

# Marination: adding diversity and value to your product range

With the trend to convenience foods showing no sign of slowing<sup>1</sup>, marination continues to offer one of the simplest paths to adding value.

Traditional marination-before-portioning has two major problems: it coats portioning equipment, such as weighers, with sticky marinade, and it leaves to chance the amount of marinade that ends up in the pack with each weighed portion. With marinade often costing twice as much as the product pieces it is meant to coat, this is a serious drawback.

The Orbicote concept: fast, effective marination of individual weighed portions

- Excellent control of portion weight via multihead weighing
- Precise dosage of marinade per portion
- Proven thorough coverage of the product with marinade
- Less waste, less mess: ALL the marinade goes in the pack
- Entire weigher-to-pack process at up to 55 packs per minute
- Hygienic, easy-to-clean machinery

Want to discuss how Orbicote marination could fit into your plans or arrange a demonstration using your product? Please contact your local Ishida office.



## Working with you every step of the way

Our extensive R&D investment is directed at meeting the challenges of the fast-changing food industry around the globe.

We aim to support our partners fully, from the very start of the buying process, and you will find many equipment brochures, visual animations and case studies available on our website. When you are ready to make contact, a well-resourced network of Ishida companies, distributors and agents, extending across Europe, the Middle East and Africa, can provide advice and organise demonstrations and trials.

Installation is rapid and efficient. For integrated packing lines, we use proven project management techniques and methodologies, tuned to your key objectives and specifications.

A dedicated pan-European service engineering team helps to maximise the performance, functionality and reliability of our installed base. In addition, spares facilities are strategically placed throughout the territory, offering 24-hour delivery in most cases.



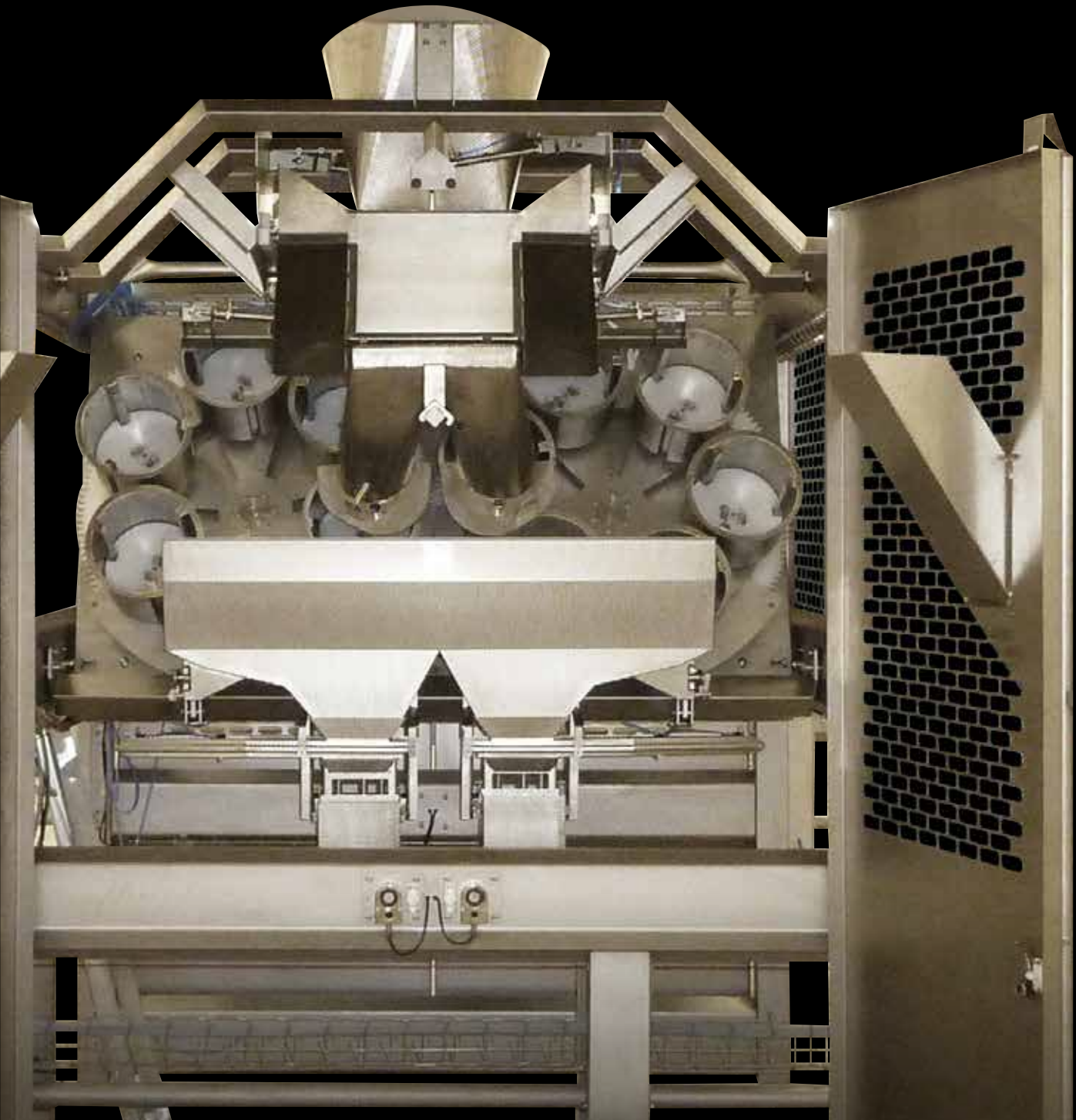
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# Orbicote

