

TECHNICAL DOCUMENTATION

ORBIT R



Date	Revision	Detailed revision reasons	Issue-Checked by
02/2022	00	First issue – Temporary	<i>Fabrizio BALDININI</i>
05/2022	01	Parameters and Alarms update	<i>Fabrizio BALDININI</i>



Norm. Tecn.
60.2.111_00

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ORBIT R

May 2022

Rev.01

ENGLISH

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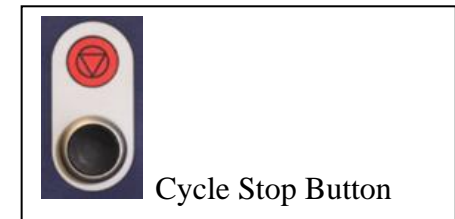
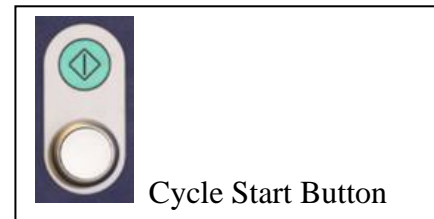
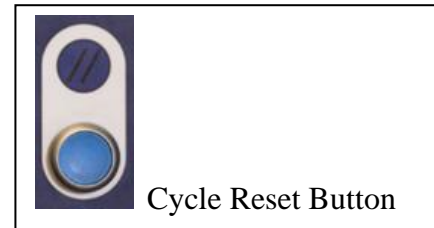
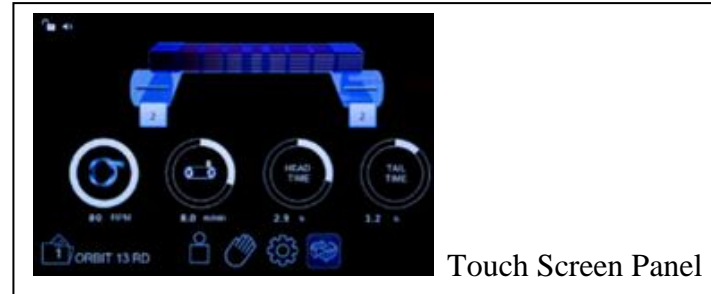
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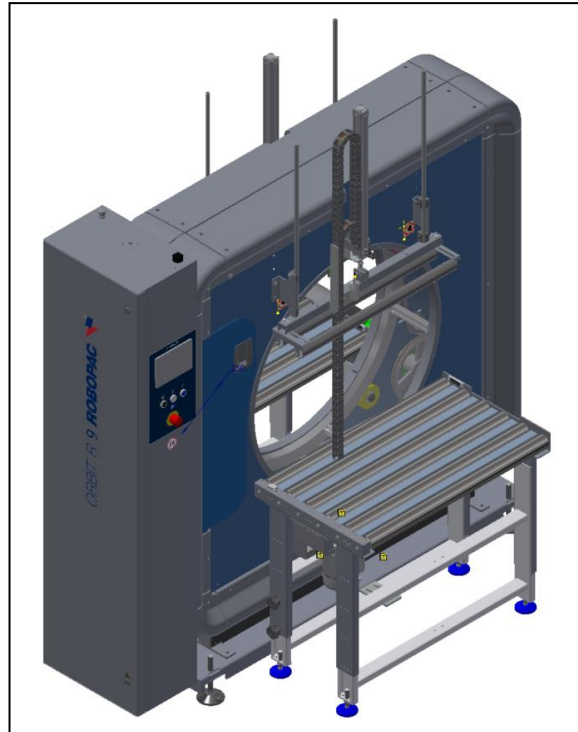
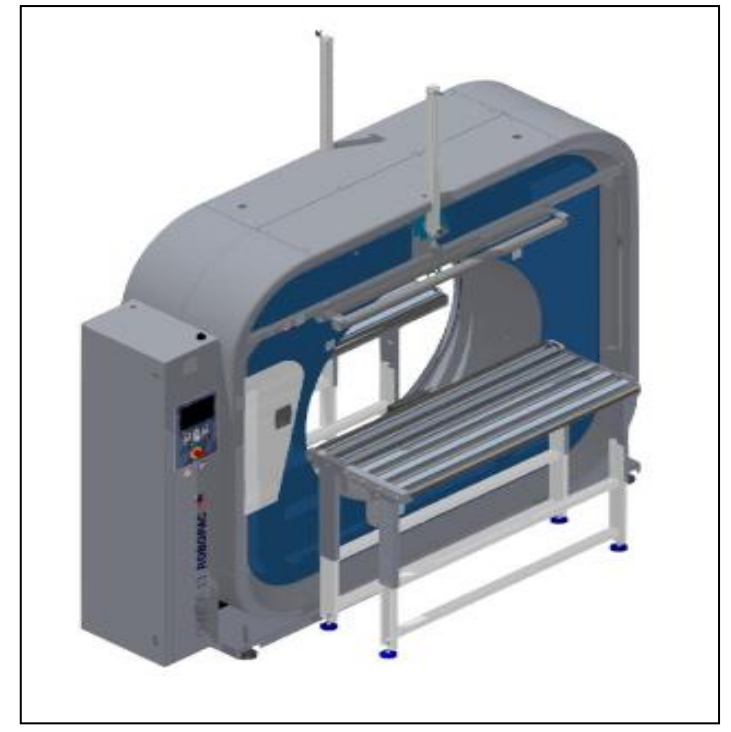
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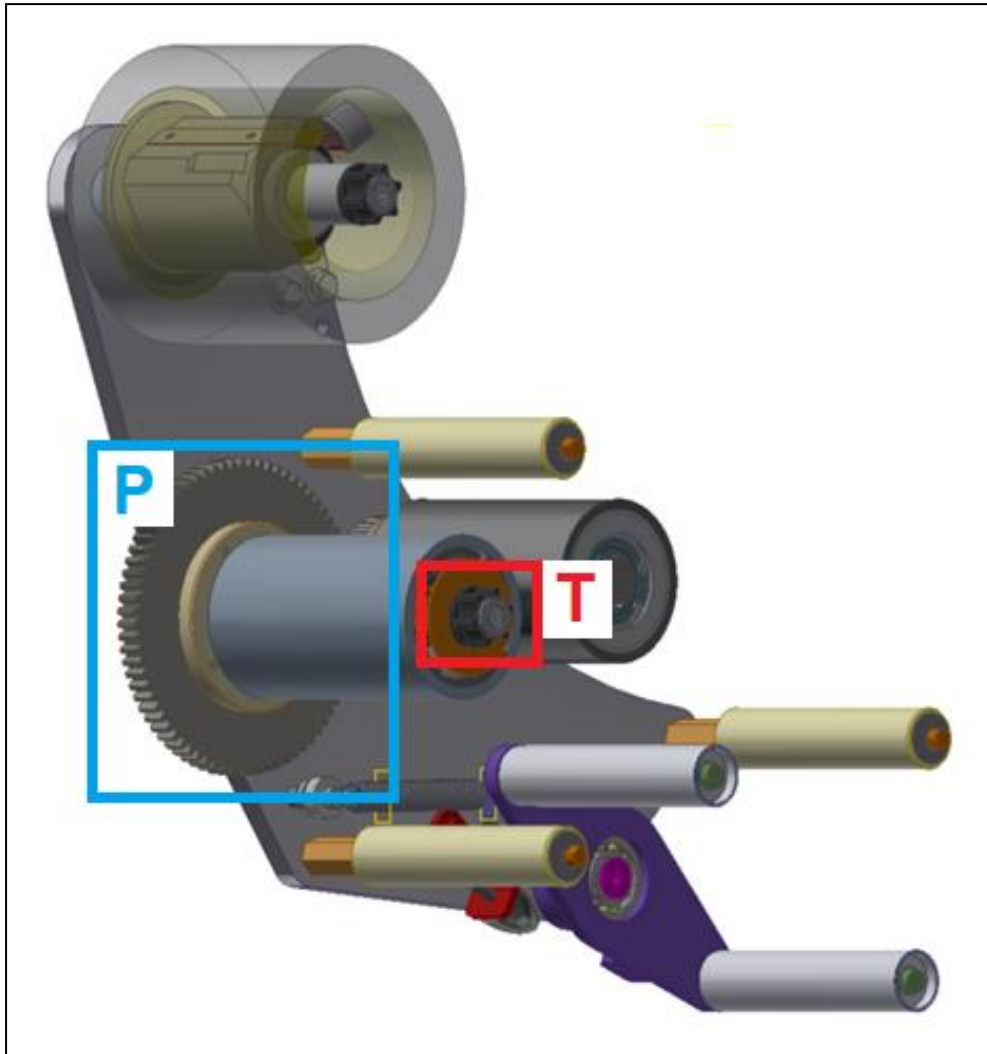
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OPERATOR PANEL



AVAILABLE MODELS**ORBIT R5 – 125****ORBIT R5 – 250****ORBIT R5 – 250 DR****ORBIT R9 – 125****ORBIT R9 – 250****ORBIT R9 – 250 DR****ORBIT R13 – 250****ORBIT R13 – 250 DR**

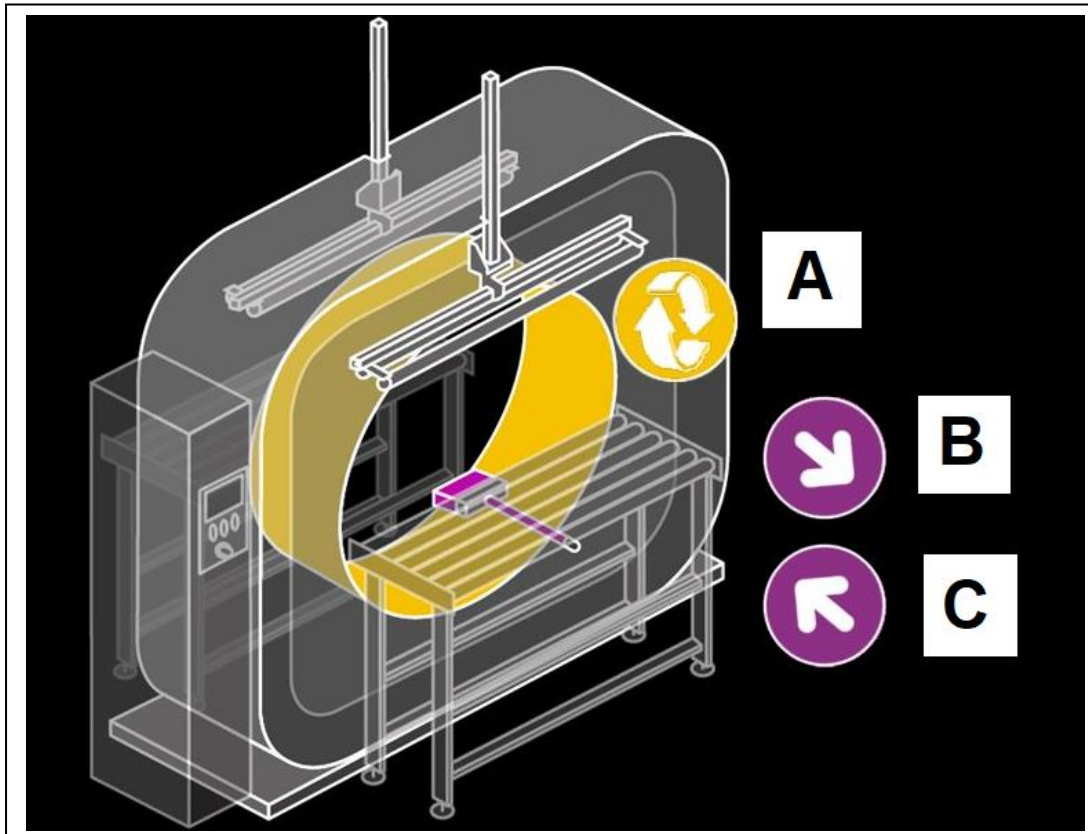
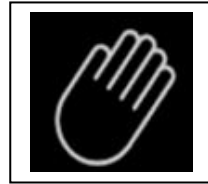
PRESTRETCH CARRIAGE standard 150%

P = **FIXED Prestretch (standard 150%)**

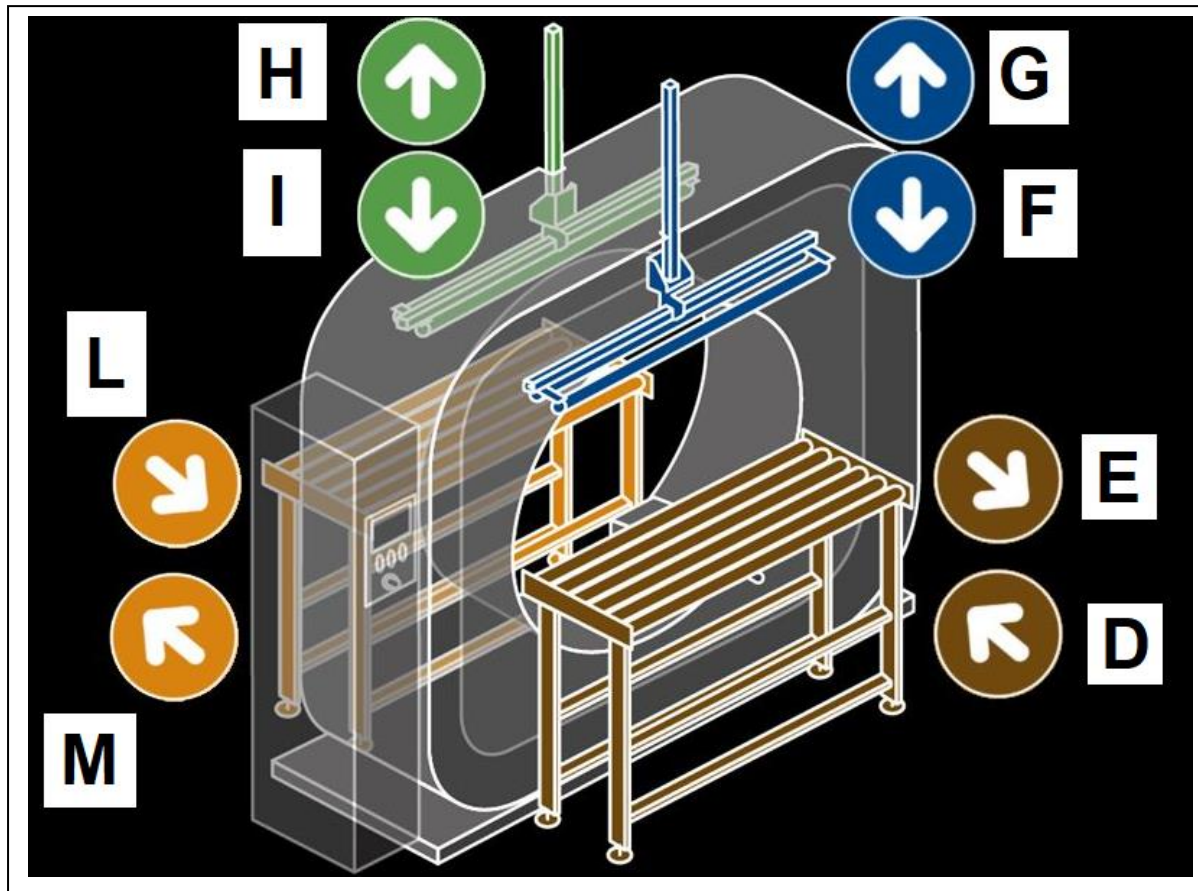
T = **FILM TENSION adjustment**

MANUAL OPERATION

Press manual operation button



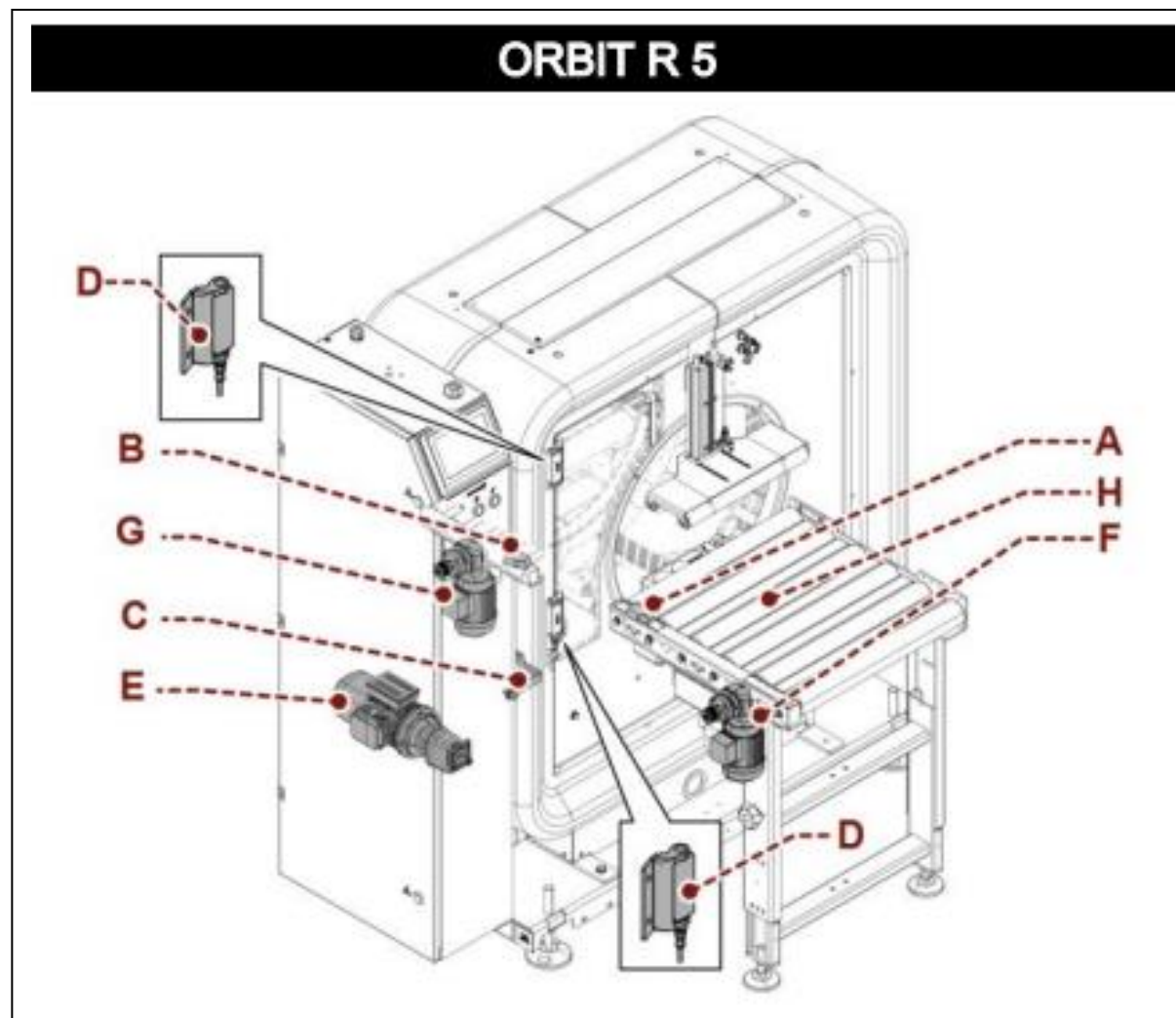
- A** RING ROTATION
- B** CLAMP BACKWARD
- C** CLAMP FORWARD



