

PFM D-Series

Stand-Up Pouch Machinery



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Stand-Up Pouch Machinery



PFM D-Series: **Why**

The top 6 product innovations.





Simple



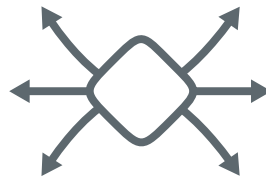
Modular



Accessible



Compact

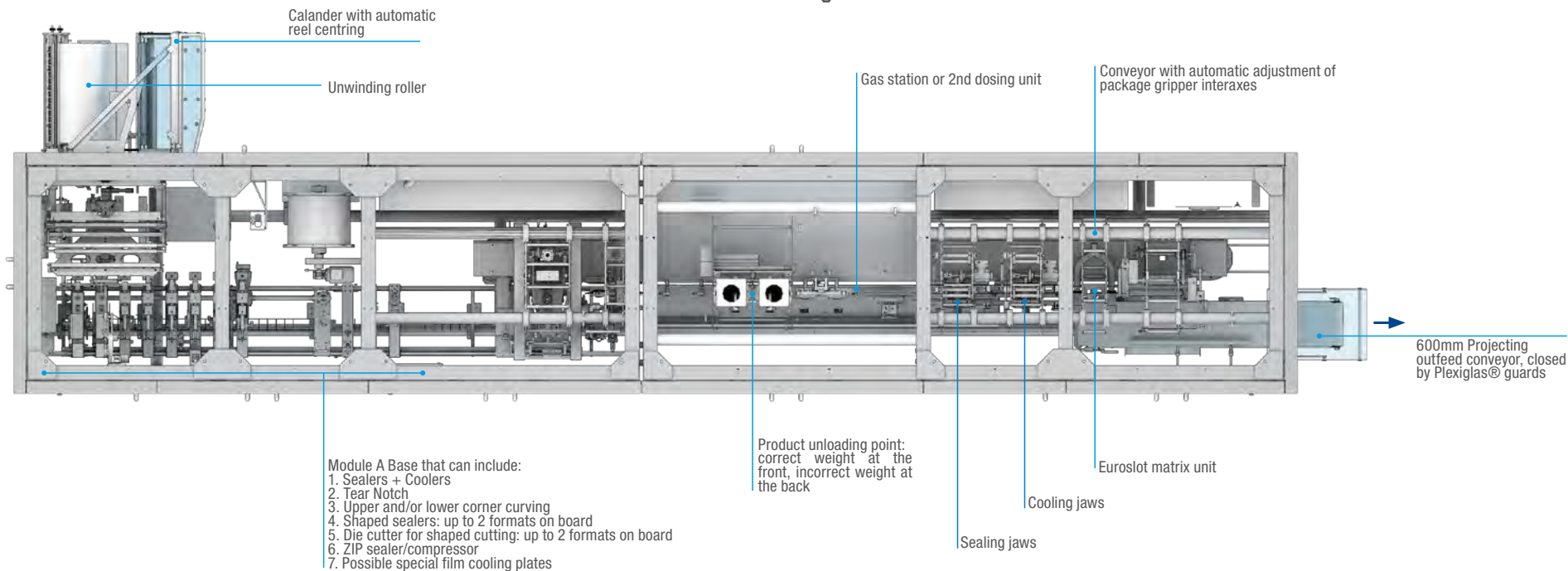
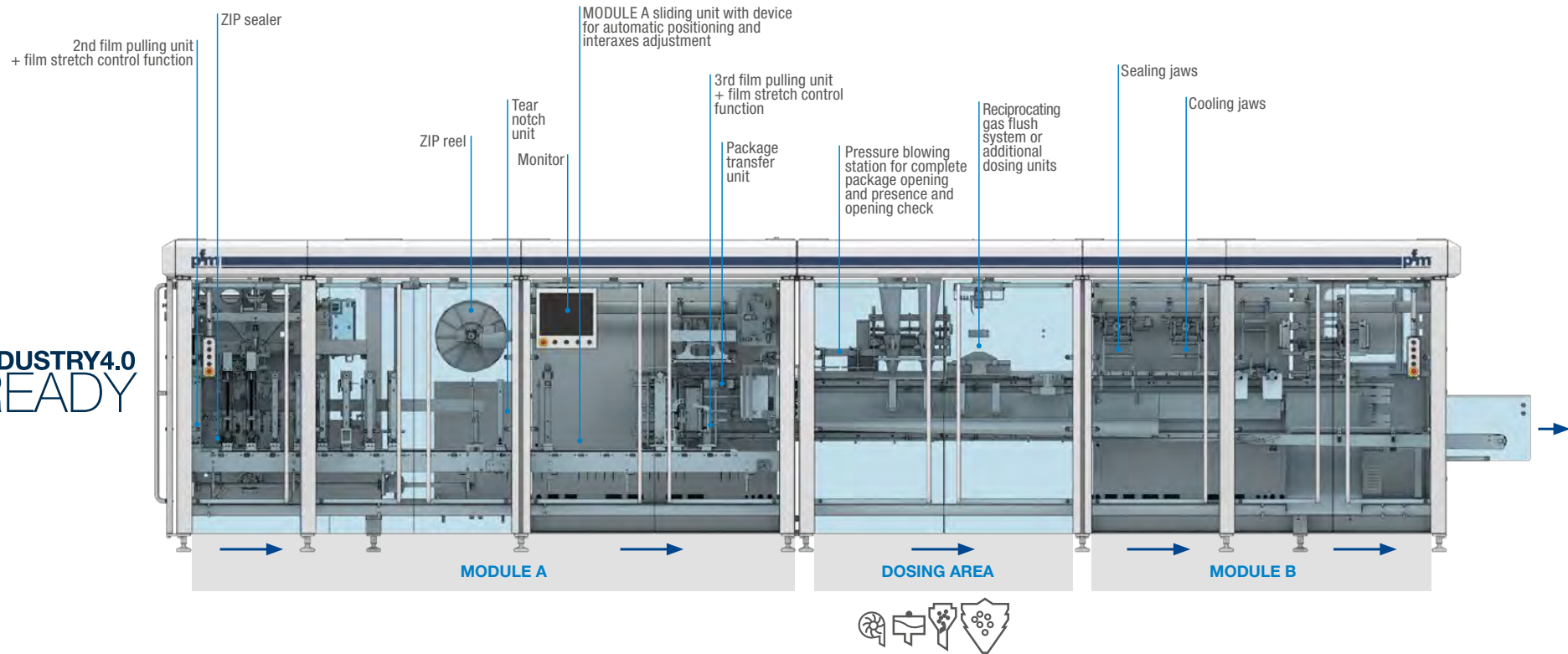