Automatic continuous marination system



<sup>1</sup> See for example <http://www.futuremarketinsights.com/reports/global-convenience-foods-market>



# Orbicote from Ishida: a new, waste-avoiding route to rapid and effective marination

Orbicote is a revolutionary approach to automating the marination process while controlling more carefully than ever before the amounts of product and marinade that go into each pack.

## How Orbicote works

With Orbicote, weighing takes place before marination. Each multihead-weighed portion is channelled into a mini-drum where it is tumbled with a set dose of marinade, allowing it to take up a thorough coverage before the entire drum contents are cleanly ejected into the packing system.

How is it possible to do this at sufficient speed to keep up with the output of a multihead weigher? This is achieved by having up to 12 mini-drums close together in an orbital arrangement, synchronised with the weigher and with, for example, a downstream tray filling system.



Ejection of the fully-marinated portion into the packing system is as effective and decisive as you would expect from an Ishida-engineered solution.

## A highly effective approach to marination

Comprehensive testing was carried out to discover the optimum mini-drum configuration, drum rotation speed and number of rotations needed for thorough coating of product pieces with marinade.

As part of this programme, product pieces were examined by food industry marination specialists and assessed for degree of coverage (i.e. marinade adhering to the surface). In 500 tests, the Orbicote mini-drum system met or exceeded their rating of satisfactory coverage.

## Making costly sauces go further

Orbicote ensures that essentially all of the marinade reaches the pack, with a high proportion of it adhering uniformly to the product. This contrasts with conventional approaches where losses of marinade can be as high as 8%.

## Secure loading of product and sauce into mini-drums

The interface between the chutes that carry the product from the weigher and the mouths of the constantly rotating mini-drums is carefully engineered to ensure a clean and secure transfer. The sauce is accurately and decisively dosed into the mini-drums using a volumetric depositing system.

## Gentle handling delivers product to pack in top condition

Short drop distances and a gentle tumbling process in drums of just 30cm diameter help avoid mechanical damage to the product.

## Easy-to-clean, allowing rapid changeovers

With easy access to all parts of the machine and with contact parts (including the mini-drums) readily removable, Orbicote can undergo a changeover, including a change of marinade, in around 15 minutes.

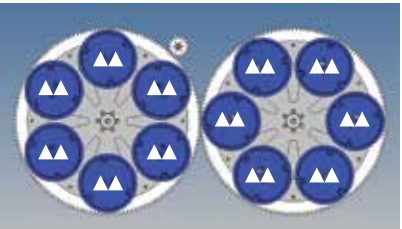
## Simple and safe to operate

Rapid access is not achieved at the cost of operator safety. Orbicote is comprehensively guarded, the gates being readily openable and removable when the machine is not operating.

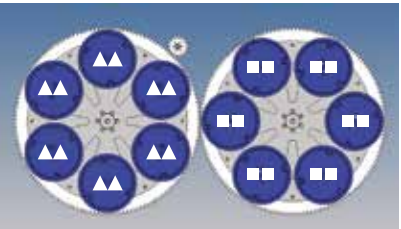
## Rapid marination that immediately transforms your factory's capabilities

When used with an Ishida 14-head weigher, the Orbicote can fill over 55 trays per minute. A line design for the overall marinating system is shown below, with the unmarinated product arriving from the left, whether in batches or by conveyor directly from a cut-up system.

