

Marel PortionCutters

Accurate, high-speed intelligent portion cutting of beef, pork, veal and lamb



Highlights

- Very flexible high-speed cutting
- Phenomenal accuracy, resulting in minimal giveaway
- Hygienic and easy to clean
- Perfect product fixation
- Software options for better product optimisation
- Optimal 360° scanning



Top performance plus simplicity

I-Cut 55

The I-Cut 55 is developed specifically for the accurate portion cutting of boneless meat products – beef, pork, veal and lamb.

360° scanning ensures that shadows and unseen areas are recorded.

The unique V-belt design and product holder eliminate all unintended product movement during the cutting process. Even backward movement is prevented by the joint item and by the boundary detection capability.

These features – and many more – ensure high-precision performance with every cut made using the I-Cut 55.

I-Cut 36

The I-Cut 36 is a high-speed, high-precision portion cutter ideal for cutting boneless meat products – beef, pork, veal and lamb – to fixed weight and/or length. The flexible high-capacity portion cutter can make up to 1000 cuts per minute.

Software programs

The machines feature several pre-programmed standard cutting patterns. In addition, special software cutting programs have been developed for optimising the meat cutting patterns, e.g. the “Cut n’ Batch” program.

Benefits

- Maximum weight accuracy with 360° 3-D scanning and perfect product fixation on I-Cut 55
- High productivity as a result of very fast portioning
- Reduced operating costs because of low maintenance
- Extremely fast continuous cutting because of boundary and joint item detection
- No learning curve, resulting in maximum flexibility
- Easy to use with different types of products
- Maximum profit because of fast payback
- High level of hygiene with open construction and easy cleaning
- Pre-set cutting programs that ensure high yield



Product	Input	Output	Machine	Portion accuracy ¹⁾ < 100 g: g > 100 g: %	Throughput ²⁾ per hour up to	
	Pork loin	2.5–3 kg	100–150 g	I-Cut 55	1.0–1.5	1200–1800 kg
				I-Cut 36	1.5–2.5	1500–2300 kg
	Pork neck	1.5–2.5 kg	100–150 g	I-Cut 55	1.5–2.0	1200–1800 kg
				I-Cut 36	2.0–3.5	1500–2300 kg
	Pork shoulder	3.7–5.0 kg	150–200 g	I-Cut 55	1.5–2.0	1800–2400 kg
				I-Cut 36	2.0–4.0	2300–3100 kg
	Pork belly deboned	1.0–2.0 kg	15 mm	I-Cut 55	1.5–2.0	600 kg
				I-Cut 36	2.0–3.0	1300 kg
	Smoked bacon	0.7–2.0 kg	40–60 mm	I-Cut 55	1.5–2.5	1400 kg
				I-Cut 36	2.0–4.0	1700 kg
	Bacon joints or Pork loin roast	2.5–6.5 kg	907 g / 2 g	I-Cut 55	1.0–1.5	5500 kg
				I-Cut 36	1.5–2.5	5500 kg
	Tenderloin (pork)	0.3–1.2	80–100 g	I-Cut 55	1.0–1.5	1100 kg
				I-Cut 36	1.5–2.0	1300 kg
	Striploin	1.0–4.0 kg	200–340 g	I-Cut 55	1.5–2.5	2000–3500 kg
				I-Cut 36	2.0–3.0	2000–3500 kg
	Ribeye	2.0–4.0 kg	200–340 g	I-Cut 55	1.5–2.5	2000–3500 kg
				I-Cut 36	2.0–3.5	2000–3500 kg
	Tenderloin (beef)	1.0–3.0 kg	200–280 g	I-Cut 55	0.8–1.5	2300–2600 kg
				I-Cut 36	1.5–2.5	2800–3100 kg
	Rump with cap	5.0–7.0 kg	500 g = approx. 15 mm	I-Cut 55	1.5–3.0	5900 kg
				I-Cut 36	n/a	n/a
	Rump without cap	5.0–7.0 kg	500 g = approx. 15 mm	I-Cut 55	1.5–2.5	5800 kg
				I-Cut 36	n/a	n/a
	Top butt without cap	0.5–2.5 kg	200–340 g	I-Cut 55	1.0–1.5	2000–3500 kg
				I-Cut 36	2.0–3.0	2800–5100 kg
	Flat iron steak	0.5–2.0 kg	200 g	I-Cut 55	1.5–2.0	2000 kg
				I-Cut 36	2.0–3.0	3000 kg
	Turkey breast	1.0–2.0 kg	125–175 g	I-Cut 55	2.0–3.0	1400–1900 kg
				I-Cut 36	3.0–5.0	2000–2700 kg

