marelec

A **DURAVANT** COMPANY

PORTIO B

Intelligent Heavy-Duty
Portion Cutter

Introduction

When MARELEC launched its first PORTIO back in 2008, it answered a growing demand in the food-processing market. The machine was initially introduced for fish processing, but soon after, the three-camera version was developed for the meat industry. This was the start of a successful product line that quickly developed into dedicated versions that would soon be used worldwide in all segments of the fish, meat and poultry processing industries.

In 2023, Duravant, a worldwide supplier of custom equipment and automation solutions for the food processing, packaging and material handling industries, acquired MARELEC Food Technologies. Leveraging its expertise in engineering, integration, project management and operational excellence, Duravant delivers comprehensive process solutions to customers and collaborators through its extensive global sales, distribution and service networks. Duravant's market-leading trademarks are known for their innovation, durability and reliability, aligning seamlessly with MARELEC's values.

Today, we are proud to present a complete range of intelligent portion cutters. All models have been created with a customer-centric focus and are built using the extensive expertise we have gained in food processing since the early nineties.

We kindly invite you to browse through our brochure to find out more about our heavy-duty portion cutter PORTIO B, its applications and our unique selling points. Our sales team is ready to answer any questions you may have.

Regardless of which PORTIO you need, choosing MARELEC - a worldwide leader in this technology - will ensure that you are working with a service-oriented company, one that listens to your specific needs and is a flexible partner with a human approach. We look forward to a mutually profitable cooperation!

marelec
A **DURAVANT** COMPANY

Unique Selling Points

1 // OPTIMIZED YIELD

The PORTIO software of the portion cutter always calculates the best way to leave zero waste, maximizing the yields. The possibility for conditional programs results in increased yields. Combinations of fixed thickness and various fixed weights enable easy portioning to a maximum yield for all applications.

2 // UNMATCHED ACCURACY

Three sets of laser cameras, at 120° intervals, perfectly scan the meat primals over 360°. This transforms the shape of the primal into a 3D model. Knowing the density of the product, the intelligent software can then calculate where to cut to ensure ideal target weights.

3 // MODULAR BELT

The unique belt surface, especially designed for handling meat primals, keeps the products in place and prevents them from moving during portioning. The (patent pending) stainless steel inserts with cone tops provide unrivalled grip while maintaining impressive lifetime.

4 // USER-FRIENDLY SOFTWARE INTERFACE

Intuitive programming of cutting patterns and fast and easy fine-tuning of the programs results in the maximum yields. The cutting pattern is visible on the screen along with the indication of the thickness and weight of every portion.

5 // MATRIX P

The MATRIX P software collects all production data from the PORTIO B to enable the generation of detailed production reports. MATRIX P enables users to remotely create programs offline and monitor the meat slicer status via an event log.

6 // EXTREMELY HYGIENIC, EASY TO CLEAN

The portion cutter complies with the most stringent hygiene standards. The open structure of the portioning machine allows for the pressure washing and disinfecting of the entire interior and exterior. A CIP (Cleaning In Place) rinses the belts. All cabinets with electrics and electronics have a unique drying system to prevent the build-up of condensation. Belts can be removed using a quick-release, without the need for tools.

