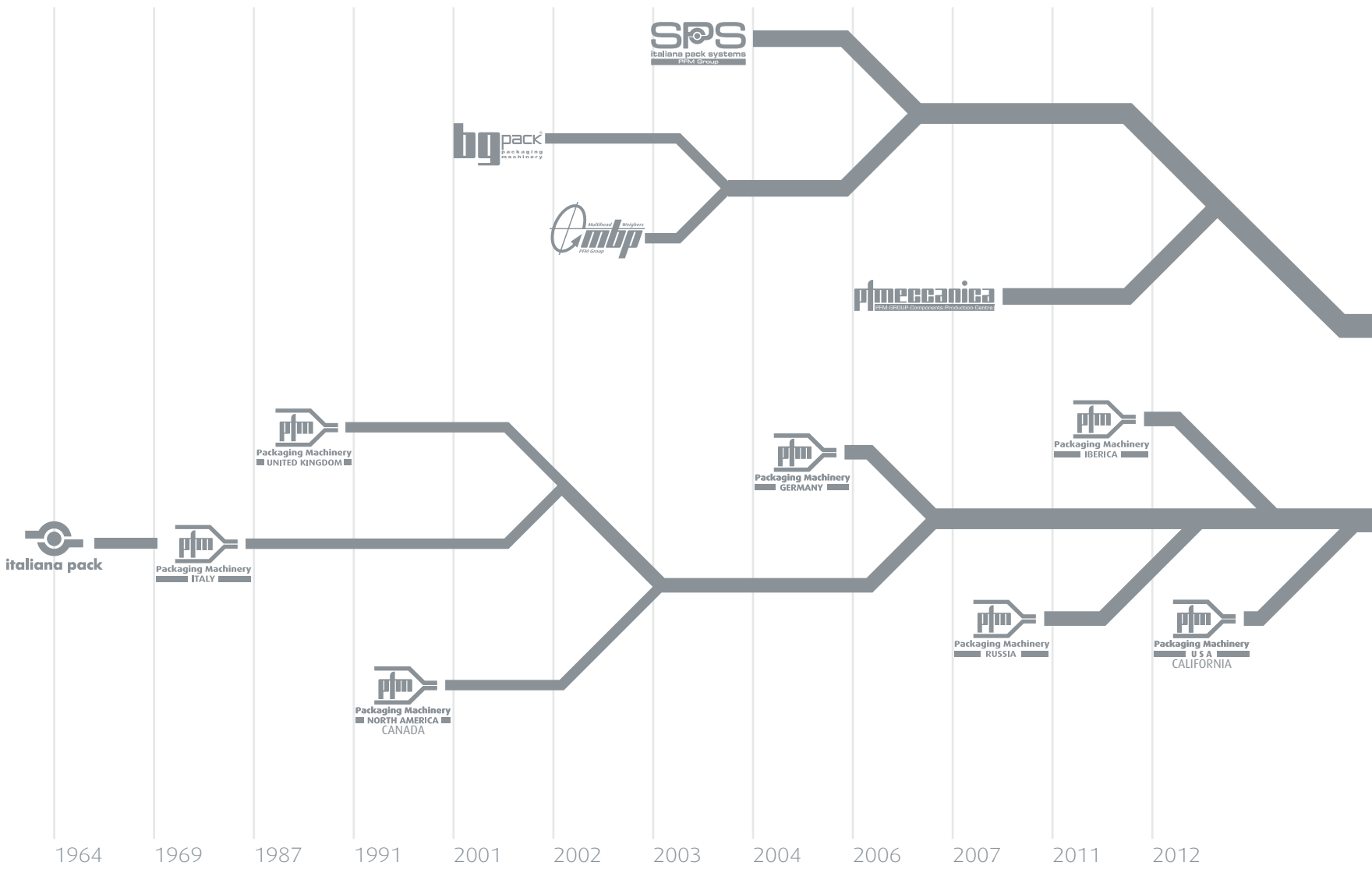


PFM D-Series

Horizontal Form-Fill-Seal Machine

PFM D-Series

Horizontal Form-Fill-Seal Machine



PFM Group: the Packaging Experience



A long history in the world of flexible packaging, continuous evolution, growth, research and development for solutions indispensable in securing relationships with clients.

PFM is an industrial group consisting of 11 companies specialised in the flexible packaging sectors: from the handling of incoming products from process lines, to dosage and weighing, through to horizontal and vertical packaging.

