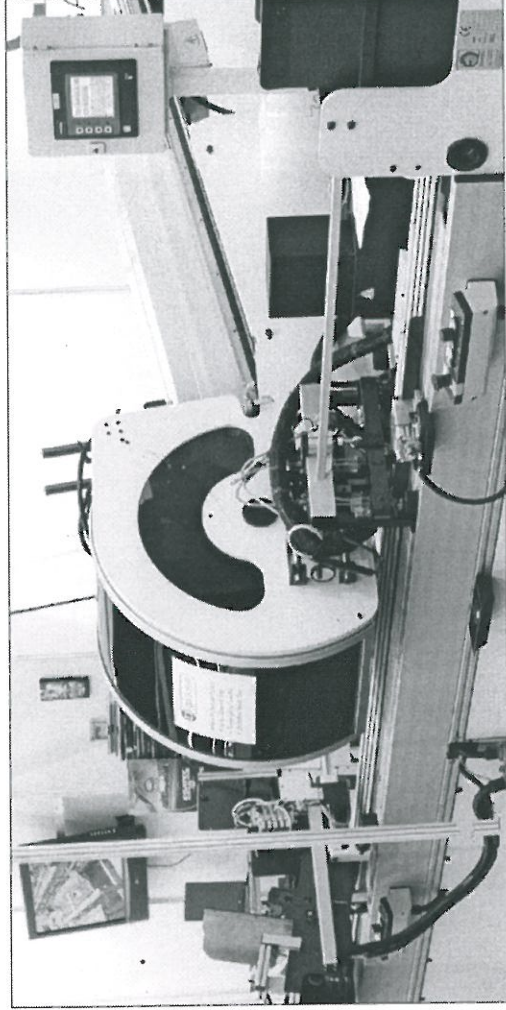


13975

Digi Small

USER MANUAL



USER MANUAL



N° 356/11

Year of manufacturing 2008

**Model: Digismall DS MT 1PP-7F 2TM DP 2DM 1L
N° 356/11**

CE**DECLARATION OF CONFORMITY**

We, ESATEC SA,

Located Z.A Les Brandeaux 16400 Puymoyen, France,

As the manufacturer declare herewith under our responsibility that our product:

**MACHINE FOR THE ASSEMBLY AND GLUING
OF CD/DVD TRAYS ONTO CARTON COVERS**

Identification: Digismall machine
Type: DS MT 1PP-7F 2TM DP 2DM 1L
Serial Number: 356/11
Year of manufacturing: 2008

Complies with the following standards, directives and referenced standard documents:

98/37/CE: Machinery
73/23/CEE amended by 93/68/CEE: Low Voltage
89/336/CEE amended by 92/31/CEE and 93/68/CEE: Electromagnetic Compatibility

Puymoyen, 16 mai 2008

LAROCHE Francis

President of ESATEC SA- France

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CHAPTER I

MACHINE DESCRIPTION

- A : Technical data _____ P.7
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- C : The HMI _____ P.9

Technical data

1/ Mechanical speed:

With standard pick & place 1 arm:

About 2,000 products per hour for 1 Digipak 1 tray
About 1,000 products per hour for 1 Digipak 2 trays
About 666 products per hour for 1 Digipak 3 trays
About 500 products per hour for 1 Digipak 4 trays
About 400 products per hour for 1 Digipak 5 trays
About 330 products per hour for 1 Digipak 6 trays

With a pick & place 2 arms:

About 3500 products per hour
About 1800 products per hour
About 1200 products per hour
About 960 products per hour
About 700 products per hour
About 600 products per hour

2/ Sizes:

Cartons in the Timed belt feeder:

- Minimum carton wide: wide of the CD cover
- Maximum carton wide: wide of the Long Box cover
- Maximum carton length: covers up to 7 panels – 6 trays

3/ Make ready time:

- With self teaching option for standard and special sizes: Less than one minute.

4/ Accuracy:

- Less than 0,5 mm

5/ Compressed air supply:

- Non lubricated air supply
- Pressure 6 bars minimum
- 5/10 m3 per hour

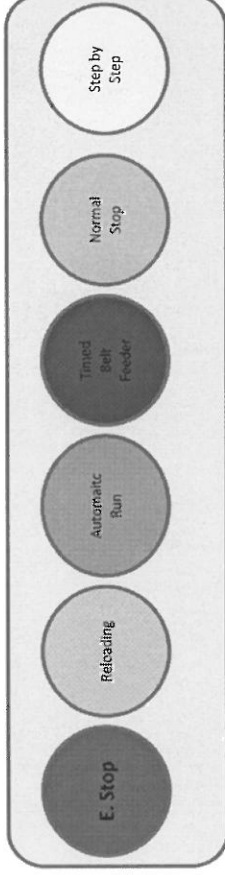
6/ Electric supply:

- For the machine: 6 KVA (3 phases + Neutral + Ground – 380 V)
- For the hot melt tank: 3 kW (1 phase + Neutral + Ground – 240 V)

Make ready

Procedure to start the machine:

- 1) Turn ON the electrical cabinet.
- 2) Press the green button of the machine's central in order to switch ON variators.
- 3) Maintain your pressure on the white button and at the end of the sound signal press again on the same button in order to start the phasing of the machine.
- 4) At the end of the phasing, the machine is ready to run.



Button « Emergency stop: E. Stop » : Allows you to stop the machine in case of Emergency. An Emergency stop switch OFF the power of all motors.

Button « reloading » : This button switches ON the power on all motors.

Button « Automatic Run » : This button allows to run the machine in automatic running.

Button « Timed belt feeder » : This button allows you or not to run the timed belt feeder.

Button « stop » : Allows you to stop the machine until the end of the cycle.

Button « Step by step » : Allows you to run the machine step by step.

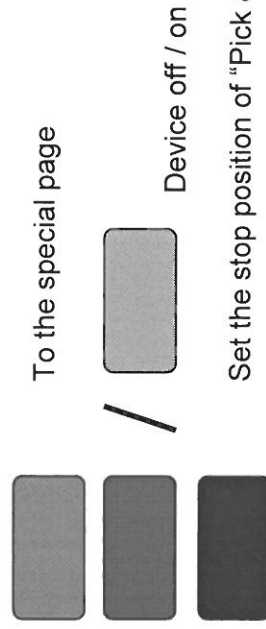
Note: We advice you to do an Emergency stop before to turn OFF the electrical cabinet.

Disc station : Push the button “timed belt feeder” + “normal stop” at the same time if you want to use the station in step by step. The button “setup disc station” must be enable. See page 22.

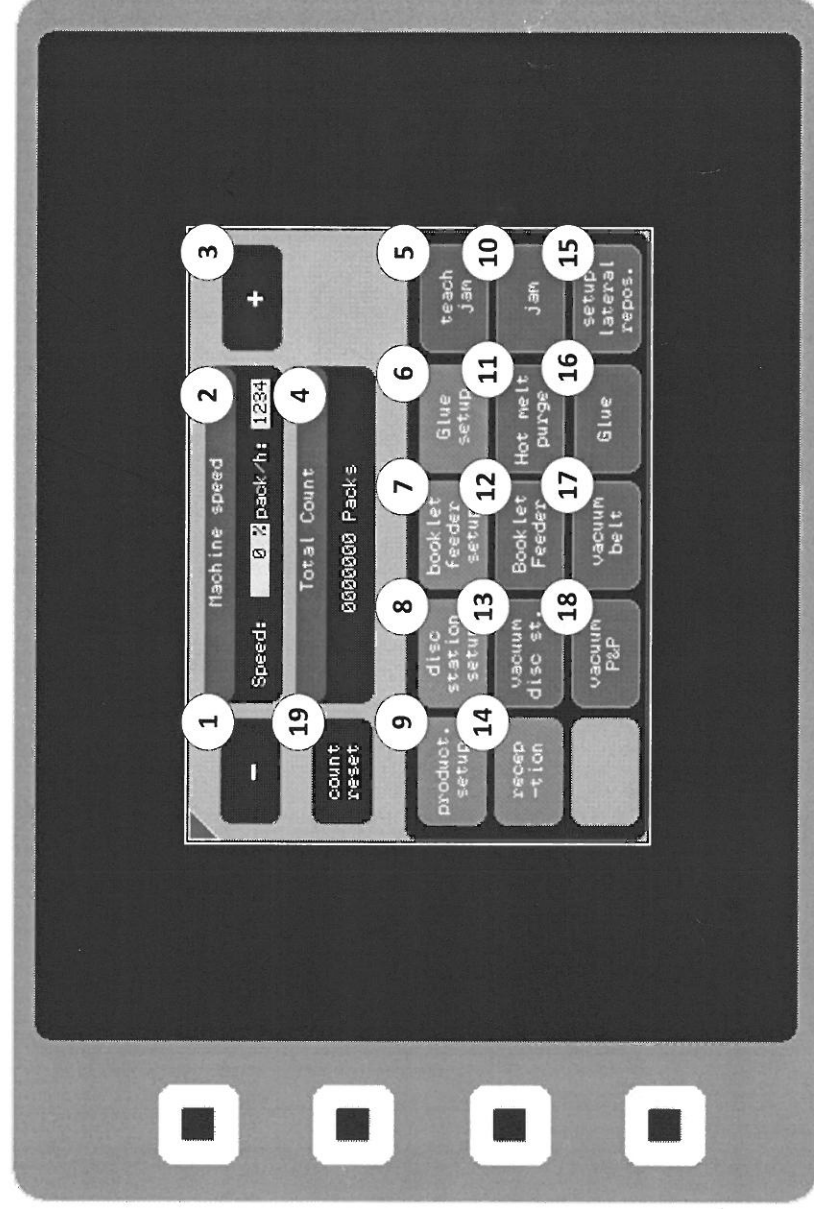
Booklet station : Push the button “normal stop” during 5 seconds if you want to use the station in step by step.

