

Marel PortionCutters

Accurate, ultra-high-speed portion cutting of fish



- High speed – increased throughput
- Great accuracy, resulting in minimal giveaway
- Flexible cutting patterns
- Small footprint
- Hygienic and easy to clean



Top performance plus simplicity

I-Cut 300

Suitable for whitefish the I-Cut 300 is the ideal solution for high-value portioning of fillets into fixed weight and shapes.

The I-Cut 300 is a single-lane PortionCutter operating at a cutting speed of up to 500 cuts per minute. It is designed to meet the needs of small to medium-sized operations and is capable of performing the work of 4 – 5 workers.

I-Cut 36

The I-Cut 36 is a high-speed, high-precision PortionCutter ideal for cutting salmon and other large fish types to fixed weight and shapes.

















The high-capacity PortionCutter can make up to 1000 cuts per minute. The I-Cut 36 is extremely flexible, with features that include a 45-degree cutting angle. This helps ensure that the cut salmon fillet portions look natural.

Benefits

- Maximum profit because of fast payback
- Compact design saves space in the production
- High productivity because of very fast portioning
- Extremely fast cutting speed – multiple cuts even on small products
- Minimised giveaway and best possible yield because of high accuracy
- 45-degree cutting angle capability
- Flexible to use with different types of products and cutting angles
- High level of hygiene with easy cleaning



When nothing else has been specified the machine runs 400 mm/sec with a spacing of 40 mm

	Knife angle	Input	Output	Machine	Portion accuracy ¹⁾ < 100 g: g > 100 g: %	Throughput ²⁾ per hour up to
	90°	450 g J-cut cod fillet	Fixed-weight loin tip, loin, two center cuts and a tail portion	I-Cut 300	2-3	1000 kg*
	90°	550 g cod fillet Light salted	Fixed-weight portions	I-Cut 300	2-3	1200 kg
	90°	200 g cod belly/ tail	Fixed-weight portions cut from belly and tail	I-Cut 300	2-3	750 kg
	90°	300 g cod loin	Fixed-weight portions cut from loin	I-Cut 300	2-3	1100 kg
	90°	500 g V-cut cod fillet	Fixed-weight loin and tail portion	I-Cut 300	2-3	1100 kg
	90°	550 g g pollack fillet	Fixed-weight loin tip, loin, two center cuts and a tail portion.	I-Cut 300	2-3	1000 kg
	90°	650 g pollack fillet Light salted	Fixed-weight portions	I-Cut 300	2-3	1200 kg
	90°	350 g pollack loin	Fixed-weight loin portions	I-Cut 300	2-3	1100 kg
	90°	250 g pollack belly/tail	Fixed-weight belly and tail portions	I-Cut 300	2-3	750 kg
	90°	600 g Pollack fillet	Fixed-weight loin and tail portions	I-Cut 300	2-3	1100 kg
	45°	1500 g salmon fillet, skinless 250 mm/sec	Fixed weight portions	I-Cut 36	3-5	2400 kg
	90°	1500 g salmon fillet, skinless or skin on	Fixed weight portions	I-Cut 36	1-1.5	3850 kg
	90°	800 g salmon loin, skinless or skin on	Fixed-weight loin portions	I-Cut 36	1-1.5	2050 kg
	90°	3200 g tuna loin, 60 mm/sec, 50 mm space	Fixed weight tuna loin steaks	I-Cut 36 I-Cut 300	2-3 3-4	1150 kg 850 kg
	90°	3500 g whole salmon, 60 mm/sec	Fixed weight whole salmon steaks	I-Cut 36	5	1200 kg
	90°	1500 g salmon fillet, 250 mm/sec	Fixed-weight batches Batch space 100 mm	I-Cut 36	2-3	1650 kg

1) +/- 1 std.

2) Throughput depends on product size, portion size and optimal loading

I-Cut 300 – the ideal PortionCutter for whitefish

① Labour saving

Capable of performing the work of 4-5 workers, the I-Cut 300 is a single-lane unit operating at a cutting speed of up to 8 cuts per second.

② Extremely hygienic

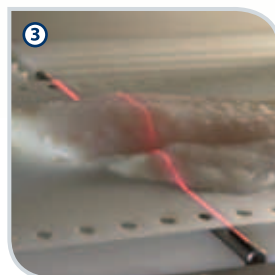
Designed with maximum hygiene in mind, the I-Cut 300 is extremely easy to clean. Opening the machine is simple and all parts are easily accessible for cleaning.

