6 Specifications

6.1 Function Capacity

A) Available PCB Sheet Width

RY-501, 503, 505, 506E, 320～635 [mm]

RY-581, 583, 585, 586E, 500～760 [mm]

Thickness 0.2～6.0 [mm]

(With roll vertical motion mechanism)

0.1～6.0 [mm]

B) Line Speed Ranges 0.0～9.0/～18.0/0～30.0 [m/min]

C) Height of Passing Line(Standard) 950±50 [mm]

D) Flow Direction Left to Right/Right to Left

6.2 Installed Utilities

E) Clean Rolls Width 650/800 [mm]

Hardness 23 (CR-065/080WS-S)

30 (CR-065/080WN-S)

F) Adhesive Tape Rolls Width 650/800 [mm]

Length 15 [mm]

G) Assortments of Clean Rolls and Adhesive tape rolls

Models	RY-501E RY-581E		RY-503E RY-583E		RY-505E RY-585E		RY-506E RY-586E	
Upper Ad.T. Rls.	1	○	2	○○	2	○○	1	○
Upper Clean Rls.	1	●	2	●●	2	●●	2	●●
Lower Ad. T. Rls.	1	●			2	●●	2	●●
Lower Ad. T. Rls.	1	○			2	○○	1	○

H) Static electricity eliminator bars at the Entrance and the Exit

I) Run-state Tape Free mechanism

J) Remote Control terminal units

6.3 Options

K) Clean Roll vertical motion mechanism

L) Passing mechanism

M) Signal Light Tower(1-3colors with/without siren)

N) Panel Counter

O) Sliding Base Unit(For the models of RY-503E,505E,506E)

P) Openable Side Covers

Q) Input/Exit Conveyors

R) Pressure Reducing Device

S) Clean Roll Spacing Block

6.4 General Specifications

T) Standard Input 230/240 1φ [AC V]

50/60 [Hz]

U)	Power Rate	160	[VA]
V)	Input air pressure	3.0	[kg/cm²]
W)	Air Consumption	10(maximum)	[l/min]
X)	Noise Level	less than 70	[dB]
Y)	Dimensions and Weights		