- D** INPUT CONVEYOR FORWARD
- E** INPUT CONVEYOR BACKWARD
- F** INPUT PRESSOR DOWN
- G** INPUT PRESSOR UP
- H** OUTPUT PRESSOR UP
- I** OUTPUT PRESSOR DOWN
- L** OUTPUT CONVEYOR BACKWARD
- M** OUTPUT CONVEYOR FORWARD

ELECTRICAL DEVICES DESCRIPTION

- A) Photocell (B1)**
It detects product presence on the infeed conveyor.
- B) Photocell (B2)**
It detects product presence on the outfeed conveyor.
- C) Timing sensor (SQ3)**
It detects the rotary ring in the start cycle position (machine set up).
- D) Microswitch (SQ1)**
The machine stops when the guard is opened.
- E) Electric motor**
It activates the rotary ring.
- F) Electric motor**
It activates the infeed conveyor.
- G) Electric motor**
It activates the outfeed conveyor.
- H) Sensor**
It detects the clamp in the "back" position.



A) Photocell (B1)

It detects product presence on the infeed conveyor.

B) Photocell (B2)

It detects product presence on the outfeed conveyor.

C) Timing sensor (SQ3)

It detects the rotary ring in the start cycle position (machine set up).

D) Microswitch (SQ1)

The machine stops when the guard is opened.

E) Electric motor

It activates the rotary ring.

F) Electric motor

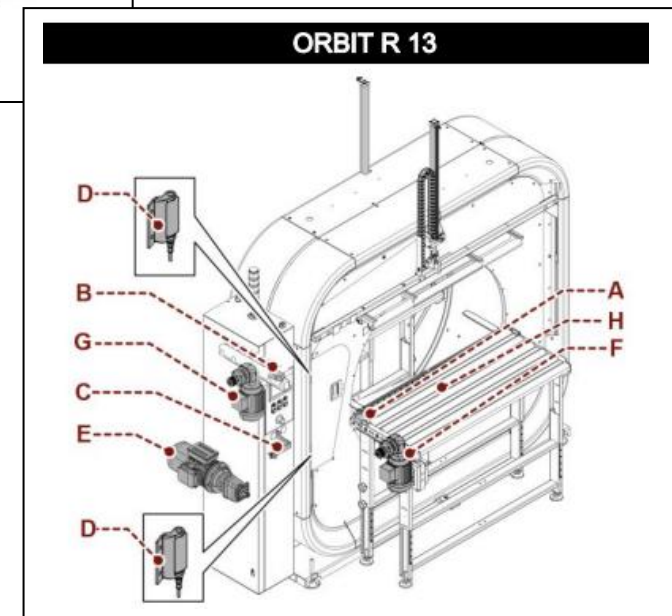
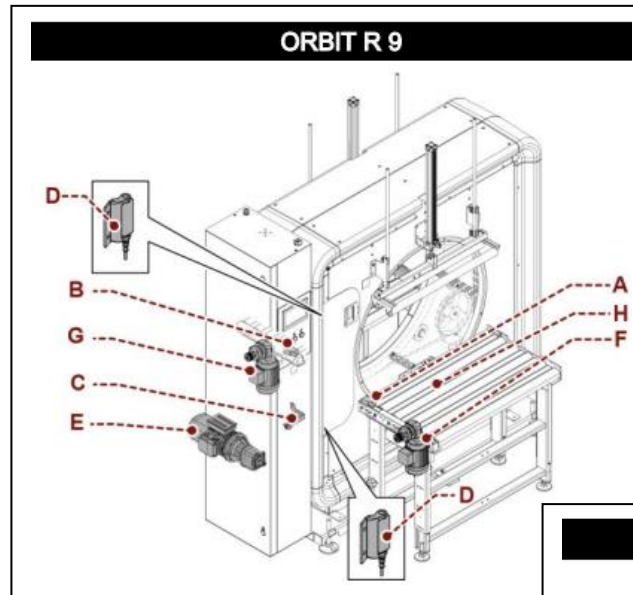
It activates the infeed conveyor.

G) Electric motor

It activates the outfeed conveyor.

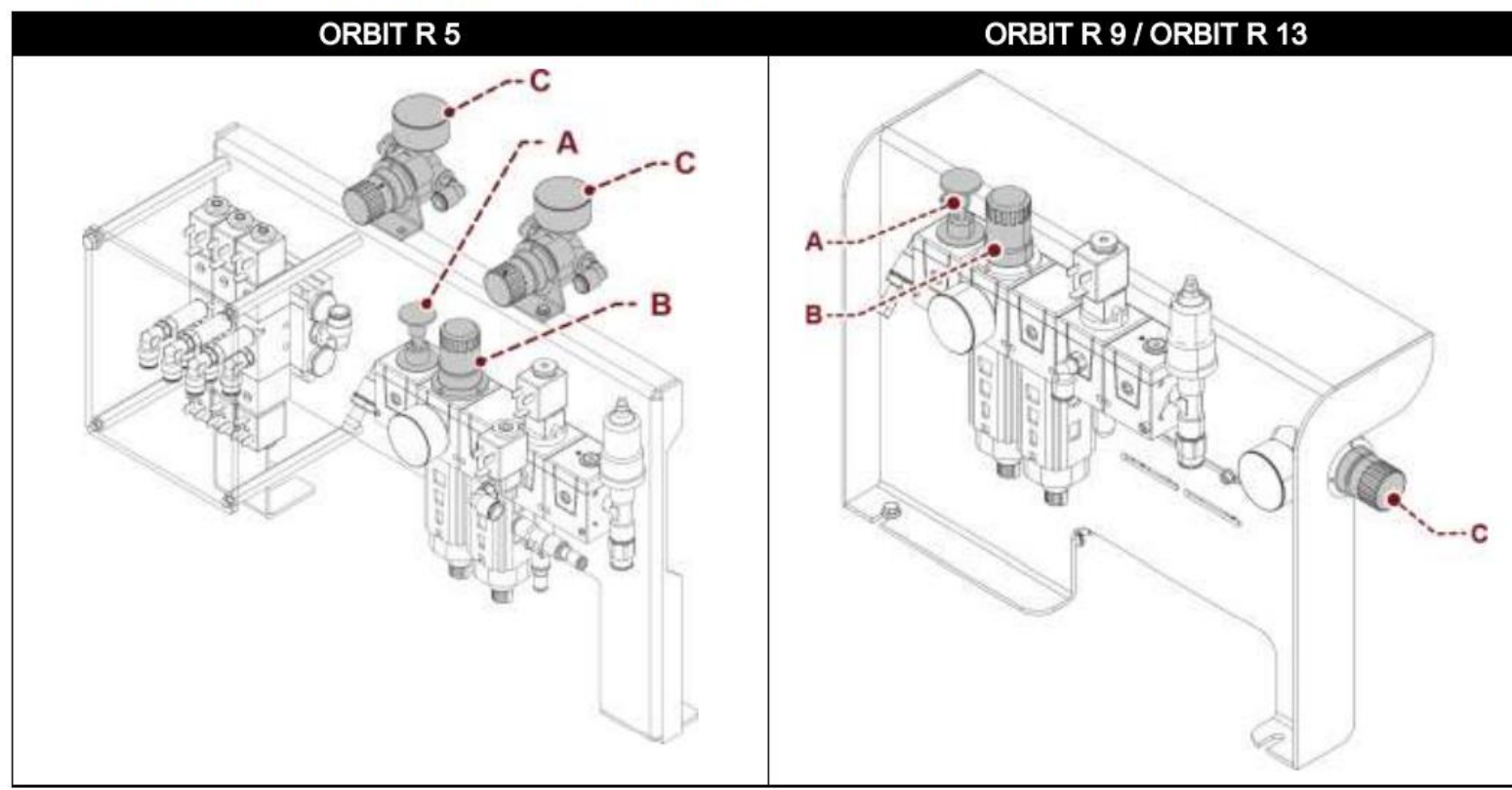
H) Sensor

It detects the clamp in the "back" position.



DESCRIPTION OF PNEUMATIC DEVICES

- A) Tap**
To eliminate the pneumatic pressure inside the machine.
- B) Pressure regulator with filter and pressure gauge**
To adjust the general pressure of the pneumatic system.
Turn the knob to change the pressure values indicated on the pressure gauge.
- C) Pressure regulator with pressure gauge**
To adjust the pressure of the infeed/outfeed pressers.



TECHNICAL SPECIFICATIONS

			Power	Absorption	Air consumption	Max pressure
			kW	A	NI/cycle	bar
				Voltage (V)		
				400 + N three-phase		
Machine	Reel					
ORBIT R 5	STD clamp	125	1.6	2.7	3.5	6
	SKID clamp		1.8		2.5	
	STD clamp	250	1.7	3.2	5.5	6
	SKID clamp		2		2.5	
	DR - STD clamp		1.7		9	
ORBIT R 9	STD clamp	125	1.7	3.2	13	6
	SKID clamp		1.9		12	
	STD clamp	250	1.7	3.2	15	6
	SKID clamp		1.9		12	
	DR - STD clamp		1.7		18	
ORBIT R 13	STD clamp	250	2.6	5	21	6
	SKID clamp		2.8	5	18	
	DR - STD clamp		2.6	5	25	

PRODUCT DIMENSIONS

Machine	Reel	Minimum size of product that can be processed (mm)
ORBIT R 5	125	50 x 50 x 600 *
	250	50 x 50 x 725 *
	250 (double reel)	50 x 50 x 1000 *
ORBIT R 9	125	90 x 90 x 625 *
	250	90 x 90 x 750 *
	250 (double reel)	90 x 90 x 1000 *
ORBIT R 13	250	150 x 150 x 800
	250 (double reel)	150 x 150 x 1000

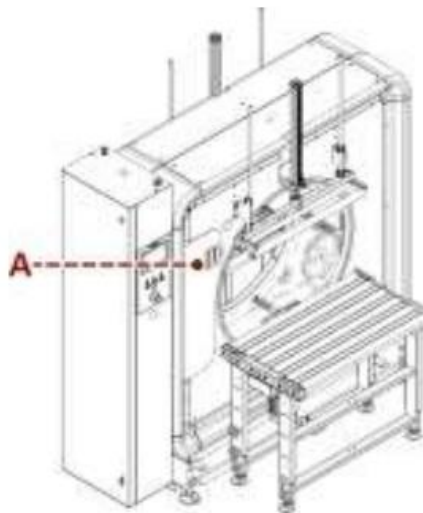
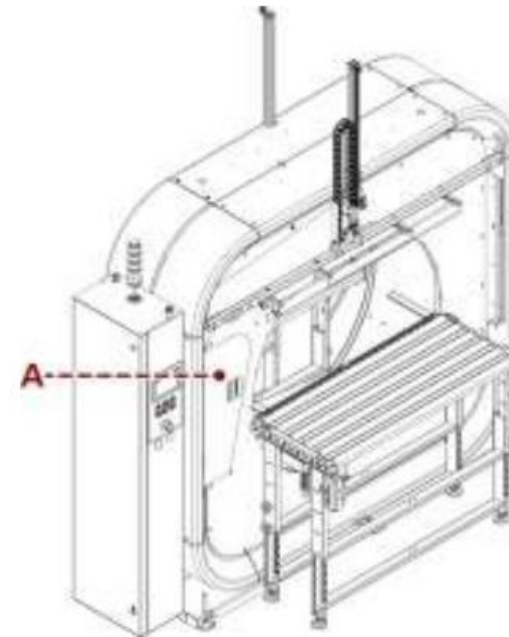
(*): Measures referring to machine basic configuration.

REEL REPLACEMENT

1. Open the door (A) to access the reel.

**Important**

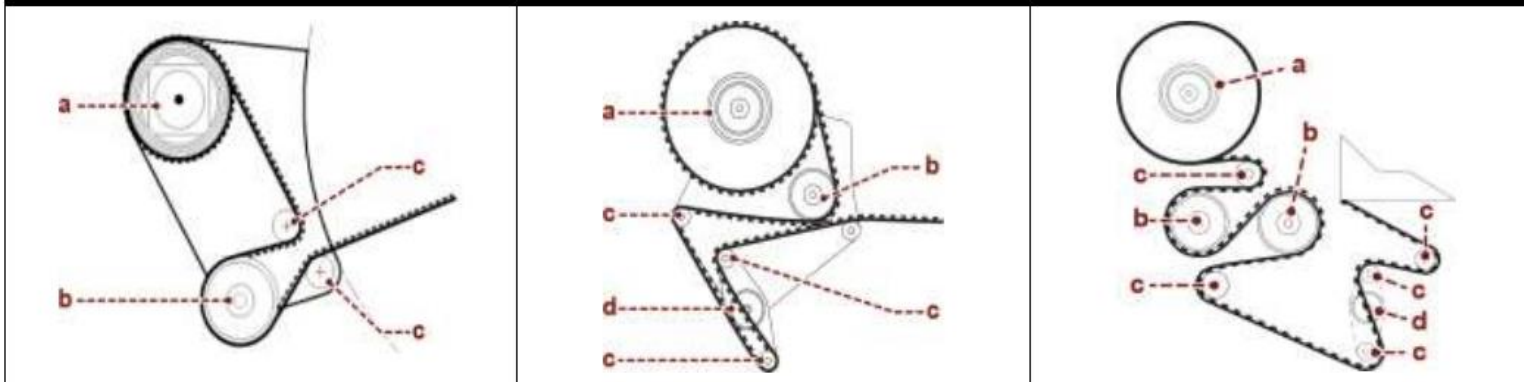
The adhesive side of the film must always face the product to be wrapped.