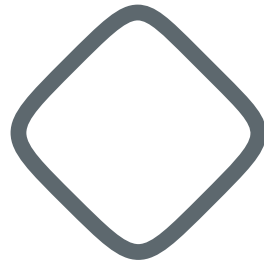
Flexible
Fast Change Over



Speed and Control

INDUSTRY4.0
READY





Simple

All machine functions and packaging parameters are electronically controlled by brushless motors (16 to 20) and are managed through the touch-screen panel.

The whole pneumatic system is electronically controlled. All the machine's pneumatic devices are connected to the touch screen panel via Ethernet.





Modular

It is a single machine with modular functions! D-SERIES consists of 2 different modules that can be set independently. MODULE A forms the pouch up to the cutting stage, or in other words until the two pouches are separated. MODULE B takes the pouch without ever releasing it until the packaging process is completed. In MODULE B the pouch is opened, checked, filled, washed with gas if necessary, sealed and finally cooled down. The machine can be fitted with the following additional modules: Metal detector, X-Ray Module, Secondary Packaging.

Modular



1 left side



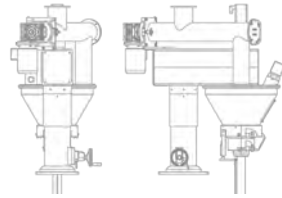
2 automatic reel change module

3 forming bag and zip sealing module

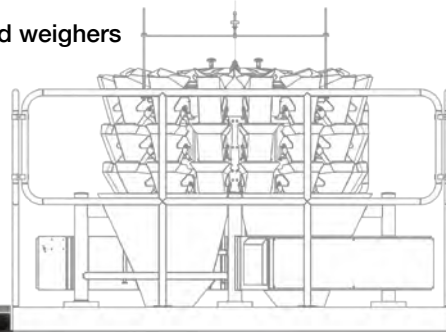
4-5 bottom sealing group with automatic height and width adjustment

6-7 side sealing unit

auger fillers and
dosing units



multihead weighers



8-9 bag cutting
and opening module

10-11 bag filling module

12 top sealing and
cooling module

13-14 bag output and
bag turning module

15-16 check weigher and
metal detector

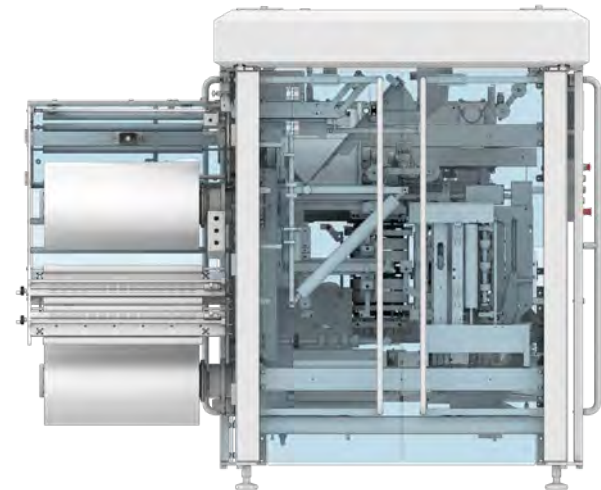




Accessible

We wanted to create a machine with a “Portal” building concept.

This means that the container is protected by screens, real doors, that house all the mechanical and electronic components of the machine. As a result, operators can easily access the machine without having to remove guards or protections.



