
ALTIMAK

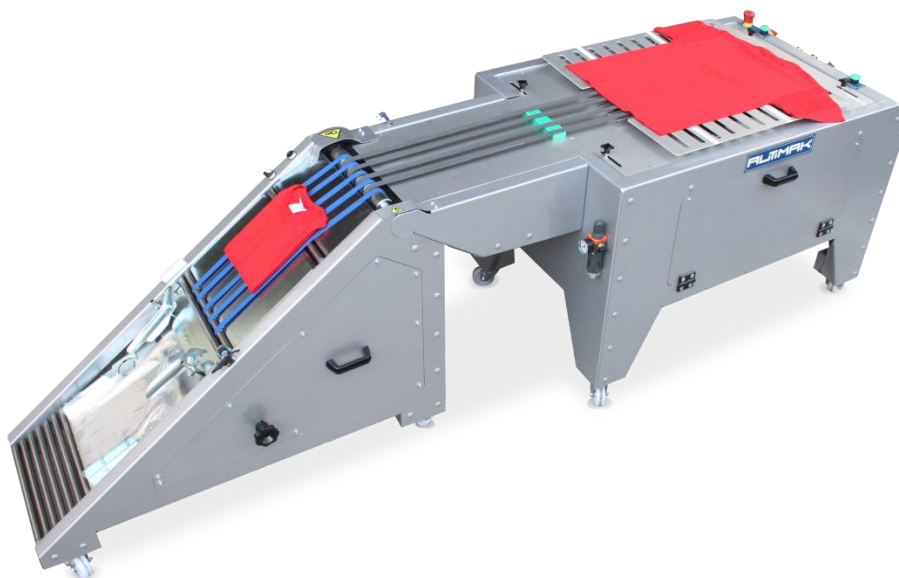
FOLDING AND PACKAGING MACHINES

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USER'S MANUAL M-600

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1. TECHNICAL FEATURES

Electric and pneumatic features:

Supply voltage: monophasic phase + neuter + land, 50Hz a 230V ($\pm 3\%$) C.A.

Installed power: 1,5 Kw

Working pressure: 6 bar

Differential protection of the connection: minimum de 300 mA

Generals features:

Height: 1.200 mm Width: 800 mm Length: 2.650 mm

Weight: 240 Kg

Production capacity: 600 cycles/hour

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| <ul style="list-style-type: none">- Name: "MACHINE M-600"- Type: Automatic machine- Trademark: AUTIMAK- Code: AUTIMAK M-600- Manufacture year: 2016 |
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2. –GENERAL DESCRIPTION

2.1. –APPLICATION DESCRIPTION

The machine M-600, is a linear machine to fold and package child and adults T-Shirt automatically.

It has a system with 4 benders at the entrance of the machine to fold the shirt and a conveyor belt that take the shirt folded to the bagging area, once there is pocketed and ejected to another conveyor belt.

2.2. – SECURITY SYSTEM

There is an emergency stop button on the control panel.

When the emergency button is pressed, the machine stops automatically and all the benders are out of pressure.

In order to start the machine after an emergency stop, the emergency button must be disassembled and then press the reset button and press the start button again.

There is hazard warning sticker on the machine for danger areas.

It is absolutely forbidden to use the machine without the safety devices correctly installed and operating properly.

IMPORTANT: If the machine is operated manually without voltage, the installed safety devices will not work.

3. –INSTALATION AND IMPLEMENTATION

Placed in the desired place and according to the optimal ergonomics for its use

Checkout the safety features.

Make out the relevant electrical and pneumatic connections.

Connect the electrical protection, magneto-thermal, etc.

Connect the compressed air connection of the machine.

For the operation of the machine, the procedure is as follows:

AUTOMATIC:

1. Activate the general switch.
2. Fill the charger with bags and leave the first bag inflated.
3. Press the reset bottom.
4. Put a T-Shirt on the folding and fold the sleeve inward.
5. Simultaneously press the 2 start button.
6. Starts the fold of the t-shirt.
7. When the fold is finished, the conveyor belts are activated and it stopped when the t-shirt is inside the bag.
8. When it has ejected the bagged t-shirt, the new folding and bagging cycle is started.