The HMI (Human machine interface)

The HMI makes possible to interact with different adjustment of the machine. It also guides you when the machine has a production default.



The home page :



Description :

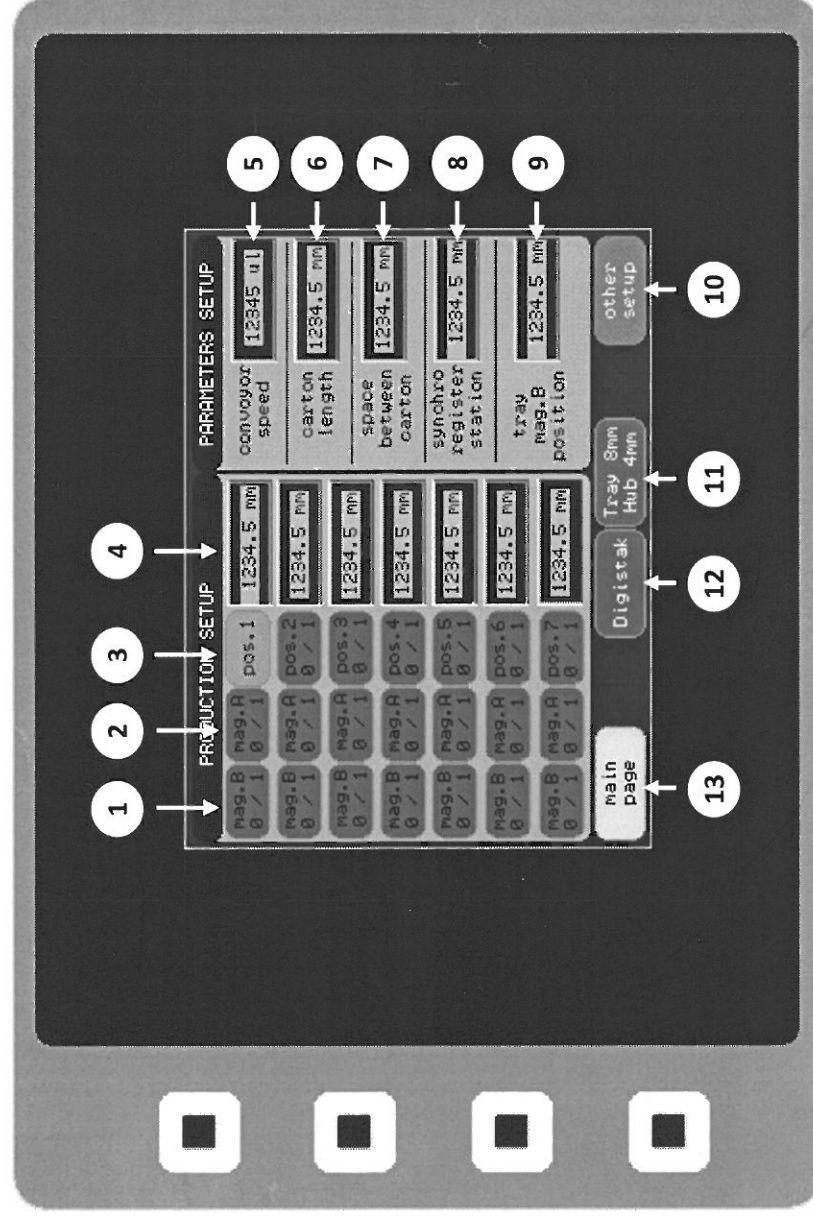
1. Decrease machine speed.
2. General speed of the machine.
3. Increase machine speed.
4. Counter of the machine.
5. Enable this button, run cartons, disable automatically after two beeps.
6. See page 16.

7. See page 23.
8. See page 20.
9. See next page.
10. Enable / Disable the jam sensors S267 and S265.
11. Push button to purge hot melt guns.
12. Enable/Disable booklet feeder station.
13. Enable/Disable the vacuum on disc station.
14. See page 24.
15. Mode to help you to adjust the aligning system.
16. Enable / Disable the glue system.
17. Enable / Disable the vacuum of the conveyor.
18. Enable / Disable the pick and place vacuum.

The production page:

All your productions job configuration begin by this page.

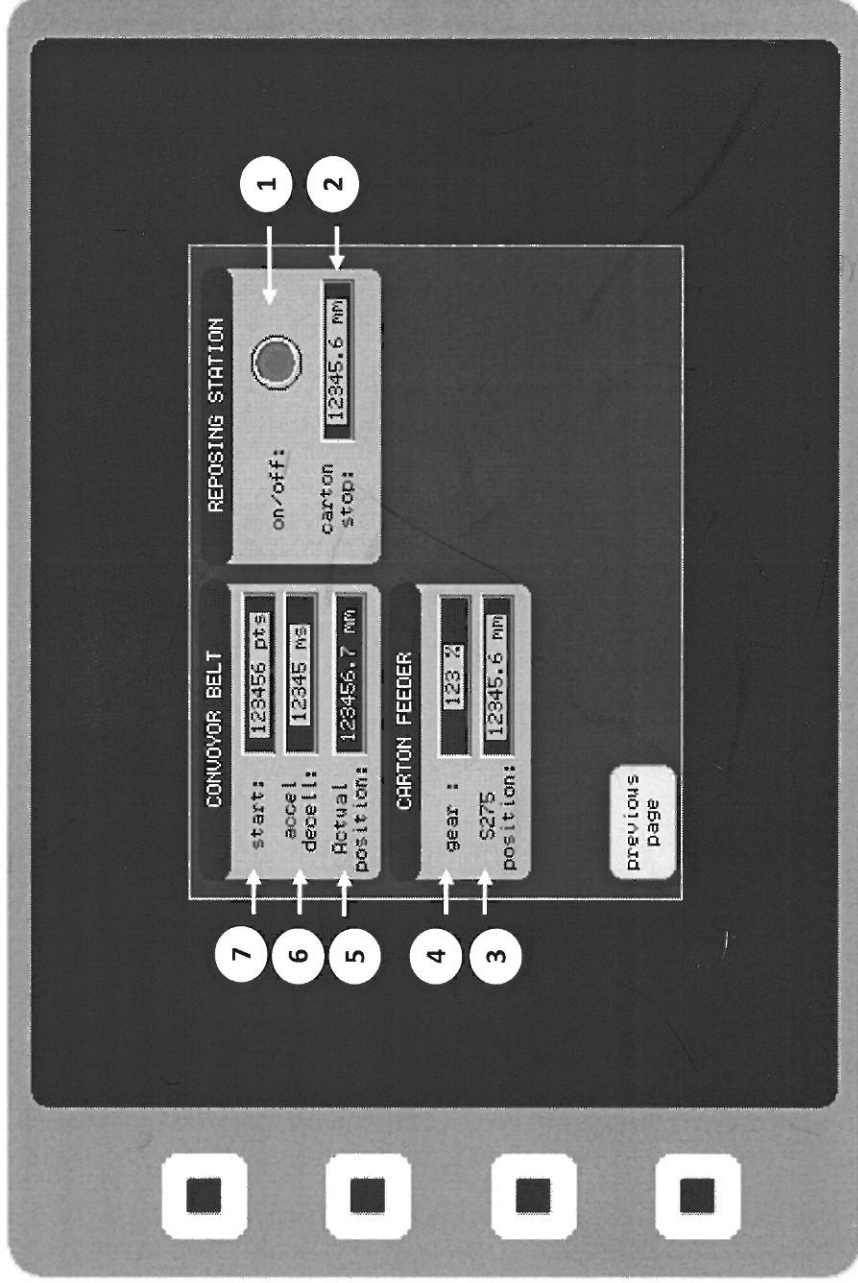
This page allows you to select from 1 to 6 trays and to define tray position on your carton board.



