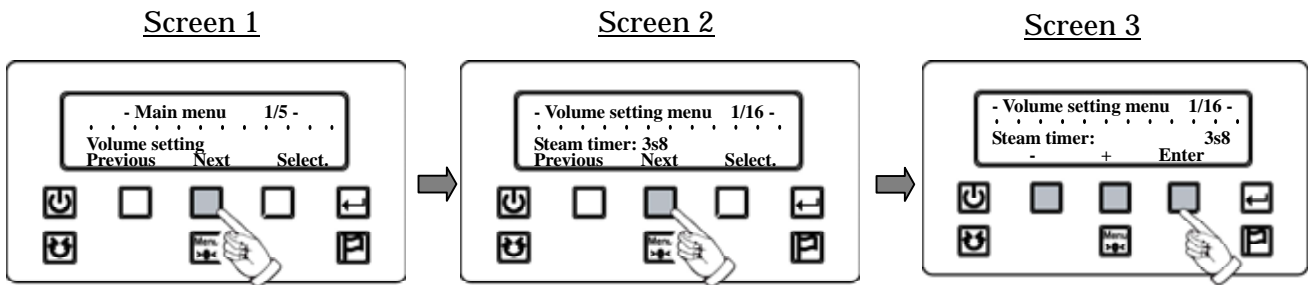
Push Select button. Screen 2 “Volume setting menu 1/16” is displayed.

Select volume with Next and Previous buttons and push select button.

Screen 3 “Volume setting menu” is displayed.

Adjust volume with “ - ”and “+” on the screen and push Enter button to save it. After screen returns to Screen 2.

Push menu button. Return to main screen.



No	Display	Contents	Factory Setting
1	Steam timer	The steam injection time during pressing.	3.8s
2	Long timer	The pressing time in long cycle mode.	30s
3	Short timer	The pressing time in short cycle mode.	20s
4	Shoulder mini long timer	Minimum shoulder press time in long cycle mode. Before be able to start rotation, the shoulder (if shoulder have been started) have to be ironed at least this time.	8.5s
5	Shoulder max long timer	Maximum shoulder press time in long cycle mode. If rotation is not started, shoulder press will end after this pressing time.	22s
6	Shoulder mini short timer	Minimum shoulder press time in short cycle mode. Before be able to start rotation, the shoulder (if shoulder have been started) have to be ironed at least this time.	5.0s
7	Shoulder max short timer	Maximum shoulder press time in short cycle mode. If rotation is not started, shoulder press will end after this pressing time.	18s
8	Long tuck press timer	Tuck press time in long cycle mode.	15.0s

9	Short tuck press timer	Tuck press time in short cycle mode.	15.0s
10*	Tuck press delay timer	Delay from body press moving to tuck press start. If this setting time is too short, tuck press starts before arm is fully open.	2.8s
11	Arm up time after tuck time	Arm up time after tuck to prevent shoulder wrinkle.	30ms
12	Side expander on time	Side expander open time. After the tail closes, the expander will open during this time and after becomes free to allow you to adjust the front of the shirt.	0.6s
13*	Blower delay time	Delay from body press moving to blower. If this setting time is too short, blower starts before press is fully close and shirt setting will be lost.	3.3s
14*	Delay open arm	Delay from body press moving to arm open start. If this setting time is too short, arm opens before press is fully close and shirt setting will be lost.	0.40s
15	Delay steam on	Delay from body press moving to steam injection so that steam injects all part of sleeve. If this setting is too short, steam injects when arm closes and it can result in finishing quality down.	2.5s
16	Sleeve release time	Delay from sleeve release to arm up after pressing. If this setting is too short, arm moves up before arm releases sleeve, and result in finishing quality down. Set this parameter for your more longer sleeve shirt.	0.90s
17	Delay short sleeve release time	Only the set up time can open a short-sleeve clamp first. If this function is turn off, set it as "0." A result of the short sleeve becomes good by opening short sleeve part before press.	1.0s

* This volume (10, 13, 14) must be adjust together.