Notes:

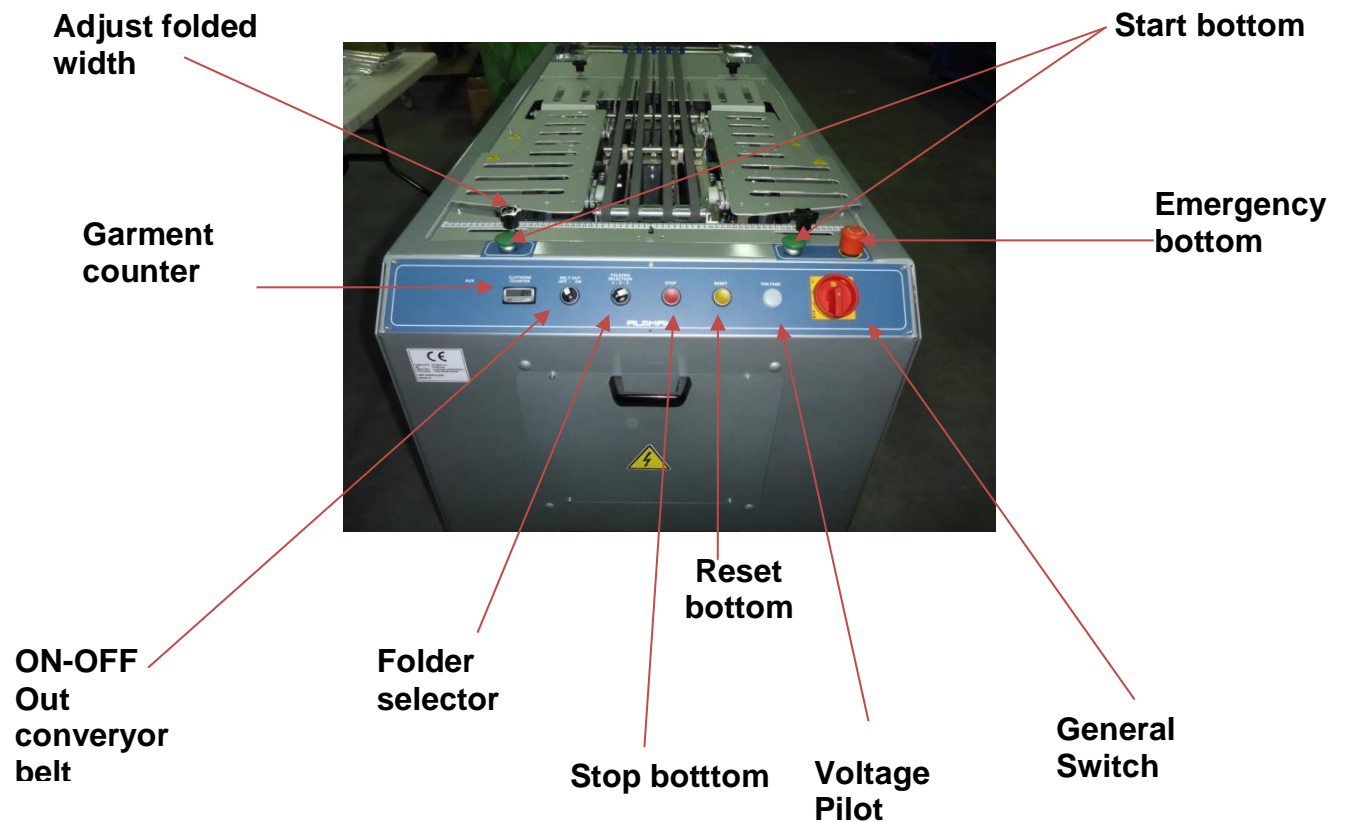
The manipulation of any part of the system by a person, must always be done with the machine stopped and an emergency button pressed.