Description :

1. Enable / Disable the tray magazine B for one position.
2. Enable / Disable the tray magazine A for one position.
3. Enable / Disable tray(s) positioning for the magazine A or/and B.

4. Physical position of the tray on your carton board **for the magazine A** (starting from the first front).
5. Speed of the conveyor belt. You have to change it between different jobs.
6. Carton length in millimeters.
7. This parameter defines the distance between cartons after the carton feeder.
8. This parameter is the synchronization between the carton feeder and the register station.
9. Distance between the reference of the magazine A and B. You have to change this distance if you move the magazine B.
10. Access to the page "other setup".
11. Option (not include with the machine).
12. Option (not include with the machine).
13. Access to the main page.

Other setup page:

Description :

1. Enable/disable the repositioning station. Disable this device only to find the good value of synchronization of the register station. See previous page.
2. This parameters change the small travel distance of the conveyor belt when the carton is repositioning at the repositioning station. **Default value: 35 mm.**
3. This parameter is to change the "virtual position" of the sensor S275 and the carton feeder. This sensor is use to stop the second carton in the feeder when the first carton is starting. **Default value: 200 mm.**
4. Ratio of the speed of the carton feeder belt compared to the conveyor belt. **Default value : 100%** (same speed as the conveyor belt).
5. Actual virtual position of the conveyor belt.
6. Acceleration / deceleration of the conveyor belt. **Default value: 200.**
7. This is the P&P position which orders the belt start movement of the conveyor which orders the belt start movement of the conveyor. **Default value: 160000.**

CHAPTER II

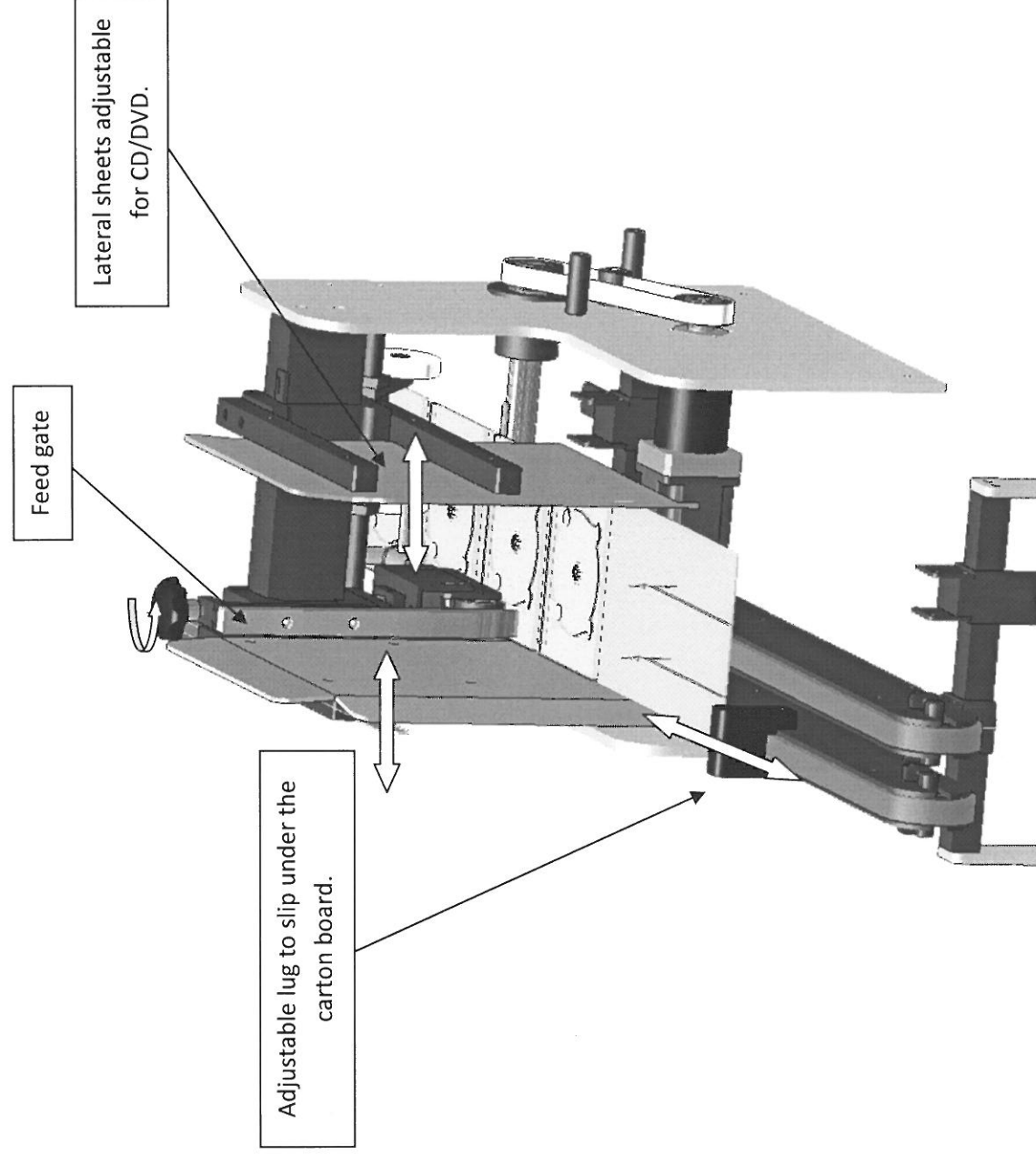
Adjustments

- A : The timed belt feeder _____ P.14
- B : The aligning system _____ P.15
- C : The gluing system _____ P.16
- D : The tray magazine _____ P.19
- E : The DISC insertion _____ P.20
- F : The booklet station _____ P.23
- G : The delivery _____ P.24
- H : The frontal folding _____ P.25

The timed belt feeder

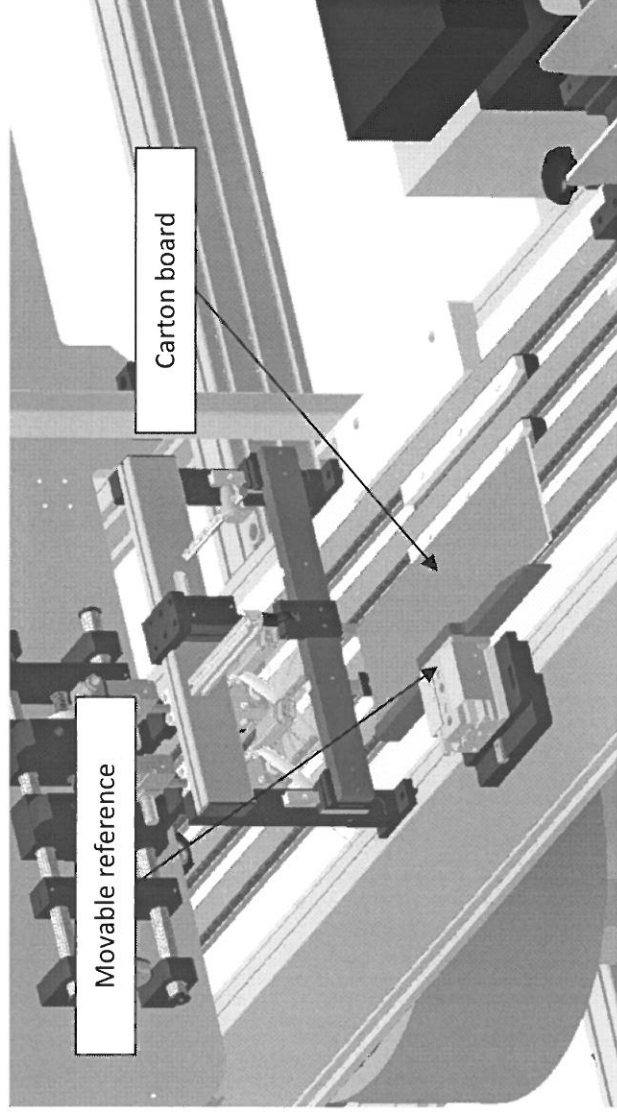
The timed belt feeder feeds the carton boards. It's made of red belts. The carton boards must be well held by the lateral sheets.

The feed gates must be always above one red belt.



The aligning system

The Aligning system registers each carton in axes x and y.