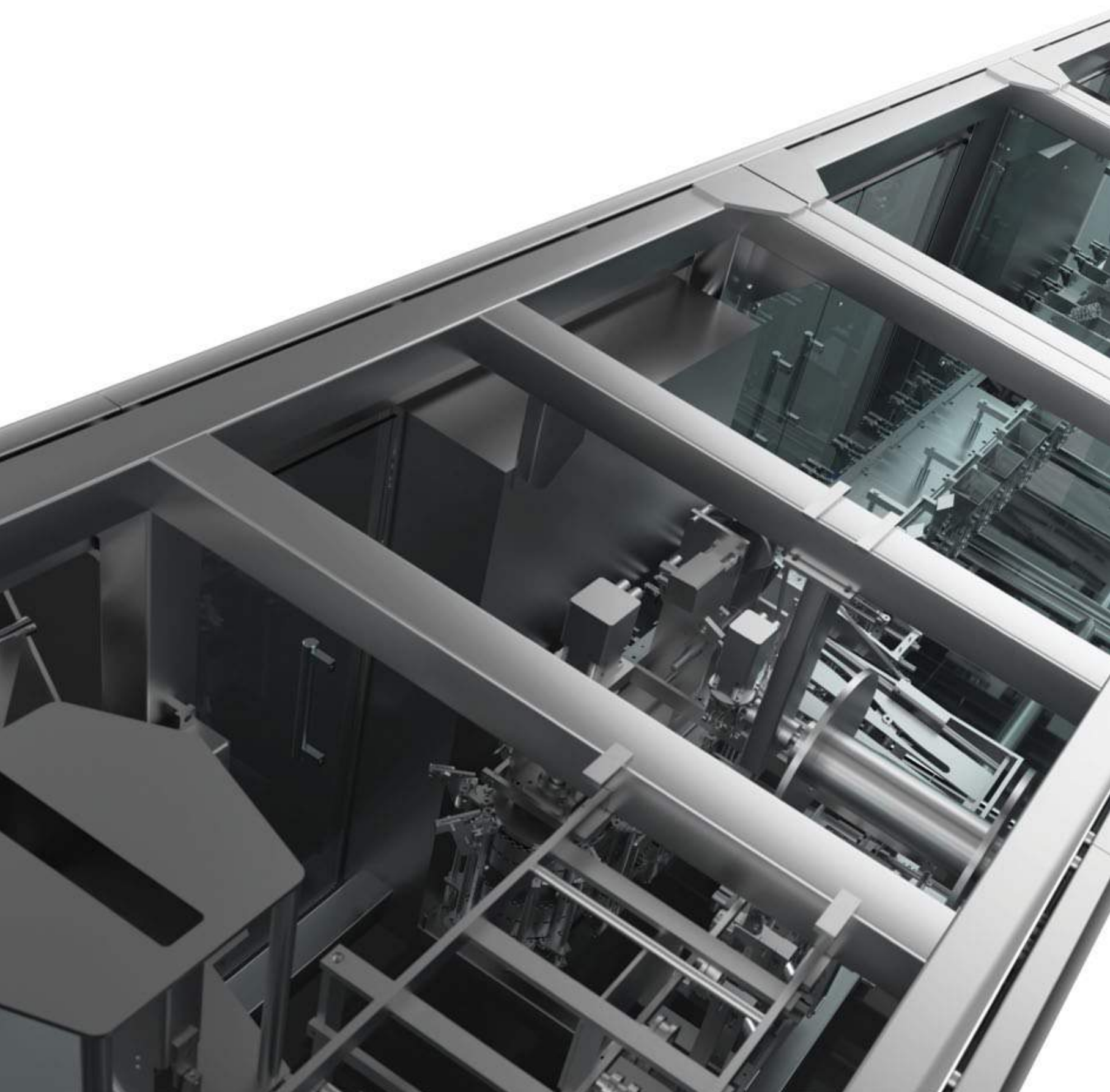
The **PFM group** design and manufacture machines, complete lines, multi-head weighing machines and dosage systems dedicated to the packaging of foodstuff, chemical, cosmetic and pharmaceutical products.

The innovations that **PFM** has continued to offer the market during these years, are the results of its investments in **Research and Development**, attained by the daily efforts of numerous technicians and designers, all driven by their enthusiasm for sharing experience and knowledge.

The strength of the **PFM group** lies in its original technological ideas, in its perseverance in creating new ones and in its absolute determination to be always one step ahead.

We are organised, effective and competitive, always striving to offer you the best.





PFM D-Series: a New Concept of Horizontal Form-Fill-Seal Machine



With the **PFM D-Series** a new concept of Horizontal Form-Fill-Seal Machine has been born, with the most innovative operating and manufacturing standards known to the sector, unique to **PFM**.

With the **PFM D-Series** a new concept of Horizontal Form-Fill-Seal Machine has been born, with the most innovative operating and manufacturing standards known to the sector. These are the **PFM** standards, unique in their kind.

When we started designing the **PFM D-Series** we had a very clear objective in mind: to provide the specific sector with a definite technological turn. We set no time limits, nor did we accept compromises: we knew we would have had to do a lot of research and prototyping to overcome all obstacles that might have presented themselves.

We can safely state that we succeeded: the **D-Series** has been born, a range of machines that provides an alternative response, creating a new way for stand-up packaging to be produced. A way that is, above all, quite simple: based on easy access and simplicity of adjustments for format changes.

With the **PFM D-Series** we have implemented a machine capable of producing perfect packaging, accommodating the most demanding aesthetic requirements of our clients.





The Packaging Experience.



Team Cooperation

PFM Group Mission: striving to secure customer satisfaction.

With over 900 machines manufactured per year in the packaging Flowpack and Vertical Form-Fill-Seal sectors, **PFM Group** exploits the experience gained through the 50 years of its history, with the know-how secured in the **PFM Iberica** research centre for developing the new **D-Series** Horizontal Form-Fill-Seal Machine.

