

Screwfeeder Multihead Weighers

Weighing and packing solutions for fresh produce



Ishida Screwfeeder Multihead Weighing

Ahead at the beginning, still ahead today

Ishida invented the multihead weigher, enabling accurate weighing of products into packs to be carried out automatically and at high speed. Since then, it has maintained its brand and technical leadership in the field with one advance after another. At the same time Ishida has developed into a provider of complete weighing and packing solutions, including checkweighing, tray sealing and testing, X-ray inspection and pick-and-place casepacking systems.

Faster calculation, more combinations, greater efficiency

Today's unique Ishida combination calculation hardware and software is fast. So fast that it can put together not one but three different combinations for each weight and double check the results. This virtually eliminates the situation that can occur with ordinary multiheads, where a wrong weightment has to be dumped, causing the weigher to miss a cycle.

Accuracy that drives down giveaway

The advanced technology behind this speed and efficiency also brings greater accuracy. This ensures that every pack of chicken drumsticks, pork medallions or fish fillets has a greater chance of being close to the target weight, maximising yield and reducing giveaway to fractions of a gram.

Engineered to meet the special challenges of screwfeeder weighing

It takes robust equipment to withstand the strong forces needed to disperse incoming pieces, to push forward large amounts of sticky product and to endure the toughest of cleaning regimes. Ishida's recognised engineering expertise is applied to making our weighers better equipped for the task than other brands.

Taking weigher hygiene to new levels

Ishida also combines its development resources with its ever-growing practical experience to eliminate food traps and make key parts both easier to reach and more effectively cleanable using standard methods.



World-leading speed and accuracy plus screwfeeder gentle propulsive power

How it works: the secrets of a spiralling success

1. Product is fed to the top of the weigher where a rotating **dispersion table** moves it out towards the feeder troughs.

To optimise product flow, Ishida Screwfeeder Weighers now have specially strengthened dispersion tables. These units are very hard-wearing and resistant to impacts and rotational acceleration.

3. On some models, the pool hopper has a photocell which controls the screw rotation. This ensures the hoppers are fed with an adequate amount of product.

Ishida offers the largest range of hopper types and sizes.

5. The product released from the opened weigh hoppers is channelled by a **discharge chute** into the packaging system. In many cases it is made more compact by being collected in a timing hopper.

Ishida discharge chutes are specially strengthened to take the rigorous cleaning regimes associated with fresh protein products.

2. In each trough, a powerful screw gently transfers product into the **pool hopper** beneath.

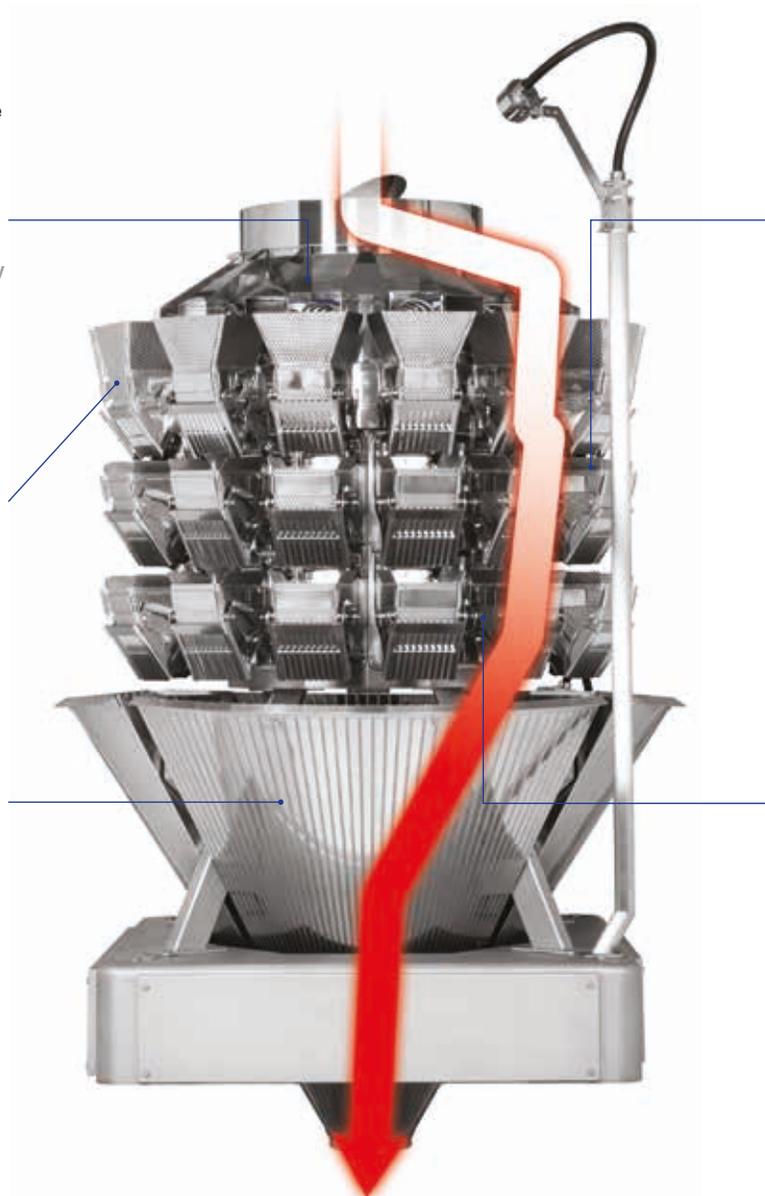
Ishida pool hoppers can be fitted with sensors to ensure just one product piece per hopper.