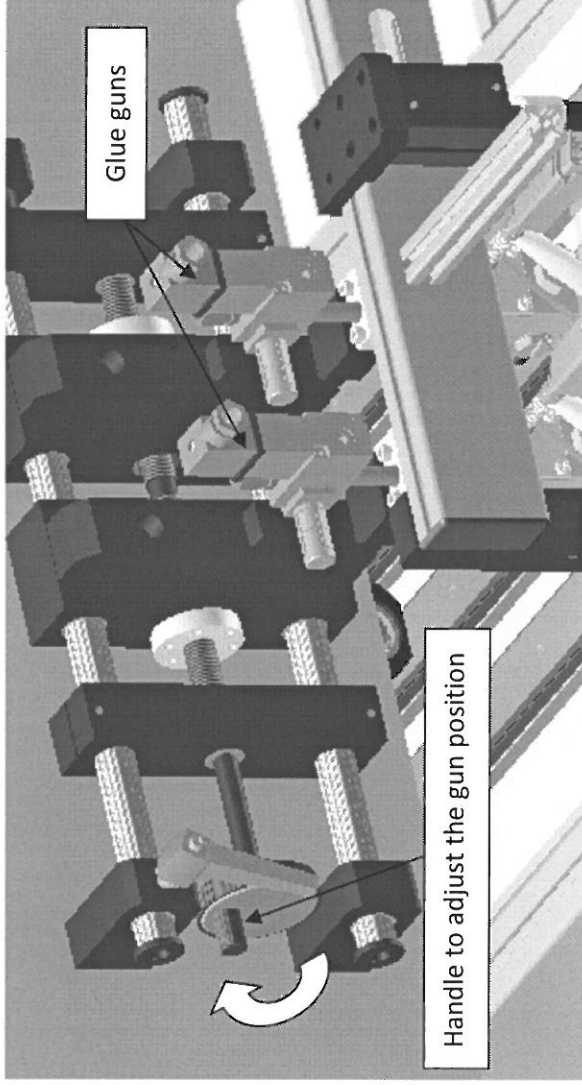


SET UP PROCEDURE:

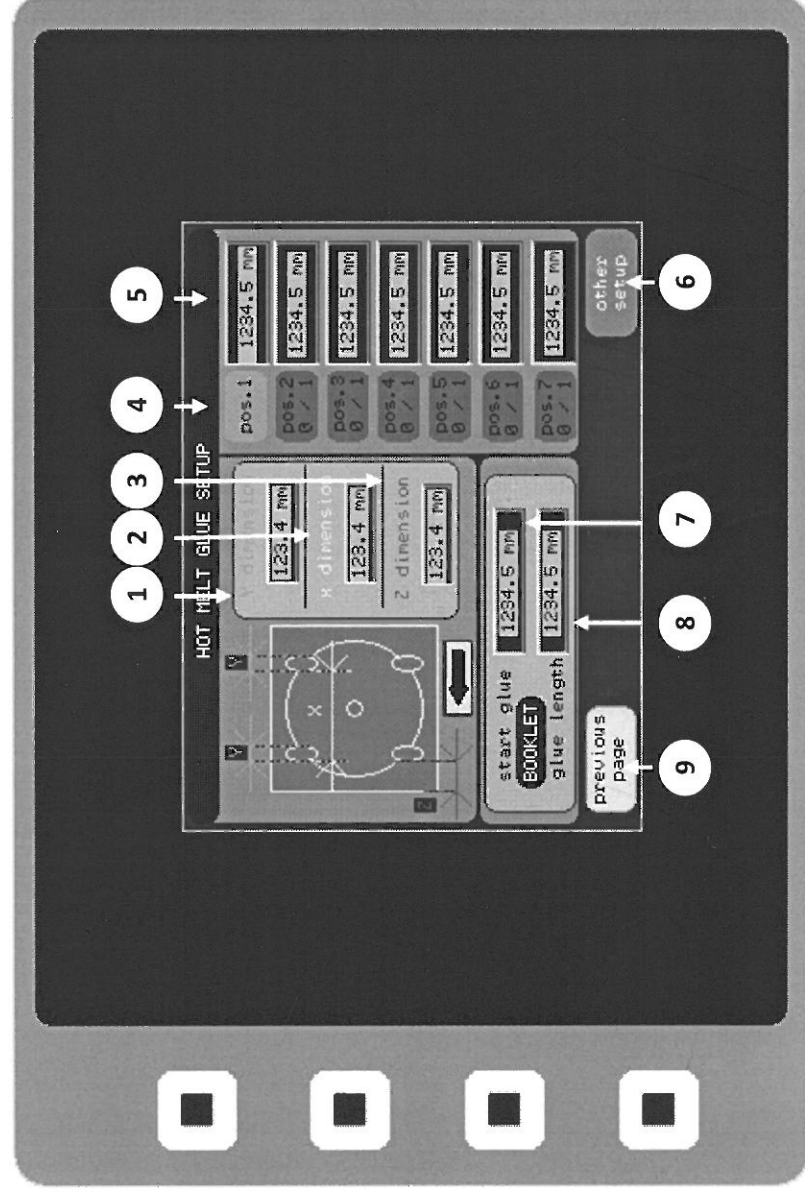
1. Position the removable reference so that the cover exceeds the belt on the movable reference side.
2. Press onto the button **setup lateral reposition** on the main page of the screen
3. The movable reference moves towards the cover, positions it the most near to the cover, by moving the whole thanks to the lights of adjustment (the cover must stay free).
4. Press on the button **setup lateral reposition** to finish the set up.

The gluing system

The adjustment of the gluing system allows you to adjust quickly the glue position between a CD Tray and a DVD Tray.



You can easily adjust the glue point position on the "glue setup" page of the screen (see page below).

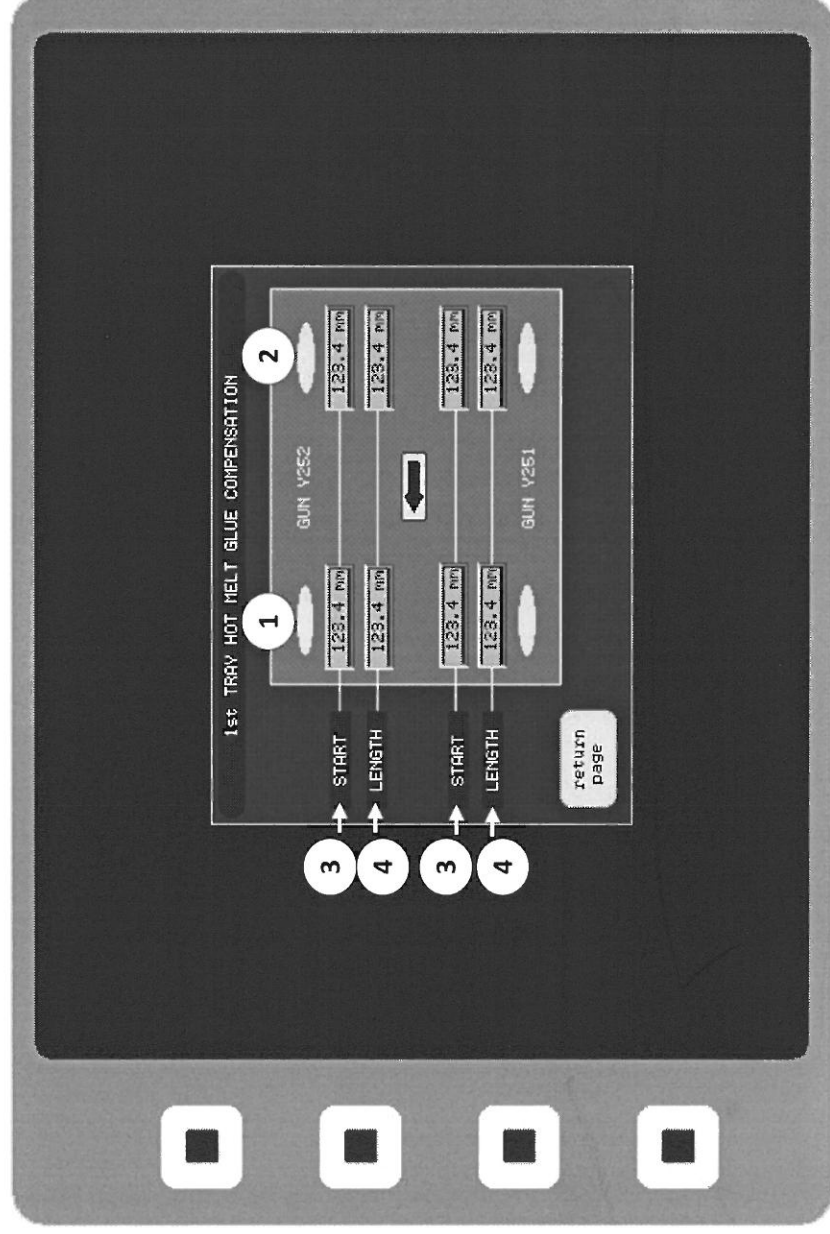
Glue setup page:

Description :

1. Length of glue points.
2. Distance between glue points.
3. Distance before to start the first glue point.
4. Enable or disable glue points for a tray.
5. Position of the tray use for the position of glue points.
6. These pages allow you to personalize each glue point of each tray. See the page below
7. Starting of the glue point for the booklet.
8. Length of the glue point for the booklet.
9. Access to the previous page.