A perfect blend of mechanical and electronic principles, creating the innovative mechatronic devices that make up the **PFM D-Series**.

Results from that much experience, so many ideas plus technical know-how, are tangible: **D-Series** produces perfect packaging, reaches excellent performance levels and is also outstandingly good looking.

The work that went into the **D-Series** has helped us discover further technical solutions that enrich the machine's functional technology.

Modular Operation

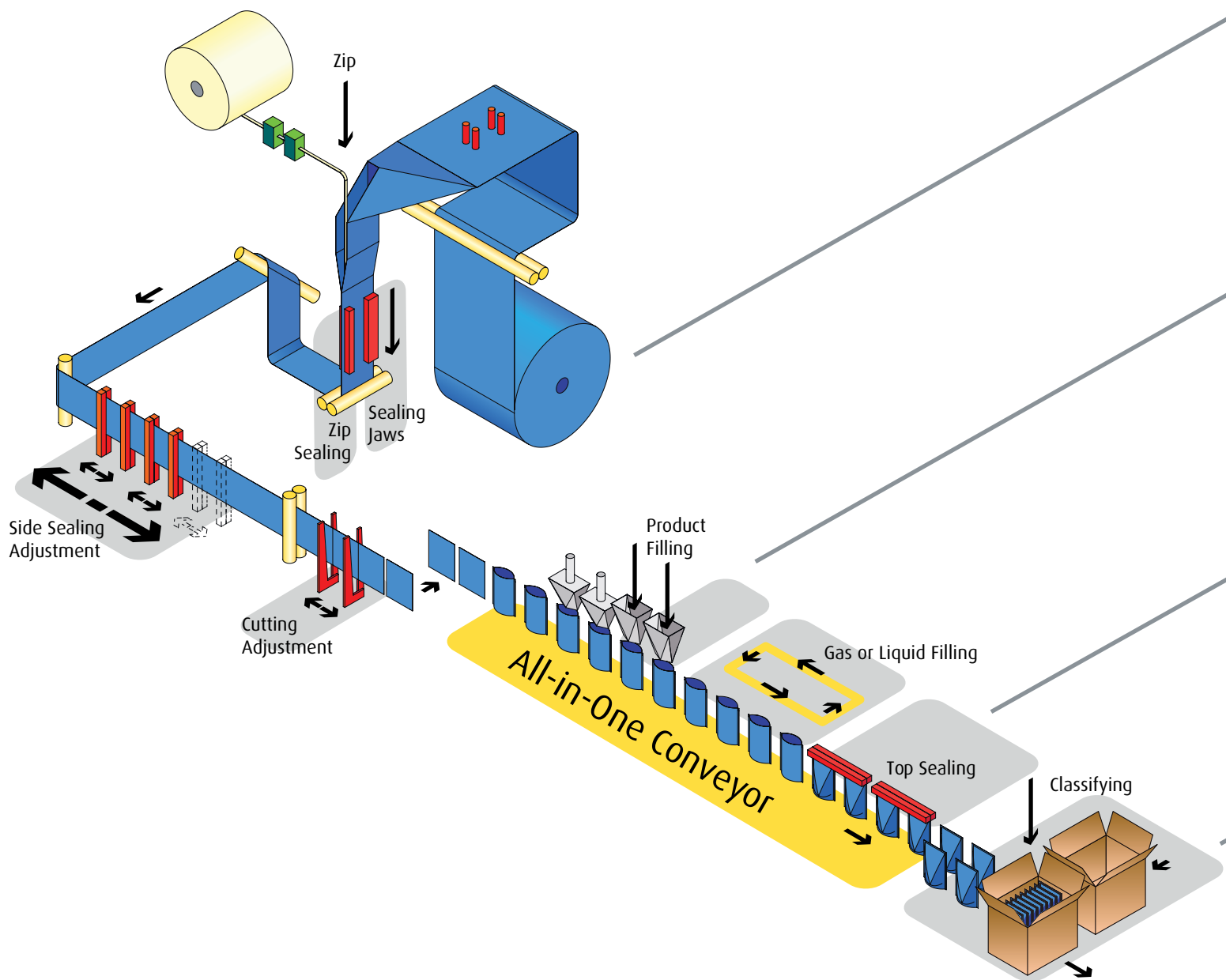
The machine consists of 3 main modules, each of which performs a specific function.

The first module (Forming) produces the finished packaging, open only at the top. This operation is independent of the second module, thus facilitating format changes and avoiding a waste of packaging.

The second module (Filling) takes care of the pack itself, conveying it to the filling, gas flushing and other units.

The third module (Sealing) completes the sealing operation. The fourth possible module (Classifying) is dedicated to the end-of-line operations, i.e. weight checking, metal detector, X rays and through to the boxing. Modularity is the basis of the manufacturing and operative simplicity. Format changes cause no wastage in either packaging or time.

Each function is well defined and legible and the operator is immediately comfortable with both the routine maintenance aspects and preventive inspection.





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.



Full Servo Control

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 18-24 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.





Package Conveying System

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.

Format Change

One of the PFM D-Series strong points is the perfect integration between specific functional elements, ensuring very rapid format changes.

Thanks to the innovative operating principle, assisted by brushless motors, the format change is also very simple for lesser experienced operators.