③ Laser vision technology

Using laser vision, the I-Cut 300 calculates the most economic cut configuration based on preselected parameters and portions the fillets accordingly.

④ Intelligent portion cutting

The I-Cut 300 is a user-friendly and easy to operate PortionCutter. Controlled by the dynamic M3000 graphic indicator, the machine can be switched between pre-programmed processes with only one keystroke.



I-Cut 36 – for flexible cutting of salmon and large fish types

① Intelligent portion cutting

Pre-programmed calibration enables you to switch product set-ups in seconds. The PortionCutter can be adjusted from the colour touch-screen control panel at any time during the portioning process, which improves performance.

② Switch of cutting angle

The I-Cut 36 easily switches cutting angle from 90 to 45 degrees.

③ Ultra-fast cutting

The knife makes up to 1000 cuts per minute – a much higher portion cutting capacity than ever seen before on a single-lane machine.

④ Unmatched accuracy

The latest in laser vision technology, featuring a 100 Hz camera, ensures unparalleled accuracy.

⑤ Extremely hygienic

The I-Cut 36 is designed and built to comply with stringent hygiene standards. Cleaning is both quick and easy, because there are no horizontal surfaces. The machine is designed with easy access to the inside of the machine.

⑥ Safety stop

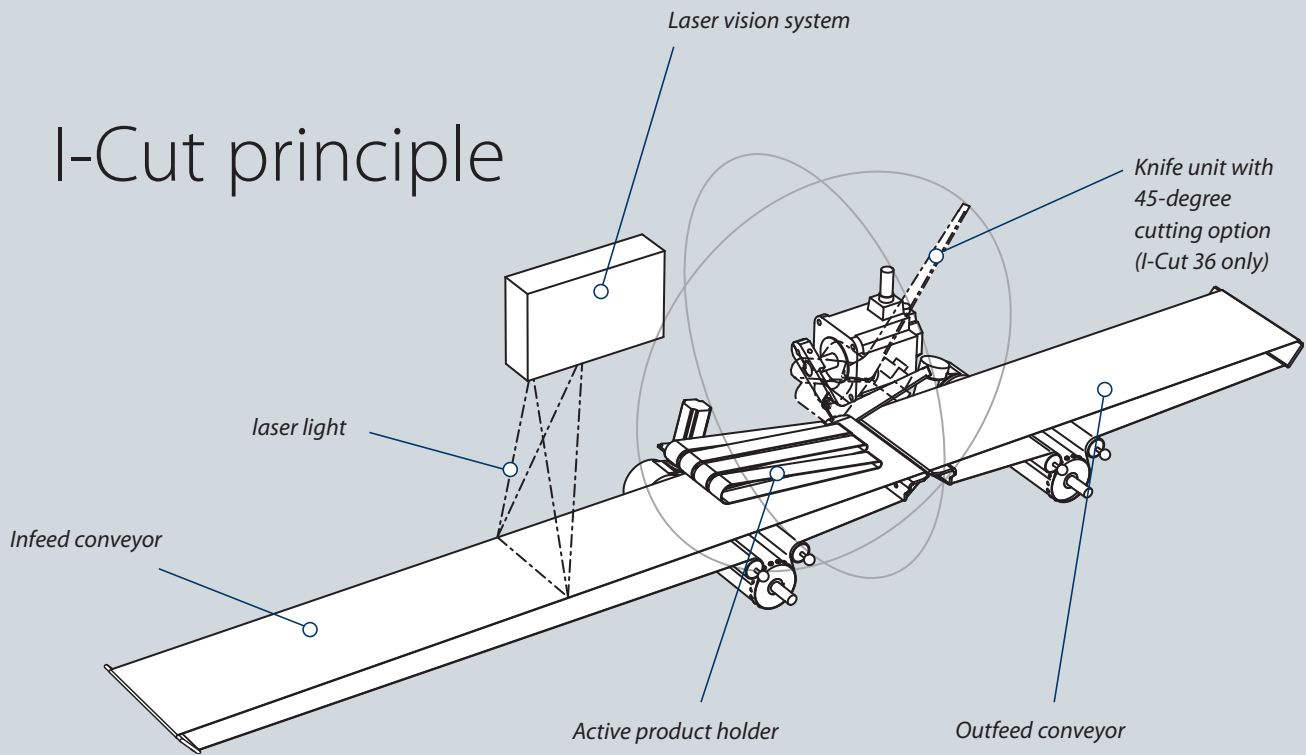
The PortionCutter is designed to ensure maximum safety for all your staff. If the door is opened during the cutting process, a safety cut-out stops the machine immediately.