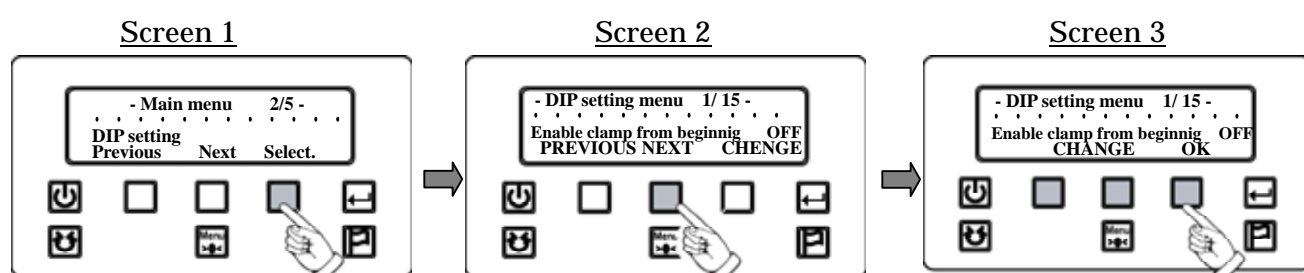
The normal setting.

- 1: Volume must be set so that Arm is fully open after press is fully close not to lost front setting.
Set this volume for the long sleeve shirt (small size).
- 2: Normally, blower must start when arm is open and tuck press must be close just before blower starts.

DIP Setting

Function selection of following list is possible in this menu.

1. Push menu button and push Next button on the screen 'Main menu 1/5'.
Screen 1 'Main menu 2/5 :DIP setting' is displayed.
2. Push select button Screen 2 'DIP setting 1/15' is displayed.
3. Select item with Next and Previous button and push Change button.
Screen 3 is displayed.
4. Change setting with "CHANGE" on Screen 3 and push OK button to save it.
Then screen returns to Screen 2.
5. Push menu button. Return to main screen.
Factory setting of the following list is * mark.



No			
1	"Enable clamp from beginning" High performance mode. This mode allows 2 operators to use the machine; the first one come with the shirt, put on the body, press one clamp button to close arm and adjust 1 sleeve. The other operator adjust the neck, tail on front position and 1 sleeve. We recommend not to use this mode.	OFF *	Cuff setting is made after tail clamp.
		ON	Cuff setting is possible in any setting time.
2	"Shoulder press imperative"	OFF *	Body press action is possible without shoulder press.
		ON	Before be able to start a rotation, the shoulder press must be started.
3	"Start sleeve mode" At the beginning of the setting, the sleeve type that will be selected by default is determined by this menu.	0 *	Same mode as previous setting.
		1	Long sleeve mode.
		2	Short sleeve mode.
		3	Large short sleeve mode.
4	"Tuck press" At the beginning of the setting, the tuck press mode that will be selected is determined by this menu.	0 *	Same mode as previous body.
		1	Tuck press ON.
		2	Tuck press OFF.

5	<p>“No clamp short sleeve” In case of short sleeve, you will have the possibility not to close the clamp to start the rotation. This will affect your sleeve finishing.</p>	OFF *	Short sleeve is clamped in short or large short sleeve mode.
		ON	Short sleeve is not clamped in short or large short sleeve mode.
6	<p>“No steam short sleeve”</p>	OFF *	Steam injection will be done in short sleeve mode.
		ON	Steam injection is canceled in short sleeve mode.
7	<p>“No steam large short sleeve”</p>	OFF *	Steam injection will be done in large short sleeve mode.
		ON	Steam injection is canceled in large short sleeve mode.
8	<p>“Power-on language”</p>	0 *	When the machine is turned on, language of display starts in English
		1	Korean
		2	French
		3	Spanish
9	<p>“Reset Parameter” The volume and the dip will be reloaded with factory setting.</p>	OFF *	Not initialization.
		ON	Return to initial setting.
10	<p>“Shoulder press pulse mode”</p>	OFF	The shoulder start buttons have to be kept until shoulder press is close.
		ON *	The shoulder start button dose not need to be kept until shoulder press is close.
11	<p>“Arm full open setting”</p>	OFF *	During neck and tail setting, the arm will be short open.
		ON	During neck and tail setting, the arm will be large open.
12	<p>“Volume lock on main screen” If this dip is set, the operator will not be able to change the volume from main screen. The setting is only possible by volume setting menu.</p>	OFF *	Volume setting is possible on main screen.
		ON	Volume setting is blocked on main screen.
13	<p>“Reset counter cover A” When you replace A body cover, turn this dip ON to reset the counter.</p>	OFF *	A body cover counter remains.
		ON	A body cover counter is reset. (After counter is reset, this dip returns to OFF automatically.)
14	<p>“Reset counter cover B” When you replace B body cover, turn this dip ON to reset the counter.</p>	OFF *	B body cover counter remains.
		ON	B body cover counter is reset. (After counter is reset, this dip returns to OFF automatically.)