1) +/- 1 std. 2) Throughput depends on product size, portion size and optimal loading

I-Cut 36

– for flexible weight-controlled cutting



Intelligent portion cutting

Pre-programmed calibration enables you to switch product set-ups in seconds. Specialised programs ensure you a highly flexible portioning solution that always makes the right decision prior to the actual cutting. The portion cutter can be adjusted from the colour touch-screen control panel at any time during the portioning process, which improves performance.

Extremely hygienic

The I-Cut 36 is designed and built to comply with the most stringent hygiene standards. The machine is designed with 4 doors for easy access to the inside of the machine.

Switch of cutting angle

With the I-Cut 36 it is possible to easily switch cutting angle to 45 degrees.

4

Safety stop

The portion cutter 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.



Unmatched accuracy

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

No use of water

The quick-release, open knife guide does not require continuous use of water. This reduces the risk of cross-contamination.



Ultra-fast cutting

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

Perfect product fixation

Four individual flexible arms hold down each product on top which keeps it stable and helps prevent it rolling backwards or from moving up and down on the conveyor belt during cutting.



I-Cut 55

– 3-D scanning technology for top performance at every cut



Perfect product fixation

1. V-belts significantly reduce sideways movement and facilitate optimum product infeed
2. Product holders stabilising the product on top help prevent products from rolling backwards and moving up and down on the conveyor belt during the cutting process
3. The joint pieces technique and the boundary detection system prevent products moving backwards while being cut.



Flexible production

Pre-programmed calibration makes it possible to change product set-ups in seconds on the colour touch-screen.

Up to 90 customer-specified programs are available, providing a highly flexible portioning solution. The portion cutter can be continuously adjusted during production, which improves performance.



5

Easy access

Separate access to the knife unit on the back side of the portion cutter. This makes it easy to mount and dismount the knife safely.

Safety stop



3-D scanning all around the product

360° scanning ensures exceptionally accurate and consistent measuring results. Static precision scanners placed in a full circle around the conveyor prevent unseen areas and shadow effects.