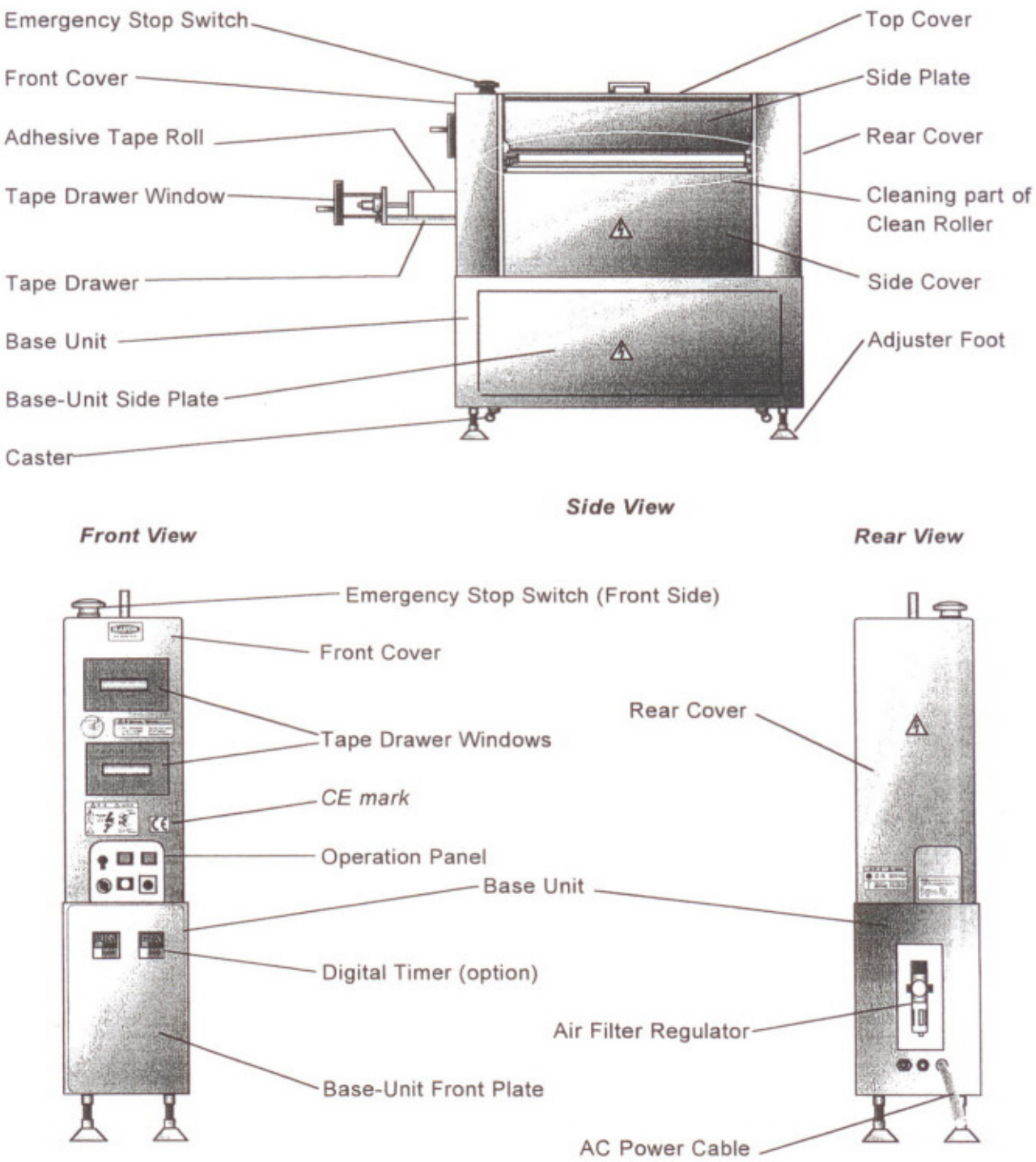
Models	RY-501E	RY-503E	RY-505E	RY-506E
Width (Travel)	920 mm (+830 mm)	920 mm (+830 mm)	920 mm (+830 mm)	920 mm (+830 mm)
Depth	232 mm	316 mm	316 mm	268 mm
Height	1125±50 mm	1125±50 mm	1125±50 mm	1125±50 mm
Weight(approx.)	69 kg	79 kg	84 kg	79 kg

Models	RY-581E	RY-583E	RY-585E	RY-586E
Width (Travel)	mm (+830 mm)	mm (+830 mm)	mm (+830 mm)	mm (+830 mm)
Depth	232 mm	316 mm	316 mm	268 mm
Height	1125±50 mm	1125±50 mm	1125±50 mm	1125±50 mm
Weight(approx.)	-- kg	-- kg	-- kg	-- kg