ORBIT R 5**ORBIT R 9****ORBIT R 13**

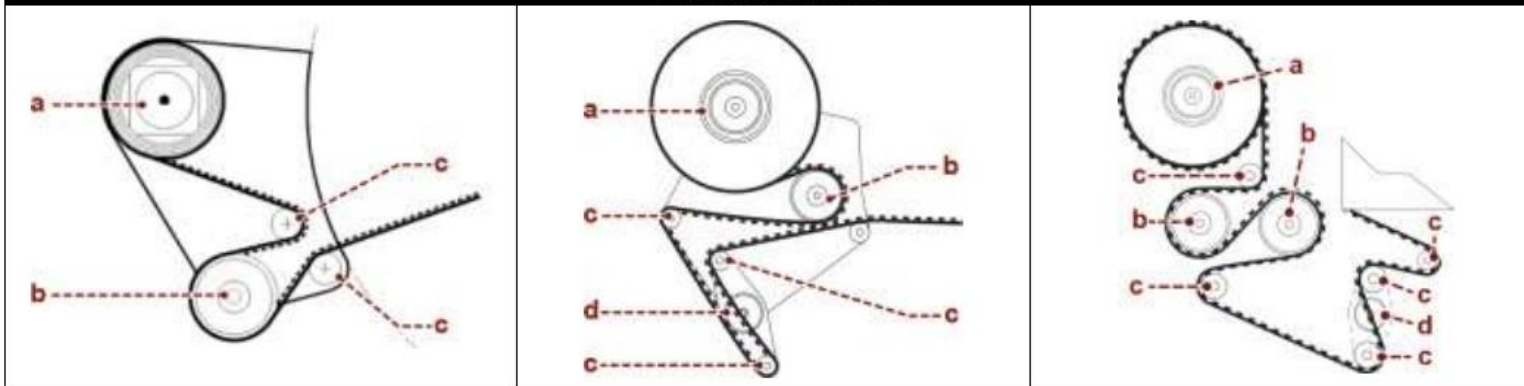
2. Insert the reel on the roller following the diagram in the figure.
The hatching shows the adhesive side (internal or external) of the film.
Unwind the film out of the protection ring.

- a) Reel carriage roller
- b) Roller with clutch
- c) Idler rollers
- d) Dancer roller

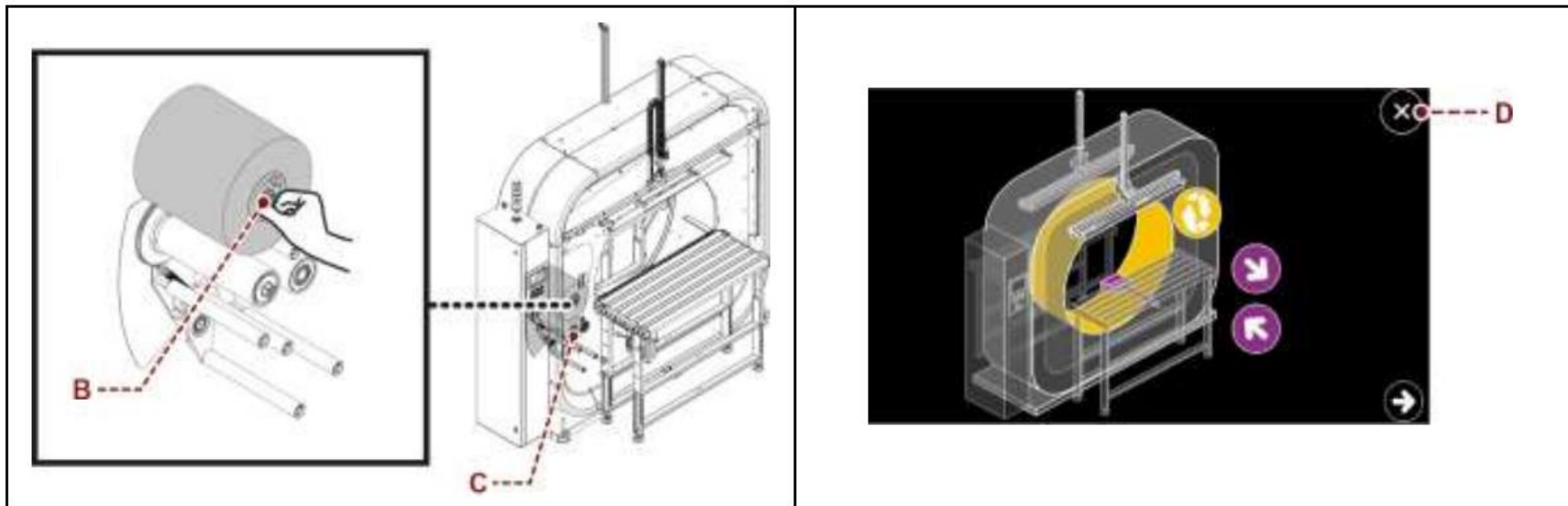
Internal adhesive



External adhesive



3. Adjust the clutch on the reel carriage roller using the knob **(B)**; turn clockwise to increase the braking effect.
4. Close the door **(C)** and press the “Reset” button.
5. Press the button **(D)** to return to the main page and to set up the machine.



FILM INSERTION IN THE CLAMP

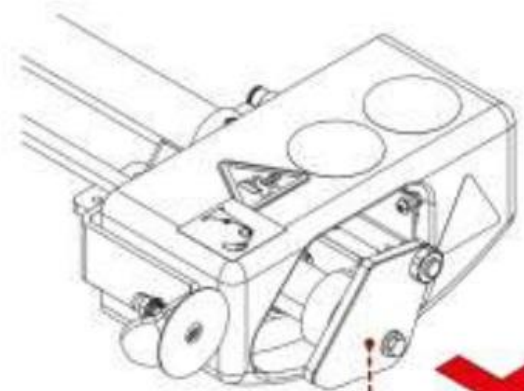
To insert the film in the clamp, proceed as follows:

1. Display the main page.
2. Check that the rotary ring is synchronised.
3. Press the button **(A)** to make the clamp **(B)** come out completely.

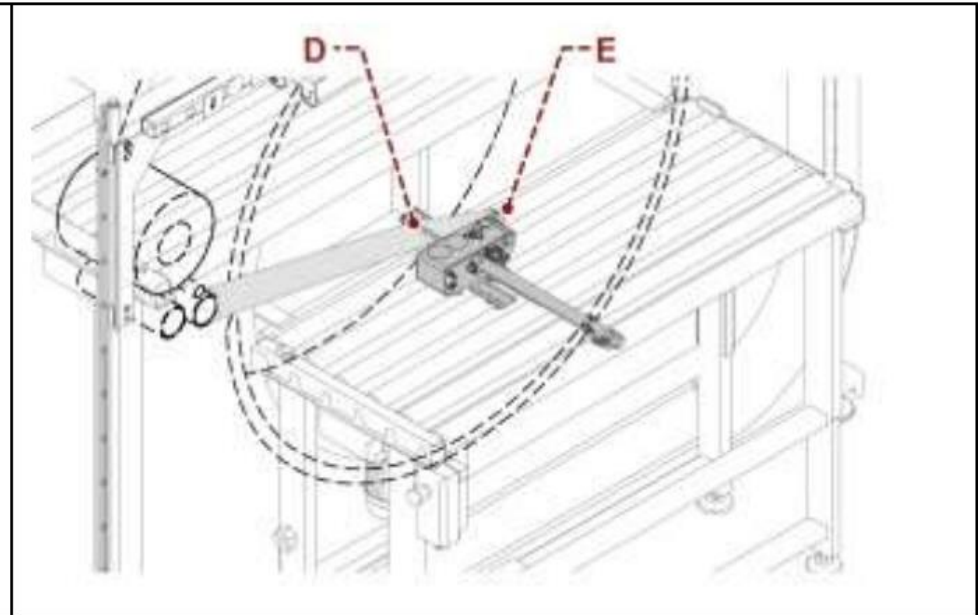
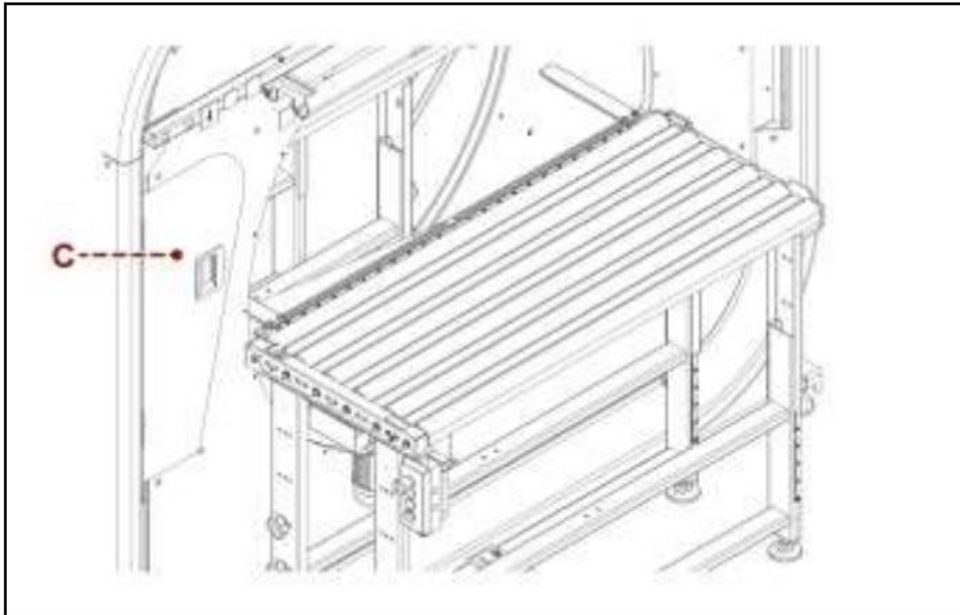


Danger - warning

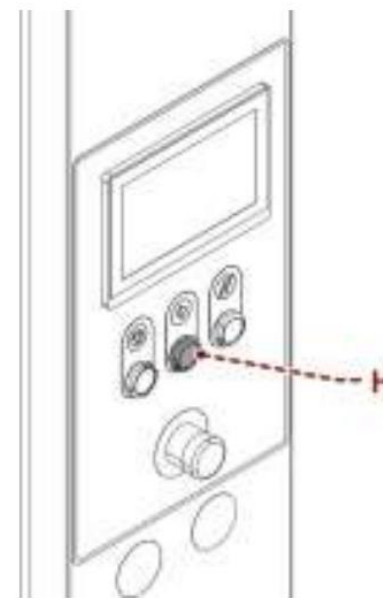
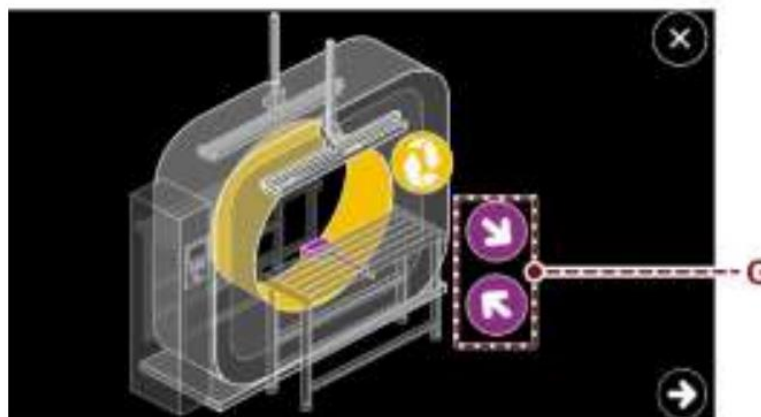
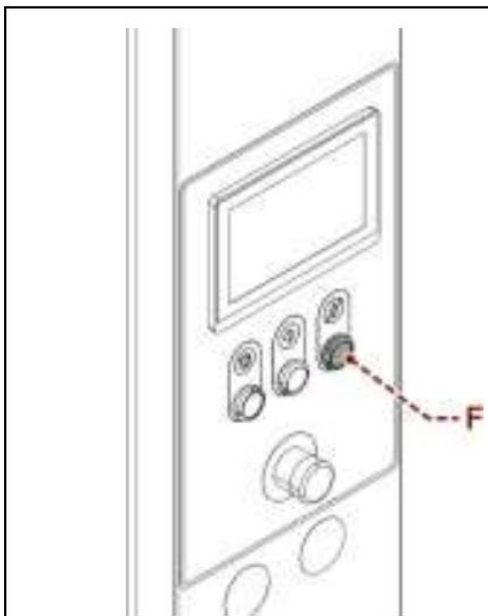
Do not expose your hands to the cutting area.

**A****B**

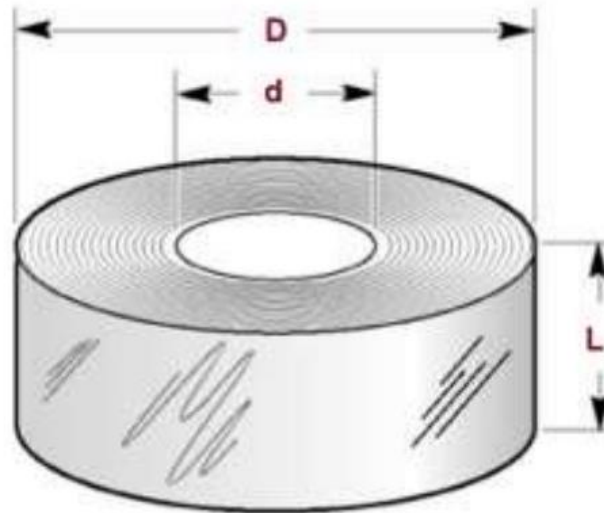
4. Open the guard (C).
5. Manually unwind the film and let it pass, well stretched, under and against the clamp bar (D) and engage it onto the disc (E).
6. Close the guard (C).



7. Press the “Reset” button (F).
8. Press the key (G) to retract the clamp, cutting and blocking the film.
9. By pressing the “Cycle start” key (H) the machine completes the cycle and stops automatically.

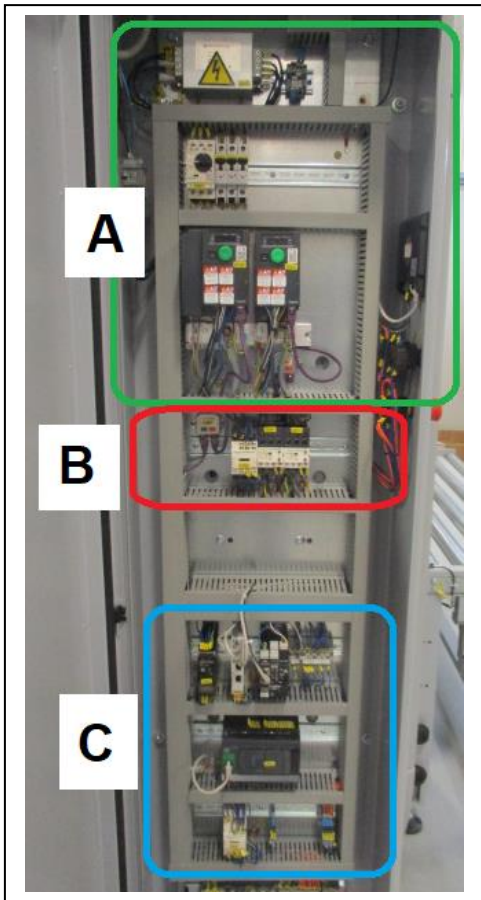


FILM TECHNICAL FEATURES



		ORBIT R 5	ORBIT R 9	ORBIT R 13
D	mm	250	250	250
d	mm	76	76	76
d optional	mm	50 (for reel 125 only)	50 (for reel 125 only)	-
L	mm	125 / 250	125/250	250
Thickness	μm	17-35	17-35	17-35

MAIN ELECTRICAL BOX DESCRIPTION AND LAYOUT



**The part numbers are for information only.
Always check and verify the codes on the
wiring diagram supplied with the machine.**

100U1 – Power supply filter 16S5-1AH1-T
code 0500300007

200Q1 – Termic Relay GV2P04
code 0001351718B

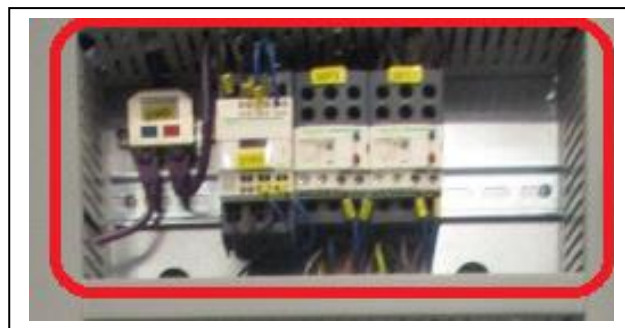
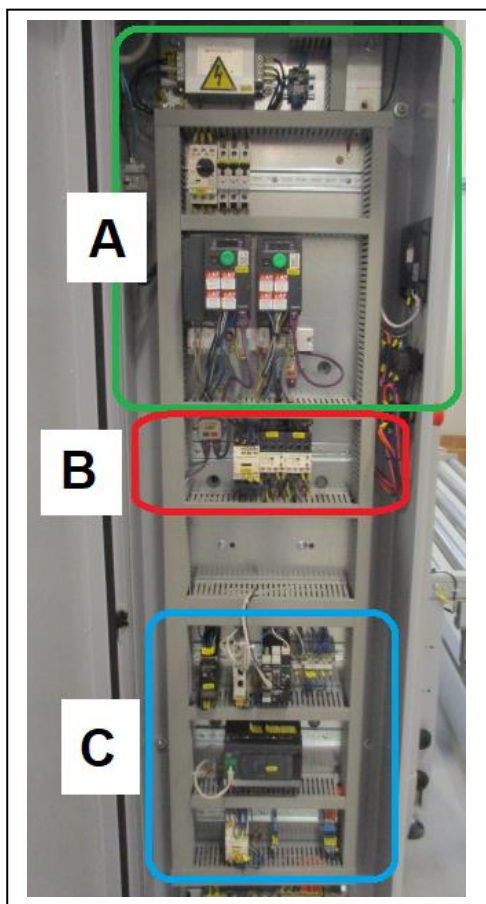
201F1 – Switch FAZ-C16/1-NA code 00L0208738