No use of water

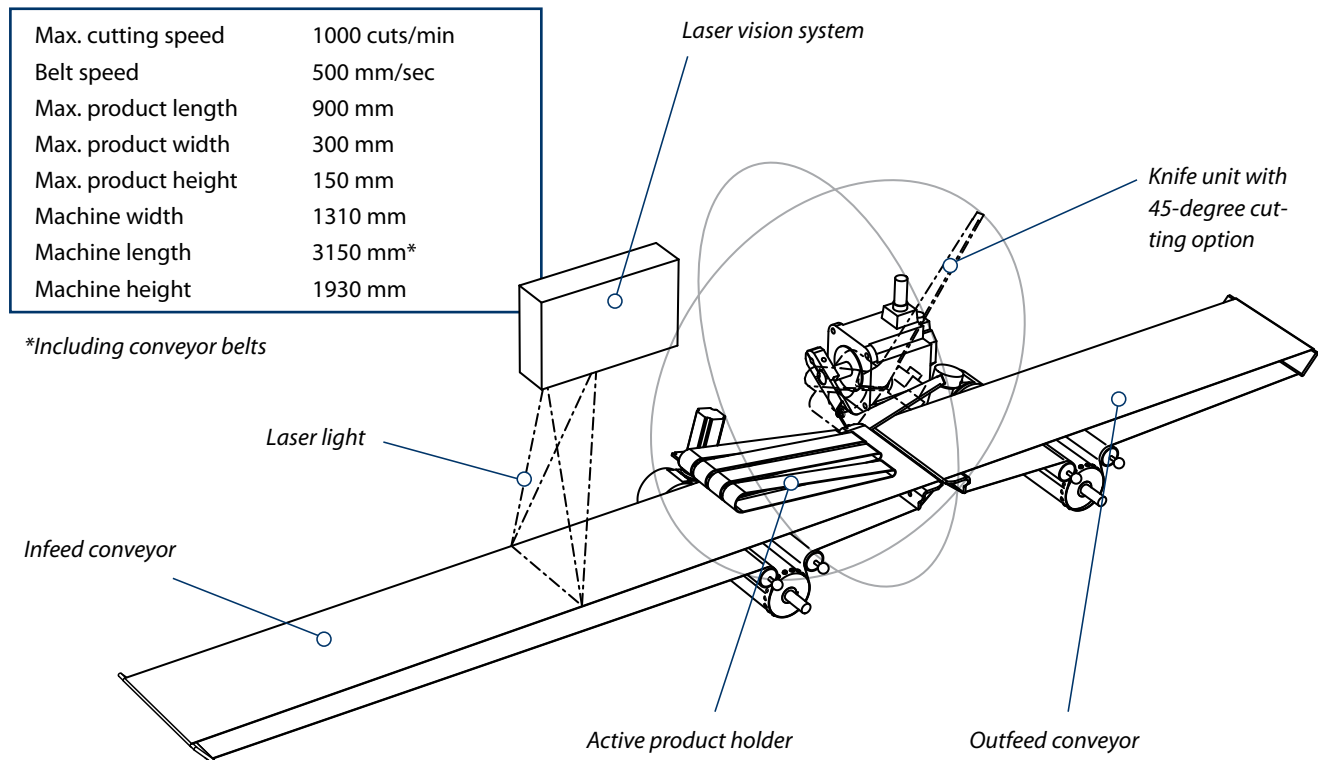
Acceleration for grading

Once the meat has been cut into pieces, the control unit adjusts the speed of the conveyor belt and makes sure there is a gap between the individual pieces. This makes automatic grading possible in high volumes.

Open construction

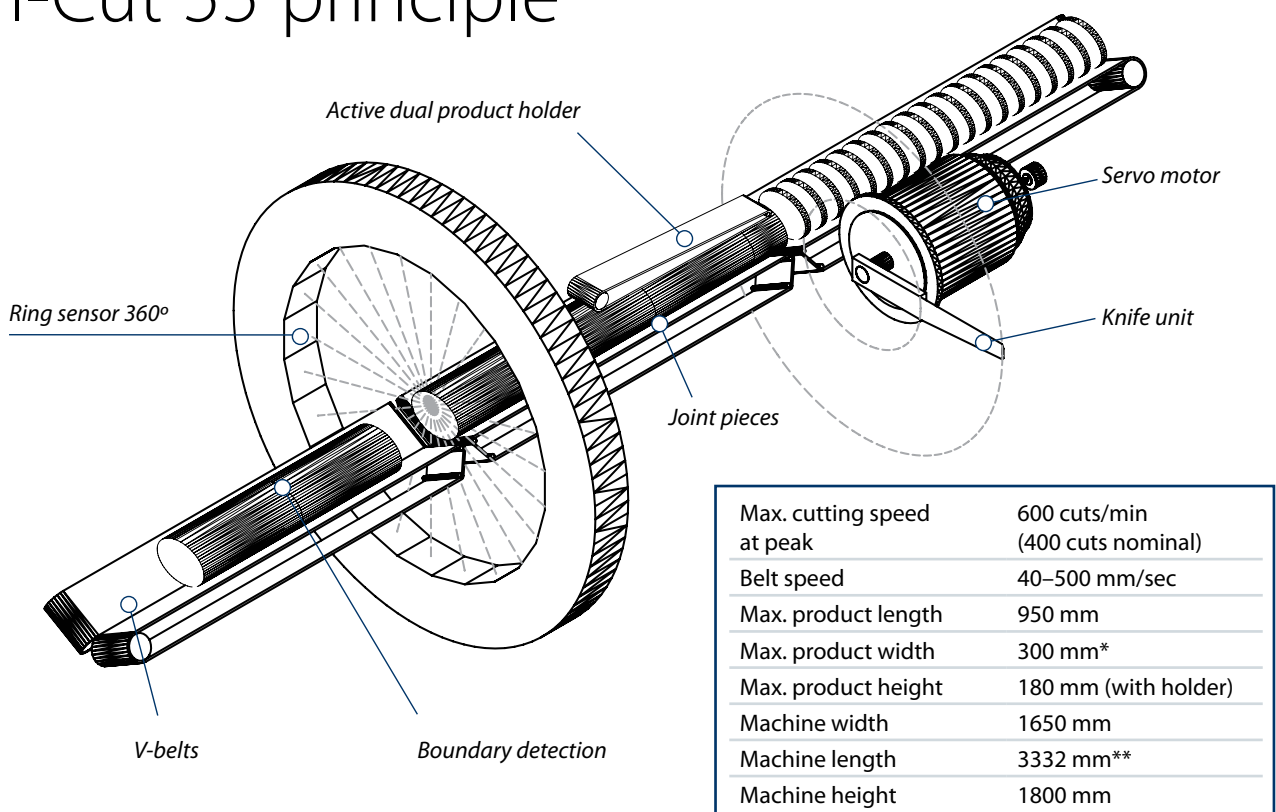
Large top-hinged doors provide easy access for cleaning and maintenance. Conveyor belts can be removed for inspection and cleaning, without using tools. Back wall-holders for all rollers facilitate easy wash down of removable parts.