7 Elements and Names

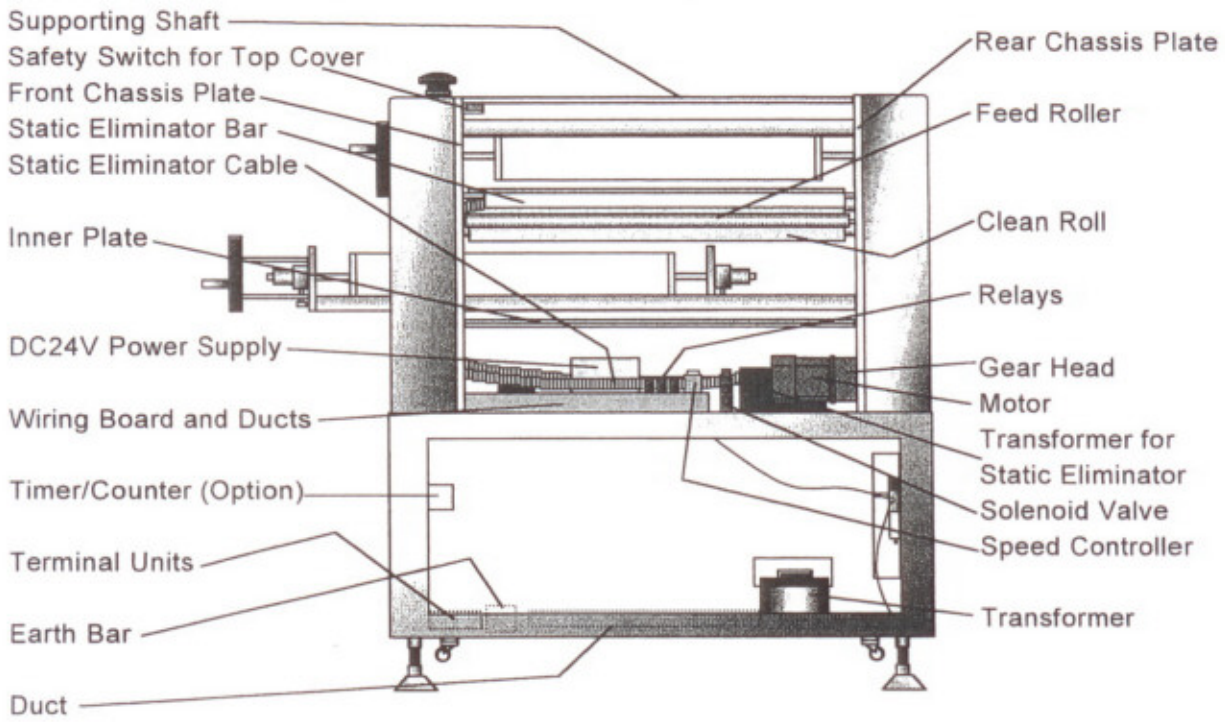
7.1 General view

Fig. 4 General view of RY-506E



7.2 Inner View

Fig. 5 Inner View of RY-506E



7.3 Options

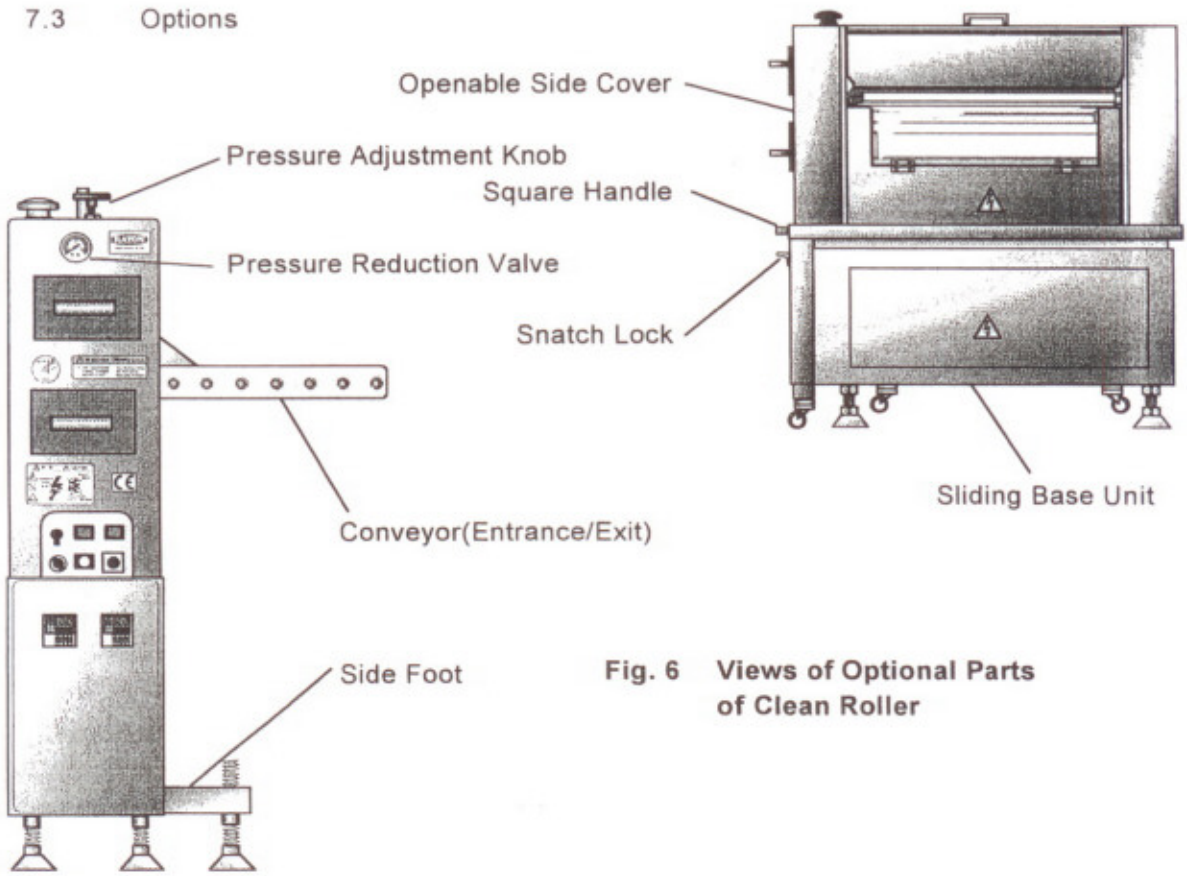


Fig. 6 Views of Optional Parts of Clean Roller

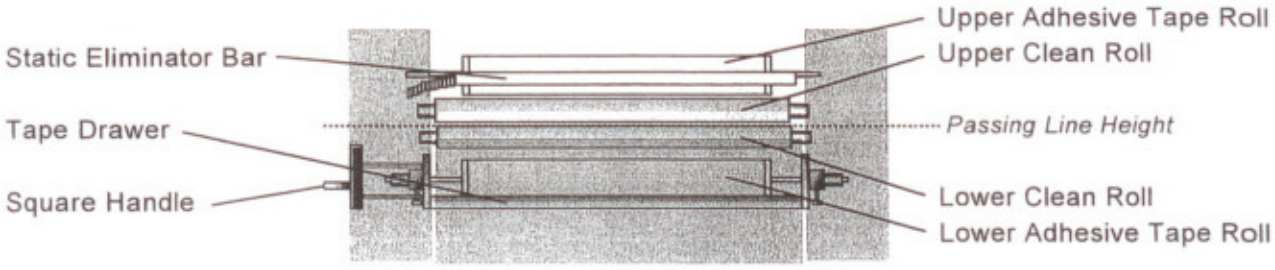
8 Functions of each part of the machine.

In this chapter, functions of each part of the machine are explained.

8.1 Cleaning Part

8.1.1 General View

Fig. 7 Elements of cleaning part of RY-506E



8.1.2 Functions of each section

A) Clean Roll

- Clean Roll rotates and directly touch the surface of PCB which comes in, and as a result, collects dust and particles from there.
- Adhesive tape rolls clean it as long as the machine is running, therefore, the PCB is touched by cleaned surface of Clean Roll all the time.

For selections of Clean Rolls, see *5.5.1 Clean Rolls*

B) Adhesive tape roll

- Adhesive tape roll collects the dust and particles on the surface of Clean Roll.
- It is pressed to Clean Roll while the machine is running.
- When the surface of Adhesive tape roll gets dirty, it can be purged by peeling one turn and cutting off the dirty part of the tape sheet.