Manual Test

The tests of following list can be performed with this menu.

Push menu button and push next button 2 times Screen 1 「Main menu 3/5 :Manual test」 is displayed.

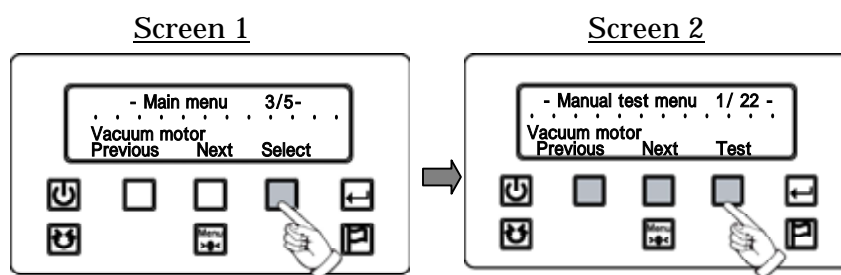
Push Select button Screen 2 「Manual test 1/22」 is displayed.

Select test item with Next or Previous button.

Push Test button. Test movement starts.

Push menu button. Return to main screen.

Mark * in test number means that you can adjust speed with speed controller according to the buzzer.



Test Number	Items
1	Vacuum motor (Keep pushing.)
2	Blower motor (Keep pushing)
3	Body rotation (A body/ B body)
4 *	Long sleeve arm (open / close)
5 *	Both long sleeve arm (open / close)
6 *	Short sleeve arm (open / close)
7 *	Both short sleeve arm (open / close)
8	Full sleeve arm (open / close)
9	Both full sleeve arm (open / close)
10 *	Tuck press (open / close)
11 *	Both tuck press (open / close)
12 *	Left cuff clamp (open / close)
13 *	Right cuff clamp (open / close)
14 *	Short sleeve clamp (front / rear)
15	Neck clamp (Keep pushing)
16	Tail clamp (open / close)
17	Tail clamp (up / down)
18 *	Expander (open / close)
19 *	Both expander (open / close)
20	Steam valve (keep pushing)
21 *	Body press (close / open)
22 *	Shoulder press (close / open)

Information Menu

Count of the machine parts and software version are displayed.

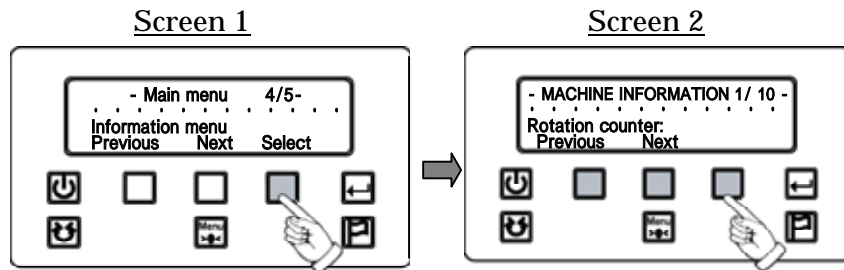
Following is item list.

Push menu button and push next button 3 times Screen 1 'Main menu 4/5 : Information' is displayed.

Push Select button Screen 2 'MACHINE INFORMATION 1/10' is displayed.

You can check each machine information with Next or Previous.

Push menu button. Return to main screen.



Test Number	Display	Contents
1	Rotation counter.	Total body rotation count until present is displayed. This counter can not be reset.
2	Press counter.	Total press count until present is displayed. This counter can not be reset.
3	Cover A counter.	A body press count since last A body cover replacement is displayed. Replace the cover about every 20000 times. After cover is replaced, reset the counter with DIP-13.
4	Cover B counter.	B body press count since last B body cover replacement is displayed. Replace the cover about every 20000 times. After cover is replaced, reset the counter with DIP-14.
5	Press A counter.	Total A body press count until present is displayed. This counter can not be reset.
6	Press B counter.	Total B body press count until present is displayed. This counter can not be reset.
7	IO software version.	Software version of IO board (Inside of Valve box) is displayed.
8	Main software version.	Software version of main board (Inside of control box) is displayed.
9	Running hour counter.	Total running time until present is displayed.(Hour) This counter can not be reset.