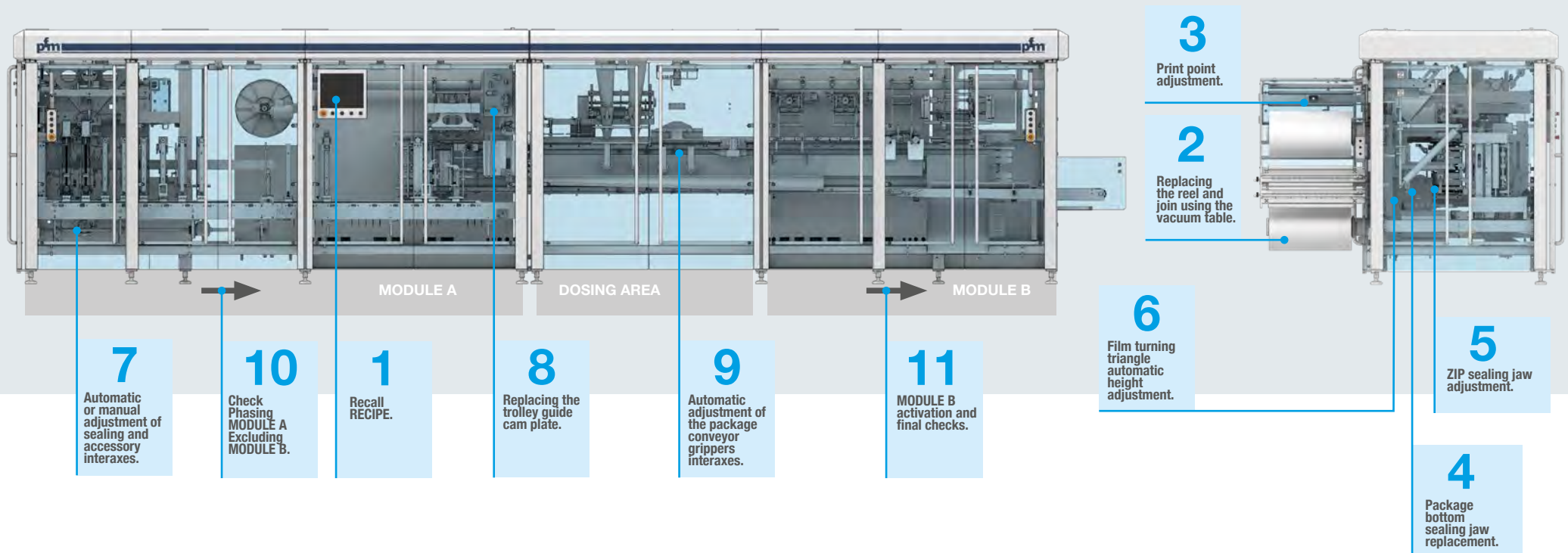




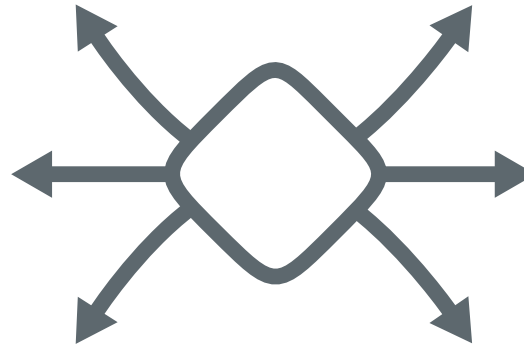
Compact

PFM D-Series has a 90° layout. The film unwinding calender, the reel-holding shaft, the compensating device, the printer adjustment system and the die-board units for cutting the bottom of the package are located at the back of the machine.

This arrangement significantly reduces the overall machine length.



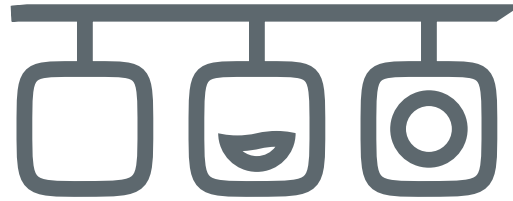
Format Change Procedure: **20 minutes**



Flexible: Fast Change Format

Format change operations can be easily and quickly carried out thanks to the electronic control system fitted on the machine. The touch-screen allows adjusting the distance between centres of two sealing units, according to the recipe data, along with a series of other parameters that determine the final size of the pouch.





Speed & Control

The exclusive servo-assisted system fitted on PFM D-Series, called the Universal All-in-One Conveyor, ensures that the pouch is held by two clamps all along the packaging path, from the opening station to the filling, gas injection and sealing ones, as well as during the application of any accessory, until it reaches the outfeed conveyor.

This system offers two main advantages: the first one is a dramatic reduction of format change times and the second is the cancellation of the probability of human error, which would cause a machine stop.

Powd

POWDER PRODUCTS

Foods Baby foods
Freeze-dried drinks Supplements
Spices Cocoa Coffee
Milk Sugar Salt Desserts Raising agents
Flours Instant food
Drink formulations
Ice cream
Chemicals Medicines
Insecticides

Gran

GRANULAR PRODUCTS

Sweets Lozenges Toffee Dried fruit
Frozen Vegetables Frozen Seafood
Grated Cheese Cheese in cubes
Cheese strips
Mozzarella and Mini Mozzarella
Mini Salamis Peanuts Pulses
Cereals Muesli Snacks Pasta
Rice Ready-cooked Foods Pickles
Vegetables Technical Products
Pet Food Toys Screws

Liqd

LIQUID PRODUCTS

Fruit juices Fruit nectars
Soft drinks
Herbal Teas Hand and body lotion
Ready to use Broth Smoothies
Oil Tea Ready-made meals
Fruit and vegetables mixes
Energy drinks
Laundry soap Fabric softener
Detergents

Dens

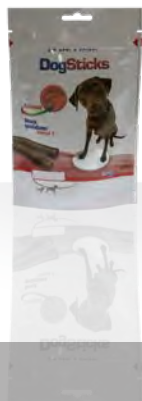
DENSE PRODUCTS

Fruit puree Creams
Cosmetics Sauces
Mayonnaise Mustard
Nutritional products
Soups Ready-made meals
Liquid spices
Dairy products Processed cheese
Honey Ketchup Glue
Fruit purée Yogurt
Detergents Liquid soap
Toilet cleaner Pet food

PFM D-Series: **What**

Just what you need.

