

**ENFLEX**

**F14 DUPLEX**





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**HORIZONTAL PACKAGING MACHINE, MODEL F14 DUPLEX**

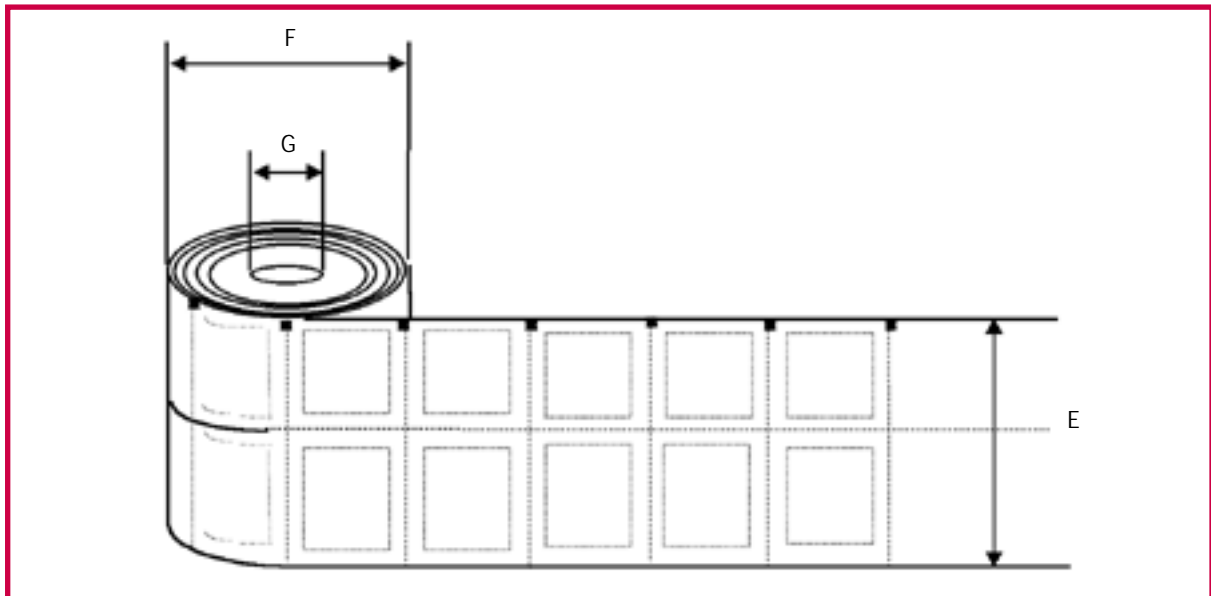
**Type of machine:** Horizontal packaging machine with intermittent motion to make flat bags, with three or four seams, from a reel of material sealing with heat at constant temperature.

**Format:**

Width	Min. 50 mm.	Max. 70 mm.
Height	Min. 70 mm.	Max. 200 mm. (Joined bags)
		Max. 65 mm. Max. 200 mm. (Separate bags)

**Filling:**

Flat bag with 3 seams	Max. 300 cc.
Flat bag with 4 seams	Max. 270 cc.



**Reel dimensions:** Max. diameter 500 mm. (F)  
Max. Width 400 mm. (E)  
Core diameter 70/72 mm. (G)

**Width of sealing:** Standard 12 mm.

**Type of sealing:** Standard, straight striped, pitch 1,5 mm.

**Noise level:** Under 70 dB. as per DIN 4563 standard

**Safety:** This model is designed and made to EC norms.

## GENERALITIES

The F14 is available in Simplex and Duplex versions and produces up to 200 pouches per minute.

The parts needing periodic maintenance were specifically designed to make the operator's task easy. Thus the upper sealing clamp can be folded right back to give absolute accessibility.

We have a complete range of special fillers available for each type of product; granule, powder, liquid, pasty, etc. The F14 can even work with two with two different fillers at the same time for products with a variety of components like instant soups.