1. The package forming system is easily adjustable through specific control knobs.
2. The Transfer system, for conveying the package from the Forming module to the All-in-One Conveyor belt is designed for multi-formats so that, upon the width or height of the package being changed, no replacement is needed.
3. Universal All-in-One Conveyor: takes on the package from the Transfer system. The distance between centres of the grippers is variable depending on the change in the package width, and the change is controlled by product program selected.





PFM Ubiquity Remote on-line Support

PFM Ubiquity: we are always with you.

By means of the **PFM Ubiquity System**, the machine operates on-line allowing the **PFM** technicians to foresee and solve possible inefficiencies, suggesting preventive maintenance interventions to clients and providing operators with on-line instructions.

PFM Ubiquity represents a new way of supporting the supplier/client relationship: it allows reduction in lines maintenance, training and supervision costs.

pouch



PFM D-Series: it is easier



Simple

The machine's basic functions (forming, filling and sealing) take place by means of simple and modular mechatronic devices. Mechatronic units can be easily extracted and inspected; all cleaning and operations for the overall hygiene of the machine are extremely simplified.



Modular

PFM D-Series is devised with a modularity concept: every single machine module performs a particular function.



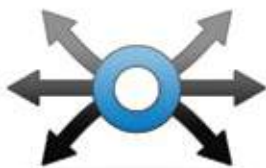
Accessible

The **FSA** (Full Side Access) constructive concept allows the operator to physically reach within the machine's perimeter and directly access all components.



Compact

The 90° layout allows a considerable reduction of the machine's longitudinal dimensions.



Flexible

- Full Servo Control.
- Universal All-in-One Conveyor.

The perfect functional integration of these two features allows the operator to carry out format changes very rapidly: something so far unheard of in the sector.



Package Conveying System

The exclusive **PFM D-Series** Universal All-in-One Conveyor system envisages that the package be held firm during all the filling and sealing stages, and other possible accessories, through to the exit conveyor belt. Therefore, there are no systems for the re-taking up of the package. Universal All-in-One Conveyor adapts automatically to the package's variation in width.

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



PFM D-Series Gallery





Flat



Gusseted



Shaped



Pocket Bag Style with
adhesive strip



with Zip



Stand-Up

Pouch Packaging: as you want it

A line allowing infinite Solutions: extreme flexibility in our technologies at the service of a continuously evolving product.

Habits change, tastes develop and the demands of end consumers and products take on new shapes, and hint at innovative uses that only the packaging is able to suggest. Solutions studied on specific requirements expressed by the client for specific products: this is what the companies in our group do every day.

PFM Group has developed the technology for the excellent packaging of an extensive range of products in the foodstuffs and other sectors; **PFM D-Series** is an expression of the total experience gained by the Group in this environment, in packaging powder, granular, dense and fluid products in stand-up mode.



with Straw



Shaped Seal



with Eurohole



with Cap



with Cap and Shaped

Feeding Systems

PFM is specialised in the designing and manufacturing of a complete range of multi-head weighing machines and dosage systems for granular, fluid and dense products, guaranteeing precision, reliability and productivity.

Solutions devised for specific client requirements applied to definite products: this is what the companies in our group do every day.



Dosage units for Fluids

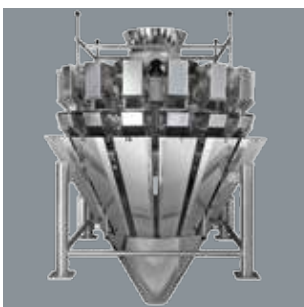
Precision, reliability and hygienization: **PFM** offers a complete range of fluid dosing devices. The ideal dosing system is agreed with the client each time according to the specific product typology, required packaging and production speed.



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.





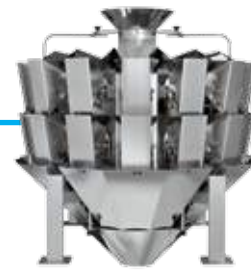
Multi-head MBP Weighers

Experience and research have led MBP towards the production of a complete range of weighing units, 100% made in Italy, which can be perfectly integrated on the HFFS PFM D-Series. Immediate advantages are the use of a single control and programming panel, a sole supplier/reference entity for the whole line in the pre and post-sales stages.



MBP Series C1

This is the multi-head weighing machine for an “entry-level budget” combination, 100% Made in Italy, characterised by an exceptional speed/precision ratio. Degree of protection IP 54. It uses the same hardware and software as the high-level C2 version.



MBP Series C2

100% Made in Italy, the Series C2 represents the top in the technological evolution of multi-head weighing units. Designed for extremely precise, high speed weighing of various types of granular products. Degree of protection IP66. The unit is characterised by an exceptional speed/precision ratio, ensuring greater saving and operative safety.



MBP Series C3

From 8 to 24 heads with memory baskets. High speed and high weighing precision, with the possibility for mixing from 2 to 8 product typologies. The Series C3 multi-head weighing unit is the optimal solution for those having to weigh different product typologies at high speed and with extreme precision.