For purge of Adhesive tape roll sheet, see also *11.2 Tape purge operation*

C) Static Eliminator bar

- *Simco* Static Eliminator bars are installed at the entrance and exit of the machine.
- The bars are powered with 7000 V by its transformer installed inside the machine, produce ionized air and eliminate the static electricity on the surface of the PCB while the machine is running.
- The bars function as static eliminator and do not have an anti-static effect.

CAUTION: ***Do not touch the bars.***
Grounding is absolutely necessary for the unit to have effects.

D) Tape Drawer

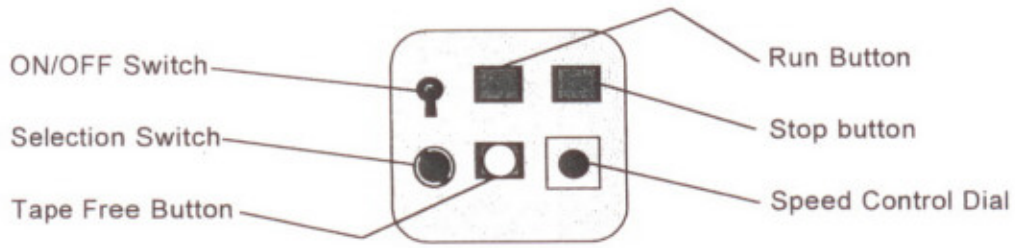
- Tape Drawer can be drawn in the front direction, and makes it easy for the operator to renew or replace the Adhesive tape roll.
- There installed a magnetic catch and an interlock switch, and without closing the Tape Drawer completely, the machine does not start. (EXCEPT in case that the TAPE FREE button is pushed.)

8.2 Operation Panel

On the Operation Panel are installed several switches and buttons to operate the machine.
The Emergency Stop button is on the top of Front Cover.

8.2.1 General View

Fig. 8 Operation Panel



8.2.2 Definition of operation states

Before stating the functions of each element on the Operation Panel, definitions are given to various states that are realized or altered by each switch and button on the panel.

A) OFF state
- The state in which the machine is not powered.
- Realized by selecting the ON/OFF switch *OFF*.
- Starting is not allowed
- No illumination of push-button is lit.

B) ON state
- The state in which the machine is powered.
- Realized by selecting the ON/OFF switch *ON*
- Either Run Button or Stop button is illuminated respective colour.
- The machine is either in the Stop state or the Run state.

C) Stop state
- The state in which the machine is powered, but allowed to start to run, i.e. not running
- It follows the OFF state after selecting the ON/OFF switch *ON*.
- From the Run state, it is realized by pushing the Stop button.

D) Run state
- The state in which the machine is running.
- Realized from the Stop state by pushing the Run Button

- If the drawer is opened, the machine cannot be brought into this state so long as it is in the normal state. (not TAPE FREE state.)
- In the run state, the static eliminator unit is working.

E) Normal state
- The state in which the TAPE FREE mechanism is not activating.

F) TAPE FREE state
- The state in which the TAPE FREE mechanism is activating.
- Realized by pushing the TAPE FREE button.
- When the machine is in ON state and TAPE FREE button is actuated, the TAPE FREE button is lit yellow.
- When the machine is in TAPE FREE state, the air pressure to press the Adhesive tape rolls to the Clean Rolls is released, and at the same time, the interlocking circuit for the Tape Drawers becomes inactive. As a result, the operator can pull the Tape Drawers to the front even the machine is in the run state.

G) Emergency Stop state
- The sort of the Stop state in which the Emergency Stop function is actuated.
- No illumination of push-button is lit
- Realized by pushing the Emergency Stop switch, and releasing is only possible by twisting the Emergency Stop button.
- It will not allow the machine to start until it is released.

8.2.3 Functions of each element

Functions of each element on the Operation Panel are explained below.