261F2 - Switch FAZ-C6/1-NA code 00L0039761

120F1 – MISSING

201U1 – Rotation motor Inverter ATV320U15M2C
code 1730300030

261U1 – Conveyors motors Inverter ATV320U04M2C
code 00L0362221



201K1 – Power Relay LC1D093BL
code 0001357195G

261F1 – Thermic Relay 1-1,6 A LRD06
code 0001352465



102G1 – Power supply 24VDC S8VKG06024
code 00L0354044

360U1 (opt)– R-Connect Module Z-PASS2-S-4GWW
code 1430300339

125U1 – PLC TM241CEC24T
code 1373300008

125U2 (opt)– Ouput Expansion Module TM3DQ8T
code 1372300004

150K1 - Switch CAD323BD code 0001303906B

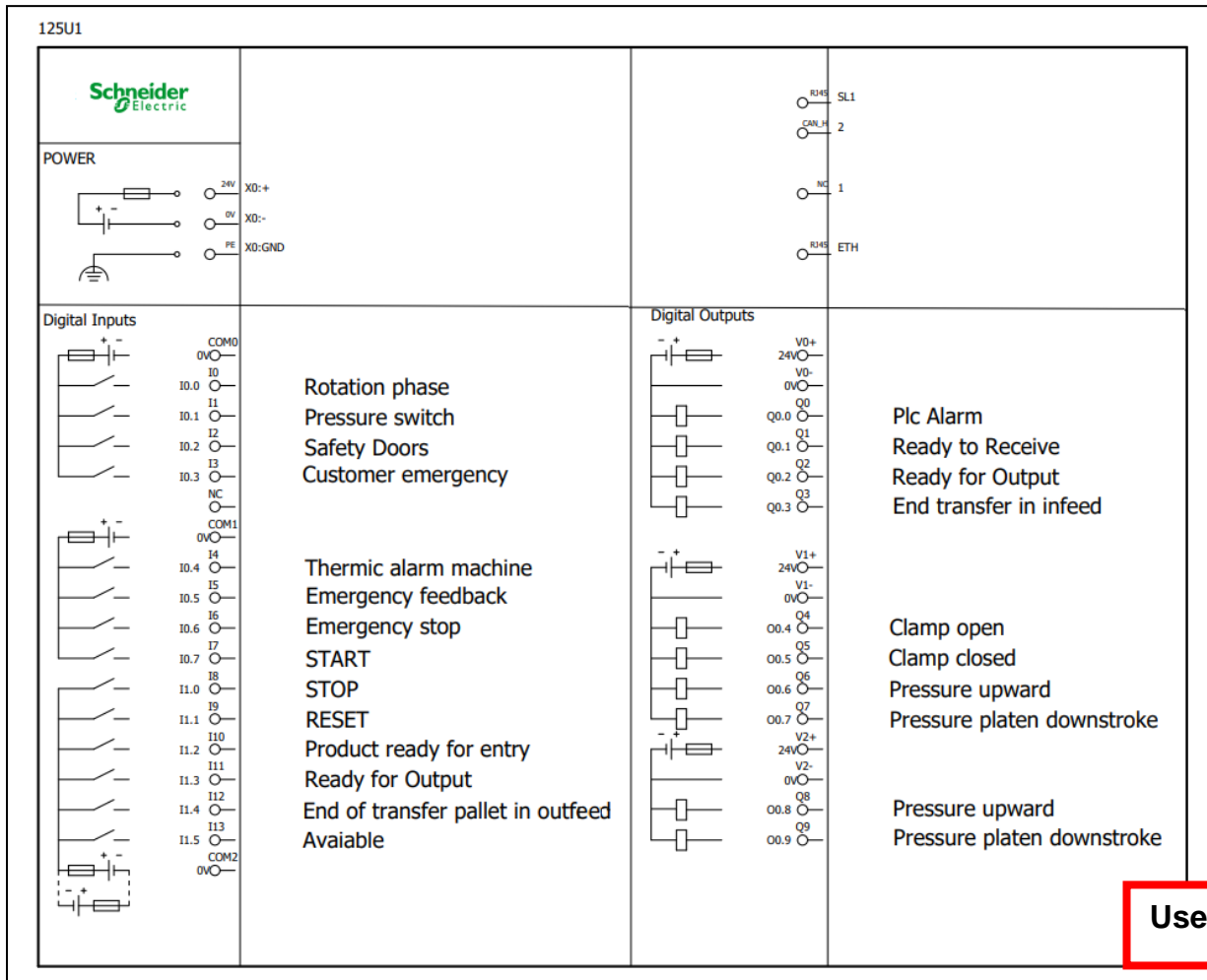
156K1 – Relay 24VDC 6A 38.61.7.024.0050 code 00L0117327

342K1 – Relay 24VDC 6A 38.61.7.024.0050 code 00L0117327

342K2 – Relay 24VDC 6A 38.61.7.024.0050 code 00L0117327

343K3 – Relay 24VDC 6A 38.61.7.024.0050 code 00L0117327

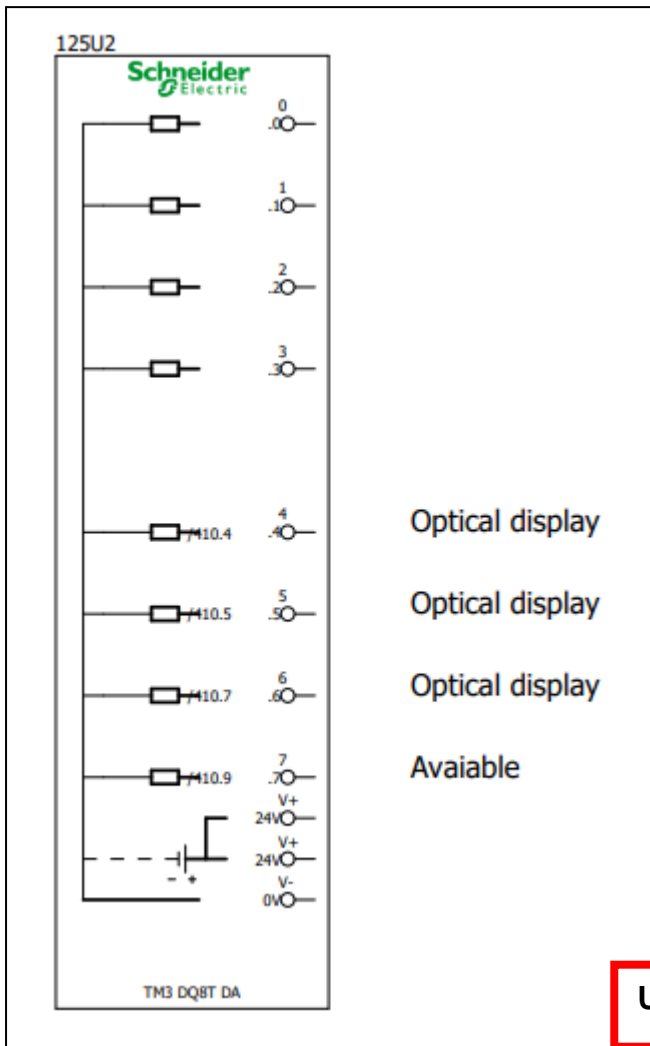
ELECTRONIC CARDS INPUT / OUTPUT DESCRIPTION PLC SCHNEIDER (125U1)



The input / output description are for information only. Always check and verify the input/output on the wiring diagram supplied with the machine.

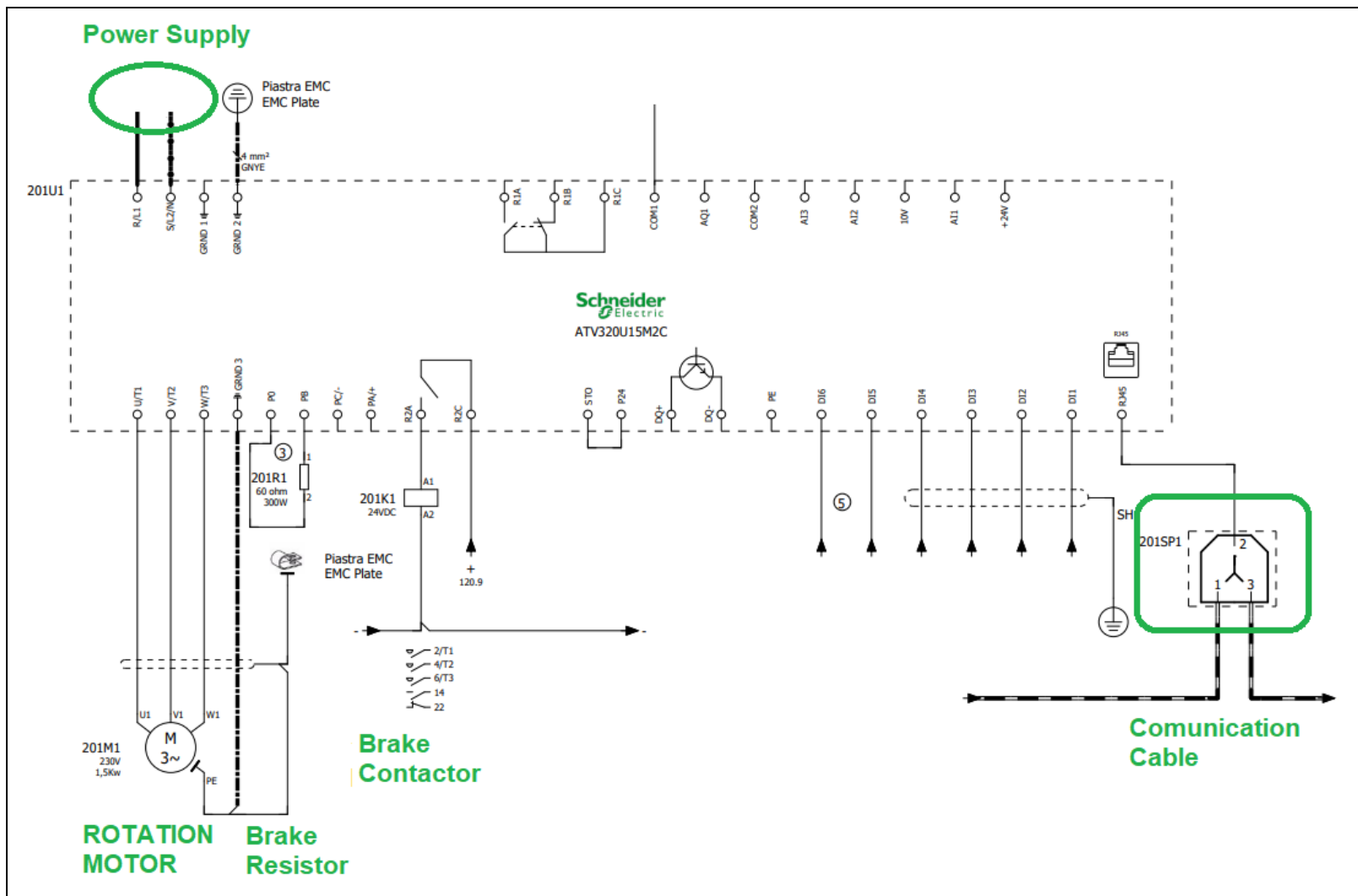
Use the PLC LEDS to check the input / output states

SCHNEIDER – OUTPUT expansion MODULE (125U2)

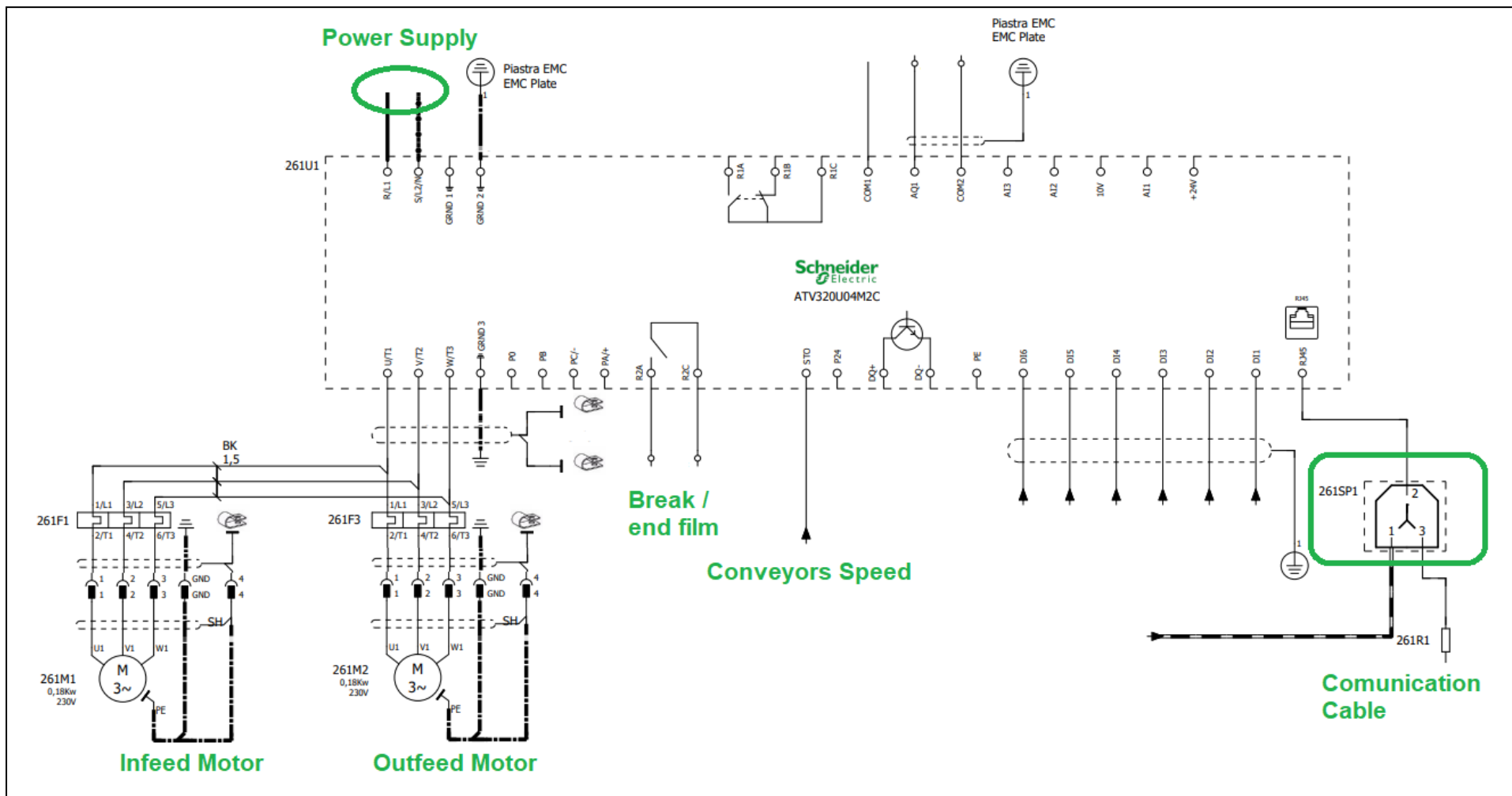


Use the PLC LEDS to check the input / output states



ROTATION INVERTER (201U1)

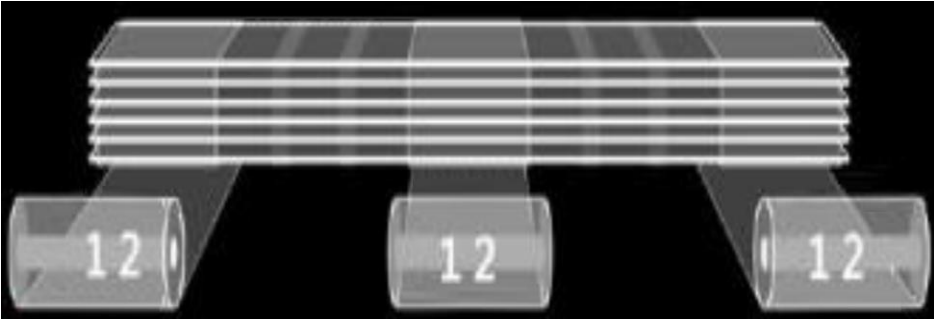





CONVEYORS INVERTER (261U1)