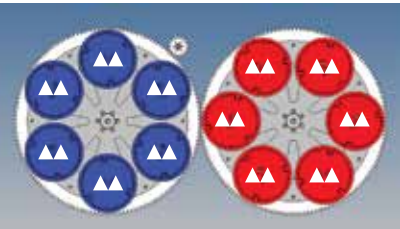
## Versatile Orbicote helps you meet varying retail needs and demand levels



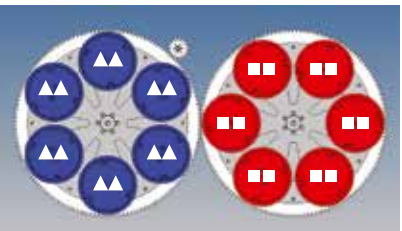
Same cut, same sauce



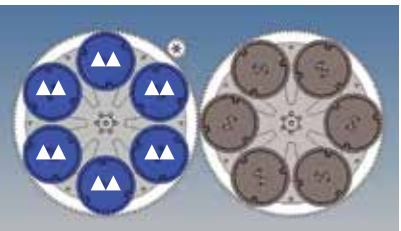
Different cuts, same sauce



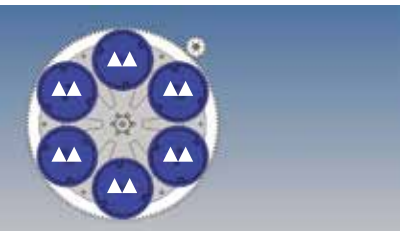
Same cut, different sauces



Different cuts, different sauces



Run one side at a time



Single-wheel model

## Orbicote: Ishida-engineered for extra efficiency

### Rejected weights cannot hold up the show

A patented feature of Ishida multihead weighers allows wrong weights to be detected and rejected virtually simultaneously, so that a correct weight can be chosen in place of a faulty one and discharged into the marinating system without missing a full beat. This adds to the speed and throughput achieved. In addition, any rejection takes place before a 'wrong' weighment reaches the Orbicote system, so no marinade is wasted on rejected portions.

### A system stop won't force a reset

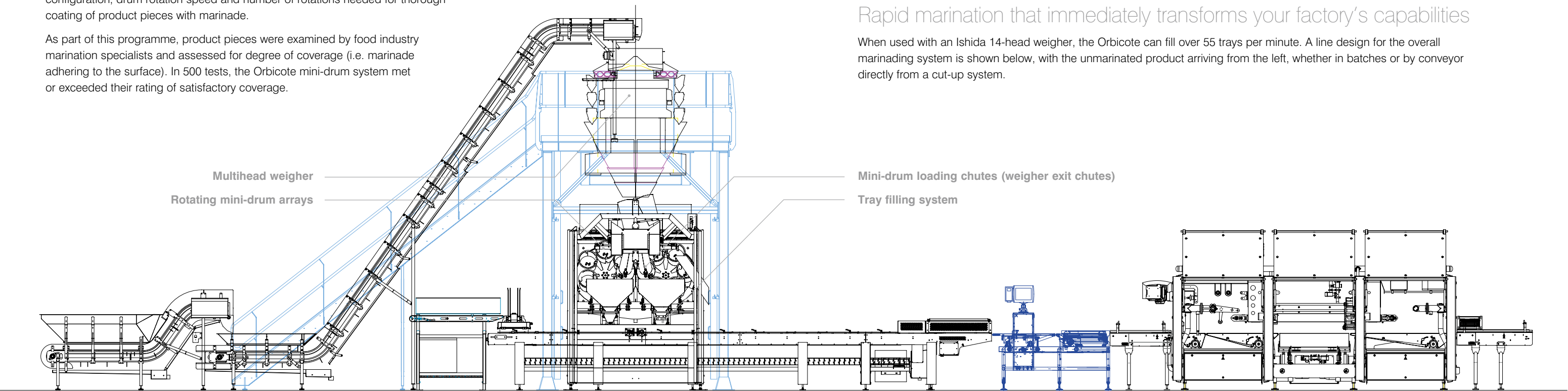
Orbicote can form a product buffer in the event of a downstream stop. When you turn it on again, the system will continue without resetting or failing.

### No-tray-no-fill

The Orbicote mini-drum will not expel its contents unless a tray is waiting underneath. And when an unemptied drum makes its way around to the filling point, there will be no further addition of product.

### No empty trays sent for sealing

If the weigher misses a dump, the unemptied drum carries on around the circuit. Unfilled trays will remain at the line start until filled, so no empty trays will clutter the line or the sealing system.



Orbicote