



COOKING AND PASTEURISATION

CATALOGUE 2026



Microwave cooking and pasteurisation

Industrial microwave systems designed for measurable performance, packaging flexibility and 24/7 production

1

measurable performance

Desk studies, sizing and energy calculations before project development. Expected performance is verified through in-house testing on real products.

2

packaging flexibility

Compatible with non-metallic microwave-safe packaging, with no requirement for proprietary trays, films or valves. Packaging is selected to suit the product.

3

industrial automation

Recipes, traceability, temperature control, data logging, alarms, remote support and integration with existing lines.

4

proprietary technology

Applicators, shielding, and command and control systems developed in-house for safety, stability, durability and ease of maintenance.

5

24/7 and in-house maintenance

Accessible components, clear diagnostics, identifiable spare parts and operator training: the system lets customers manage routine maintenance in-house, reducing downtime and dependence on the supplier.

6

validated quality

Texture, colour, nutrients, clean-label characteristics and shelf life are verified through testing and validation.



MIPAAF VALIDATION

Microwaves for organic food

Cooking and pasteurisation validated for organic production.

COOKING

PASTEURISATION

ORGANIC

ONE SINGLE LINE FOR COOKING, PASTEURISING AND COOLING

Continuous microwave processing
configured to suit the product and packaging

The MIT Industrial solution combines cooking, pasteurisation and, where needed, cooling in a single continuous microwave line.

A flexible system delivering process efficiency, food safety and superior product quality, while reducing time, energy use and operational complexity.



Shorter lead times

Continuous processing
in one line



Lower energy use

Uses heat already
introduced into the product



Less thermal stress

Fewer temperature
changes, higher quality



Packaging compatibility

Non-proprietary
microwave-safe
containers and films

4 METHODS IN 1 PLATFORM

1



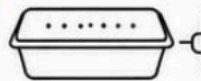
Cooking before
sealing the pack

2



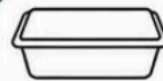
Sealed pack
with valve

3



Perforated pack
with subsequent
patch sealing

4



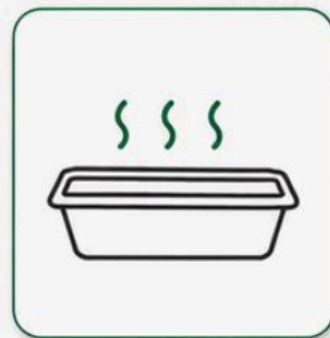
Pasteurisation
in a sealed pack



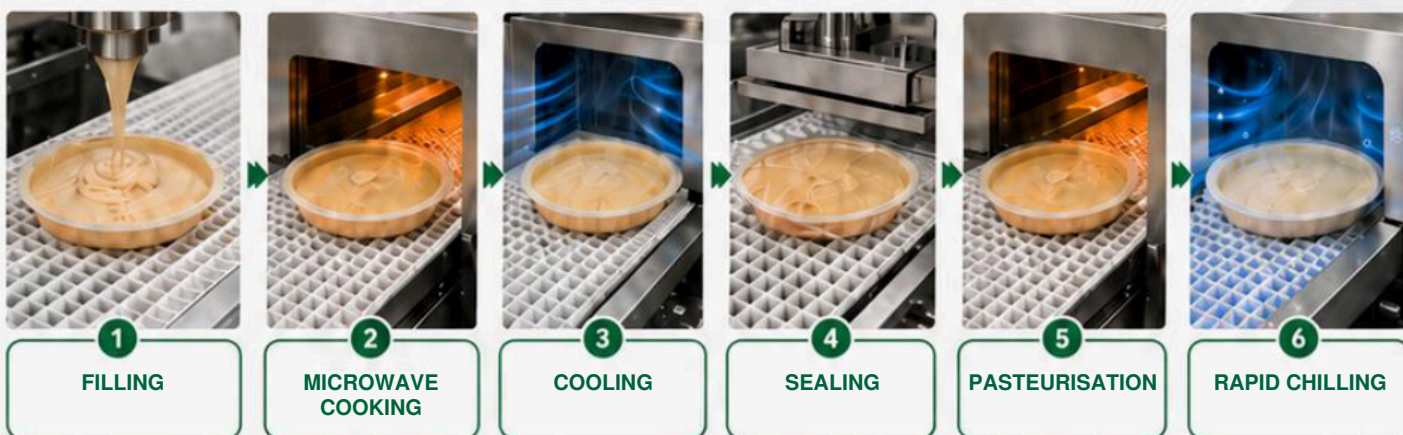
1

Cooking before sealing the pack

The product is cooked in an open tray. At the end of the heating stage, its temperature is reduced to a level compatible with the heat-sealing film.



After sealing, residual product heat is used during a controlled holding stage, helping achieve the pasteurisation target. Rapid chilling then brings the product to the required refrigerated storage temperature.