MBP Series C4

MBP Series C4 is a range of combined linear multi-head weighers specifically designed to handle fragile products. The inner sides of the baskets, one next to the other, make up a single inclined drop plane ending on the small conveyor belts that transport the product. A reduced drop height and the absence of slides are the two essential features of this series.



MBP Series C5

MBP Series C5, as with Series C4, is a range of combination linear multi-head weighers, but specifically designed for sticky or difficult to handle products. It differs from the C4 series in the vertical positioning of the baskets.



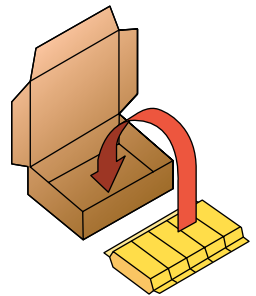
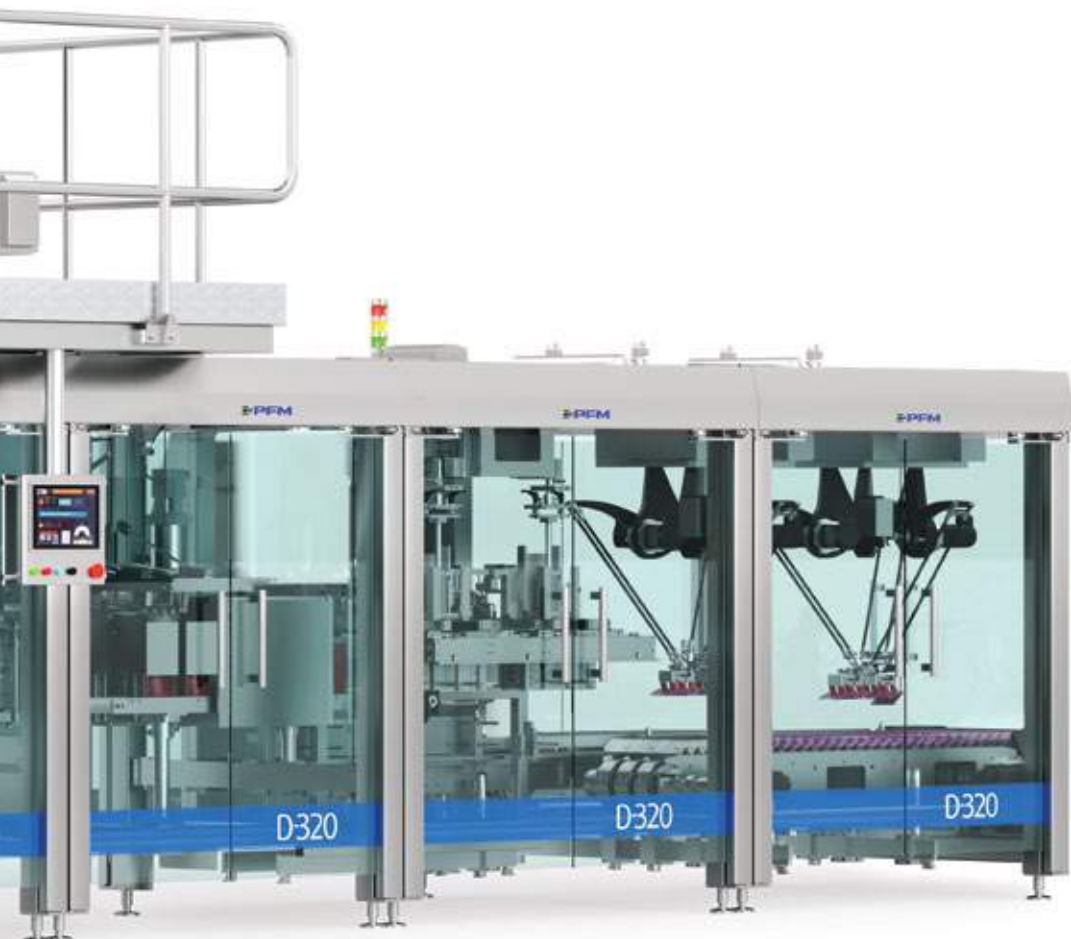


D-Series Fully Integrated Concept

From the primary packaging to the cardboard strapping, PFM proposes integrated solutions that include necessary metal detectors, weight control and X-Ray systems.

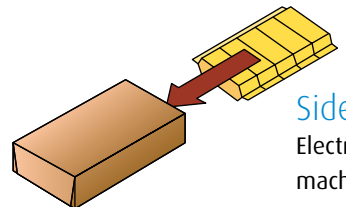
The integration encompasses the functional, hardware and software aspects as well as the pre and post-sales service. In detail:

- The functional aspect takes advantage of the mechanical integration through which the packages are never released but follow a logical consequential path, from the **D-Series** conveyor to the end-of-line take-up system.
- The hardware integration simplifies and rationalises the devices dedicated to the electronic control.
- The software integration allows the operator to follow a univocal programming logic and to carry out the recording and storage of recipes. Furthermore, it allows the line's integral remote diagnostic through the Ubiquity system.
- The pre and post-sales integrated service system simplifies the client-supplier relationship: the client interfaces with a single reference person taking care of the designing stage, and following all stages making up the purchase definition, installation, testing and post-sales assistance.