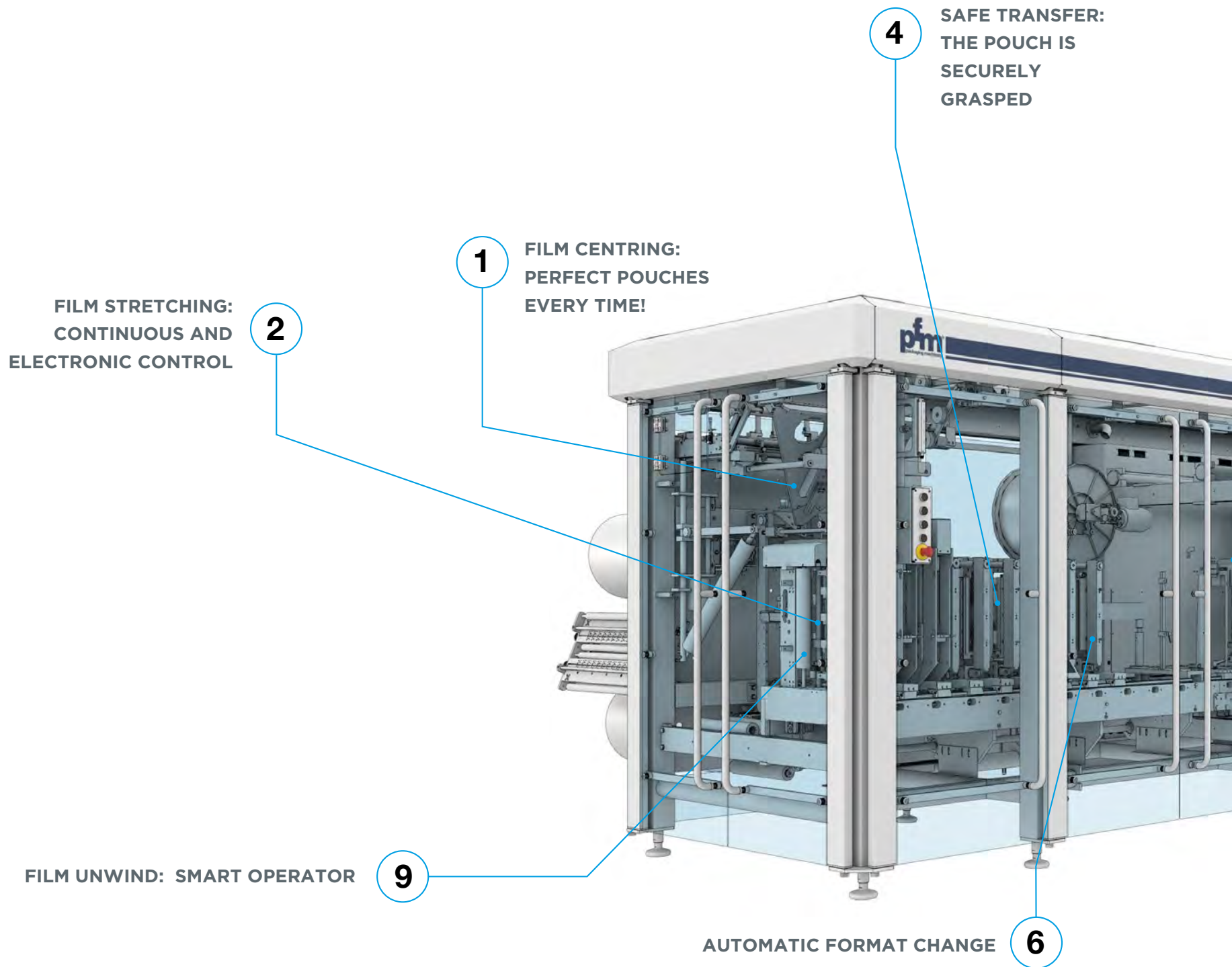




Pouches Examples

5 good reasons to choose POUCH and go beyond packaging.

1. It is suitable for **INDIVIDUAL PORTIONS**: dramatic reduction in waste.
2. It is **RE-CLOSABLE**.
3. It is **LIGHT**: for example, when 0.2 l glass bottles are transported on wheels, 52.3% of the load is dedicated to the packaging; the same product packed in a pouch reduces such load to 6%.
4. It **INFORMS** the consumer and clads the product.
5. It **OPTIMIZES** displays in large supermarkets as it is in itself a **DISPLAY**.



FILM STRETCHING:
CONTINUOUS AND
ELECTRONIC CONTROL

2

1

FILM CENTRING:
PERFECT POUCHES
EVERY TIME!