I-Cut 36 principle



6

I-Cut 55 principle



* (possibility of 350 mm when V-belt angle is low)

** Including conveyor belts

Add-ons for your specific needs

I-Cut portion cutters are available with a range of additional cutting and batching options that can result in payback times of less than one month.



Cut n' Batch Software (optional purchase)

- Let the I-Cut be your batching machine

- The Cut n' Batch software ensures a specific target weight for a whole batch, rather than just an individual piece.
- The individual pieces within the batch are guaranteed to have equal thickness. The consumer benefits because all the pieces take the same time to cook.
- The pieces in a batch are always adjacent pieces with the same meat colour, marbling, fat coverage, etc.

The software can even handle different batch target weights within one whole piece of raw material.

In addition, the product can be divided into designated zones, which can then be cut according to the above set parameters.

Job Queue Software (optional purchase)

Imagine that you receive a range of orders that together add up to 2,325 steaks of 200 g sirloin.

In the production a number of steaks are cut based on an estimate - reaching e.g. 2,543.

What can you do with these excess steaks?

With the Job Queue software, you can instruct the I-Cut to stop cutting as soon as the target of 2,325 steaks of 200 g sirloin is reached - even if this means stopping in the middle of a sirloin.

It is also possible to run multiple sirloin jobs at the same time.

Specific optimisation software (optional purchase)

Imagine you have a 2,738 g pork loin.

You want the first and the last part of the loin cut into 8 x 125 g fixed-weight pork chops. You also want the centre part cut into 150 g pork chops (catch weight ranging from 150-175 g), but instead of having a trim piece left over, you want that trim added to these chops.

Without the optimization software you will have

8 x 125 g = 1,000 g

11 x 150 g = 1,650 g

Trim = 88 g

With the optimization software you will have

8 x 125 g = 1,000 g

11 x 158 g = 1,738 g

No trim

There are many other possibilities with this software, please ask for more details.

Alternative knife types

We are constantly trying to improve accuracy and the cutting face of the meat. To do this we have several knife types available. For example :



Serrated straight knife:

Very good when you want to cut through membrane, crust frozen products or other types of surface where a serrated penetration first would be ideal.



Straight knife:

Good for e.g. soft red- and pork meat.



Angled knife:

Definitely first choice when cutting meat. This type of knife gives the meat a very nice clean cut. The impact when hitting the meat is done on an angle and therefore not pressed through the meat but sliced through.

Cutting thin meat slices (optional purchase)

With our newly designed knife ring with additional knife guidance, we are able to cut meat items down to approx. 5 mm thick.



Demonstrations prove the value

Demonstrations prove the value

Marel Food Systems 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 like more information about how you can benefit from our portioning know-how.



Marel Food Systems

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

RETURN ON INNOVATION