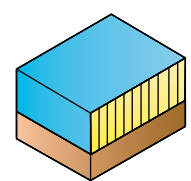
Top Loading

Robotic loading unit, designed to handle a wide variety of bags and load them into RSC cases, boxes, trays etc. 2-4 AXIS, Delta and "Y" shape robots are integrated into complete packaging lines.



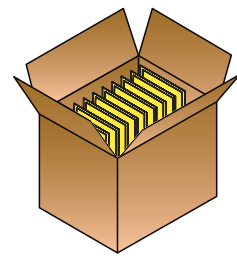
Side Loading

Electronic intermittent-continuous motion cartoning machines at medium/high speed range.



Wrap-Around and Display-Box

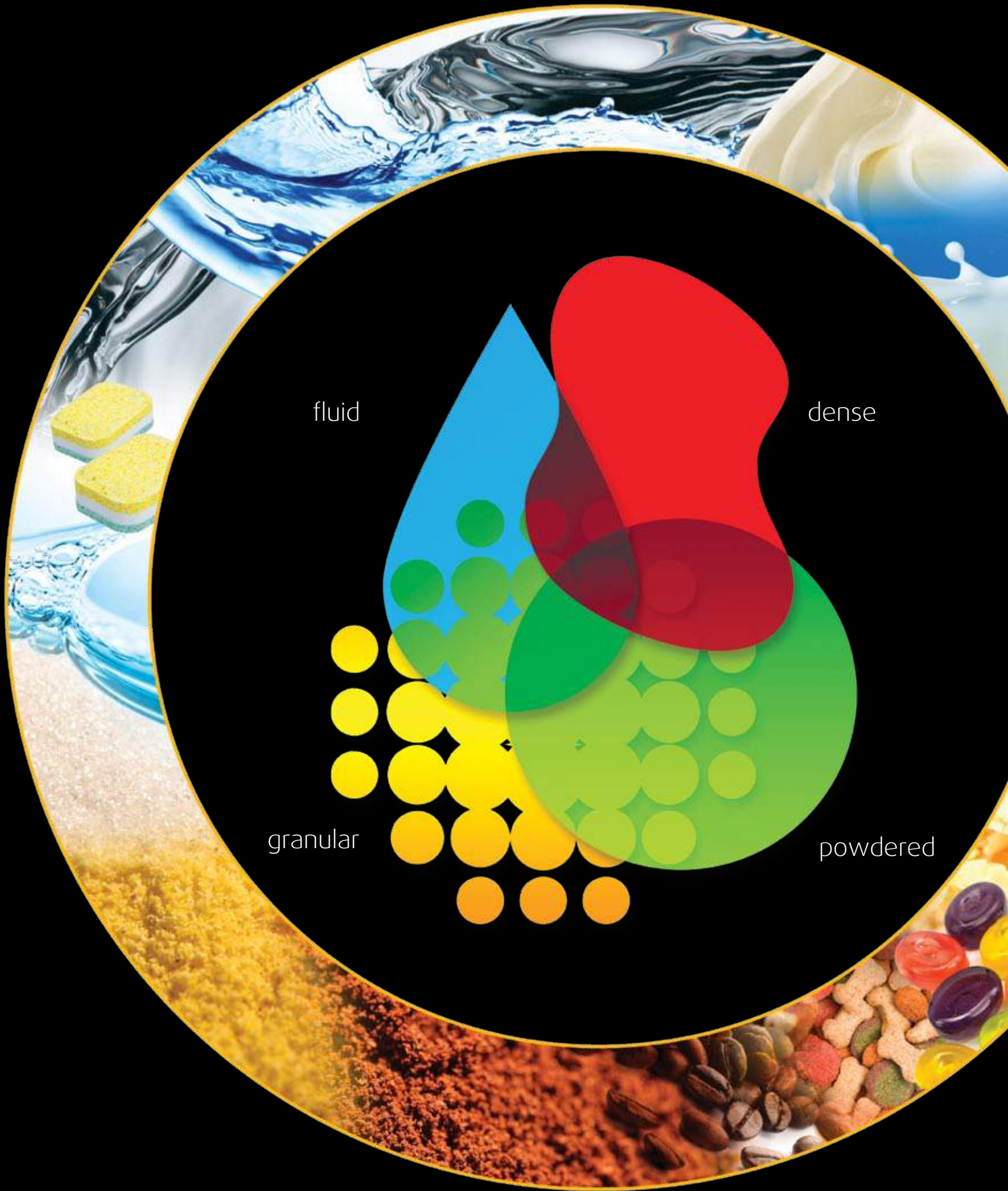
Electronic case packers capable of packing a variety of products into one-piece wrap-around or two piece display cases for retail-ready packaging solutions.



Case Packing

Horizontal RSC case packing machines.