Maintenance operations shall be conducted by the head of maintenance with the machine stopped, and disconnecting previously pneumatic and electrical power.

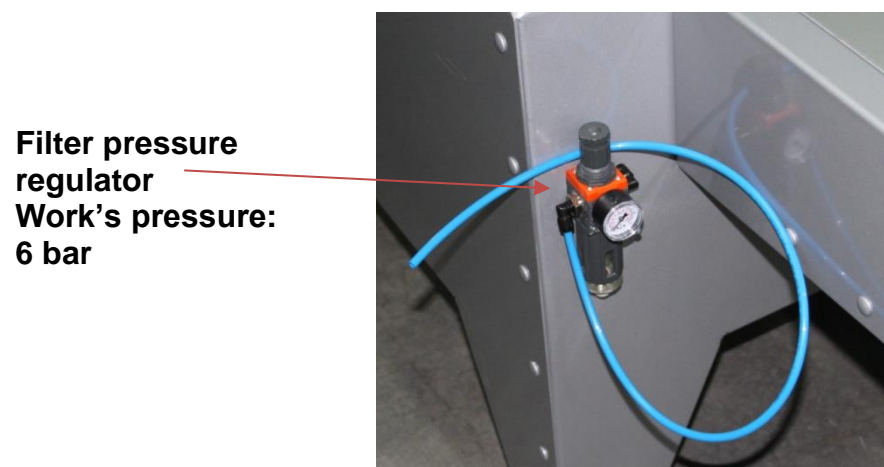
¡Any manipulation or modification not made by the manufacturer is responsibility of machine's user!

4. - OPERATIONS OF THE CONTROL

FOLD AREA



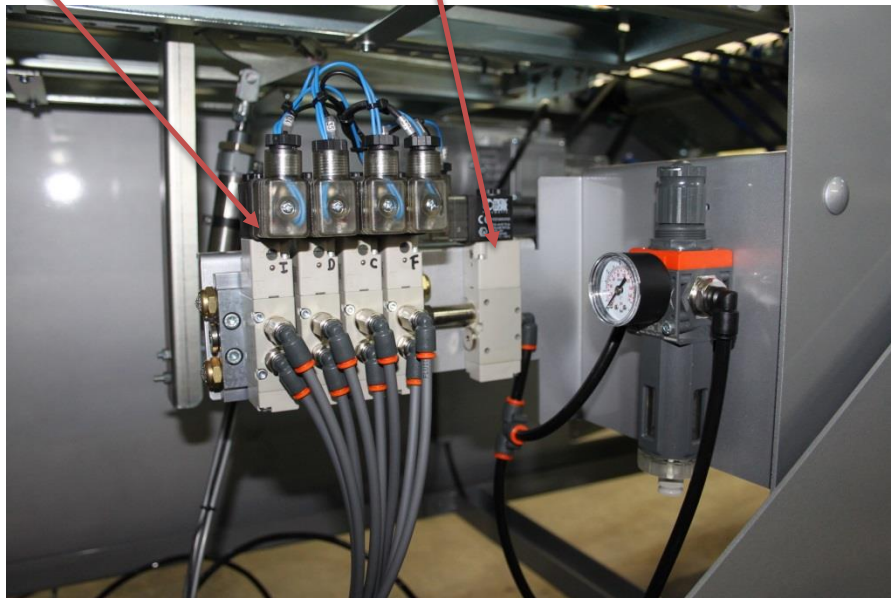
FILTER PRESSURE REGULATOR



FOLDING VALVES

Kit of fold
valves

Folder's air valve



FOLDERS

Left folder

Converyor belt

End folder

Right folder



FOLD CYCLE:

1) End Fold 2) Left fold 3) Right fold 4) last fold 5) Activation conveyor belt



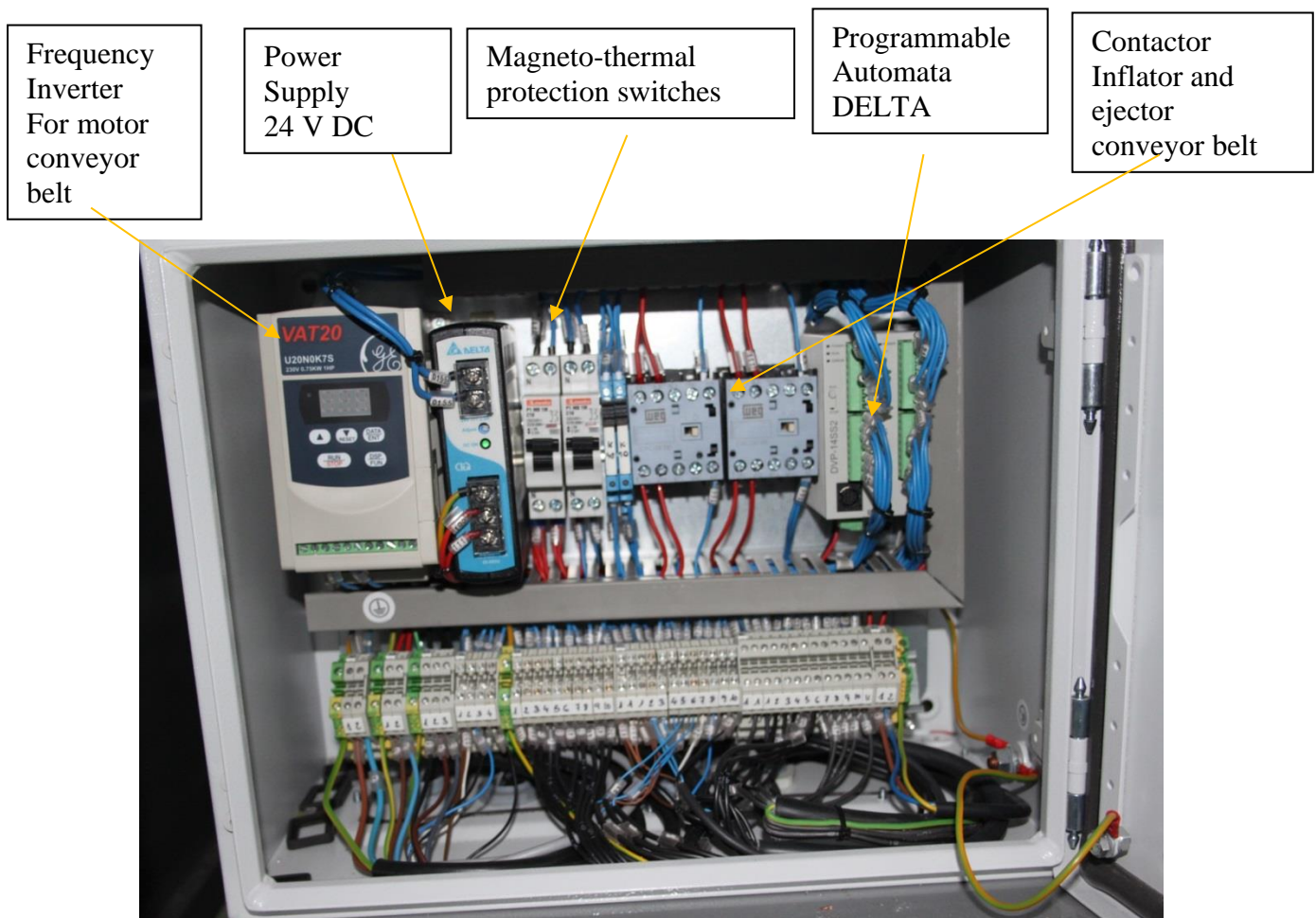
There are three folds program; you can choose it from the control panel.

Program 1: Fold of 3 folds left, right and the last fold with conveyor belt, this is for small garments.

Program 2: Only the conveyor belt without folder.