⑦ Perfect product fixation

Holding each product down on top keeps it stable and helps prevent it from rolling backwards or moving up and down on the conveyor belt during cutting. Typically used for whole fish.



I-Cut principle



Cut and Batch System - Whitefish

The Cut & Batch system for whitefish products is a fully automated processing line designed to minimize labour costs and giveaway.

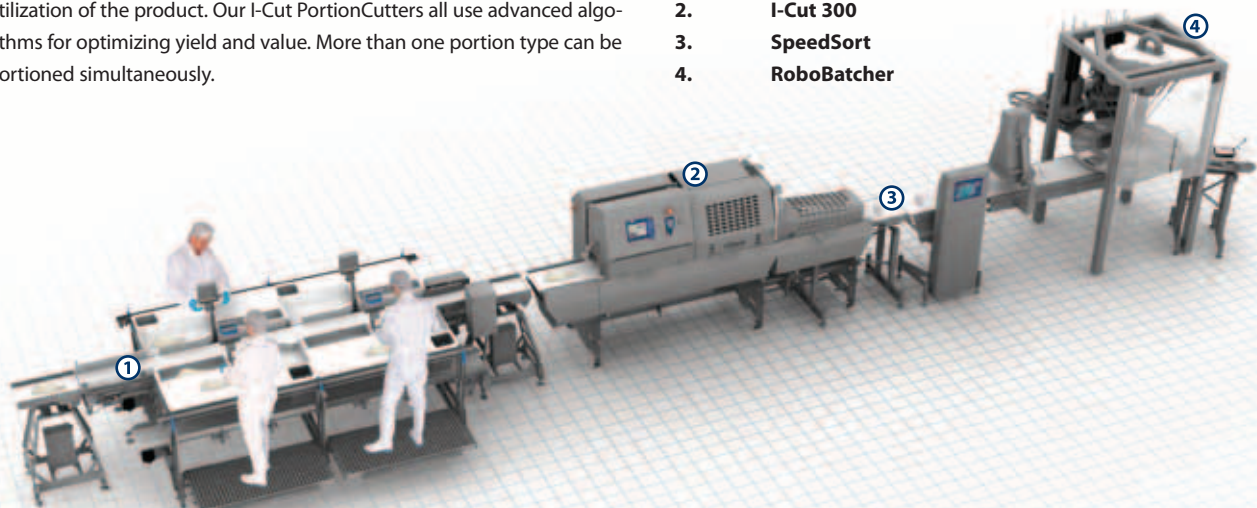
First in line is the Streamline used for handfilling of most species and can be provided with or without weighing and yield monitoring. By adding Marel's product control software Innova, your key performance indicators will be stored in a database and can even be used as the basis for bonus payment plans for added incentive.

For accurate portioning of whitefish the I-Cut 300 will optimize yield and utilization of the product. Our I-Cut PortionCutters all use advanced algorithms for optimizing yield and value. More than one portion type can be portioned simultaneously.

Any trim can be removed with the addition of a SpeedSort as an integral part of the processing line. The ultra-fast retraction conveyor opens and closes so quickly that it can remove trim from both the front and the back end off a single product.

Finally the RoboBatcher provides you with the very latest technology in automatic tray loading and presentation. It is capable of loading the portions in a predefined pattern and a specially designed gripper ensures gentle and precise transfer of portions from the infeed conveyor to the tray.

1. **Streamline**
2. **I-Cut 300**
3. **SpeedSort**
4. **RoboBatcher**





Cut 'n Batch solution

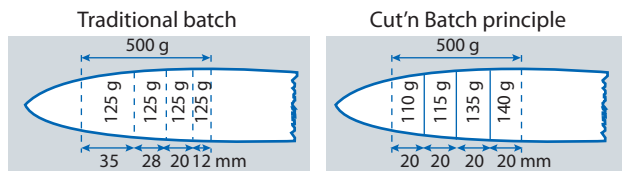
The Cut 'n Batch concept is an innovative way of automatically cutting and batching salmon portions with maximum efficiency, yet with only two operators needed. A Cut 'n Batch installation is capable of batching up to 120 fixed-weight batches.