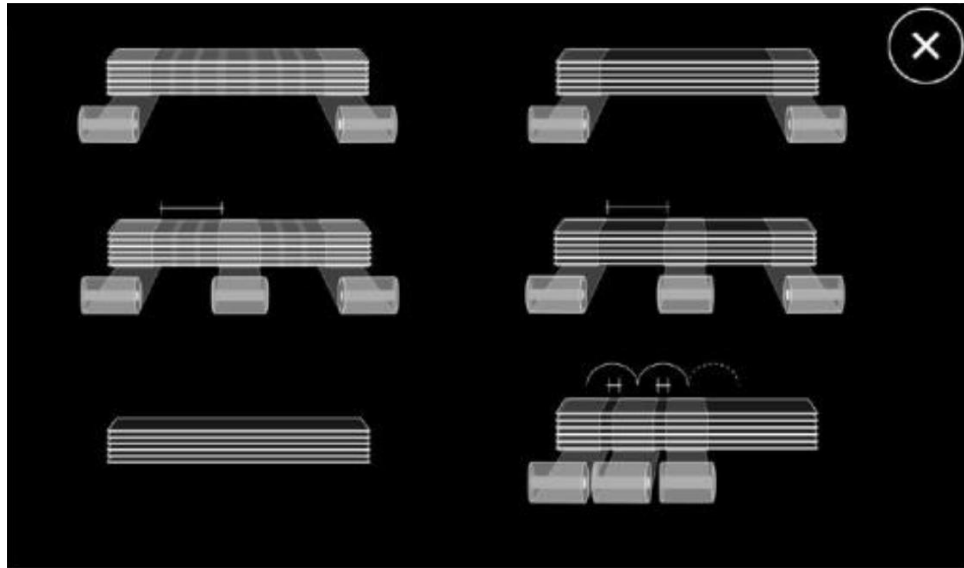


CYCLE PARAMETERS RANGE

Parameter	Min. – Max.	Machine model	Step	Measure unit
Ring rotation speed 	10 – 180	Orbit R5 – 125	1	turns / minute
	10 – 150	Orbit R5 – 250	1	turns / minute
	10 – 150	Orbit R5 – 250 DR	1	turns / minute
	10 – 120	Orbit R9 – 125	1	turns / minute
	10 – 100	Orbit R9 – 250	1	turns / minute
	10 – 100	Orbit R9 – 250 DR	1	turns / minute
	10 – 80	Orbit R13 – 250	1	turns / minute
	10 – 80	Orbit R13 – 250 DR	1	turns / minute
Conveyors speed 	5.0 – 20.0	Orbit R5 – 125	0.1	meters / minute
	8.0 – 35.0	Orbit R5 – 250	0.1	meters / minute
	15.0 – 70.0	Orbit R5 – 250 DR	0.1	meters / minute
	4.0 – 15.0	Orbit R9 – 125	0.1	meters / minute
	5.0 – 25.0	Orbit R9 – 250	0.1	meters / minute
	10.0 – 50.0	Orbit R9 – 250 DR	0.1	meters / minute
	4.0 – 20.0	Orbit R13 – 250	0.1	meters / minute
	8.0 – 40.0	Orbit R13 – 250 DR	0.1	meters / minute

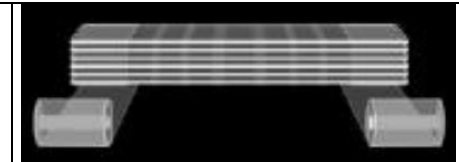
<p>Over-wraps</p> 	<p>1 – 99</p>	<p>All models</p>	<p>1</p>	<p>Rounds</p>
<p>Head over-wraps positioning time</p> 	<p>0.1 – 9.9</p>	<p>All models</p>	<p>0.1</p>	<p>Seconds</p>

<p>Tail over-wraps positioning time</p> 	<p>0.1 – 9.9</p>	<p>All models</p>	<p>0.1</p>	<p>Seconds</p>
<p>Memorized wrapping programs</p> 	<p>20</p>	<p>All models</p>		

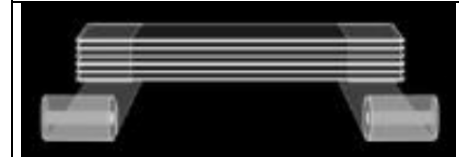


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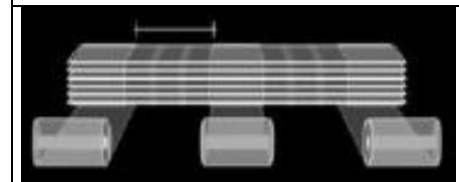
All



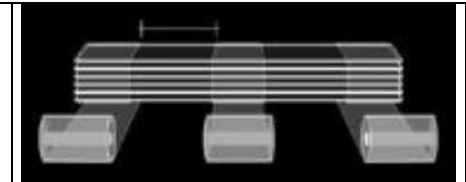
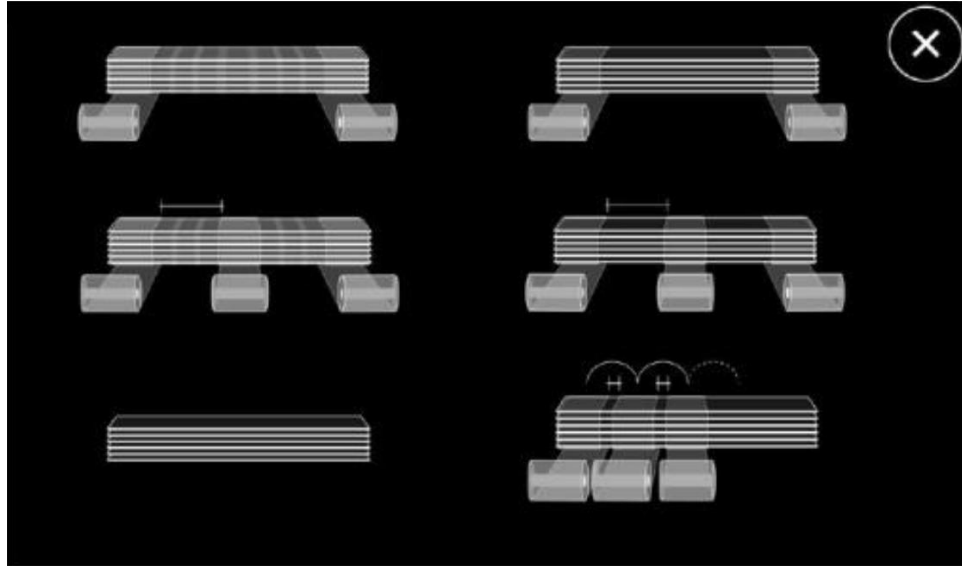
Complete packing with head and tail over-wraps of the product



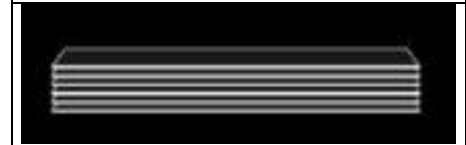
Head and tail over-wraps packing



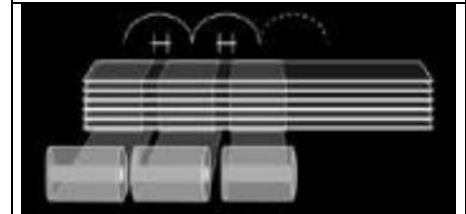
Complete packing with equidistant over-wraps of the product



Packing with equidistant bands





By-pass cycle (Product not wrapped)



Special cycle,
We pack only selected bands,
one or more.
In the case of multiple bands
they are equidistant, parameter
in seconds ...

PASSWORDS MANAGEMENT



	<p>Customer Manager Password</p> <p>PSW = 1111</p> <p>Exchangeable (enter with 1111 password)</p>
	<p>SERVICE Password</p> <p>PSW = 6161</p> <p>NOT Exchangeable</p>

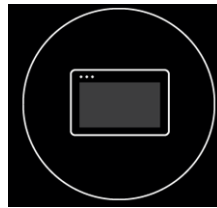
Changing the Customer Responsible Password



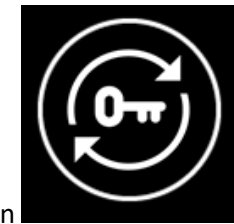
Log in with the Customer Manager password 1111



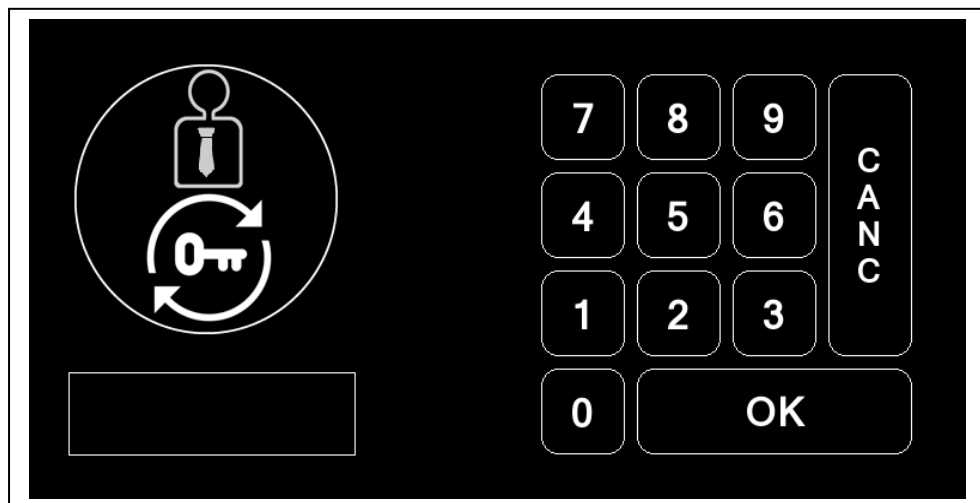
Press the "Settings" icon



, then press the icon



, then press the "change password" icon



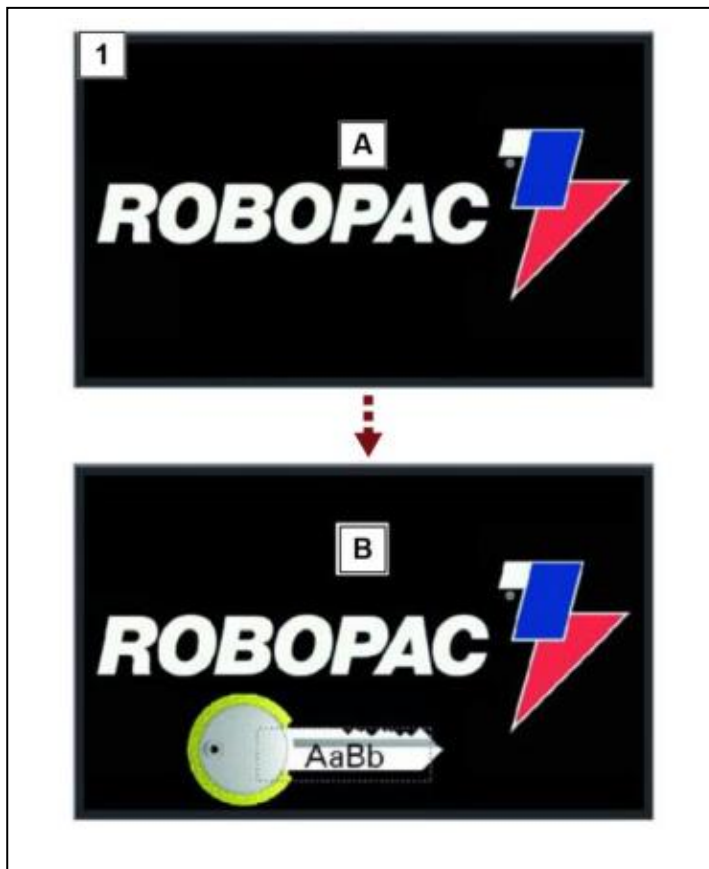
Enter a NEW 4-digit PASSWORD

and press OK

RESET password Customer Manager to 1111



It is possible at any time to reset the Customer Manager password to 1111

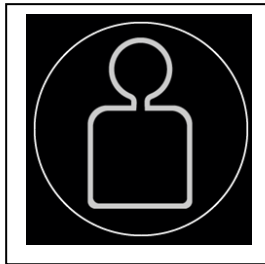


- Turn off the machine
- Turn on the machine
- When starting the software when page (A) appears
--- > touch corner **1** of the display
--- perform the operation quickly,
the page remains displayed for **only 5 seconds** ---
- The operation was successful if page (B) appears
with password **1111** displayed

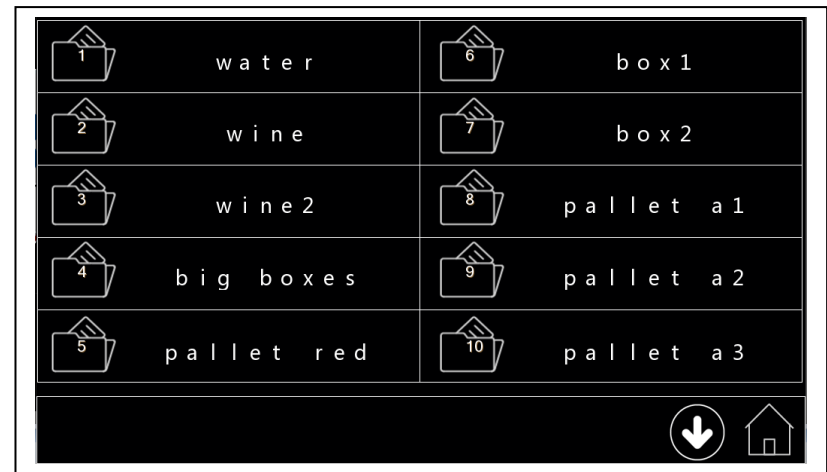
Modification of the working cycles

NO PASSWORD

REQUEST



--- > To select a working cycle



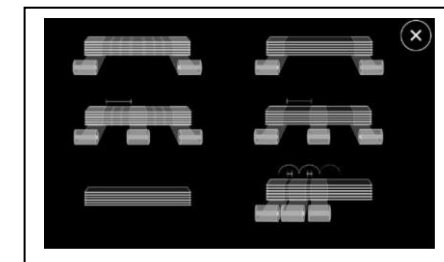
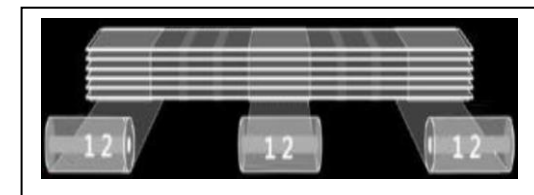
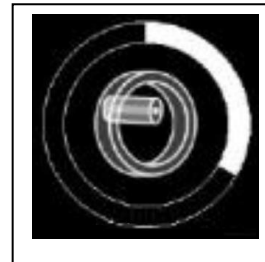
PASSWORD REQUIRED

RESPONSIBLE of

CUSTOMER



--- > To **MODIFY** the
working parameters



...

PROCEDURES FOR REPLACEMENT AND SOFTWARE LOADING OF ELECTRONIC BOARDS

TOUCH SCREEN PANEL

The TOUCH SCREEN is supplied as a spare WITHOUT SOFTWARE inside, in case it is necessary to replace or update the TOUCH SCREEN

Use the USB pen drive containing the original software versions which is supplied with the machine.



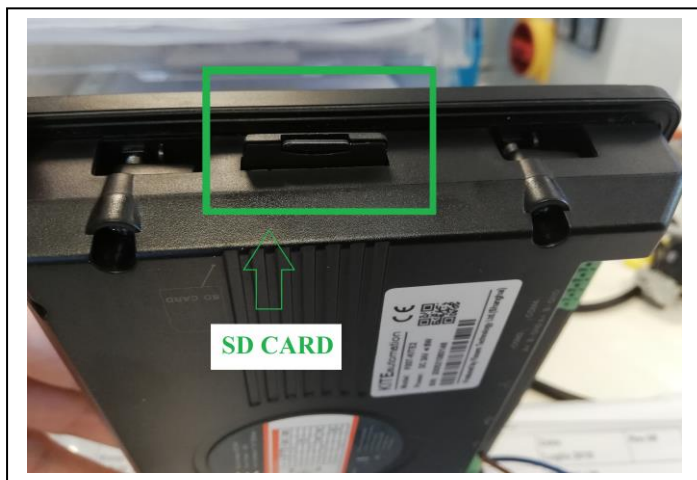
Robopac provides the original machine software with the USB 2.0 pen drive housed in the switchboard with all the technical machine documentation.