Program 3: Fold with 4 folds and the conveyor belt (like picture)

ELECTRIC AND PNEUMATIC PANEL



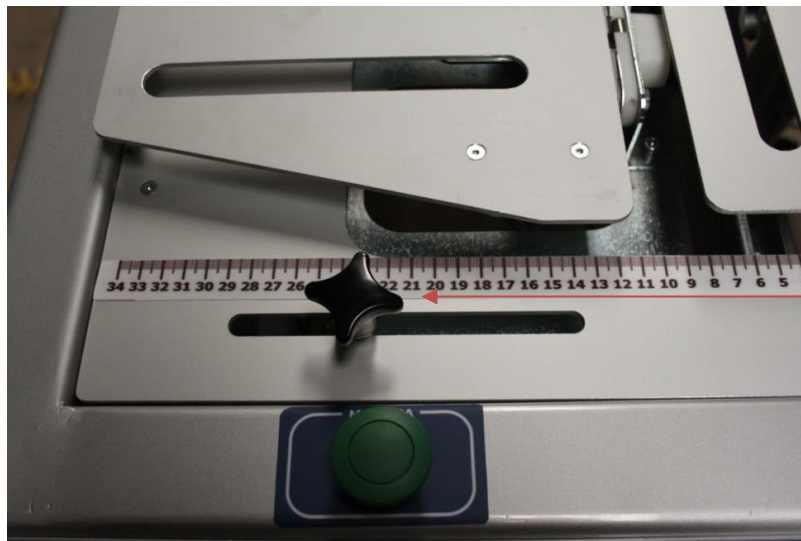
FORMAT CHANGE

You can adjust the final dimensions of garment if you move the folders.

To adjust the width, loosen the 4 commands (two in front and two on the bottom) without removing them altogether, and then hold each folder with your hands and place them at the desired distance from the center. Finally you have to re-tighten each of the hands.

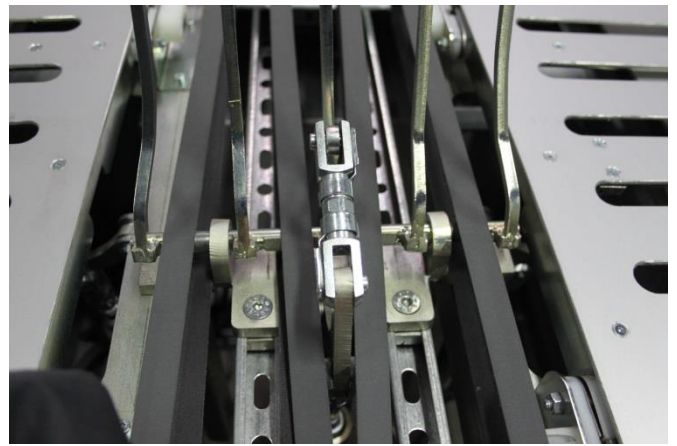
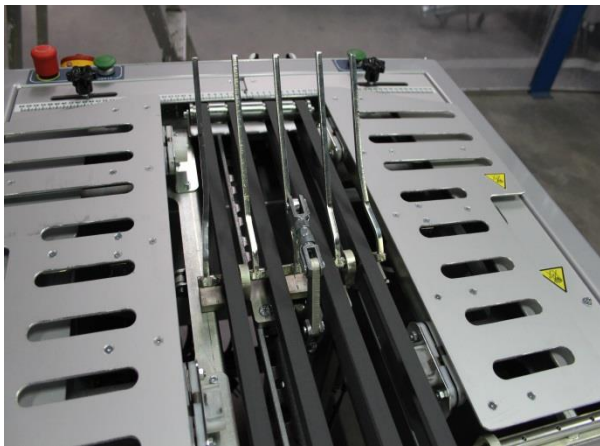
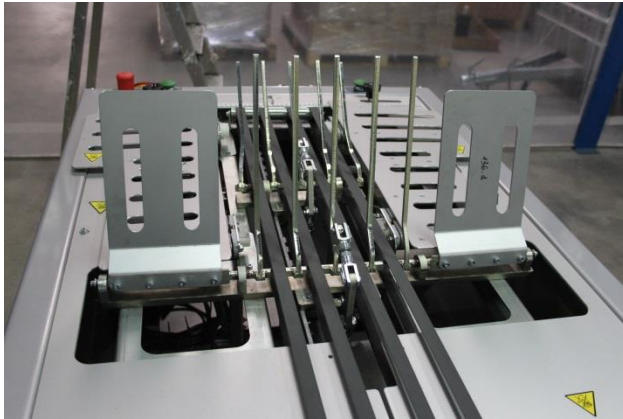