Error Message

When error occurs, following error message is displayed.
Take measure according to each following instruction.

Error message is classified into 3 categories.

Blocking error

To restart, turn the power off and turn the power on again. This error excludes safety error.

Safety error

This error occurs when sensor works to protect operator from danger. When emergency stop button has worked, turn the button right to release lock and push reset button. When safety rope has worked, pull rope switch lever and push reset button. For the other cases, push reset button to restart.

Normal error

Push reset button to restart. This error excludes safety error.

Error Number	Error Message	Cause and how to deal with it.	Type
1	24V Power Supply is too low, please check.	24V power supply is low. Check power supply.	Safety
2	Left emergency button activated, please check safety of machine, then reset emergency button.	Indicated emergency stop button is pushed. Turn the button right to release lock and push reset button. If it does not recover, check emergency stop button.	Safety
3	Right emergency button activated, please check safety of machine, then reset emergency button.		Safety
4	Safety rope activated, please check safety of machine, then reset safety rope.	Rope switch lever is working. Pull rope switch lever and push reset button.	Safety
5	Right body safety bar activated, please check safety of machine.	Body safety bar has worked. Check each body safety bar and push reset button.	Safety
6	Left body safety bar activated, please check safety of machine.		Safety
7	Air pressure too low, please check air inlet.	Air pressure is low. Check air inlet.	Safety
51	Machine is ready to start, push reset button to start.	24V power supply has been recovered. Push reset button.	Safety

52	Left emergency button has been activated, push reset button to re-start the machine.	Indicated emergency stop button has been worked. As lock is already released, push reset button to recover.	Safety
53	Right emergency button has been activated, push reset button to re-start the machine.		Safety
54	Safety rope has been activated, push reset button to re-start the machine.	Rope switch has been worked. As lock is already released, push reset button to recover.	Safety
55	Right body safety bar has been activated, push reset button to re-start the machine.	Indicated body safety bar has been worked. Check safety of surrounding and push reset button to recover. If it does not recover, check safety bar.	Safety
56	Left body safety bar has been activated, push reset button to re-start the machine.		Safety
57	Air pressure restored, push reset button to re-start the machine.	Air pressure returned to regulation value. Push reset button to recover.	Normal
101	No communication with IO board.	Check the cable between main board and IO board. (W121 and W122)	Blocking
102	IO board internal error A.	There is problem in IO board. Turn the power OFF and turn the power ON again. If error is still displayed, there is possibility of board break down. Change it.	Blocking
103	IO board internal error B.		Blocking
104	IO board internal error C.		Blocking
105	IO board validation signal lost.	Check the cable between main board and IO board. (W121 and W122)	Blocking
106	Main board output power supply not detected.		Blocking
107	IO board output power supply not detected.		Blocking
108	Error emergency circuit in trouble (24V).	Check wirings concerning each emergency stop switch.	Blocking
109	Error emergency circuit in trouble (LE).		Blocking
110	Error emergency circuit in trouble (RE).		Blocking
111	Error emergency circuit in trouble (RO).		Blocking
112	Error emergency circuit in trouble (RS).		Blocking
113	Error emergency circuit in trouble (LS).		Blocking
114	Error emergency circuit in trouble (RL).		Blocking
115	Error emergency circuit in trouble (LE).		Blocking
116	Error emergency circuit in trouble (IO).		Blocking
117	Internal error RT.		Turn the power OFF and turn the power ON again. If error is still displayed, there is possibility of board break down.
118	Internal error RI.	Blocking	

151	Foot-pedal (58) ON during initialization.	Each button keeps pushed when reset button is pushed to initialize the body in standby mode. Check if button is not pushed and button is worked well. Then push reset button.	Normal
152	Short sleeve select button (93) ON during initialization.		Normal
153	Large short sleeve select button (78) ON during initialization.		Normal
154	Left start button (76) ON during initialization.		Normal
155	Long timer button (53) ON during initialization.		Normal
156	Short timer button (51) ON during initialization.		Normal
157	Right start button (50) ON during initialization.		Normal
158	Tuck press cancel button (63) ON during initialization.		Normal