APPLICATION SOLUTIONS FOR METHOD 1

	24 kW	16 kW	8 kW	4 kW
 Usable loading width	600 mm	600 mm	300 mm	Dish dia. 800 mm
 Rated microwave power	24 kW	16 kW	8 kW	4 kW
 Tunnel length	7 m	7 m	5 m	–
 Power supply	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz
 Total installed power	55 kW	47 kW	24 kW	12 kW



Tunnels for cooking food in open trays have a vapour management and exhaust extraction system. The cooking chamber is fully cleanable, and cooking air is not recirculated.



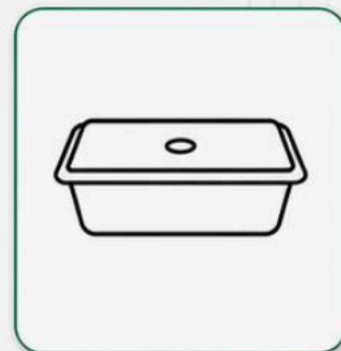
Examples of products that can be processed



2 Cooking in a sealed pack with valve application

The tray is sealed before treatment and then perforated at a predefined point. During cooking, the hole allows controlled steam release, preventing excessive pressure inside the pack.

After cooking, a valve is applied to close the vent. The product then proceeds to the thermal holding stage, followed by rapid chilling.



1
FILLING



2
SEALING



3
VALVE
APPLICATION



4
COOKING AND
PASTEURISATION



5
RAPID CHILLING



APPLICATION SOLUTIONS FOR METHOD 2

	80 kW	60 kW	40 kW	24 kW	16 kW	8 kW	4 kW
 Usable loading width	1600 mm	1600 mm	1600 mm	600 mm	600 mm	300 mm	Dish dia. 800 mm
 Rated microwave power	80 kW	60 kW	40 kW	24 kW	16 kW	8 kW	4 kW
 Tunnel length	9 m	8 m	7 m	7 m	7 m	5 m	-
 Holding unit	Air holding included	Air holding included	Air holding included	/	/	/	Function available
 Power supply	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz
 Total installed power	165 kW	145 kW	125 kW	55 kW	47 kW	24 kW	12 kW



Examples of products that can be processed



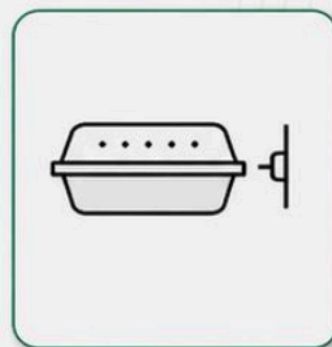
3

Cooking in a perforated pack followed by patch sealing

The operating principle is similar to Method 2, but the hole is finally closed with an adhesive patch or sealing plug, rather than a functional valve.

During cooking, the hole releases excess pressure. Once the most critical treatment stage is complete, the opening is automatically closed to restore the pack seal.

The sealing material must be validated for temperature, adhesion, barrier properties, food compatibility and seal integrity throughout shelf life.



APPLICATION SOLUTIONS FOR METHOD 3

	80 kW	60 kW	40 kW	24 kW	16 kW	8 kW	4 kW
 Usable loading width	1600 mm	1600 mm	1600 mm	600 mm	600 mm	300 mm	Dish dia. 800 mm
 Rated microwave power	80 kW	60 kW	40 kW	24 kW	16 kW	8 kW	4 kW
 Tunnel length	9 m	8 m	7 m	7 m	7 m	5 m	–
 Holding unit	Air holding included	Air holding included	Air holding included	/	/	/	Function available
 Power supply	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz
 Total installed power	165 kW	145 kW	125 kW	55 kW	47 kW	24 kW	12 kW



Examples of products that can be processed

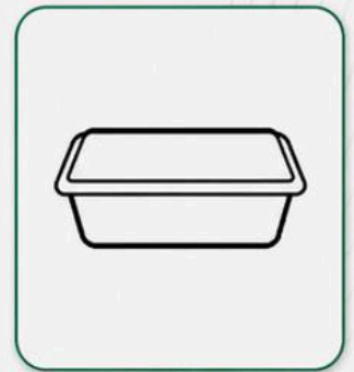


4

Pasteurisation in a sealed pack

The product can be packed in three ways: in a modified atmosphere, in an unmodified atmosphere or under vacuum. The entire cooking, pasteurisation and cooling process takes place without opening or modifying the pack. This is the most streamlined and compact process, as it requires no perforation or subsequent application of valves or sealing patches.

This method requires packaging specifically designed and validated to withstand the temperatures and pressures generated during treatment.