Commads

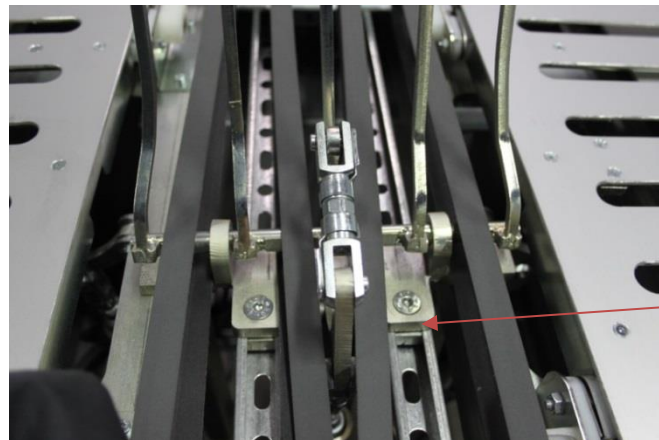


Commands

To adjust the position of the last folder, make sure that the machine is in emergency stop, then lift the final folder manually and loosen the screws. Place in the desired position and finally tighten firmly.

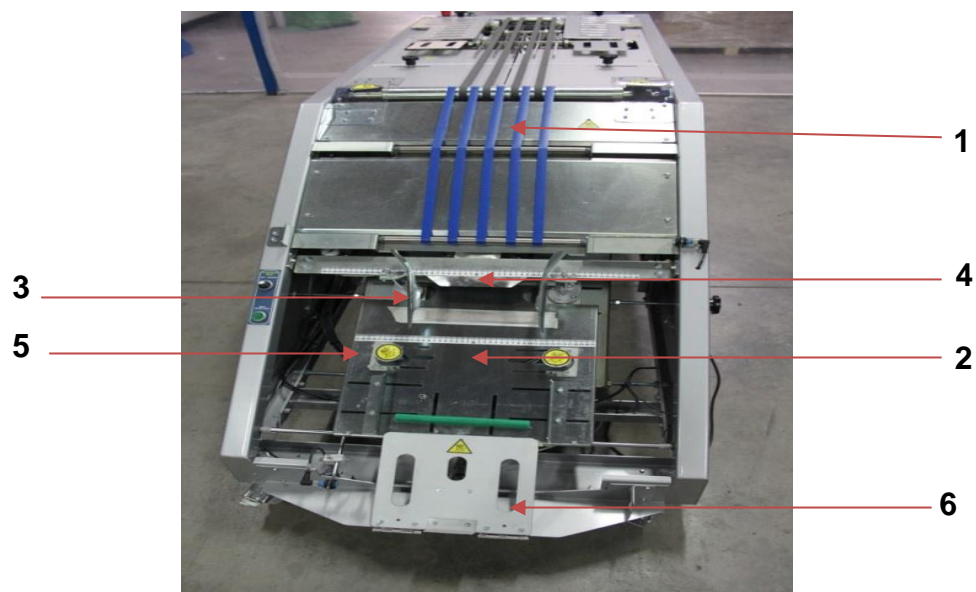


Last folder



Screw to adjust
the fold

BAG'S AREA

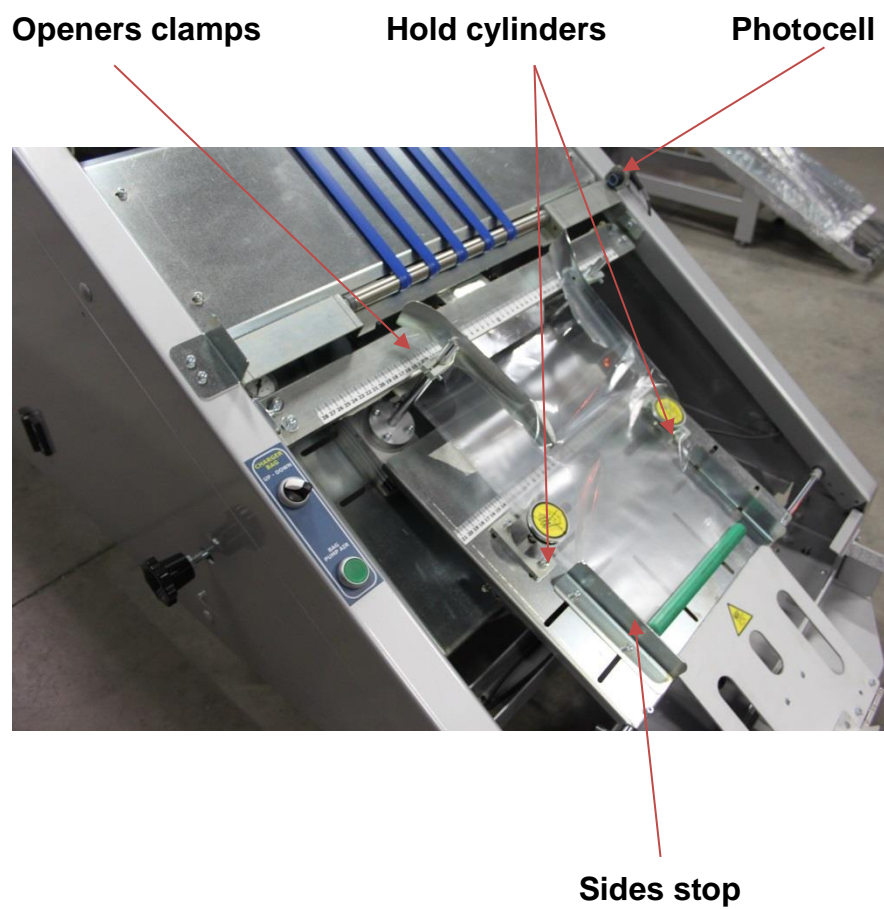