Glue points compensation :

These pages allow you to personalize each glue point of each tray.



Description :

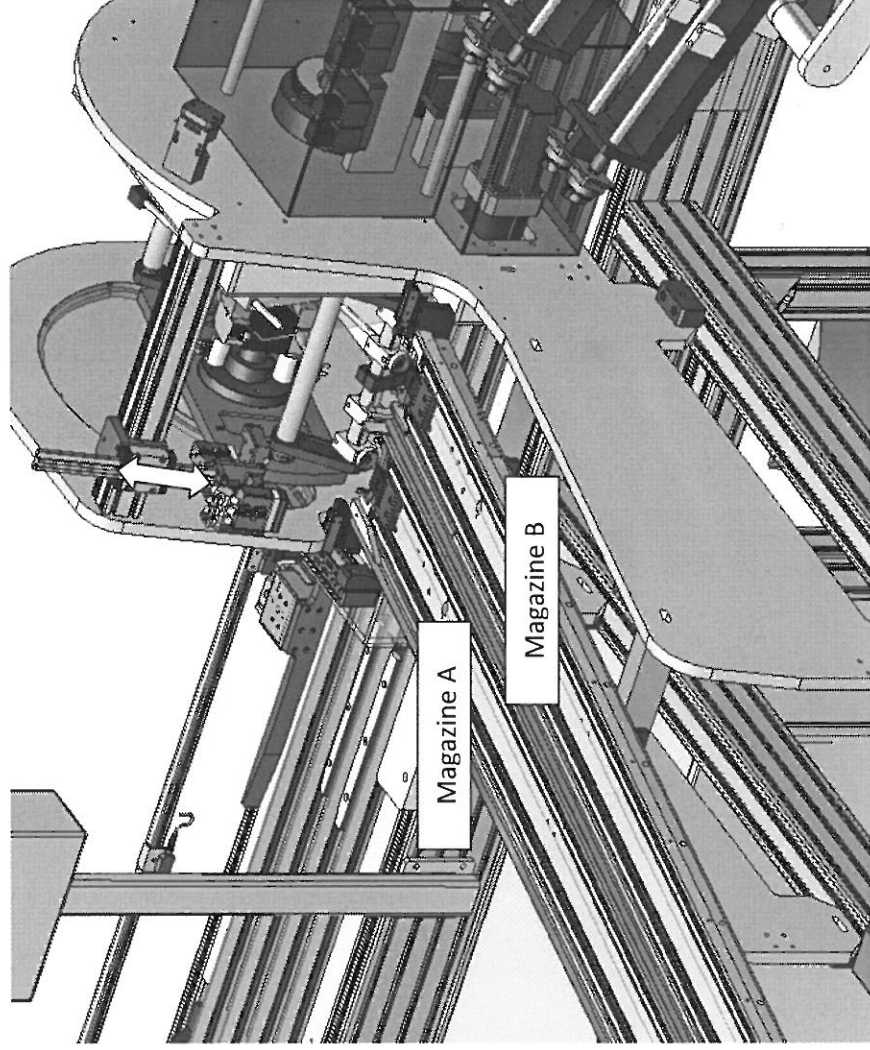
1. First glue point.
2. Second glue point.
3. Value to change the starting of the point.
4. Value to change the length of the point.

The tray magazine

The tray magazine is made for CD and DVD trays.

The only adjustment necessary between CD and DVD trays is the high of the magazine head.

The magazines B allow you to run on higher speed or to run different trays on the same cardboard.



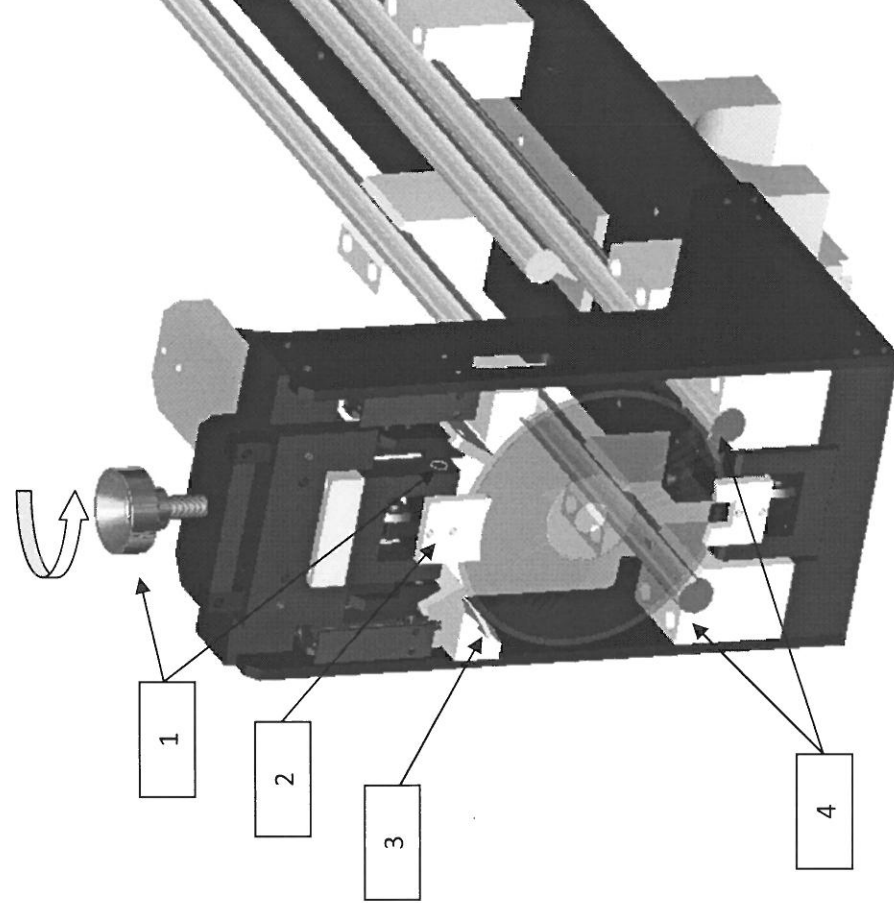
The DISC insertion

The CD stations allow to insert 1 CD (optionally until 6) into CD/DVD Digipak trays.

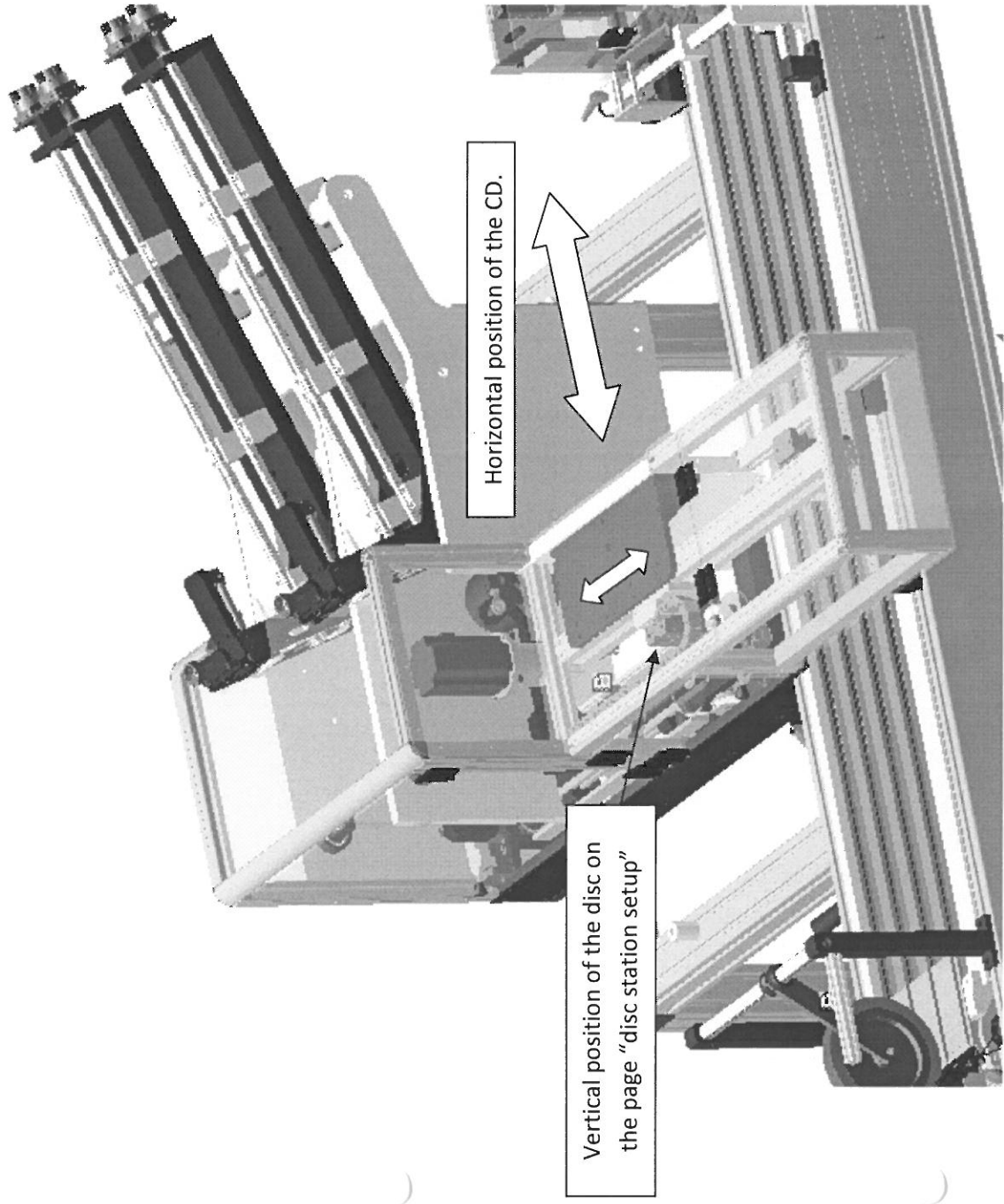
The magazine:

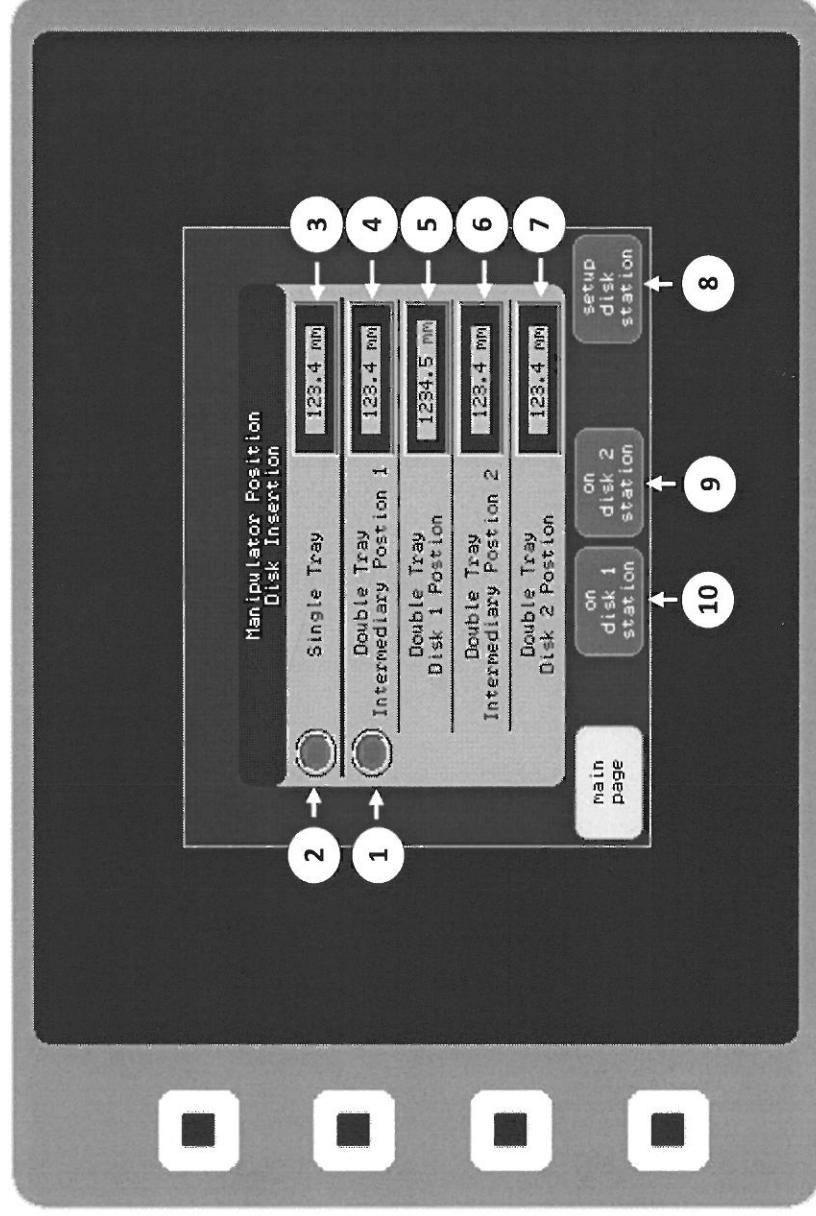
CDs are accumulating vertically on the magazine.

In front of the magazine, CDs are guiding by upper guides adjustable by the screw number 1. Then, CDs are stuck on the top by parts number 3 and on the bottom by parts number 4. To stuck CDs, the parts number 4 turn on itself to let place at a rubber part.



The disc conveyer:



Disc station setup page:

Description :

1. Enable disc insertion into "double trays".
2. Enable disc insertion into "single tray".
3. Manipulator position for disc insertion into "single tray".
4. First intermediary manipulator position to prepare the first disc insertion into "double tray".
5. Manipulator position for the first disc insertion into "double tray".
6. Second intermediary manipulator position to prepare the second disc insertion into "double tray".
7. Manipulator position for the second disc insertion into "double tray".
8. Enable this button is you want to use the station in step by step. After this one enable, push buttons "normal stop" + "timed belt feeder" at the same time.
9. Enable / Disable the disc magazine 2. You must do an emergency stop to change it.
10. Enable / Disable the disc magazine 1. You must do an emergency stop to change it.

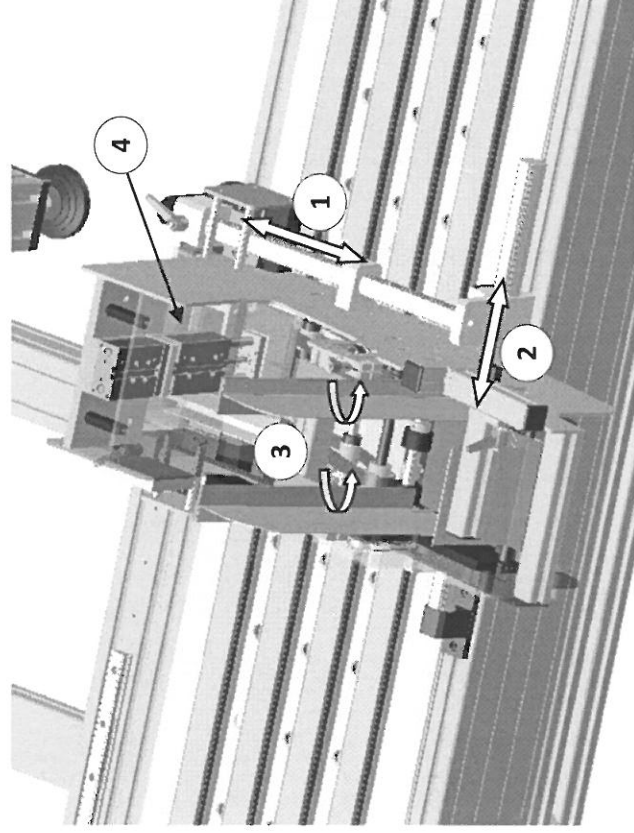
The booklet station

The booklet station is able to glue CD and DVD booklet on cardboard.

The station can be enable on the screen by the button "booklet station".

The glue position is adjustable on the page "Glue setup". See page 18.