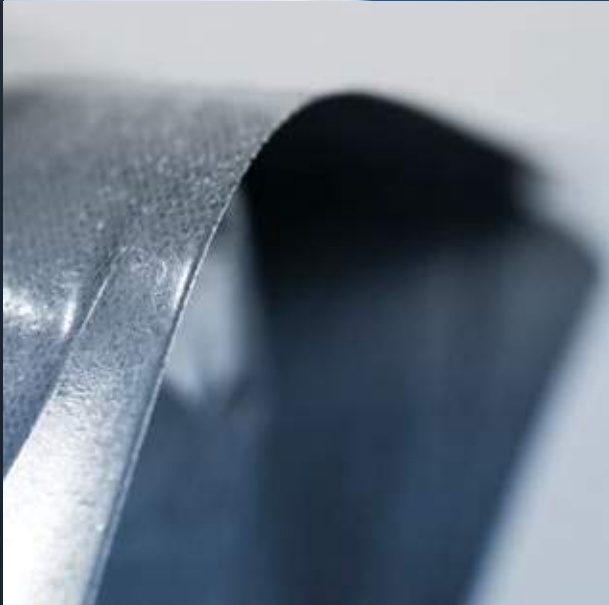
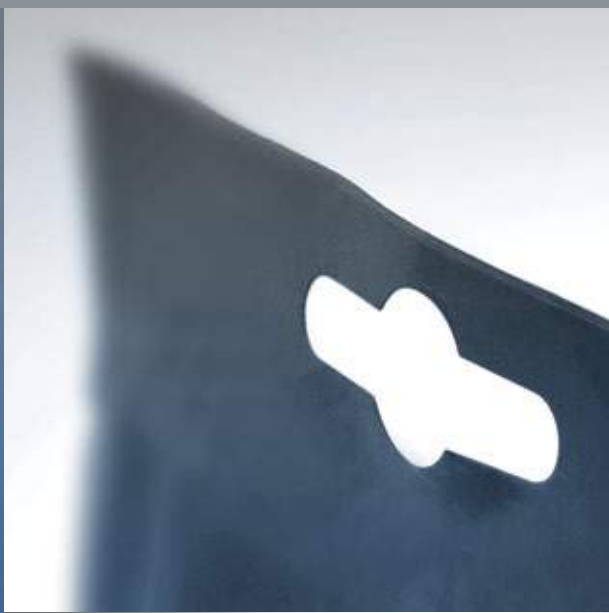




Share your Product

Share your product with us, illustrate its characteristics, particular aspects and requirements: together, we will find the right solution.

PFM Group has developed a technology for the perfect packaging of a very wide range of products from the foodstuff and other sectors: **PFM D-Series** is the clear expression of the whole experience gained by the Group in this sector, for the packaging of powders and granular, dense and fluid products in stand-up configuration.