7 // SERVICE

MARELEC has built a very strong reputation for its after sales service. A team of service engineers is available 24/7 to reply to your queries. All machines can be connected to the internet, which allows our service team to diagnose the status of the machine from our head office. This puts us in a position to offer you unrivaled on-the-spot assistance.
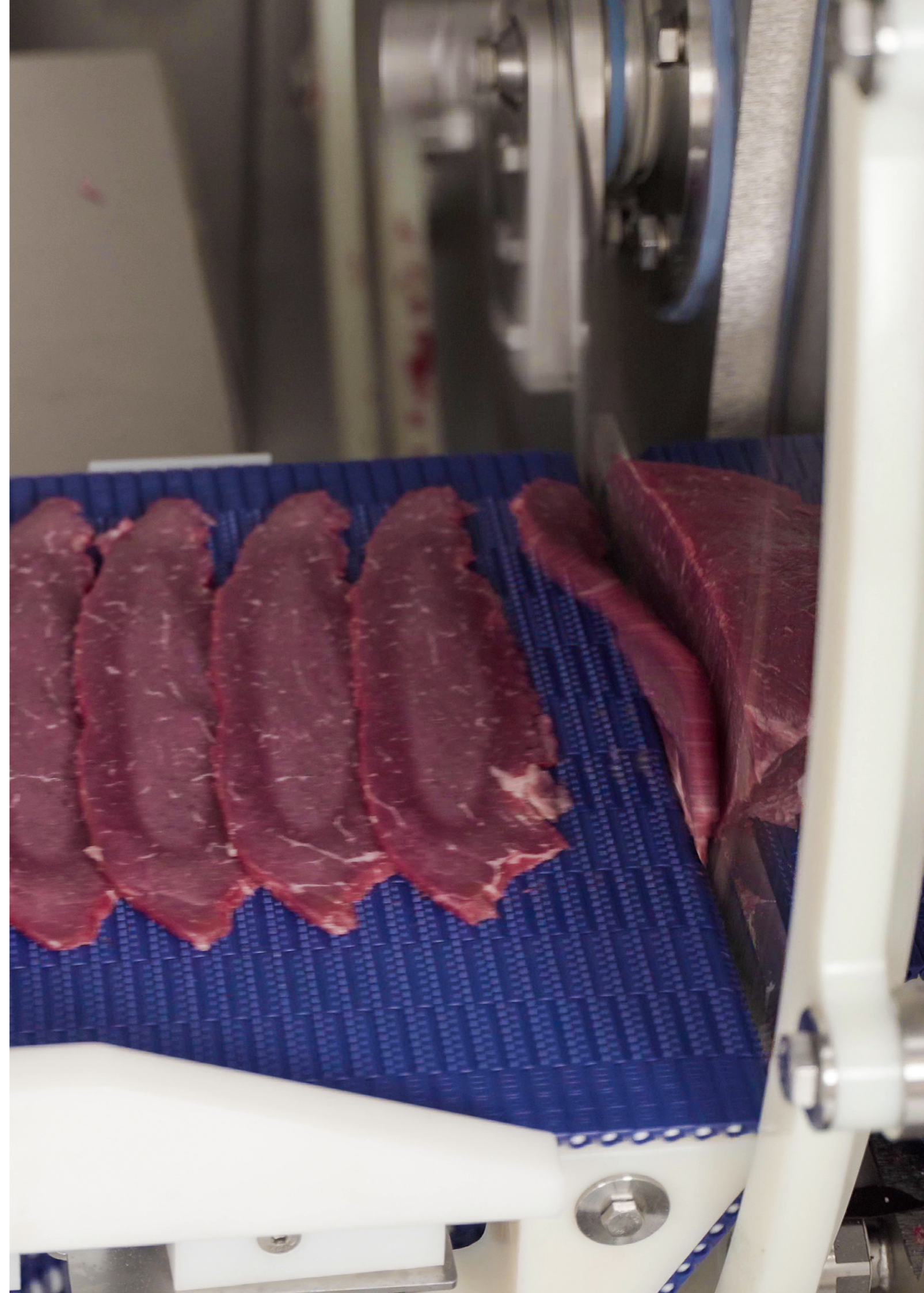
PORTIO B

// LASER SCANNING

The PORTIO B uses three camera laser combinations, spaced at 120° intervals, to perfectly scan the volume of irregular shapes. This enables the scanning of the contours of more rounded products, preventing blind spots on the edges. Typical applications are bone-in pork primals, crust-frozen meat primals, frozen products and cured/dried/smoked meats, etc.
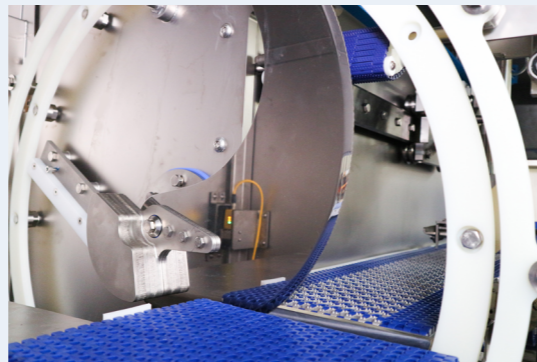
Product
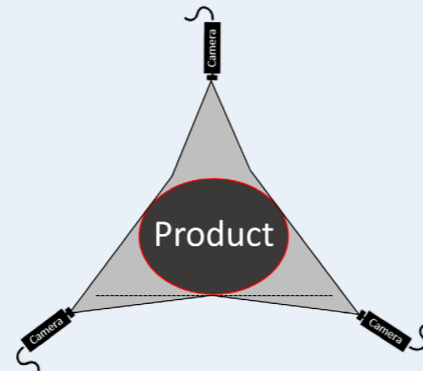
// FEEDING CONCEPT