Error Number	Error Message	Cause and how to deal with it.	Type
202	A body front limit switch (61) not OFF in time.	During the rotation the sequence of the switch has not been respected or the rotation was too slow. The rotation sequence is that first the Limit switch (59 or 61) will turn OFF then Cylinder sensor (60) ON then OFF and the other limit switch (59 or 61) will turn ON. You have to check the indicated sensor and the Rotation parts (cylinder, valves, rotation air pressure regulator).	Blocking
203	B body front limit switch (59) not OFF in time.		Blocking
204	Half rotation sensor (60) not ON during rotation.		Blocking
205	Half rotation sensor (60) not OFF in time.		Blocking
206	A body front limit switch (61) not ON in time.		Blocking
207	B body front limit switch (59) not ON in time.		Blocking
208	A body front sensor (61) ON and B body front sensor (59) ON at the same time.		The Rotation sensors are in an abnormal combination. Check the sensors indicated and if something doesn't put the sensors in trouble.
209	A body front Sensor (61) ON and Half rotation sensor (60) ON at the same time.	Blocking	
210	B body front Sensor (59) ON and Half rotation sensor (60) ON at the same time.	Blocking	
211	A body left arm close limit switch (62) OFF during rotation.	During rotation, one of the arm was not detected close. You will have to check the indicated arm. The switch setting, the lock cylinder setting will need to be adjusted. Or the switch can be break down.	Blocking
212	A body right arm close limit switch (72) OFF during rotation.		Blocking
213	B body left arm close limit switch sensor (67) OFF during rotation.		Blocking
214	B body right arm close sensor (73) OFF during rotation.		Blocking

215	A body left arm lock sensor (65) OFF during rotation.	During Rotation, one of the Lock was not detected Lock. You will have to check the arm indicated. The sensor can be in trouble or the setting will need to be adjusted. Or the lock cylinder or his valve can be in trouble.	Blocking
216	A body right arm lock sensor (66) OFF during rotation.		Blocking
217	B body left arm lock sensor (69) OFF during rotation.		Blocking
218	B body right arm lock sensor (70) OFF during rotation.		Blocking
219	Shoulder Press upper sensor (82) OFF during rotation.	During the rotation, the shoulder press was not detected in position up (sensor 82 OFF). You must check the cylinder sensor, sensor setting, cylinder, and valve.	Blocking
220	Blower link disengage limit switch (86) OFF during rotation.	During rotation, the blower link was not detected in position disengaged (senor 86 ON). You will have to check the blower link sealing (if it is sticky), the cylinder, the cylinder valve, the limit switch SW86.	Blocking
221	Front press open sensor (55) OFF during rotation.	During the rotation, front or rear press was not detected in position open. You will have to check the sensor indicated, the cylinder and the cylinder valve.	Blocking
222	Rear press open sensor (56) OFF during rotation.		Blocking
223	Left shoulder guard (83) pressed during rotation.	During rotation, the indicated shoulder guard has been activated. Check if there was no collision and Check the indicated safety.	Blocking
224	Right shoulder guard (84) pressed during rotation.		Blocking
225	Left shoulder guard (83) has been activated during rotation.		Blocking
226	Right shoulder guard (84) has been activated during rotation.		Blocking
227	A left safety tuck (89) pressed during rotation.	One of the tuck press safety has been activated during rotation. Check if there was no collision with near machine or people.	Blocking
228	A right safety tuck (90) pressed during rotation.		Blocking
229	B left safety tuck (91) pressed during rotation.		Blocking
230	B right safety tuck (92) pressed during rotation.		Blocking
231	A left safety tuck (89) has been pressed during rotation.		Blocking
232	A right safety tuck (90) has been pressed during rotation.		Blocking
233	B left safety tuck (91) has been pressed during rotation.		Blocking
234	B right safety tuck (92) has been pressed during rotation.		Blocking
235	Error soft shoulder.	There is problem in software. Contact our company or dealer.	Blocking
236	Error soft blower link.		Blocking
237	Error soft body press.		Blocking
238	Error soft tuck.		Blocking

251	Body not in position, please rotate it.	The bodies are not in a position that allows the machine to position them. Rotate bodies a little with hands and push reset button.	Normal
252	Rotation too speed.	Rotation speed is too fast or slow. Check rotation pressure regulator and speed controller of rotation cylinder.	Normal
253	Rotation too slow.		Normal
254	A body front limit switch lost contact.	The bodies were in position but the limit state change to OFF. Check if there was no chock with near device.	Normal
255	B body front limit switch lost contact.		Normal
256	Error rotation can not initialize.	During the bodies initialization, the machine not success to reach one of the limit. Check the limit switch, the valve or the cylinder.	Normal