4

SAFE TRANSFER:
THE POUCH IS
SECURELY
GRASPED

9

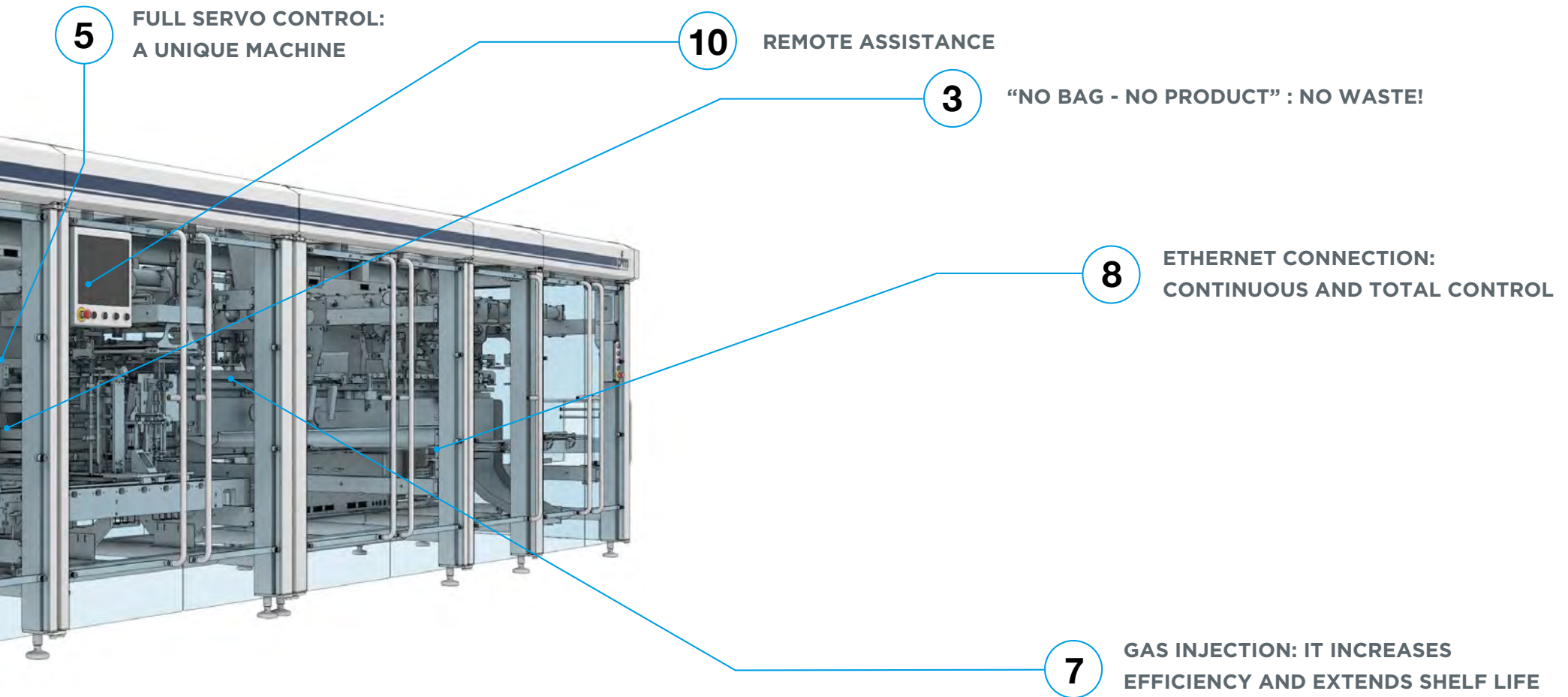
FILM UNWIND: SMART OPERATOR

6

AUTOMATIC FORMAT CHANGE

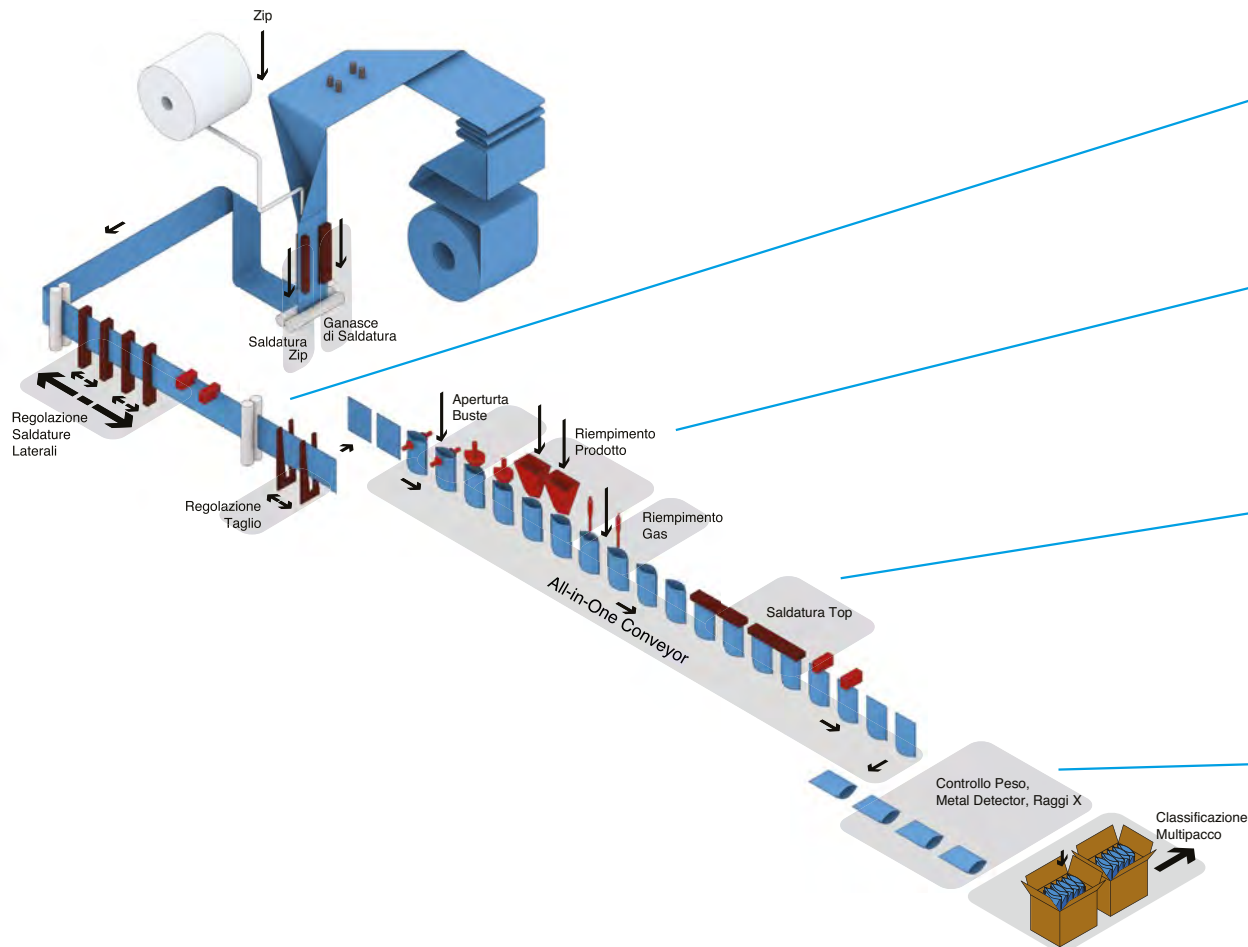
PFM D-Series: **How**

The 10 Best Features: a Powerful Combination.



Working Diagram

Modular Functioning, Efficiency, Easy Control.



Forming

- Implements the packing and includes any accessories needed.



Filling

- Includes the “All-in-One” conveyor belt and the devices necessary for filling packages and for gas flushing when required.



Sealing

- Includes the final sealing units and prepares packaging for any necessary end-of-line operations.



Classifying

- End-of line: weight checking, X-rays, metal-detector, secondary packaging in multi-packs.

Technological **Innovations**

Clear ideas, in everything we do.



Full Servo Control



All-in -One Conveyor



Automatic Format Change *Patent Pending*



Remote On Line Support



No-Stretching Film Pulling Unit *Patent Pending*



Full Servo Control

Electronic control of every function.

PFM D-Series is completely servo-assisted, which affords some natural advantages such as a perfect and micrometric check on all movements of the package as well as a constant monitoring of the pressure of all sealing units.

PFM D-Series operates through 18-20 brushless axes aiding greater productivity, speed of format changes, precise control of packaging at any given time of the productive cycle.

The software best exploits the feedback functions from the drives to intelligently manage the alarms and safety.

Connectivity between Ethernet devices IP 10/100 Mb. Interface through Touch Screen control panel (industrial PC).

Remote on-line support via web (PFM Ubiquity software) with web-cam for monitoring individual devices.