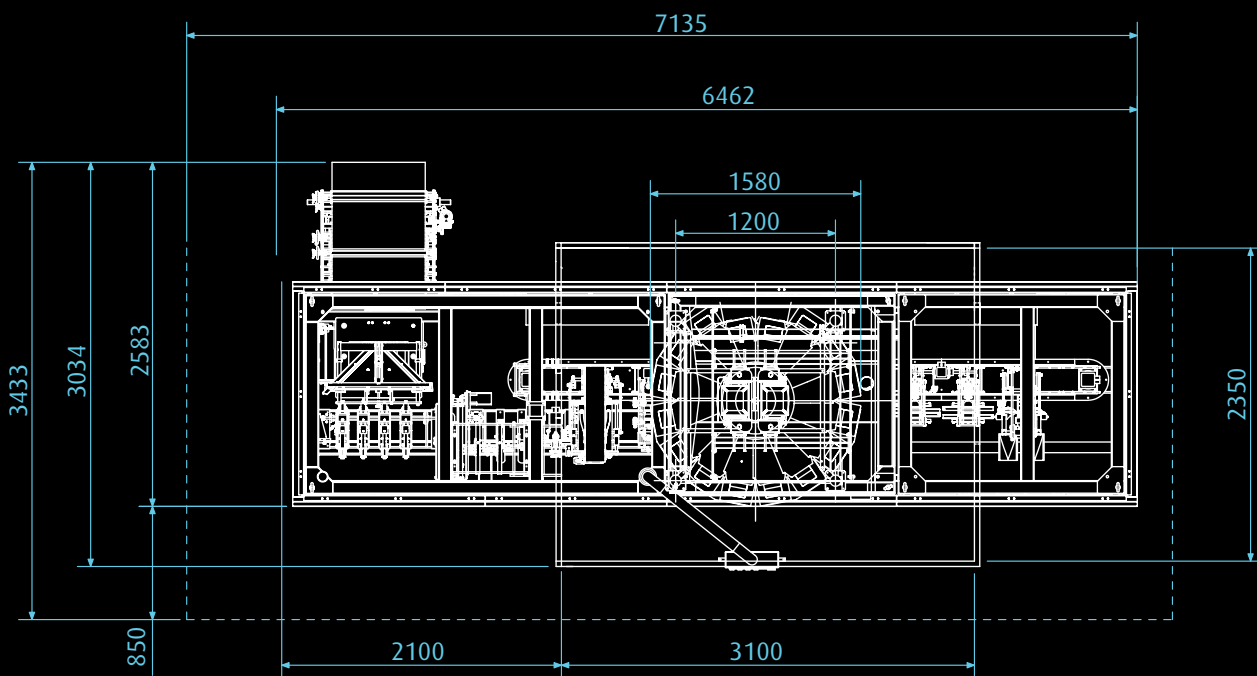
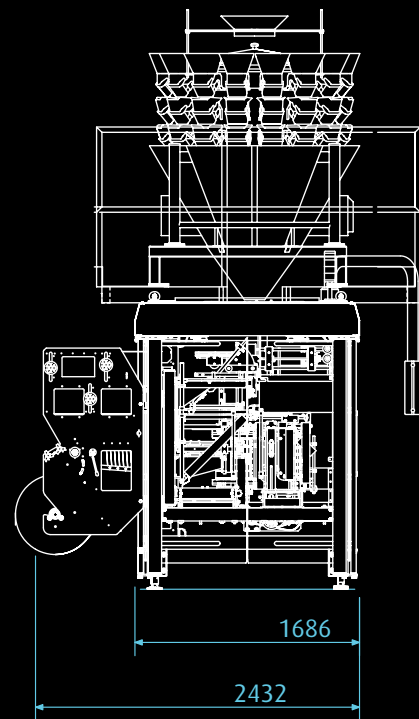
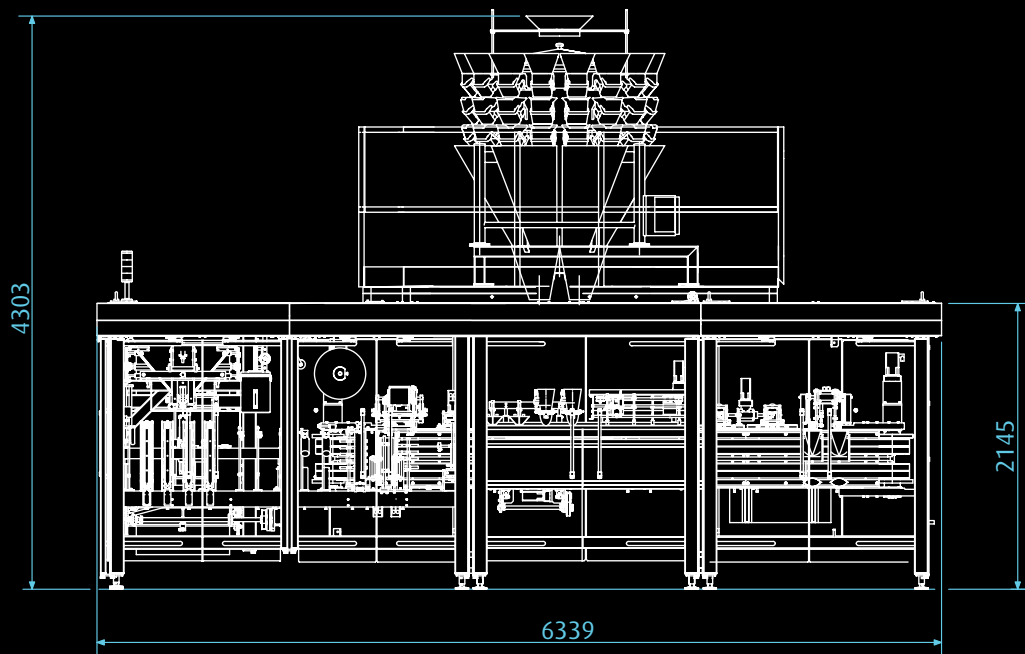


Search for, Select, Find.

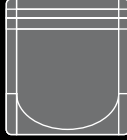
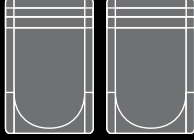
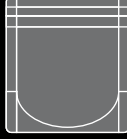
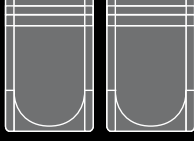
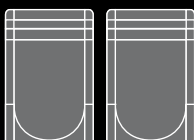
Now begins the second, decisive stage of your work: from the time your product arrives on the supermarket shelves with that “special something” that will give it a decisive advantage over another.

What is needed is a carefully devised and original shape; a detail, such as a spout or a drinking straw; a definitive intuition. We help you find an innovative solution.





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	80
	D 	120 x 300	90 x 100	160
D-320	S 	360 x 300	90 x 100	70
	D 	160 x 300	90 x 100	140
D-400	D 	200 x 300	90 x 100	120

PFM reserves the right to modify technical data without prior notice.

Optional

- 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.



The Solution in one Stroke

5 good reasons to prefer POUCHES and to progress beyond packaging:

1. MONOPORTION: drastic reduction of wastage. *
2. RE-CLOSABLE.
3. LIGHT: for example, a transport on wheels for a load of 0.2 litre glass bottles of fluid implies that 52.3% of the load is made up by the packaging; for the same product packaged in pouch, only 6% of the total load is represented by the packaging.
4. INFORMS the consumer and "dresses" the product.
5. OPTIMISES the displays in the Point of Sale, becoming itself the DISPLAY.

* It is estimated that domestic food wastage in Europe totals an overall 71 million tons per annum, amounting to 90 billion Euro (Source: FPE Flexible Packaging Europe, Düsseldorf , The Perfect Fit).





Packaging Machinery
ITALY



Packaging Machinery
UNITED KINGDOM



Packaging Machinery
NORTH AMERICA



Packaging Machinery
U S A



Packaging Machinery
GERMANY



Packaging Machinery
RUSSIA



Packaging Machinery
IBERICA



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