FILLING



SEALING



PASTEURISATION



RAPID CHILLING



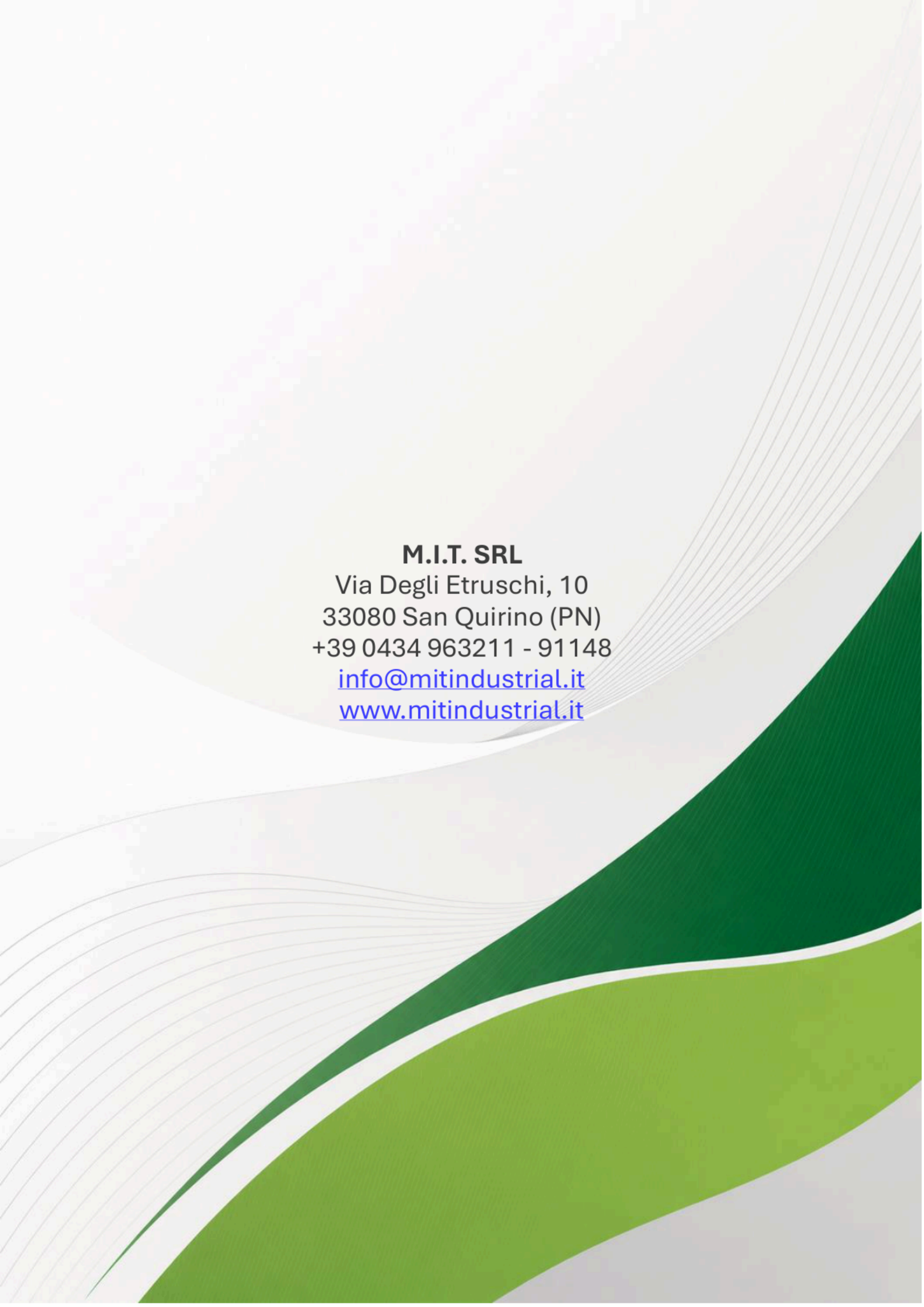
APPLICATION SOLUTIONS FOR METHOD 4

	80 kW	60 kW	40 kW	24 kW	16 kW	8 kW	4 kW
 Usable loading width	1600 mm	1600 mm	1600 mm	600 mm	600 mm	300 mm	Dish dia. 800 mm
 Rated microwave power	80 kW	60 kW	40 kW	24 kW	16 kW	8 kW	4 kW
 Tunnel length	9 m	8 m	7 m	7 m	7 m	5 m	-
 Holding unit	Air holding included	Air holding included	Air holding included	/	/	/	Function available
 Power supply	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz	400 Vac – 50 Hz
 Total installed power	165 kW	145 kW	125 kW	55 kW	47 kW	24 kW	12 kW



Examples of products that can be processed





M.I.T. SRL
Via Degli Etruschi, 10
33080 San Quirino (PN)
+39 0434 963211 - 91148
info@mitindustrial.it
www.mitindustrial.it