Main characteristics of the bagging area

- 1-Elastic entrance belt
- 2-Bag's charger
- 3-2 opener clamps
- 4-Inflatable air blower
- 5-Cylinders holding bag pack
- 6-Ejector balde

Operation:

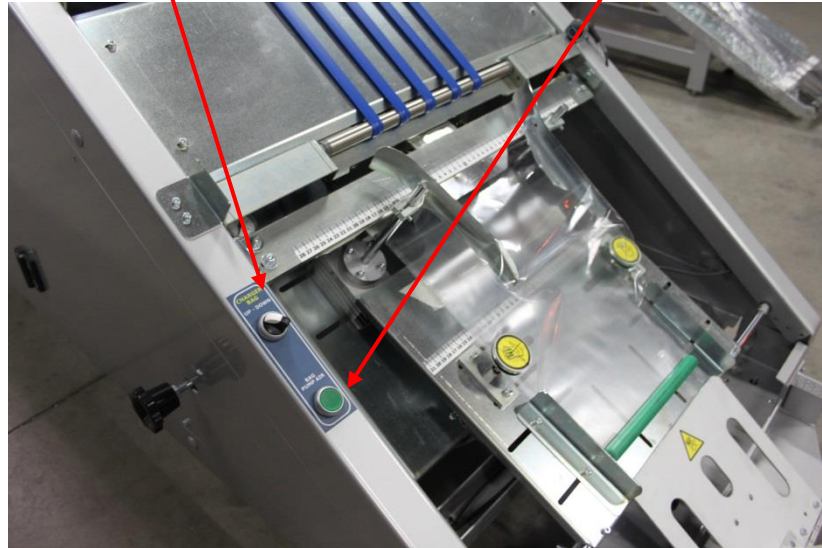
- 1 Charge the bags in the charger
- 2 Adjust the cylinders holding the bags
- 3 Up the bag's charger
- 4 Blow the bag and adjust the clamp openers until the bag is hold and with a little tension.