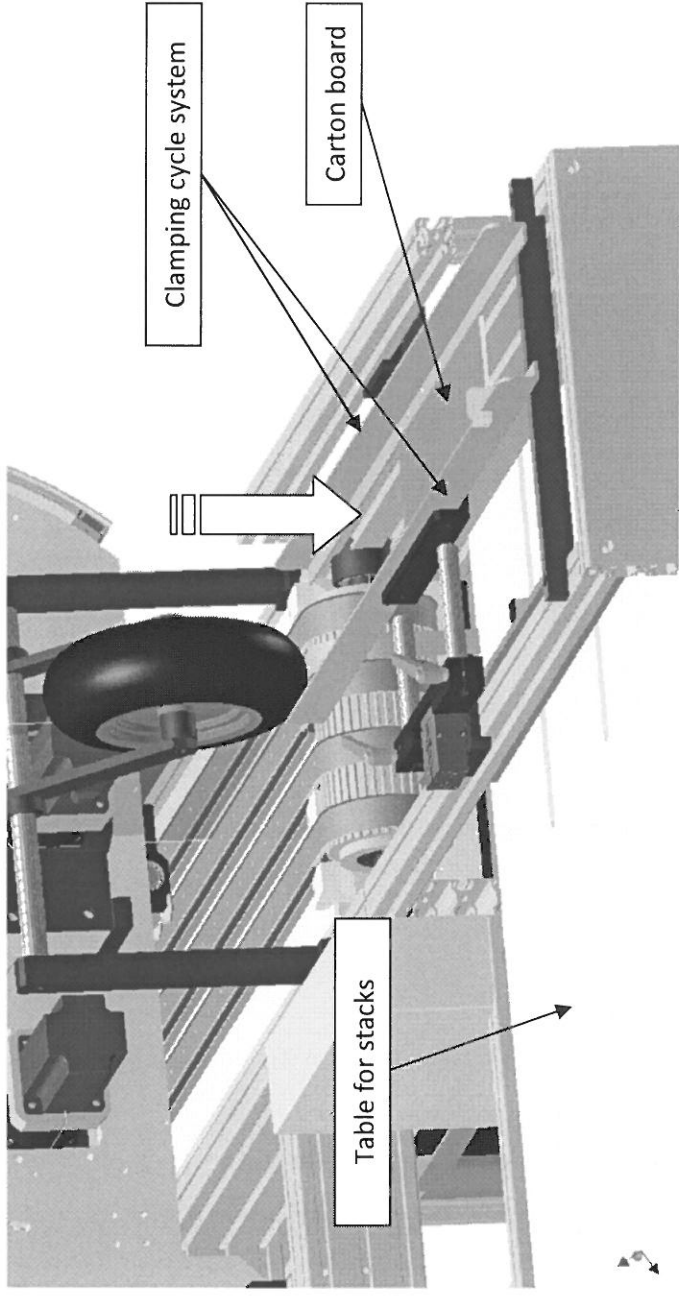
To adjust the position of the booklet on your cardboard, move the station on guides 1 and 2.
Depending of the thickness of your booklet, adjust screws 3.
Between CD and DVD, adjust the guide number 4.



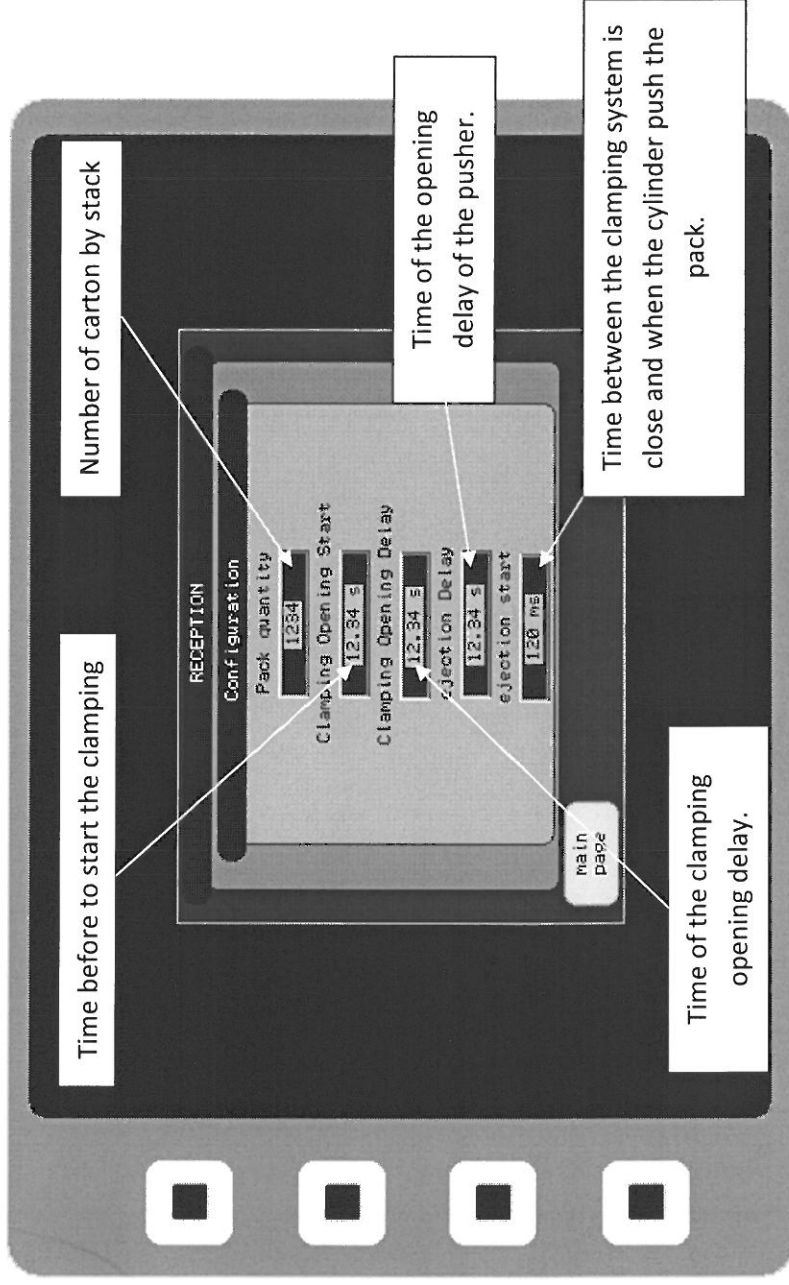
The delivery

The delivery is made by accumulation.

When a stack is complete, a pusher moves the stack in direction of the operator.

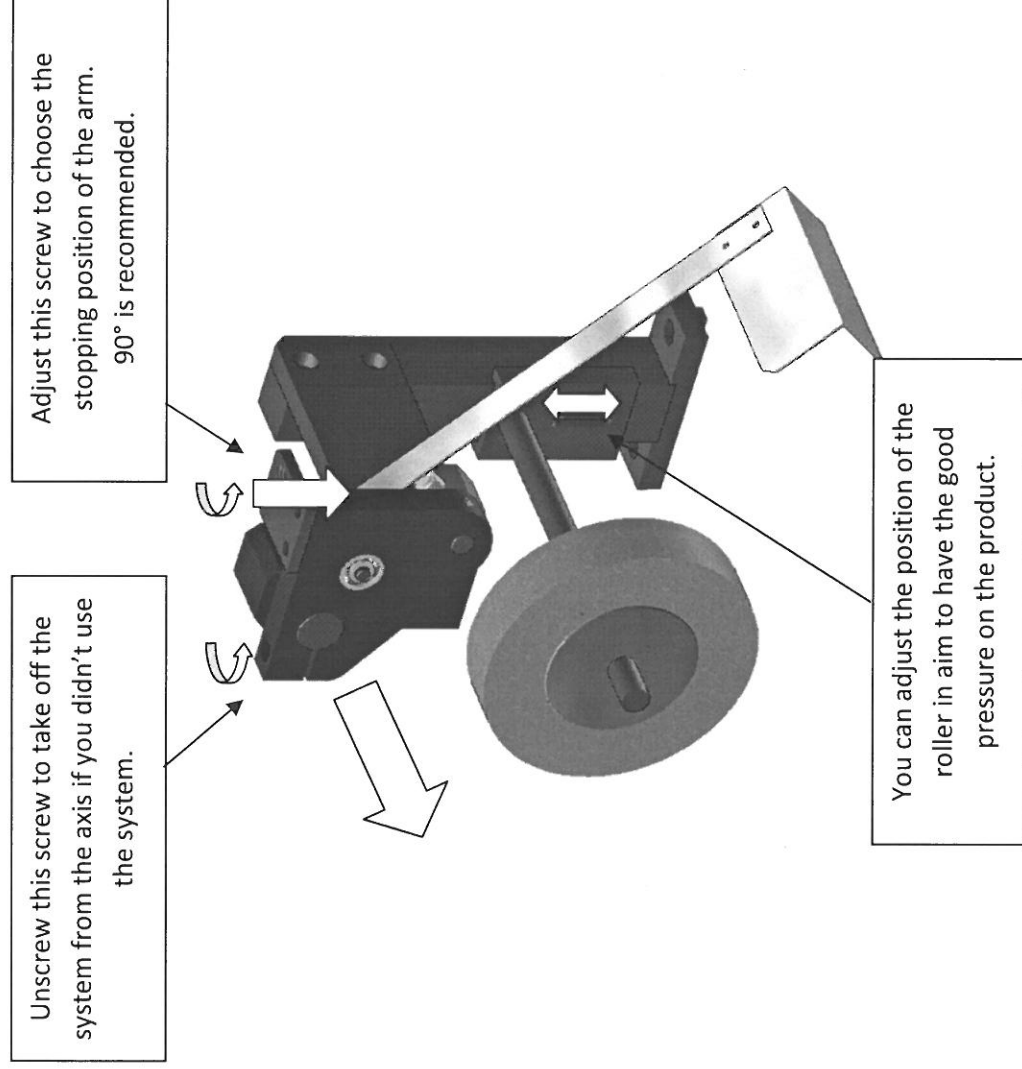


You can choose the number of carton by stack in the "reception" page of the HMI.