Our advanced infeed system features two separate conveyors - a servo-driven buffer belt and a dedicate infeed belt. The buffer belt optimizes capacity by adjusting its speed to ensure a consistently small space between each primal during scanning and cutting. Meanwhile, the separate infeed belt reduces the impact when of placing a heavier piece of meat, even while the previous primal is being scanned. With this design, we prioritize accuracy without compromising on efficiency.
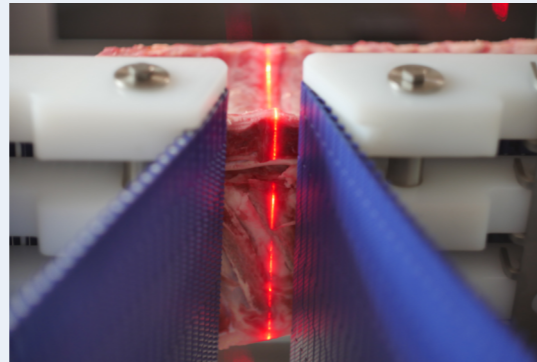
// DEDICATED KNIFE

The knife consists of a smooth section to cut the softer meat part and a serrated section to cut through bone parts. This combination optimizes the cutting quality.

// GRIPPER & TOP HOLDER

The claws of the gripper ensure that the primals move towards the cutting section without losing their position on the belt after being scanned. The programmable position of where the gripper will hold the product can be optimized to reduce trim and improve yields.

While the gripper ensures that the primals don't move backwards, the topholder prevents products from moving sideways on the feeding section. The combination of gripper and top holder will guarantee accurate fixed-weight cuts with high cutting quality, ready to be presented in a retail package.
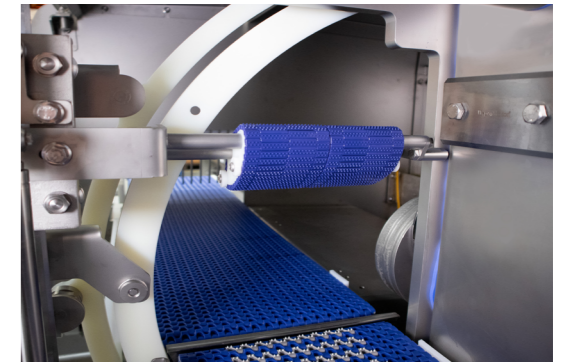
// DYNAMIC INFEED WEIGHER

The optional DIW will compensate for possible variation in fat content. Knowing the exact density of each primal will make your giveaway predictable and programmable. The DIW consists of an infeed belt, which will start and stop for optimum capacity, and two weighing conveyors. Using a combination of short and long weighing conveyor will increase the capacity as primals can be fed with less distance in between.
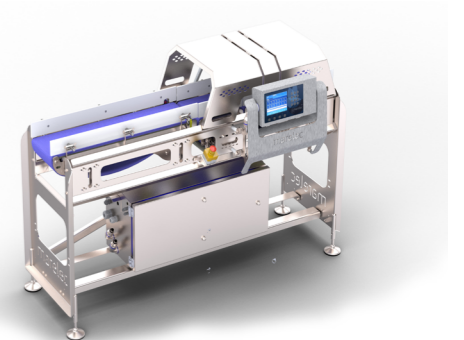
// GROUPING

The MARELEC PORTIO B offers you the flexibility to choose between continuous cutting or batching portions per group, tailored to your specific needs. Whether you prefer a continuous workflow or batch processing, the PORTIO B can accommodate both options seamlessly.

// SPECIFICATIONS

Lanes	1
Cameras	3
Belt width	254 mm / 10 inch
Max. product dimensions	800 x 240 x 160 mm / 31,5 x 9,5 x 6,2 inch

Subject to modifications for technical progress.