Charger control

1. Selector to up and down the charger

2. Button to inflate



1. - Selector to up and down the bag's charger:

When you activate the selector, first the bag's charger goes down and then the hold cylinders are opened to charge the bags.

When you put the selector in up position, the hold cylinder is closed to hold the bags and then the charger goes up.

Preventive measure! Don't put the hands under the subject cylinder, like is indicate.

2.- Button to inflate:

When the charger is up, we have to push the button and inflate the first bag before to begin to work.

You have to repeat this move every time you charge the bags.

Automatic operation:

When the bag's charger is full and the first bag inflates, we can work.

The t-shirt arrives to the bag, there is a sensor to detect it and inflate the bag, when the t-shirt is inside the bag begins the eject process.

1. - The openers clamps closed.
2. - The charger goes down ejecting the t-shirt.
3. - The hold cylinder continues closed holding the bag for it not fall down.
4. - When the t-shirt is ejected the process to inflate the bag is beginning again

All these steps will be repeated automatically.

Inflatable air blower

Adjust openers clamps

Hold cylinders



Out conveyor



It starts up through a switch that is on the control panel, its function is to extract the t-shirts coming out of the machine.

MAINTENANCE PLAN

5.1.- SPARE LIST

ELECTRIC SPARE:

- Power supply Delta 24V DC 2.5A (1u)
 - Inverter Delta VFD-N 0,75 kW
 - PLC DELTA DVP-14SS2 (1 un.)
 - Automatic switch 1p + N 10A (2 un)
 - Yellow button MOOLER (1 un)
 - Green button MOOLER (2 un)
 - Push-button emergency stop MOOLER (1 un)
 - Selector 0-1 MOOLER (1 un)
 - Selector 0-1-2 MOOLER (1 un)
 - General switch MOOLER 25A.
 - Red button MOOLER (1 un)
 - Photocell M-18 (1 un)
 - Reeds Metalwork
 - Contactor weg 9 A
-

PNEUMATIC SPARE:

- 4 Metalwork cylinder Ø25mm x 100mm (5 un)
- Metalwork Solenoid Valve EW5/2 1/8" (6 un)
- Filter regulator (1 un)
- 2 Base plate 4 elements 1/8" (1 un)
- 2 Compacts Vesta cylinder diam. 20 x 40 mm path

5.2. – PREVENTIVE MAINTENANCE

To perform maintenance, switch off the compressed air and the tension of the machine.

The maintenance operations must be performed by the responsible for maintenance.

If operations or maintenance are done in the electric voltage of the machine, there will always be emergency stop button pressed.

Every week:

- Lubricate moving parts
- Clean the machine and the inflatable air blower.

Every year:

- Open side covers and make a general clean of machine
 - General clean on electric panel
 - Check tension tapes.
-

6.- RISK ASSESSMENT and PPE

6.1.- OTHER POSSIBLE RISK:

Never invade work's area of machine when is working.

Not invade folder area when machine is working, neither the operator nor other person.

There is hazard warning sticker to indicate the danger area.

¡Never handle any part of the machine while is performing some movement in the machine. Neither the operator nor anybody else in the work area!

6.2.- PERSONAL PROTECTIVE EQUIPMENT

Gloves for work approved industrial handling.

Footwear with protection structure for industrial work.

IMPORTANT

<p>Any modification in this machine needs approval from the manufacturer with revision of documentation. If it's not in that way, the warranty will lose its effect and in case of accident, malfunction or breakdown of any part of the machine, the manufacturer shall not be liable.</p>
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7.- ANEXED: electrics and pneumatics schemes.