N.B.: In case it's necessary to create a new installation support (e.g: the original pen drive is lost) with a commercial pen drive:

- *use a USB 2.0 pen drive only*
- *copy the PLC board software files provided by Robopac at first directory level of pen drive*

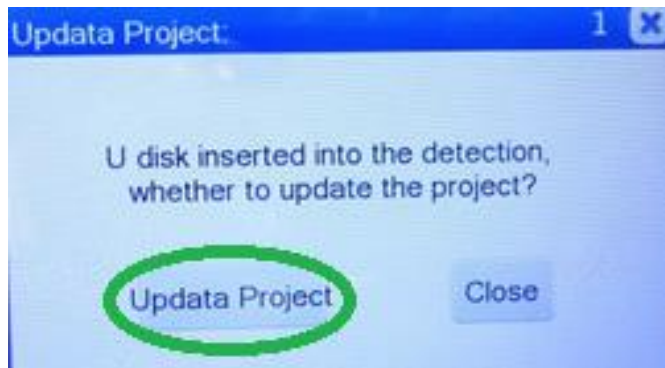
New Installation

- Mechanically mount the touch-screen panel in place of the defective one
- Insert the SD card of the defective Touch Screen into the new Touch Screen

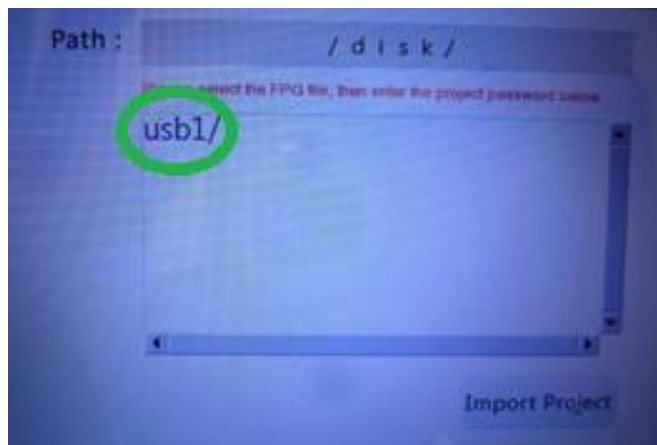



- Electrically wire the panel
- Insert the USB key into the USB port of the HMI
- Turn on the machine and wait some seconds

- After an initial boot phase, the following pop-up will appear on the screen:
- Press the button **Updata Project** indicated in the image below

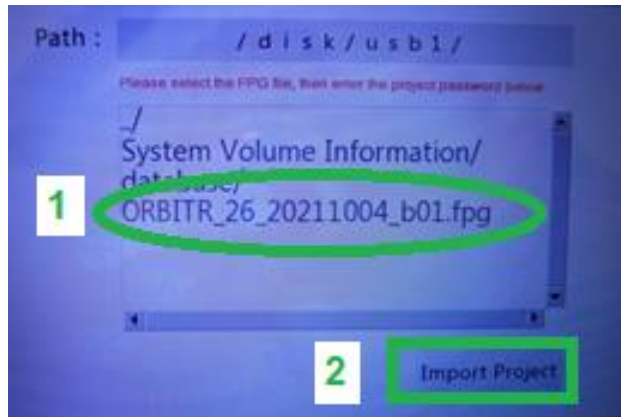


- Go to the next page and press **usb1/**

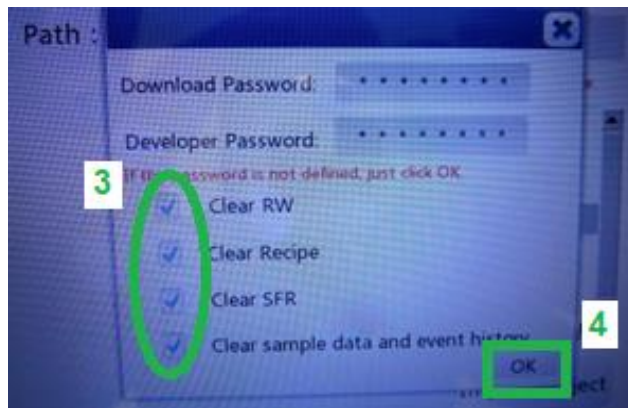


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- Select the file **ORBIT R xxxxxxxxxxxx (1)** then press **“Import Project” (2)**



- Confirm all **the ticks (3)** and press the button **OK (4)**



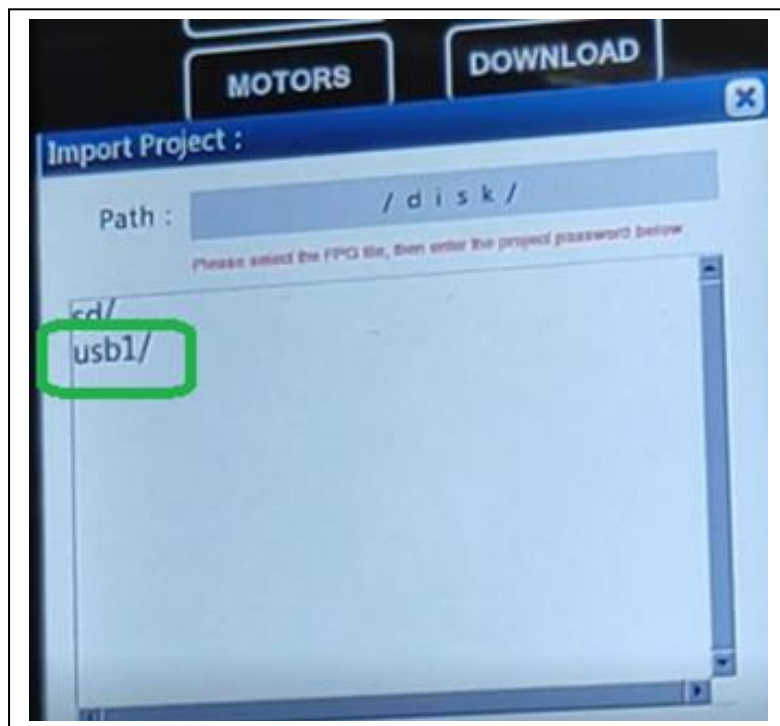
At the end of the REPLACEMENT and insertion of the software in the TOUCH SCREEN

IT IS NOT NECESSARY to do other operations on the parameters

Software Update



Enter with the Service password 6161



Access the service page

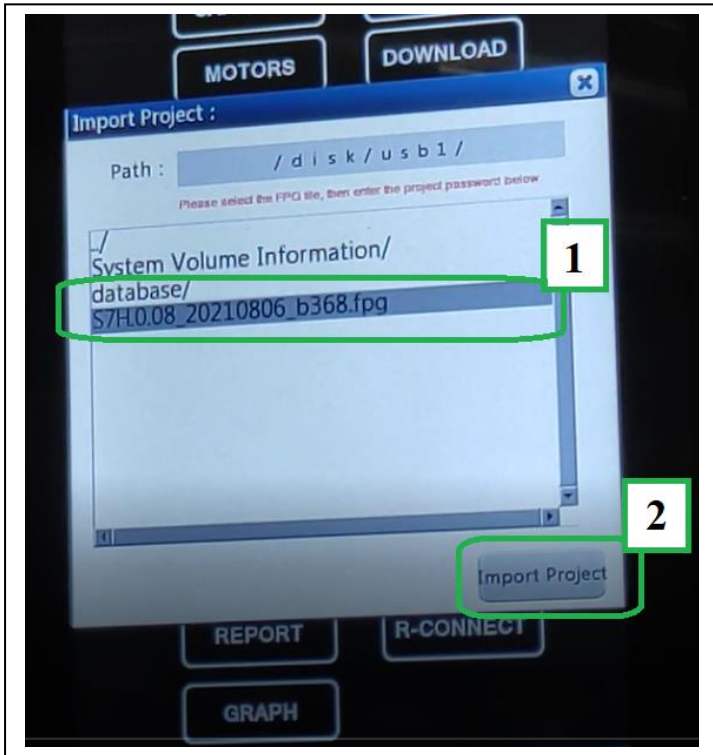


and then on the



page

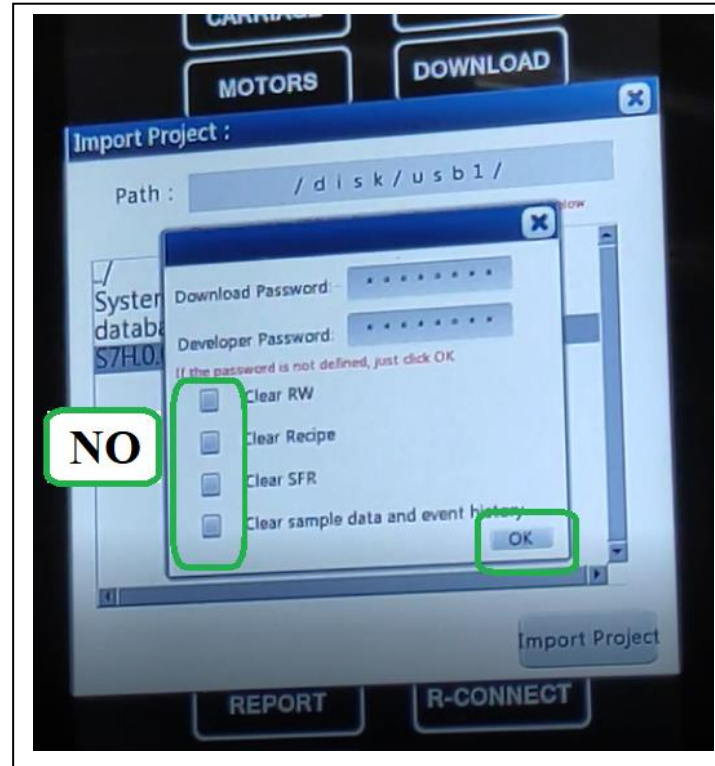
Select usb1/



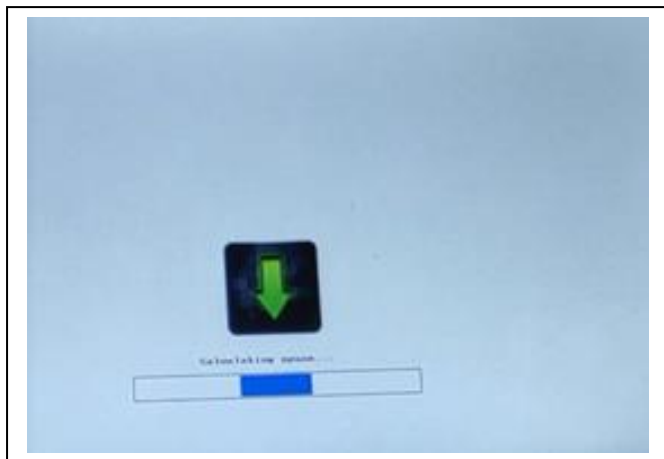
[1] Select the file **fpg**

[2] press **Import Project**

Without ticking ANYTHING



press **OK**



The software is downloaded ...



Operation Concluded

At the end of the simple software UPDATE in the TOUCH SCREEN

IT IS NOT NECESSARY to do other operations on the parameters

PLC (programmable logic)

Contact the ROBOPAC AFTER SALES department ROBOPAC to have the correct software

New Installation

Loading the FIRMWARE into the PLC

With the machine off, insert the SD card marked with the wording "**Firmware**" in the Slot as shown in the figure and follow the next steps:



- Turn on the machine
- "SD" LED starts flashing
- Wait, when the "SD" LED remains on and the "ERR" LED flashes, the download is complete
- Turn off the machine and remove the SD card from the Slot

Loading the SOFTWARE into the PLC

With the machine off, insert the SD card marked with the wording "**Software**" in the Slot as shown in the figure and follow the next steps:



- Turn on the machine
- "SD" LED starts flashing
- Wait, when the "SD" LED remains on and the "ERR" LED flashes, the download is complete
- Turn off the machine and remove the SD card from the Slot

At the end of the REPLACEMENT and insertion of the software in the PLC

IT IS NECESSARY TO RE-CONFIGURE THE ENTIRE MACHINE BY INSERTING:

- 1)** All machine CONFIGURATION PARAMETERS (see chapter ***MACHINE CONFIGURATION PARAMETERS***)
- 2)** All the PARAMETERS for machine LOADING and UNLOADING (see chapter ***LOADING AND UNLOADING OPTIONS***)
- 3)** All CYCLES and WORKING PARAMETERS (see chapter ***CYCLE PARAMETERS RANGE***)

Software update

You just need to insert the Software and not the Firmware

Loading the SOFTWARE into the PLC

With the machine off, insert the SD card marked with the wording "**Firmware**" in the Slot as shown in the figure and follow the next steps:



- Turn on the machine
- "SD" LED starts flashing
- Wait, when the "SD" LED remains on and the "ERR" LED flashes, the download is complete
- Turn off the machine and remove the SD card from the Slot

At the end of the simple software UPDATE in the PLC

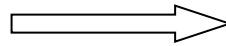
IT IS NOT NECESSARY to do other operations on the parameters

INVERTERS

If you need to replace an INVERTER, it is advisable to contact the ROBOPAC TECHNICAL SERVICE to communicate the machine serial number and the inverter function (Rotation, Conveyors). The INVERTER will be sent to with the **CORRECT PARAMETERS** inside

Machine serial number +

INVERTER function (Rotation, Conveyor)



correct INVERTER

with correct parameters inside



ACCESS TO THE SERVICE PAGE

To access the SERVICE pages

- Enter the SERVICE password 6161



, press the "Settings" icon



, press the SERVICE icon



	K2	000.0	RPM	0	Manual Freq.	0
	SP Max	0	SP Min	0		
	Acc.Ramp	0.0	Decel.Ramp	0.0		
	K1	0			SAVE PARAMETERS	
	SP Max	0.0	SP Min	0.0		
	T1 (s) Strip Covering	0.0	T3 (s) Stretching Time	0.0	Clamp Open Time (ms)	0
	T2 (s) Position Time	0.0	T4 (s) Pressor Down Delay (IN)	0.0		
		I/O	REPORT		ALARMS LIST	VIDEO

R-CONNECT REGISTRATION (optional)

Press the **[R]** button to access the R-CONNECT option



- Verify that APP VERSION is not 0
- Insert the phone card and SD supplied into the R-Connect module (if not already inserted)
- Check for the presence of the IMEI and ICCID code
- Press the Register button, the Command WORD displays the number 17, wait for the response from the module which writes the number 32 to the Command WORD
- A green check appears next to the Register key
- The RConnect module is registered correctly.

REPORT PAGE

Press the **[REPORT]** button to access the REPORT page

this page is only used to communicate data to the Robopac After Sales service in case of need

Ring Peak Current (Acc.)	00.0	A	Ring Peak Current (Acc.)	00.0	A
Ring Peak Current (Travel)	00.0	A	Ring Peak Current (Travel)	00.0	A
Ring Peak Current (Decel.)	00.0	A	Ring Peak Current (Decel.)	00.0	A
Ring Peak Torque (Acc.)	000.00	Nm	Ring Peak Torque (Acc.)	000.00	Nm
Ring Peak Torque (Travel)	000.00	Nm	Ring Peak Torque (Travel)	000.00	Nm
Ring Peak Torque (Decel.)	000.00	Nm	Ring Peak Torque (Decel.)	000.00	Nm
Ring Phase Reading Counter	00	N.	Ring Phase Reading Counter	00	N.
Ring Faster Round	0.000	s	Ring Faster Round	0.000	s
Ring Speed (Reference)	000	RPM	Ring Speed (Reference)	000	RPM
Ring Speed Calculation	000	RPM	Ring Speed Calculation	000	RPM
Ring Acc. Ramp Time	0.000	s	Ring Acc. Ramp Time	0.000	s
Ring Decel. Ramp Time	0.000	s	Ring Decel. Ramp Time	0.000	s
Conveyor Peak Current	00.0	A	Conveyor Peak Current	00.0	A
Clamp Status			Clamp Status		

REPORT TEST INTERNAL

REPORT TEST SERVICE

REPORT

ALARMS LIST

VIDEO

MACHINE CONFIGURATION PARAMETERS

Press button [A] to access the first group of configuration parameters

	K2	000.0	RPM	0	Manual Freq.	0
	SP Max	0	SP Min	0		
	Acc.Ramp	0.0	Decel.Ramp	0.0		
	K1	0			SAVE PARAMETERS	
	SP Max	0.0	SP Min	0.0		
	T1 (s) Strip Covering	0.0	T3 (s) Stretching Time	0.0	Clamp Open Time (ms)	0
A	T2 (s) Position Time	0.0	T4 (s) Pressor Down Delay (IN)	0.0		

Navigation bar icons:

Rotation Parameters

Machine Type	K2	Rpm	Sp. Max	Sp. Min	ACC	DEC	Manual Freq.
R5.125	9.0	1410	180	10	2	0,6	3
R5.250	10.0	1410	150	10	2	0.7	3
R9.125	15,5	1410	120	10	2	1,1	3
R9.250	15,5	1410	100	10	2	1,6	3
R13.250	21,5	1410	80	10	2	1,7	3



Rollers Feed Parameters

Machine Type	K1	Sp. Max	Sp. min
R5.125	82	20.0	5.0
R5.250	27	35.0	8.0
R9.125	106	15,0	4,0
R9.250	53	25,0	5,0
R13.250	57	20.0	4.0
R5.250 DR	27	70.0	15.0
R9.250 DR	53	50,0	10,0
R13.250 DR	57	40.0	8.0