Max. cutting rate	5 cuts/sec
Machine dimensions	4150 x 1350 x 1600 mm / 163 x 53 x 63 inch
Machine net weight	1800 kg / 3968 lb
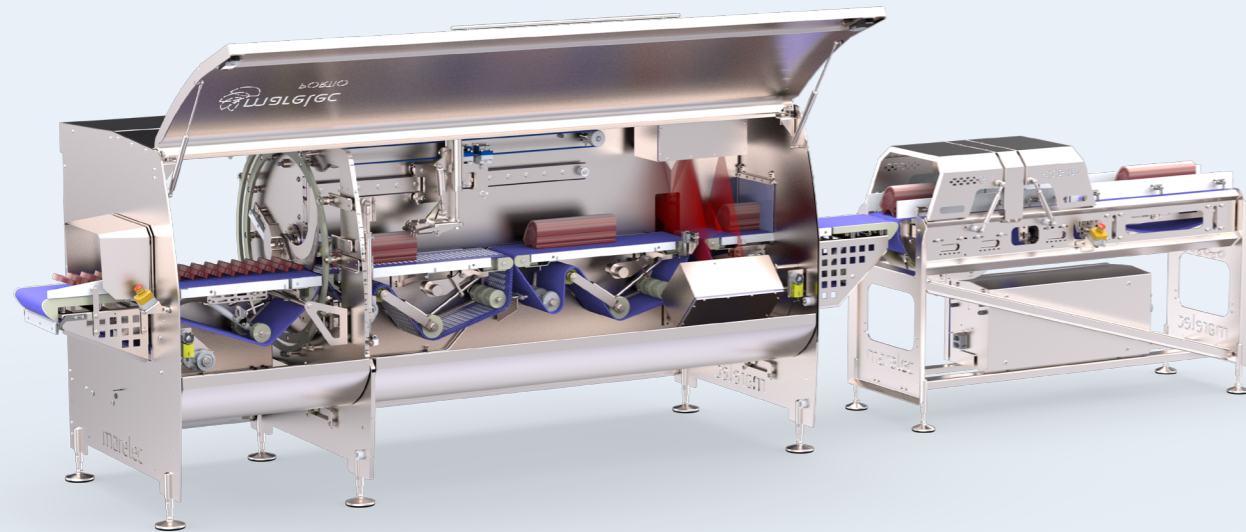
Scan to see
the machine
in action

// APPLICATIONS & CAPACITIES

PORK PRODUCTS					
Product	Common cuts	Accuracy (std deviation*)	Max. capacity	Min. slice thickness	Pre-treatment
Bone-in pork loin	125-200g	5,5-8,5g	1440kg/h	8mm	Crust freezing**
Pork loin	60-100g 100-200g 600g	2g 2g 2%	1000kg/h >2000kg/h	3mm	Crust freezing**
Bone-in pork neck	125-200g	6-8g	1100kg/h	6mm	Crust freezing**
Pork neck	100-150g	4,5g	1000kg/h	4mm	Crust freezing**
Pork belly	4mm 60-300g	300-800g 1,5-2%	700kg/h	3mm	Crust freezing**
Pork ham	100-250g	4,5g	700kg/h	3mm	Crust freezing**

BEEF PRODUCTS					
Product	Common cuts	Accuracy (std deviation*)	Max. capacity	Min. slice thickness	Pre-treatment
Boneless rib-eye	100-200g 200-500g	4-5g 1,5-2%	1200kg/h	5mm	Crust frozen/fully frozen (-4° C)
Striploin	100-200g 200-500g	4-5g 1,5-2%	1200kg/h	5mm	Crust frozen/fully frozen (-4° C)
Splitted rump	170-250g	5-9g	1200kg/h	5mm	Crust frozen/fully frozen (-4° C)
Eye of round	100-200g 200-800g	3-4g 2-2,5g	800kg/h	5mm	Crust frozen/fully frozen (-4° C)
Tenderloin	150-250g 60-100g (out of tail)	1,5-2% 2-2,5g	700kg/h	3mm	Crust frozen/fully frozen (-4° C)

CURED MEAT - HARD PRODUCTS					
Product	Common cuts	Accuracy (std deviation*)	Max. capacity	Min. slice thickness	Pre-treatment
Pancetta	200-300g	4g	750kg/h	5mm	Crust frozen/fully frozen (-4° c)
Serrano ham	150-300g	4g	750kg/h	5mm	Crust frozen/fully frozen (-4° c)
Pork delicatessen	Very product dependent; needs to be confirmed by a test on the specific product				

* Std deviation: the standard deviation is significantly influenced by various factors related to the product, such as its fat content, the amount of bones present, the method of trimming and its temperature.
** Crust of ±1 cm with temperature ranging from approximately –5°C to –10°C/ The center of the product ranging from 0°C to 5°C.

Demo

MARELEC Food Technologies has created a state-of-the-art demonstration room, fitting it with all the equipment necessary to film and stream online live demonstrations. Of course, customers are very welcome to visit the MARELEC headquarters in Nieuwpoort, Belgium, to test the PORTIO B portion cutter with their own products. Another possibility is for MARELEC experts to undertake trials in the production facilities of our customers.

We firmly believe this is the best way to convince our valued customers of the quality of the cut, as well as the accuracy, capacity and the obtained yields, gains and fast return on investment that results from using the MARELEC PORTIO B.

Please contact the MARELEC sales team to make an appointment. They will then make sure the ideal machine for your application will be available for a successful demonstration.