A) ON/OFF switch
- An alternate switch
- By selecting the ON/OFF switch OFF, the machine is brought into OFF state.
- By selecting the ON/OFF switch ON, the machine is brought into ON state.
- Selecting the ON/OFF switch ON only does not bring the machine into the Run state, in other words, it does not start the machine itself.

B) Stop button
- A momentary switch.
- By pushing the Stop button, the machine is brought into the Stop state.
- Pushing the Stop button does not bring the machine into the Stop state from the Run state when the outer circuit controls the machine.

C) Run Button
- A momentary switch.
- By pushing the Run Button, the machine is brought into the Run state from the Stop state.
- Pushing the Run Button does not bring the machine into the Run state form the Emergency Stop state.

- Pushing the Run Button does not bring the machine into the Run state form the Stop state when either or both of the Tape Drawer is left open.

D) TAPE FREE button

- An alternate switch
- By pushing the TAPE FREE button, the machine is brought into the TAPE FREE state. And it will never be brought back into the Normal state again until the TAPE FREE button is pushed again and released.
- When the TAPE FREE button is actuated the button is illuminated yellow, if the machine is in the ON state.

E) Speed control dial

- By turning the Speed control dial, the speed of rotation of Clean Rolls (i.e. the line speed) can be adjusted.
- The scales behind the Speed control dial are not necessarily in proportion to the actual increase/decrease of the speed of rotation of Clean Roll.

F) Selection Switch

- When the machine is equipped with such options as Clean Roll vertical motion mechanism, this switch can select whether the function is active or inactive.

8.3 Emergency Stop Switch

8.3.1 General View

Fig. 9 Emergency Stop Switch

For the position of the Emergency Stop Switch, see also *7.1 General view*

8.3.2 Function

- Pushing the Emergency Stop switch brings the machine into the Emergency Stop state. (See.*8.2.2G) Emergency Stop state*)
- Once the Emergency Stop Switch button is pushed, the button will remain in the actuated position until the latch is released by a clock-wise turning of the same button.

8.4 Level adjuster feet and casters

8.4.1 General View

For general view of level adjuster feet and casters, see *7.1 General view*

8.4.2 Function

- Casters will facilitate short distance travel of the machine.
- Level adjuster feet enable the adjustment of passing line height of the machine.

For the method of adjustments, see *9.2 Installation procedures*

8.5 Functions of Remote Control terminal Units

8.5.1 Introduction

At the bottom of the base unit in the front side, remote control terminal units are installed, which are to be connected to other machines to exchange signals.

- OK/NG signals are output from RY-500E
- P1 and P8 are input terminals for remote control

Functions available with these units are:

- INPUT: Start and stop the machine.
- OUTPUT: Send normally closed signal while the machine is running.
  Send normally open signal while the machine is running.

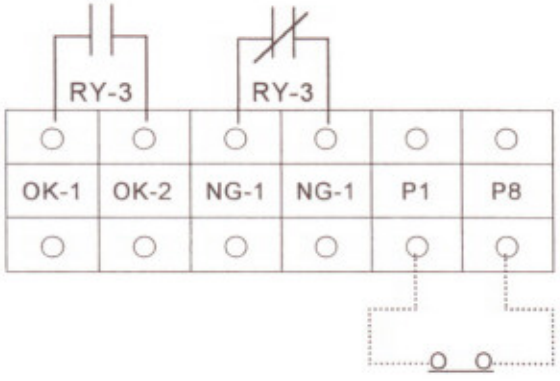
Use these signals to control the peripheral machines synchronously.

8.5.2 Connection

Connect the cable for remote control to the terminals below through the control line inlet.

Run state: RY-3 is ON

Fig. 10 Remote Control Conneciton



CLOSE: Run State
OPEN: Stop State

This circuit is for the standard model. When options are applied to the machine, please check the diagram in the circuit diagram.

8.5.3 Function

A) Terminals P1/P6(Remote Control INPUT terminals)

- Closing P1 and P6 brings the machine into the Run state.