D-320

SERIES

Horizontal Form Fill Seal Machine

pfm

pfm
packaging machinery

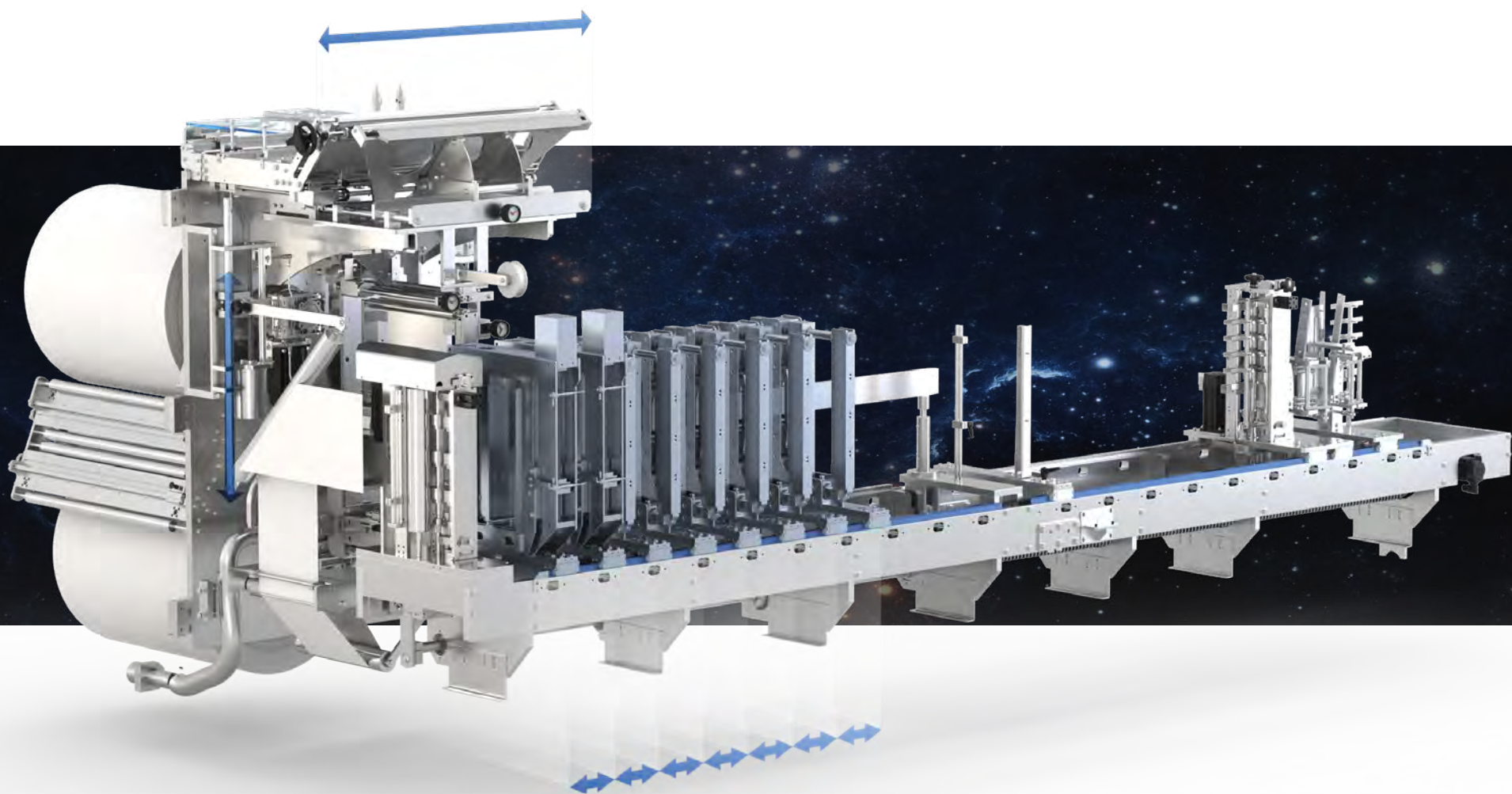
made in Italy

All-in-One Conveyor

PFM D-Series All-in-One Conveyor.

The exclusive PFM D-Series Universal All-in-One Conveyor system envisages the package always being firmly held during the filling and sealing stages plus the inclusion of any accessories, through to the exit conveyor. Therefore, there are no systems taking up that package again. Universal All-in-One Conveyor adapts automatically to changes in the

package widths. Advantages are considerable both in terms of the finished package's perfect appearance and the operative simplicity in format changes.





Automatic Format Change

We drastically reduce the time taken to change the format thanks to the automatic device that sets the distance between the centres of the sealing units.