The PortionCutter controls the entire line by scanning the portions and determining where the cuts are to be made. Each batch contains a pre-defined weight and number of cuts.

The fixed-weight batches continue for packing in trays.

Features:

- Provides portions with consistent colour and width in each batch
- Exact weight on the entire batch (rather than per portion)
- No need for weighing machine or grader/batcher
- More gentle handling than with a grader/batcher
- Higher capacity than an individual weighing line



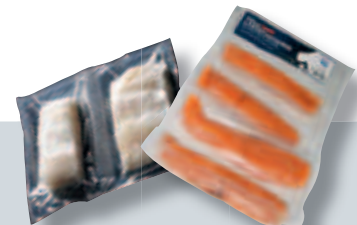
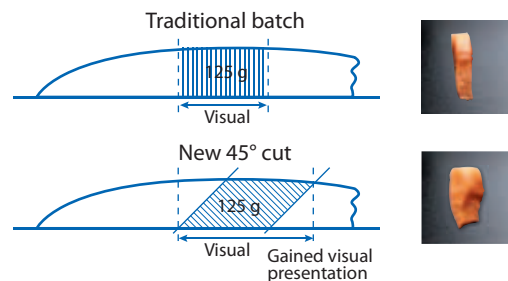
Cut 'n Pack system

The Cut 'n Pack concept is a fully automated cutting, batching and packing solution from Marel. The line is capable of automatically loading up to 160 salmon portions per minute directly into thermo formers.

The I-Cut 36 controls the line by first scanning the product to determine where the cuts are to be made to produce the fixed-weight portions. Then it makes sufficient space between the portions so that an IPL Robot can gently pick them up and load them into thermo formers.

Features:

- No manpower needed for packing
- Higher accuracy on portions
- Possibility for 45 degree angled cuts
- More gentle handling than with a grader/batcher



Payback calculation for the fishing industry

A company making 150 g salmon portions was interested in replacing its existing cutter with a Marel portion cutting solution.

We therefore conducted a study of their existing line and compared the results with a test run by Marel on our I-Cut 36.

The results were significant.

The company had the following data as a starting point:

- 220 working days a year
- 7.5-hour working day
- 5 operators on the slicing/packing line
- 7.5 tons production per working day
- Market price € 4.15/kg

- Attainable price for un-sellable portions € 1.50/kg
- Labour costs: € 30,000 per operator per year

With a new I-Cut 36, the company would get:

- Significantly improved accuracy on each individual portion
- Higher capacity (7.5 tons produced in 5 hours instead of 7.5 hours)
- Improved yield (every ton cut resulted in 50 kg more sellable product)
- Less manpower required (only 4 operators)
- More stable and consistent production
- Better product infed because of greater flexibility regarding distance between individual products

The payback calculation was as below, on an annual basis:

- Labour savings = € 30,000
- Higher yield = € 218,625
- Greater capacity = € 40,040

Total savings by upgrading from existing equipment to an I-Cut 36 = € 288,665

This gave the customer a payback time of less than 6 months



Compatible with Innova
– Intelligent production control system

Demonstrations prove the value

Marel has performed a number of successful equipment demonstrations for the food industry at different locations throughout the world to show how flexible, efficient, and user-friendly our machines are.

We want you to experience the machine on site and to see for yourself that it can handle your products. We are convinced that customers become more aware of the useful and practical functions and capabilities of the machine when they have seen it operate at their own facility.

Testing a variety of products

If you have a variety of products, you can test those products during the demonstration and calculate yield, throughput, quality, appearance, and payback time. At the same time, it is possible to test new products that you want to introduce to the market - products that perhaps have not been tested before.

Call us today to arrange a demo – or if you would just like more information about how you can benefit from our fish portioning know-how.



Marel

The world's leading manufacturer of high-tech equipment for the food processing industry.

We are innovative in everything we do and we provide outstanding new solutions and services to the food processing industry in order to create greater value for all our stakeholders.

For further information please visit
www.marel.com