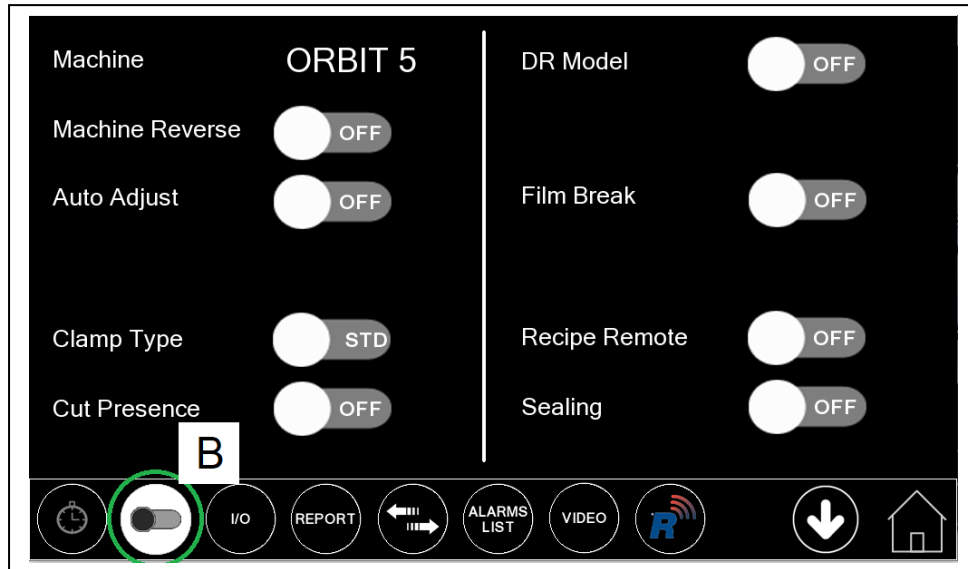


Winding timers

Machine Type	T1 – Tail time	T2 – Positioning time	T3 – Film tension time	T4 – IN pressure delay (s)	T5 – STD clamp opening time (ms)	T6 – SKID clamp heating time (s)
R5.125	0,9	0,8	0,5	0,6	100	1
R5.250	0,8	0,9	0,4	0,7	120	1
R9.125	0,6	1.1	0,9	1,8	120	1
R9.250	0,6	1.1	0,9	1,8	120	1
R13.250	1,8	1,2	0,7	1,5	120	1

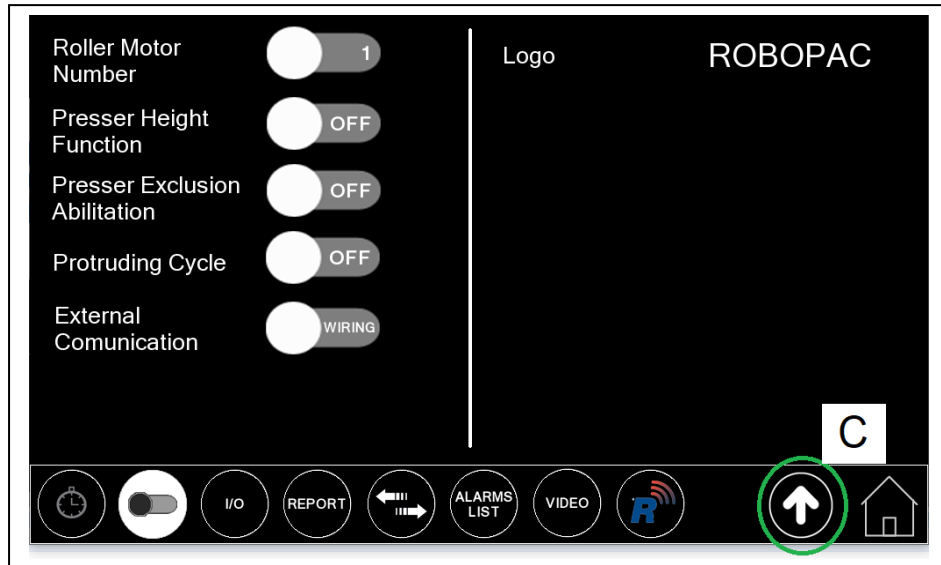


Press button **[B]** to access the second group of configuration parameters (concerning the possible options)



Parameter	Explanation	Action
Machine	Machine type	Machine model
Machine Reverse	Opposite panel	ON (optional) - OFF (STD)
Auto-Adjust.	Self-Centering Guides Option	ON (optional) - OFF (STD)
Clamp Type	Clamp type	STD - SKID (optional)
Cut Presence	Type of cut	ON (optional) - OFF (fixed cut (STD))
DR Model	DR (double coil) Option	ON (optional) - OFF (STD)
Film Break	Film break Option	ON (optional) - OFF (STD)
Film Break Type	Film break Option	Select ON (Continuous) or OFF (STD)
Recipe Remote	Remote Recipe Recall Function	ON (optional) - OFF (STD)
Sealing	Welder	ON (optional) - OFF (STD)

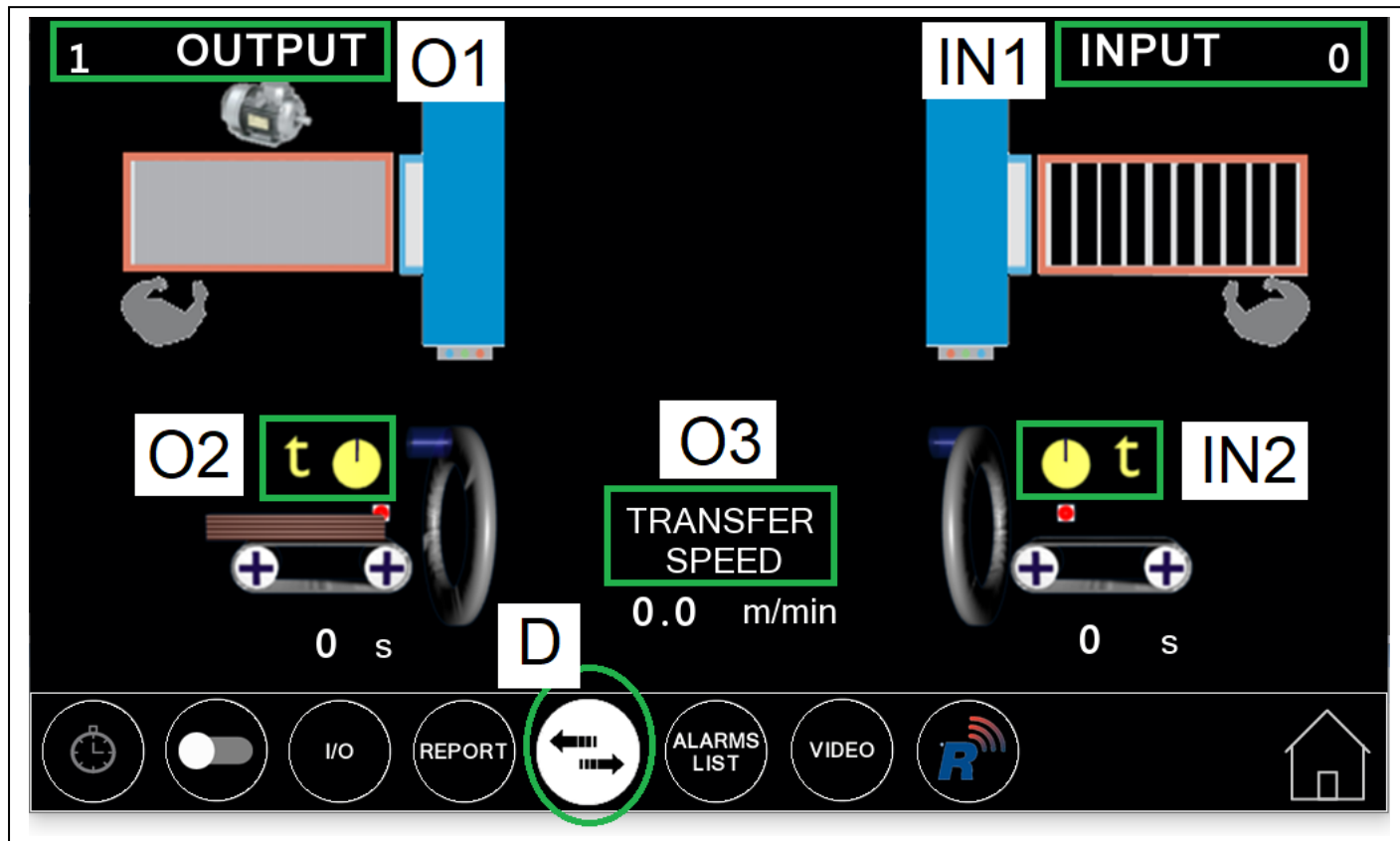
Press button [C] to access other parameters of the second group of configuration parameters (concerning the possible options)



Parameter	Explanation	Action
Roller Motor Number	Inverters numbr for conveyors	1 (STD) - 2 (optional)
Presser Height Function	Presser height Option	ON (optional) - OFF (STD)
Presser Exclusion Abilitation	Enabling the "Pressors exclusion" selector	ON (optional) - OFF (STD)
Protruding Cycle	Special cycle for inlet roughness	ON (optional) - OFF (STD)
External Communication	Segnals in line	WIRING (wired - STD) – PLC PROT (available on the ETHERNET port of the switch inside the panel - optional)
Logo	Display of the logo at power on	ROBOPAC

LOADING AND UNLOADING OPTIONS

Press button **[D]** to access the configuration of the loading and unloading parameters





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The product loading options (INPUT) are selected and represented in the right column, while the unloading options (OUTPUT) are selected in the left column.

By pressing on the respective figures you can scroll through the options described below

LOAD (INPUT) – IN1

Parameter	Action	Action
0	Roller conveyor always active	After pressing the start from the panel, the conveyors are activated waiting for a product. This condition remains valid until the end of the count of the "Maximum wait" time shown under the selection, after which it is necessary to press start again. This selection also freezes the UNLOAD option to 0
1	With cycle start	After having pressed the start from the panel, the machine goes into the "Automatic" state without turning on the conveyors. The start of the cycle is given via a button or external photocell. After unloading, the conveyors stop waiting for a further cycle start.
2		Stock selection for possible future use.
3	Line 1	Activation of signals in line.
4	Line 2	Activation of signals in line.

PARAMETER - IN2

Parameter	Selection	Timer	Models
0	STD	120 Sec.	With all conveyors
1	OPTIONAL	-	With all conveyors if "Start external cycle" option is present



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UNLOAD (OUTPUT) – O1


Parameter	Action	Action
0	Roller conveyor always active	Frozen at 0 by the LOAD = 0 option
1	Timed product unloading	When the packaged product clears the exit photocell, the unloading timer is activated. At the end of the count the conveyor stops.
2	Product unloading up to sensor	When the packaged product clears the output photocell, the conveyor remains in motion until the product is detected by the sensor or photocell.
3	Line 1	Activation of signals in line.
4	Line 2	Activation of signals in line.

PARAMETER - O2

Parameter	Selection	Timer	Models
0	STD	-	With all conveyors - Frozen at 0 by the LOAD = 0 option
1	OPTIONAL	3 Sec.	With all conveyors if "Start external cycle" option is present

PARAMETER – O3

Parameter	Selection	Value
Transfer Speed	Product loading / unloading speed	m/min.
ORBIT13.250		15.0

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VARIOUS ADJUSTMENTS AND CHECKS

CHECK OF THERMAL PROTECTION CALIBRATION

Check that all the thermal protections inserted in the electrical panel (thermal, magnetothermic switches, etc.), are calibrated according to what is shown on the wiring diagram.

CHECK PNEUMATIC CLAMP SENSOR

Check the correct position of the pneumatic sensor that signals the clamp back (sensor led and monitoring on the I / O page of the HMI) and the robust tightening on the cylinder.

PHOTOCELLS OPERATION ADJUSTMENT

Align all the photocells of the machine to their reflector, adjust them to a minimum reading of 1.5cm using a reference ruler (sensor led and monitoring on the I / O page of the HMI).

CHECK THE INPUT / OUTPUT ROLLERS / BELTS ALIGNMENT

By using a straight profile resting on the input conveyor,

v check that the height of the output conveyor is equal or lower with a maximum deviation of 3 mm.

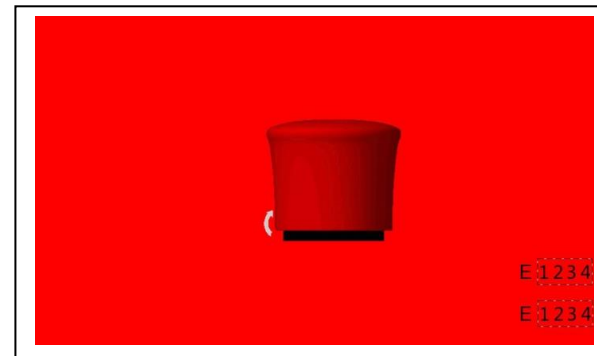
CHECK OF THE EMERGENCY BUTTON CHAIN AND INTERLOCKS

Check the correct operation of all the emergency buttons and the safety interlock located on the movable guard (door).

Press the Reset button and check that “Rdy” appears on the inverter display.

Press the EMERGENCY button and check:

- The air is discharged from the machine
- The following screen appears on the display

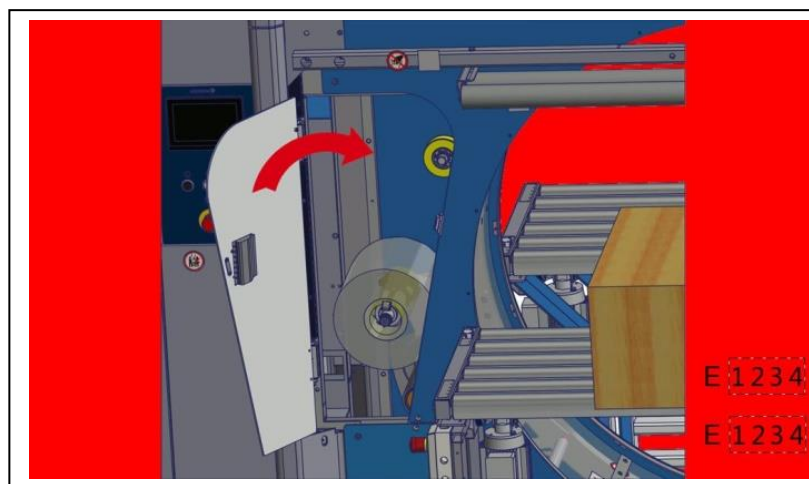


- The message "STO" appears on the displays of the inverters

Rearm with Reset (try the other external emergency buttons if present)

Open the guard (EMERGENCY DOOR) and check:

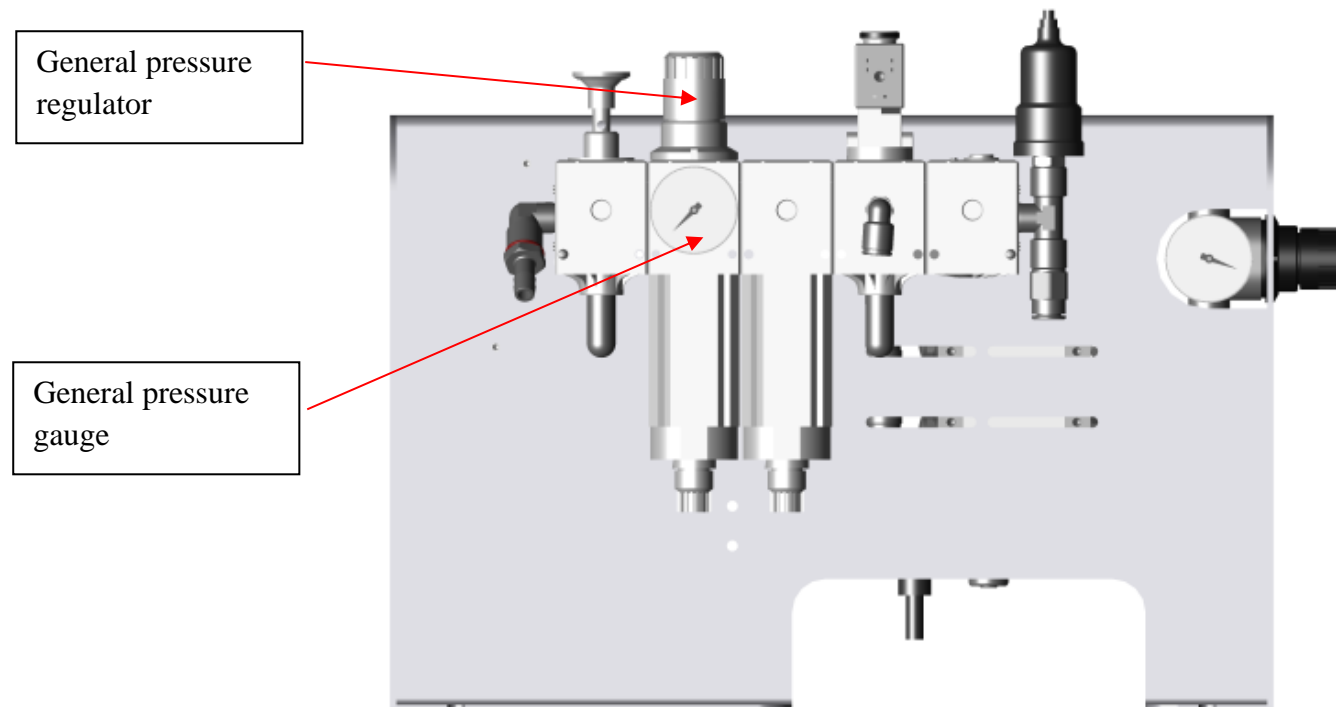
- The air is discharged from the machine
- The following screen appears on the display