Error Number	Error Message	Cause and how to deal with it.	Type
302	Front sensor detect open during press time.	The status of the press sensor and the state of the valve is not compatible. Check the sensor, valve, and cylinder.	Blocking
303	Front press detect not open during open time.		Blocking
304	Rear body press detect open during pressing time.		Blocking
305	Rear body press detect close during open time.		Blocking
306	Body not in position during pressing.	During pressing one of the limit switch was not active. Check the limit switch	Blocking
307	Front body press not detect open in time.	The machine requests the press to open or close but indicate press is not detected open/close. Check the indicated sensor, cylinder and valves.	Blocking
308	Front body press not detect close in time.		Blocking
309	Rear body press not detect open in time.		Blocking
310	Rear body press not detect close in time.		Blocking

Error Number	Error Message	Cause and how to deal with it.	Type
401	A-body left arm lock sensor (65) signal lost.	The unlock valve is OFF but the arm is detected unlock (sensor OFF) check the lock cylinder, sensor and valve	Blocking
406	A-body right arm lock sensor (66) signal lost.		Blocking
411	B-body left arm lock sensor (69) signal lost.		Blocking

416	B-body right arm lock sensor (70) signal lost.		Blocking
402	A-body left arm lock sensor ON (65) during unlock time.	The Unlock valve is ON but the arm is detected lock (sensor ON) check the lock cylinder, sensor and valve.	Blocking
407	A-body right arm lock sensor ON (66) during unlock time.		Blocking
412	B-body left arm lock sensor ON (69) during unlock time.		Blocking
417	B-body right arm lock sensor ON (70) during unlock time.		Blocking
403	A-body left arm lock sensor (65) ON but arm sensor (62) OFF.	The arm is detected lock (sensor ON) but the arm is not detected close (sensor OFF). Check the indicated arm sensor and lock sensor. The lock cylinder and arm switch will need to be adjusted.	Blocking
408	A-body right arm lock sensor (66) ON but arm sensor (72) OFF.		Blocking
413	B-body left arm lock sensor (69) ON but arm sensor (67) OFF.		Blocking
418	B-body right arm lock sensor (70) ON but arm sensor (73) OFF.		Blocking
404	A-body left arm lock sensor (65) not ON in time.	The machine requests the lock cylinder to unlock the arm but the arm is detected lock (sensor ON). Check the indicated arm lock cylinder, sensor, and valve.	Blocking
409	A body right arm lock sensor (66) not ON in time.		Blocking
414	B-body left arm lock sensor (69) not ON in time.		Blocking
419	B-body right arm lock sensor (70) not ON in time.		Blocking
405	A-body left arm lock sensor (65) not OFF in time.	The machine requests the lock cylinder to lock the arm but the arm is not detected lock (sensor OFF). Check the indicated arm lock cylinder, sensor, and valve	Blocking
410	A body right arm lock sensor (66) not OFF in time.		Blocking
415	B-body left arm lock sensor (69) not OFF in time.		Blocking
420	B-body right arm lock sensor (70) not OFF in time.		Blocking
451	A-body left arm up sensor (62) signal lost.	The valves long sleeve arm up and short sleeve arm up are ON but the arm is detected down (Sensor OFF). Check the switch, arm, lock cylinder and if no device blocks it.	Normal
455	A-body right arm up sensor (72) signal lost.		Normal
459	B-body left arm up sensor (67) signal lost.		Normal
463	B-body right arm up sensor (73) signal lost.		Normal
452	A-body left arm up sensor (62) ON during arm open time.	The valve long sleeve arm down or short sleeve arm down is ON but the arm is detected in upper position (Sensor ON). Check the sensor, lock cylinder, and valves.	Normal
456	A-body right arm up sensor (72) ON during arm open time.		Normal
460	B-body left arm up sensor (67) ON during arm open time.		Normal

464	B-body right arm up sensor (73) ON during arm open time.		Normal
453	A-body left arm up sensor (62) not ON in time.		Normal
457	A-body right arm up sensor (72) not ON in time.	The machine requests the arm to move up, but the arm is detected down (Sensor OFF). Check the switch, arm, lock cylinder and if no device blocks it.	Normal
461	B-body left arm up sensor (67) not ON in time.		Normal
465	B-body right arm up sensor (73) not ON in time.		Normal
454	A-body left arm up sensor (62) not OFF in time.		Normal
458	A-body right arm up sensor (72) not OFF in time.	The machine request to the arm to move down, but the arm is detected in upper position (Sensor ON). Check the sensor, lock cylinder, and valves.	Normal
462	B-body left arm up sensor (67) not OFF in time.		Normal
466	B-body right arm up sensor (73) not OFF in time.		Normal