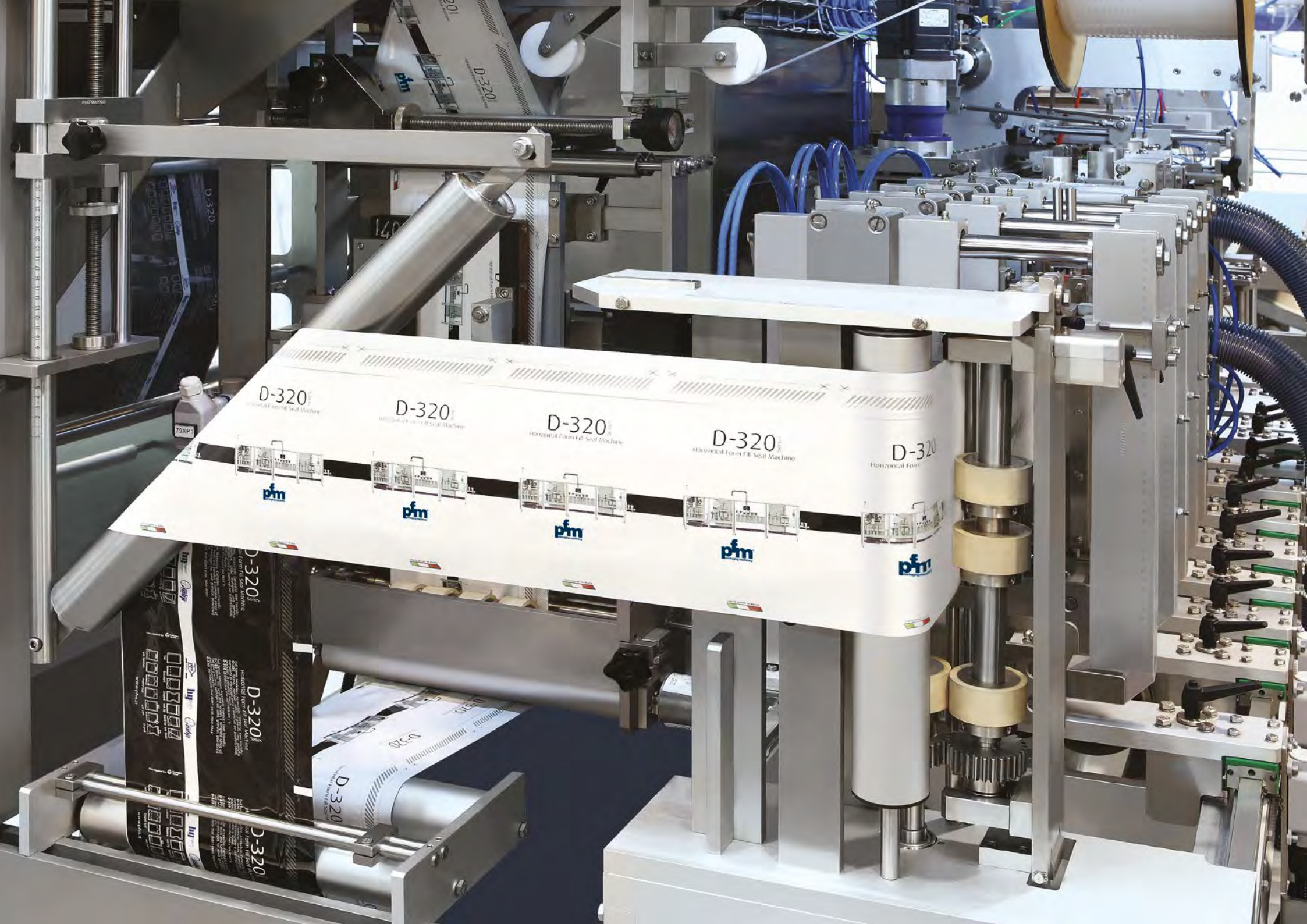
The SEALING UNITS are fitted on guides that can be used to adjust the width between sealing units. This is an automatic function, thanks to a device that receives each sealing unit and positions it according to the data in the recipe.

You can set the pouch width from the touch-screen panel, and the automatic device sets the distance between the centres of the sealing

units, according to the data in the recipe.

The electronic setting is immediate and only a few operations need to be done at this point.

These operations only require a few minutes!





Continuous and **Automatic Stretch Control**

The machine automatically controls and corrects the film stretch thus eliminating any need for operator intervention and mistakes in pouch formation.

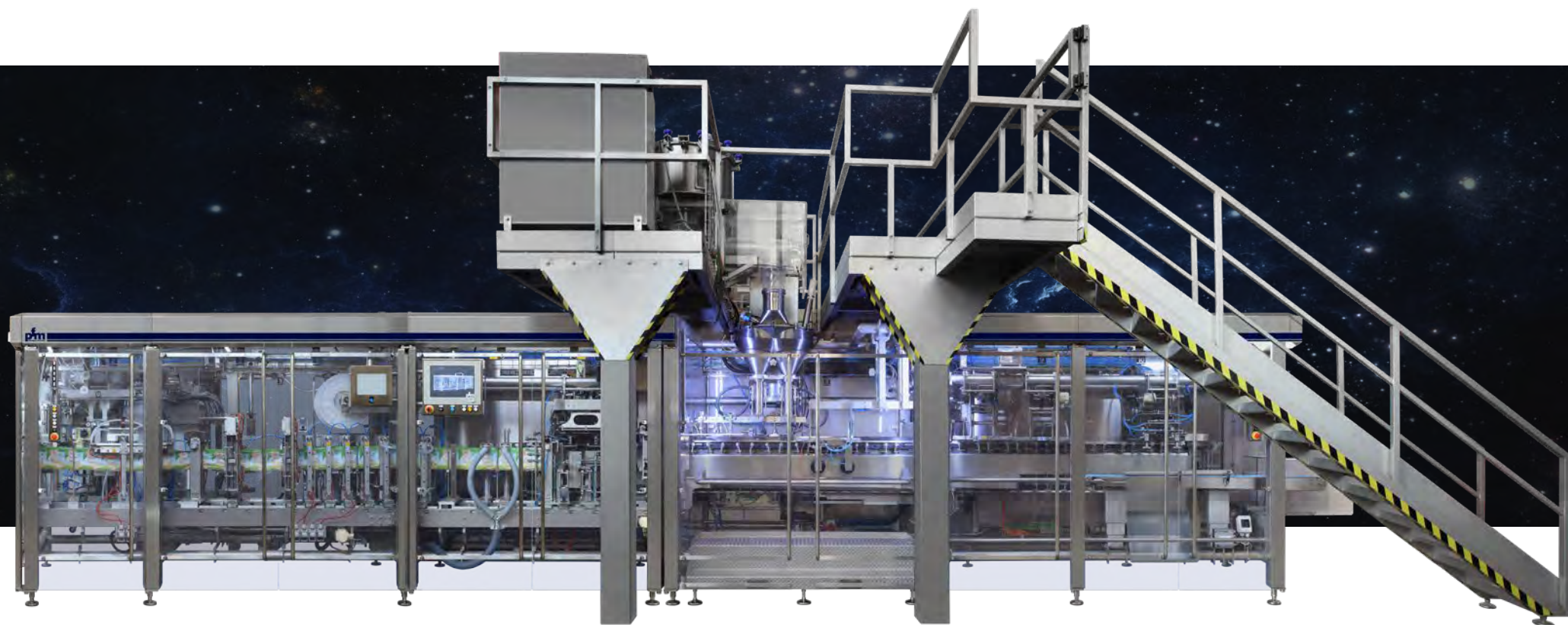
With D-SERIES, stretching is automatically and continuously checked and corrected, which means that any problems related to temperature and humidity changes that cause the film to stretch are solved.