## FINISH

All ENFLEX machines are finished and treated with the anti-corrosion paint and treatment especially appropriate to a wide range of applications, such as pharmaceutical laboratories, agricultural products, etc.

The exterior and interior finish of the whole unit, made up of the frame, main plate, covers, doors and large surface supports, undergoes the following painting and treating processes:

1. Cleaning and degreasing by dipping.
2. Trickling with SA 2,5 sand as per SIS-055900/1967 standards.
3. Painting with a 40-micron epoxy anticorrosion-priming coat, without lead or chromium.
4. Puttying as needed.
5. Sanding of puttied parts.
6. Painting with a 100-micron undercoat of Acrylic-Polyurethane.
7. Final sanding.
8. Final ENFLEX 40-micron grey Metallized Polyurethane paint.

All the exterior parts of the machine fall into one of the two basic finishing types, whether they are or not in contact with the product.

The parts of the machine that are in contact with the product are made of several types of stainless steel to preserve the integrity of the products and resist the action of aggressive cleaning products.

The other exterior parts of the machine, which are not in contact with the product, have a 20-micron chemical Nickel coating.

The exterior part of the machine has other elements, such as bellows, screws, axles, etc. Each one of these elements is made of the materials and undergoes the treatment most adequate to its own application or closeness to the product being filled, or to the characteristics of the materials used to make the bag.

Inside the machine, all the parts not made of stainless steel are finished with a surface treatment of black zinc coating.

## UNWINDER

The unwinder is designed to hold a reel of 500 mm. maximum diameter and 400 mm. maximum width. It is made up of a reel holder, an unwinding device, a brake and, optionally, an end-of-reel detector. The whole unwinder is covered by transparent guards.

The proportional brake ensures smooth unwinding, without jerks, even though the reel weight varies with the amount consumed by the machine. All this is extremely important if we wish to avoid tension in the paper during the bag making process.

The unit guarantees the correct supply and unwinding of the wrapping material.

The reel holder is extendible to facilitate reel insertion and extraction and to provide rapid reel fixing.



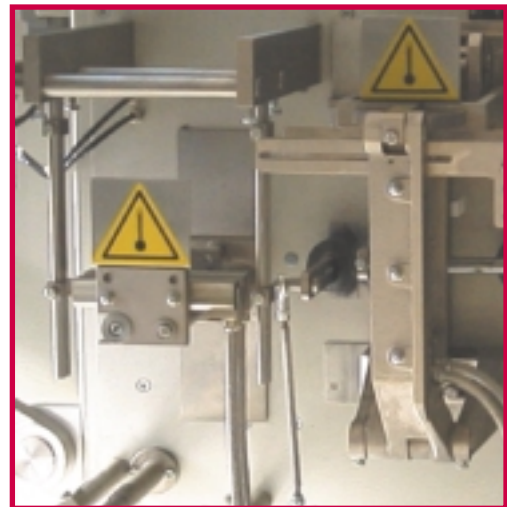
## BOTTOM SEALING

It is made up of two sealing jaws with a resistance and a resistance thermometer type probe each, which allows for independent monitoring and regulation of temperature, as well as fault detection for each sealing jaw.

Temperature regulation is carried out through the machine touch screen.

The jaws are fully mechanical and they operate intermittently in synchronization with the whole machine through a cam / lever mechanism.

Regulation is achieved through an aligning system, so that the sealing jaws fit perfectly in an accurate parallel position all along the paper passage line. In addition, a spring regulates the sealing pressure.



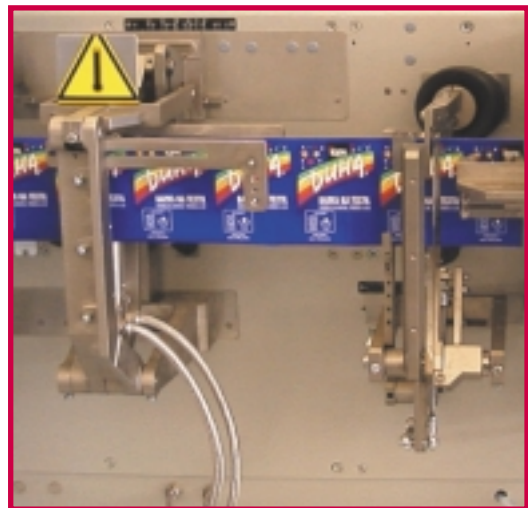
## VERTICAL SEALING

It is made up of two sealing jaws with a resistance and a resistance thermometer type probe each, which allows for independent monitoring and regulation of temperature, as well as fault detection for each sealing jaw.