Error Number	Error Message	Cause and how to deal with it.	Type
502	Shoulder Sensor Up and Down ON (81,82) same time.	The shoulder press sensors are in an abnormal combination. Check the indicated sensors.	Blocking
503	Body not in position during shoulder press.	During the shoulder pressing, one of the limit switches was not active. Check the limit switches	Blocking
504	Shoulder safety guard by-passed.	The machine detects an abnormal condition, check the wiring, or the board need to be change.	Blocking
551	Shoulder up sensor not OFF in time during closing shoulder press. Check sensor, speed controller, cylinder, valve.	The Shoulder press sensors sequence is not respected or the movement is too slow. The shoulder sensor sequence is that shoulder press up sensor OFF, shoulder press down sensor ON, pressing time, shoulder press down sensor OFF, shoulder press up sensor ON. Check the indicated sensor, the cylinder and the valve.	Normal
552	Shoulder down sensor not ON in time during closing shoulder press. Check sensor, speed controller, cylinder, valve.		Normal
553	Shoulder down Sensor not OFF in time during opening shoulder press. Check sensor, speed controller, cylinder, valves.		Normal
554	Shoulder up sensor not ON in time during opening shoulder press. Check sensor, speed controller, cylinder, valve.		Normal
555	Shoulder up sensor OFF during shoulder press open. Check Sensor.	The Shoulder press valve and the shoulder sensor are not in good combination. Check the machine sensor, valve and cylinder	Normal
556	Shoulder down sensor OFF during press. Check sensor.		Normal
557	Shoulder Left Safety activate.	The indicated shoulder press guard is activated, check the machine and	Normal

558	Shoulder Right Safety activate.	activated, check the machine, and check the guard.	Normal
559	Shoulder left safety guard was activated.	The indicated shoulder press guard was activated, check the machine, and press reset to clear error.	Normal
560	Shoulder Right safety guard was activated.		Normal

Error Number	Error Message	Cause and how to deal with it.	Type
802	A tuck safety guard in trouble.	The machine detects an abnormal condition. Check the tuck safety wiring, and the IO board.	Blocking
803	A tuck safety guard bypass.		Blocking
804	B tuck safety guard in trouble.		Blocking
805	B tuck safety guard bypass.		Blocking
851	A body left tuck safety guard activated.	The indicated tuck safety guard is active. Check the machine, the safety guard.	Normal
852	A body right tuck safety guard activated.		Normal
855	B body left tuck safety guard activated.		Normal
856	B body right tuck safety guard activated.		Normal
853	A body left tuck safety guard was activated.	The indicated tuck safety guard was activated, check the machine and press reset to clear the error	Normal
854	A body right tuck safety guard was activated.		Normal
857	B body left tuck safety guard was activated.		Normal
858	B body right tuck safety guard was activated.		Normal

Error Number	Error Message	Cause and how to deal with it.	Type
902	Blower link not detect up in time.	The machine requests blower link to move up or down but the limit switch (SW86) status does not change. Check limit switch, cylinder, valve.) and air pressure.	Blocking
903	Blower link not detect down in time.		Blocking
904	Blower link down during up time.	The blower link valve sate and switch status are in compatible combination. Check limit switch (SW86), cylinders and valve.	Blocking
905	Blower link not down during down time.		Blocking
906	Blower link up and body not in position.	During blower time, one of the limit switches was not active. Check the limit switches	Blocking

907	Vacuum breaker safety corrupted.	There is problem in vacuum motor breaker.	Blocking
908	Blower breaker safety corrupted.		Blocking
951	Breaker vacuum motor off.	The Vacuum breaker has trip out. Check the vacuum motor (Temperature...) and if all is normal, turn on vacuum motor breaker.	Normal
952	Breaker blower motor off.	The blower breaker has tripped out. Check the blower motor (Temperature) and if all is normal, turn on vacuum motor breaker.	Normal
953	Breaker vacuum motor reset.	The indicated breaker has been turn on push reset button to clear error.	Normal
954	Breaker blower motor reset.		Normal