The frontal folding

The frontal folding systems allow to fold a Digipak made of 2 panels.



CHAPTER III

Caution

- A : Safety _____ P.27
- B : Pass code and diagnostic _____ P.28
- C : Brushless status _____ P.29
- D : Maintenance _____ P.30

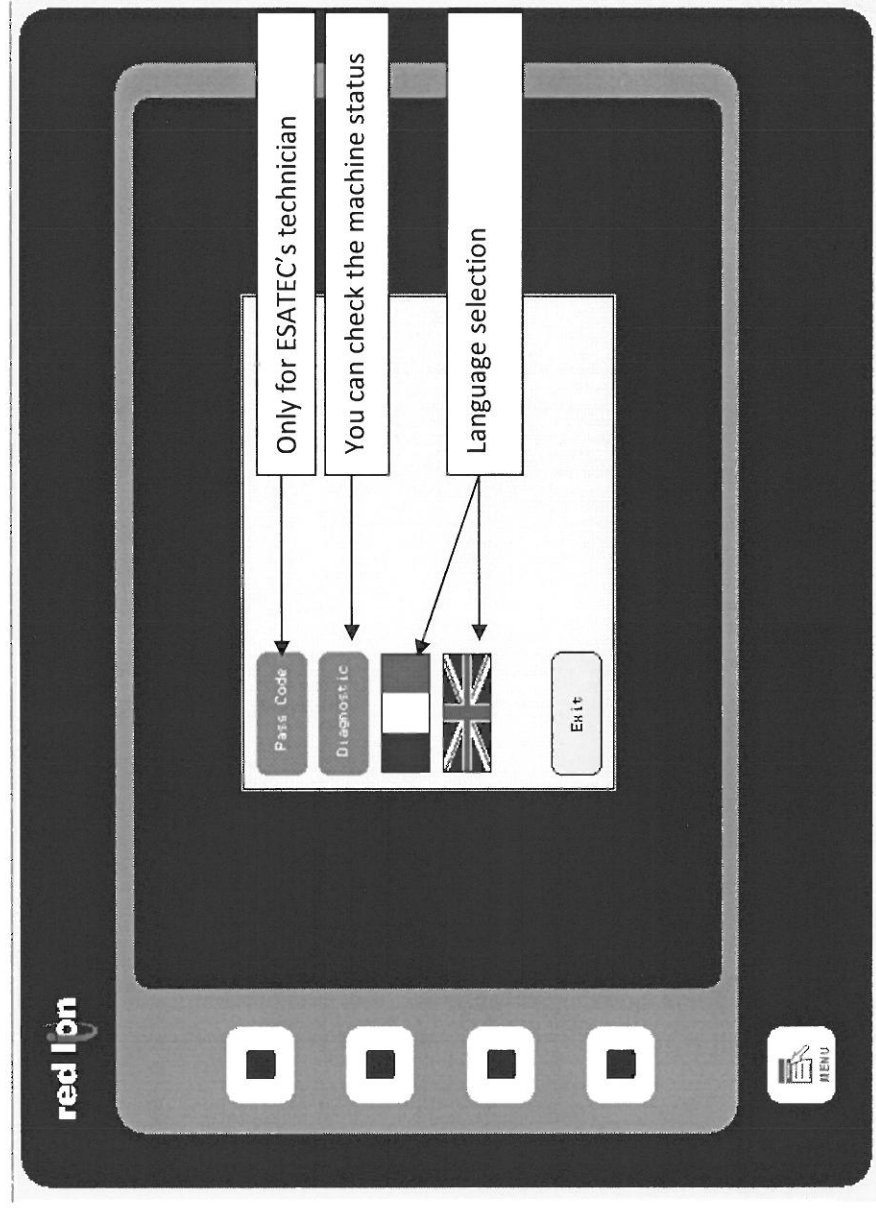
Safety

WARNING

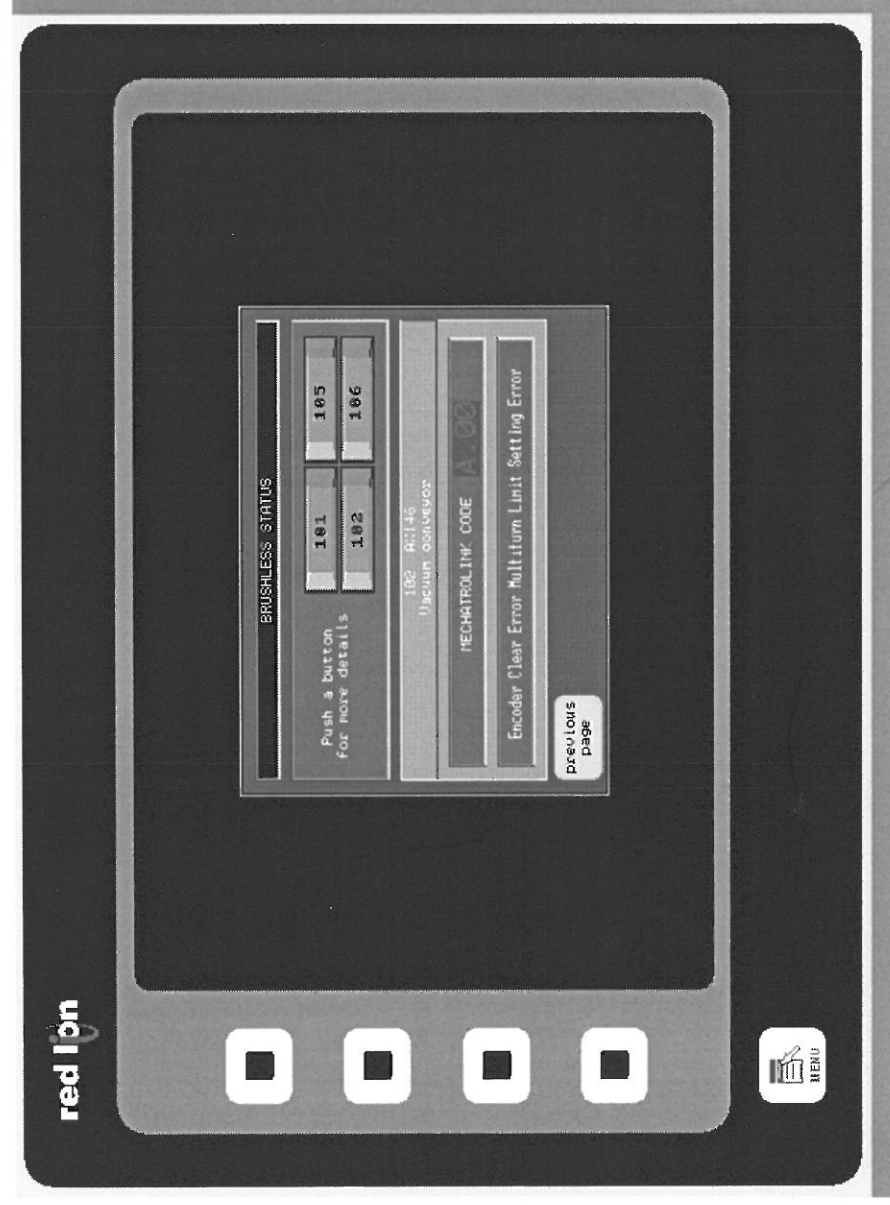
For your security, some rules must be respected for the machine use:

- Never disconnect a safety guard
- Never cut the buzzer, it warns people before the machine starting
- Never go under or in the machine when it is running
- Never place is handle under or in the machine when it is running
- Check that nobody is working on the machine before each machine starting
- Use a step or a platform of quality for the loading of the trays
- Each operator must know the emergency stop button placement before the machine using
- Each operator must know the safety rules before each machine using

Pass code and diagnostic



Brushless status



If this page appears, press the red button.

The Mecatrolink code should be change and you have also the information of the trouble.

Maintenance

Everytime:

- Check the cleanness of the belt conveyor: without any glue dots

Every month:

- Check the tension of the belt conveyor
- Put grease on the carton aligning system
- Check if there is no gap on the two arms of the P&P
- Check the tension of each belts of the feeder