- The message "STO" appears on the displays of the inverters

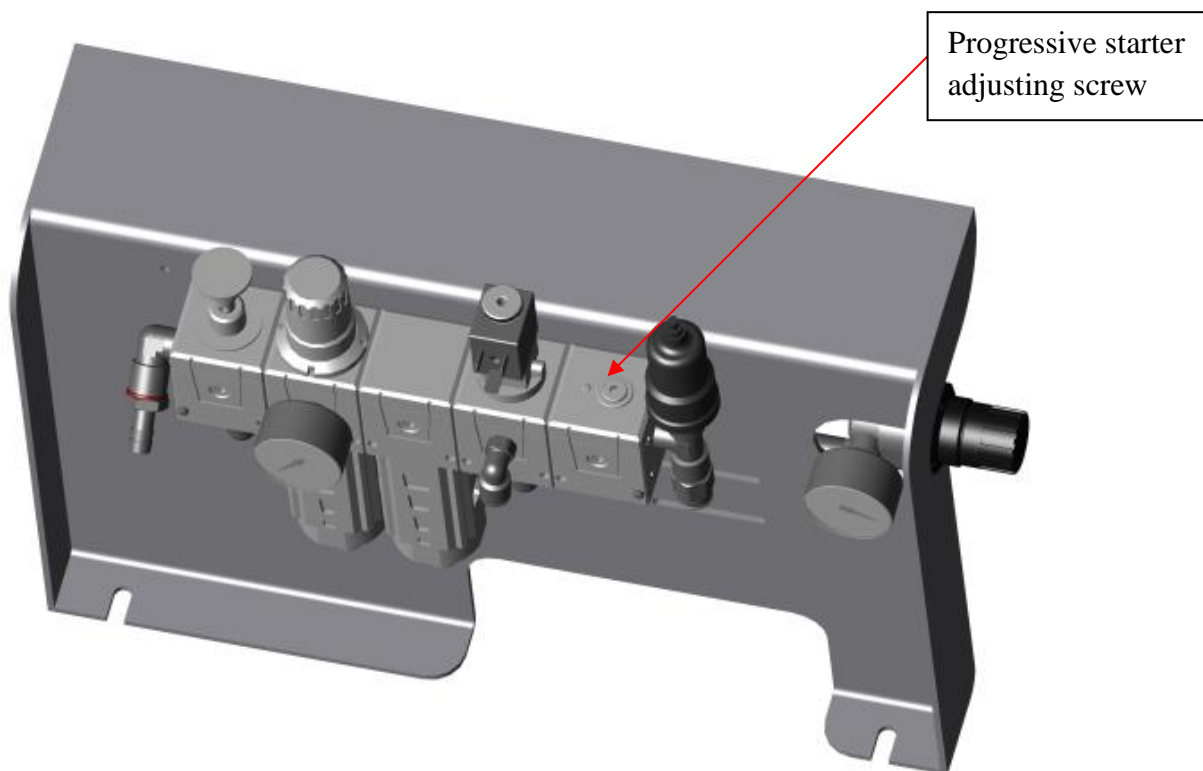
ADJUSTMENT OF THE MACHINE WORKING PRESSURE

Adjust the general working pressure of the machine to the value of 6 ± 0.5 Bar.



PROGRESSIVE START-UP REGULATION

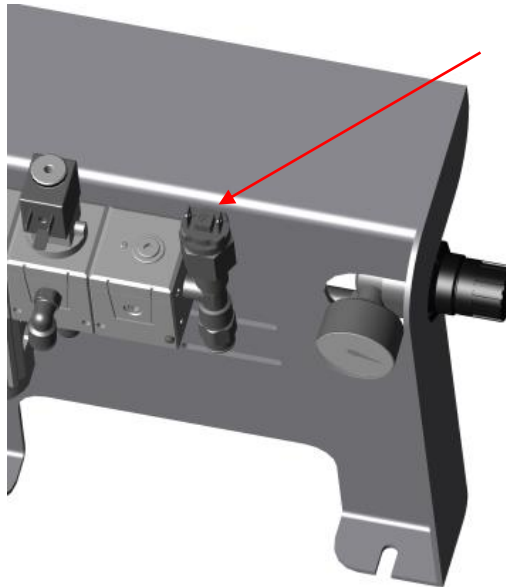
Set the pneumatic soft start valve to maximum.



DYNAMIC CHECKS

PRESSURE SWITCH ADJUSTMENT AND CALIBRATION

Check, while the machine is running (6 bar + -0.5), that the pressure switch does not intervene, signaling a lack of air.



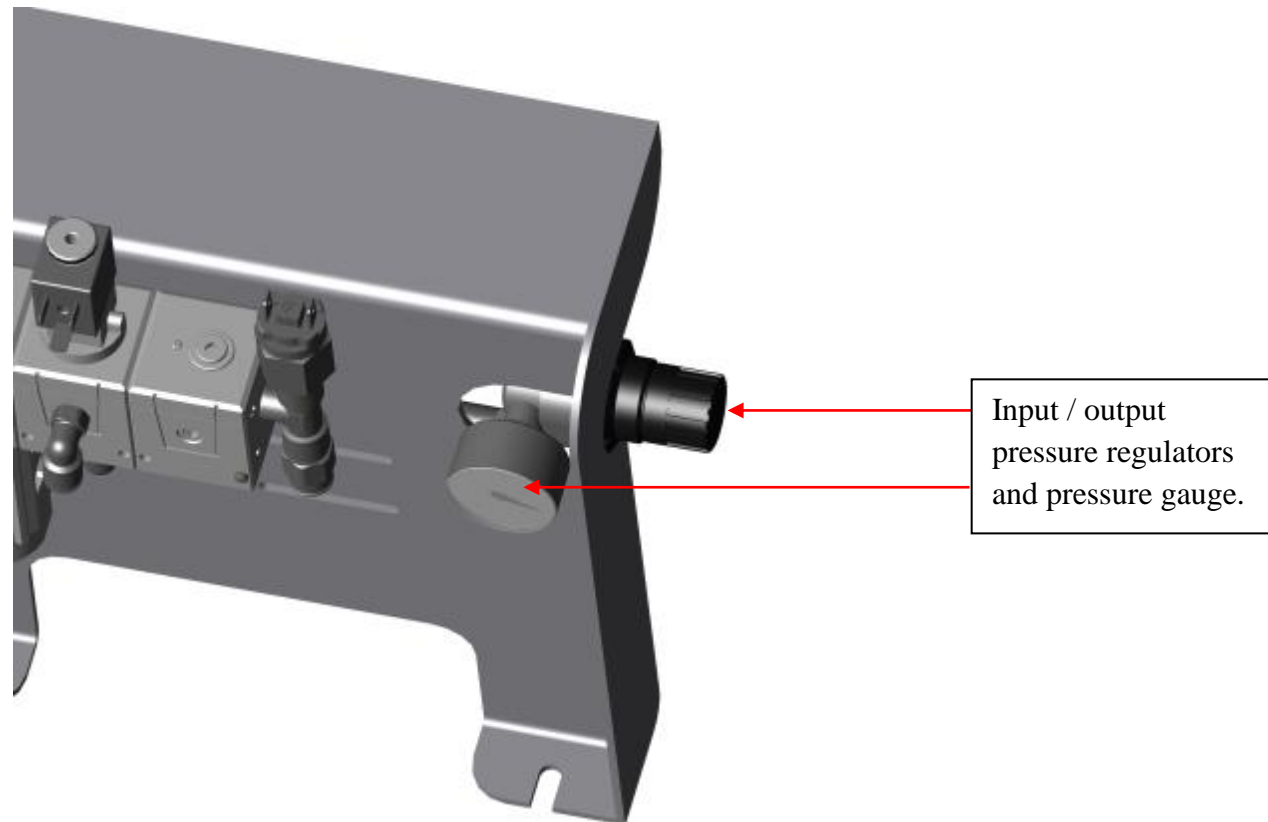
Also check that by decreasing the pressure from the general pressure regulator, the pressure switch intervenes on 3 + -0.5 bar.

If adjustment is required, use the screw in the figure.

ADJUSTMENT OF THE WORKING PRESSURE OF THE PRESSERS

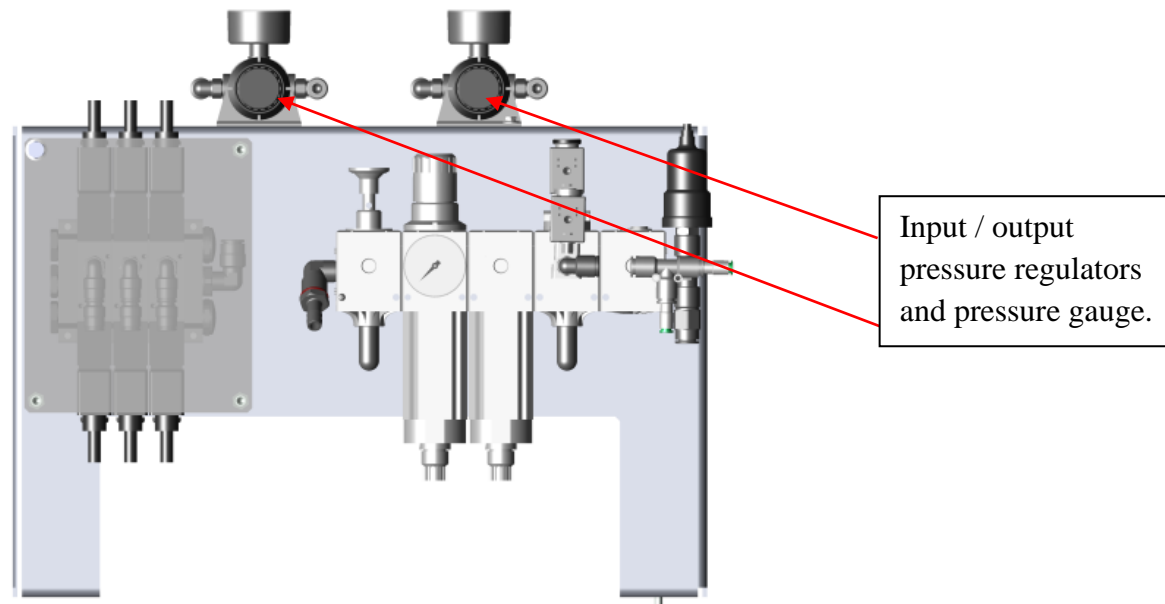
- MODELS 9 and 13

Adjust the working pressure to 2.5 ± 0.5 bar by acting on the control in the figure.



- MODEL 5

Operate the pressers manually and adjust the working pressure to 2.5 ± 0.5 bar by acting on the regulators in the figure



CHECK OF THE PLC AND PANEL SOFTWARE VERSION

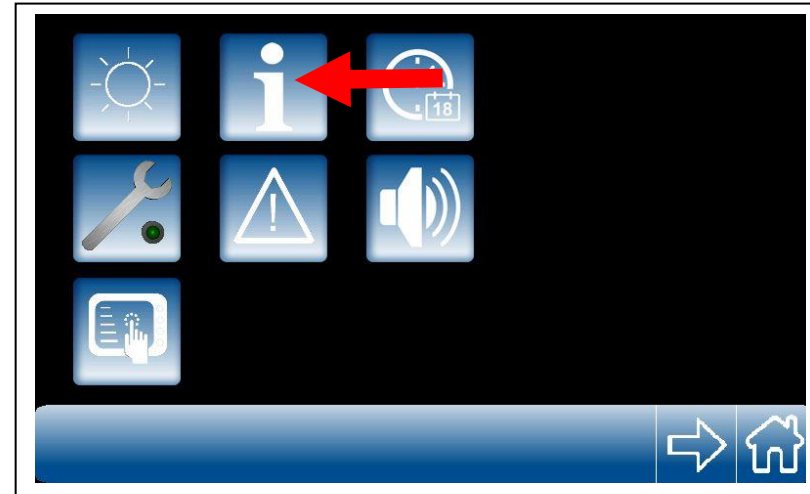
Show the main page on the display and press the button shown in the figure.



The following page will be displayed: press the button in the figure



When the following screen is displayed, press the **i** button



The software versions are displayed

PLC --- > PLC Program

and

PANEL --- > HMI Program





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ALARM LIST

Alarm Code	Alarm Description	Cause	Solution
1001	Emergency button	Emergency button pressed	Reset the button and press the “Reset” button
1010	Line emergency (from Customer)	Line emergency	Reset the emergency circuit of the line and press the "Reset" button
1020	Cover open.	Protection cover open.	Close the cover and press the Reset button.
		The microswitch does not work.	Replace the microswitch.
2001	Thermal cutouts	Thermal or magneto-thermal relays have been triggered.	Eliminate the overload cause, reactivate the protections. Press the “Reset” button.
3110	Ring inverter alarm	Ring inverter overload.	Eliminate the cause of the overheating / malfunction and press the Reset button.
3210	Infeed conveyor inverter alarm	Infeed conveyor inverter overload	Eliminate the cause of the overheating / malfunction and press the Reset button.
3310	Outfeed conveyor inverter alarm	Outfeed conveyor inverter overload	Eliminate the cause of the overheating / malfunction and press the Reset button.
5001	Sealer temperature alarm	Sealer not yet at the correct temperature, or probe faulty	Check the temperature reading probe
6501	“No air”	Faulty pressure switch or no air supply in the system.	Check pressure switch or reactivate air supply.
6502	Product infeed photocell alarm	The photocell detects that the product is not in the correct position or that the reflector is not properly aligned.	Remove the product or align the photocell with the reflector.



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Alarm Code	Alarm Description	Cause	Solution
6503	Product outfeed photocell alarm	The photocell detects that the product is not in the correct position or that the reflector is not properly aligned.	Remove the product or align the photocell with the reflector.
6504	“Film breakage” alarm	The film has broken or reel is finished.	Insert the film or replace reel.
6505	Rotary ring not synchronised	Ring timing sensor faulty or incorrectly positioned.	Check the ring timing sensor
6506	Ring and sealer not synchronised	Both ring and sealer are not synchronised	Synchronise the fifth wheel by hand by releasing the motor brake
6507	Upper clamp alarm (DR MODEL ONLY)	Upper clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6508	Cut alarm	Cutting cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6509	Contrast alarm (OPTIONAL)	Contrast cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6510	Sealer alarm	Sealer cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6511	ST clamp alarm	Clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6512	SKID clamp alarm (OPTIONAL)	Clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.



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Alarm Code	Alarm Description	Cause	Solution
6513	Upper cut alarm	Upper cut cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6520	"Failure to release air from the system"	The pressure switch signals the presence of air in the system in an emergency state	Check the pressure switch or restore the air.
7001	Safety device retraction	Safety relay locked	Check the safety relay, testing it by switching the machine off and on again.
8010	PLC/Ring inverter Can Bus error	no connection between PLC/Ring Inverter	Check CAN OPEN communication cable
8110	PLC/Infeed conveyor inverter Can Bus error	no connection between PLC/Infeed conveyor Inverter	Check CAN OPEN communication cable
8210	PLC/Outfeed conveyor inverter Can Bus error	no connection between PLC/Outfeed conveyor Inverter	Check CAN OPEN communication cable
8310	PLC/Air handling valves Can Bus error	no connection between PLC/Air handling valves	Check CAN OPEN communication cable
8410	PLC/HMI Can Bus error	no connection between PLC and HMI	no ETHERNET connection between PLC and HMI
8510	PLC/Seneca Can Bus error	no connection between PLC and Seneca	no ETHERNET connection between PLC and SENECA MODULE



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TROUBLESHOOTING

Problem	Solution
Film is too slacken during the wrapping operation	Increase the braking effect of the roller with clutch.
Film is too taut during the wrapping operation	Reduce the braking effect of the roller with clutch
Film overlaps too little on the product	Decrease conveyor speed
Film overlaps too much on the product	Increase conveyor speed
Wrapping begins too close to the product edge	Increase the “head positioning” time
Wrapping begins too far from the product edge	Decrease the “head positioning” time
Wrapping terminates too close to the product edge	Decrease the “tail positioning” time
Wrapping terminates too far from the product edge	Increase the “tail positioning” time
Wrapping overlaps are not compact	Check if the reel has been mounted correctly according to the film adhesive side