Temperature regulation is carried out through the machine touch screen.

The jaws are designed to open quickly, to make its maintenance easy. They are fully mechanical and operate intermittently in synchronization with the whole machine through a cam / lever mechanism.

Regulation is achieved through an aligning system, so that the sealing jaws fit perfectly in an accurate perpendicular position all along the paper passage line. In addition, a spring regulates the sealing pressure.



## DRAWING

This device makes the bag making material go forward and places the printing with reference to the size of the bag.

The drawing system is monitored by a photocell that limits with high precision the drawing travel by reading a spot, and it makes it correspond perfectly with the printing on the reel. This photocell is situated on the paper guides.

Drawing is achieved through an arm with a clip that holds the wrapping material and pulls it. This operation is monitored by an electric brake that receives the information from the photocell.

It operates intermittently in synchronization with the whole machine through a cam / lever mechanism.



## CUTTER

The cutter separates the bags once they have been made. This is achieved by the movement of two blades mounted on a common axle and operated by a cam / lever mechanism.

Considering the fact that these parts do wear off, they are designed in a way to make removal and mounting very easy and without maintenance.



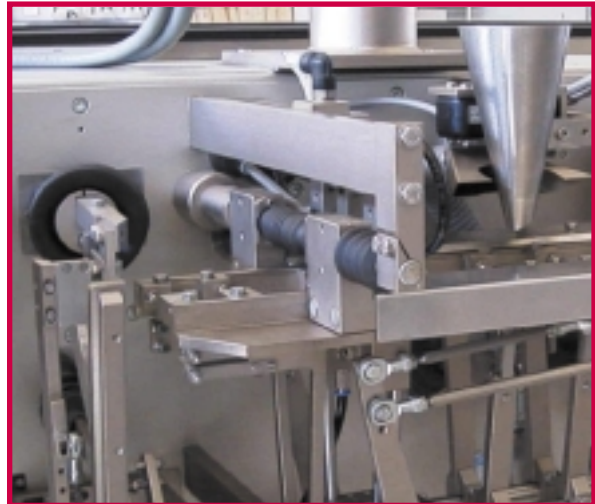
## BAG OPENING

The system designed to open the bags has two different functions:

- Vacuum suction pads.
- Blowing nozzle.

Opening is performed by the operation of both the nozzle and of the two groups of suction pads – top ones and bottom ones. The top suction pads start the bag opening while the nozzle at the mouth of the bag blows into it. Next the top suction pads stop operating to avoid bag deformation. Thus the bags are held and opened by the bottom suction pads and the nozzle only. This way the process is simplified and there is no need for additional mechanisms that could cause deformation and jerks.

This system guarantees a good bag opening even in the most negative conditions, such as reels difficult to handle or high speed operation.



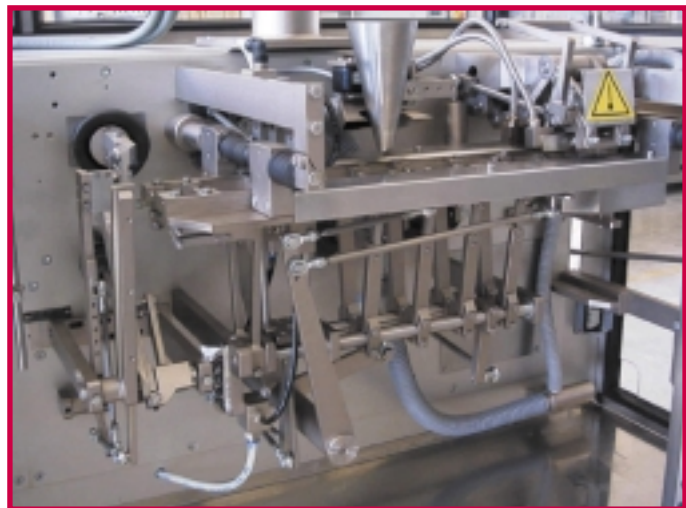
## BAG TRANSFER

Once the blades have cut the bags off the reel, these are moved through the combination of two mechanisms: the transport trolley and the fixed pincers.