The two pulling units are controlled using two photocells that continuously detect the correct positioning of the film and measure its stretching. As soon as any stretching is detected, the two units will pull in a different

way so as to compensate and correct the mistake.

Continuous and automatic control guarantees perfect pouches, with a cut that is perfectly centred to the print. This is of great help to the operator, who no longer needs to make manual adjustments.

Thanks to this system, the machine offers top operational safety: it always responds in the same manner, regardless of environmental conditions.



Feeding Systems



Dosage units for Fluids

Precision, reliability and hygienization: PFM offers a complete range of fluid dosing devices. The ideal dosing system is agreed with the client each time according to the specific product typology, required packaging and production speed.



Dosing Screw Feeders

PFM offers a complete series of volumetric dosing systems, Series AF-5000, for products in powder form (sugar, salt, beverages in powder forms, flour, cocoa, coffee, etc.). Maximum dosing precision is guaranteed by the screw's constructive accuracy, the perfect finish of surfaces coming into contact with the product and the exactness and consistency in the shifting angles and in the screw rotation movements.

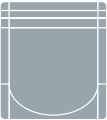




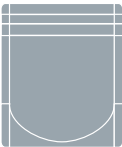
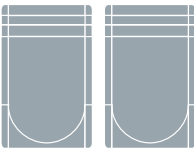



Multi-head Weighers

Almost thirty years experience and intensive research have led MBP, a company of the PFM Group, to manufacture a series of weighing units, 100% made in Italy (C1, C2, C3, C4, C5) technologically advanced and providing solutions for the most demanding clients.



Technical Data

| Model | Version | Package dimensions (base x height) | | Speed (packages/min) |
|-------|--|---------------------------------------|----------|-------------------------|
| | | Max (mm) | Min (mm) | |
| D-240 | S  | 280 x 300 | 90 x 100 | 60 |
| | D  | 120 x 300 | 90 x 100 | 120 |
| D-320 | S  | 360 x 300 | 90 x 100 | 60 |
| | D  | 160 x 300 | 90 x 100 | 120 |
| D-400 | D  | 200 x 300 | 90 x 100 | 120 |
| D-480 | S  | 240 x 300 | 90 x 100 | 80 |
| | D  | 240 x 300 | 90 x 100 | 120 |
| | T  | 120 x 300 | 90 x 100 | 180 |

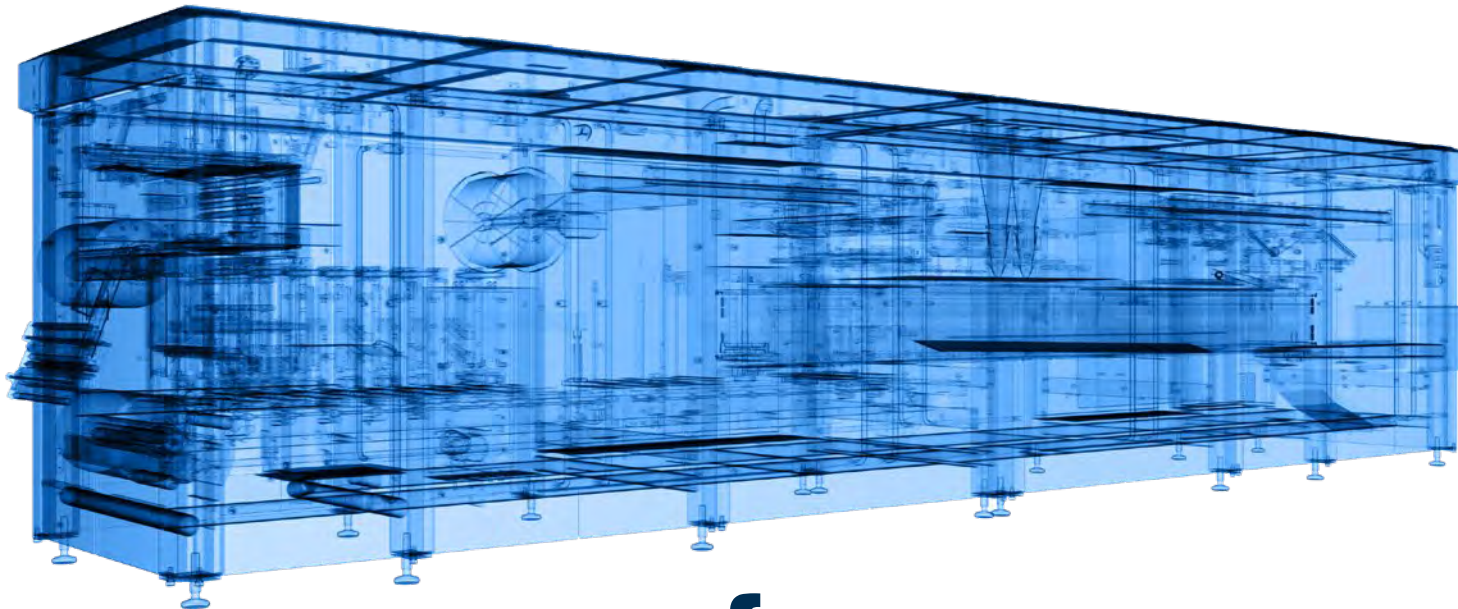
PFM reserve the right to make modifications without prior notice.

Main Options



[PFM D-Series on the web.](#)

- Caps applicator.
- Drinking straws applicator.
- Follow-up system for introducing inert gas.
- Follow-up system for introducing fluids and semi-dense substances.
- Shaped packaging dies and/or handle, euro slot.
- Ultrasound sealing system.
- Stainless steel version.
- AISI 316 super stainless steel version.
- Automatic reel change.
- Printing equipment.
- Labelling machines.
- Weight control, metal detector, X-Ray.
- End-of-line systems.





PFM S.p.A.

PACKAGING MACHINERY

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