Transport of the bags is performed through the bags being taken alternatively and in synchronisation from the mobile pincers to the fixed ones. The mobile pincers are in the trolley and move the bags, and the fixed pincers are under the trolley and fasten the bags during the operations in different stations.

The shifting elements of the trolley have been improved in such a way that its mechanisms require as little maintenance as possible.

It operates intermittently in synchronization with the whole machine through a cam / lever mechanism.



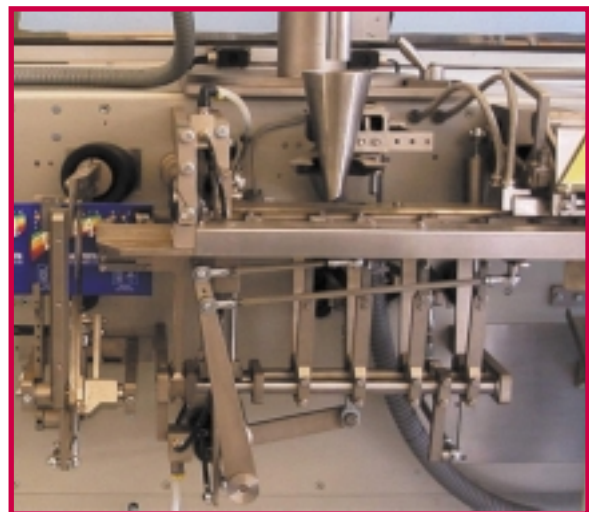


## FILLING STATION

This model of packaging machine was designed to mount two filling stations to introduce two different products into the same bag.

These filling elements vary with the product fed and its size. Subject to these parameters, the following elements may be provided: funnels for solid products, powder or granules, nozzles for liquid, nozzles for pasty products, etc.

In addition, there are other optional accessories that can be mounted as required, such as suction holes to remove the dust created by the product dropping, bottom vibrator for best filling of bags, etc.



## TOP SEALING

This device performs the top sealing of the bags after filling. With this operation, the bag is perfectly closed and ready to be removed, either by means of an extractor or an outlet ramp.

It is made up of two sealing jaws with a resistance and a resistance thermometer type probe each, which allows for independent monitoring and regulation of temperature, as well as fault detection for each sealing jaw.

They operate intermittently in synchronization with the whole machine through a cam / lever mechanism.

The top seal jaws require regular cleaning because some of the product packaged may lay on top of them. In addition, the heat-sealing material flowing along the ends of the bag, accumulates on the sealing devices and must be removed. This is why the top sealing jaws designed by ENFLEX are made in such a way as to provide for easy access to make cleaning easy.

All this has a positive effect on the work of the operator, the performance of the machine and the quality of the end product.

Regulation is achieved through an aligning system, so that the sealing jaws fit perfectly in an accurate parallel position all along the paper passage line. In addition, a spring regulates the sealing pressure.



## BAG OUTLET

The standard bag outlet is a ramp that ejects bags out of the machine through gravity.

The height of this ramp can be regulated to obtain the best bag outlet.

There are two alternatives to this outlet ramp.

The first option is a conveyor belt driven continually by a reducing motor. This conveyor belt is complemented with an outlet ramp or an extracting system with suction pads.

The second option is a counting, grouping belt driven by two reducing motors at different speeds. The slow speed makes groups as required by the customer. Separation between groups is obtained with the fast speed. This second option has got the above indicated extracting system.



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