4. The **integrated computer** picks the weigh hoppers whose contents will combine to give the right target weight, and releases only those hoppers.

The Ishida combination computer is so fast that it presents not one but three viable combinations for release, greatly increasing efficiency.

6. 'Booster' or 'memory' hoppers collect unused weighed product. They provide extra known weights for use in combinations, increasing speed and accuracy.

Booster hoppers come as standard on some Ishida models.



Just a few of the details that turn a screwfeeder into a technology leader



More hygiene, less complexity

Product entering the machine flows cleanly to the screwfeeders thanks to the elimination of potential trapping points. The key is a new, simple-to-remove-and-clean geometry at the top, with no complex clips or fussy roller systems.



Dispersion table effectively sealed in

A lip around the underside of the dispersion feeder table, combined with the circular blue ptfе gasket, eliminates the gap between table and body. The resultant labyrinth seal is virtually impenetrable by food fragments, yet the table can be lifted off in seconds for cleaning.



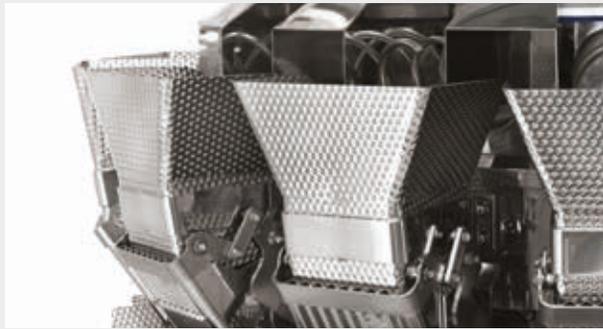
For smaller products, no trapping between fence and dispersion table

The fence is the dart-shaped structure preventing product from falling between two screwfeeder troughs. On some weighers there is a potential trapping point (especially for smaller product pieces) where it meets the dispersion table. Ishida has designed this out by introducing square-ended fences.



Simple infeed ring and spreader plate

The screwfeeder design has been optimised by eliminating bug traps and reducing the number of contact parts. The simple lift off infeed ring is a good example. The spreader plate rotates with the dispersion table to give an even product feed to all the heads.



Robust hoppers lift off instantly

As an alternative to cleaning-in-place, hoppers can be lifted off by hand and placed on a washwall or in a washing machine. Replacing them is equally quick and simple.



Attaching and removing screws now easier

A twist-to-fit approach makes it fast and simple to insert and remove the screws by hand. Quality bearings help ensure that the solidly supported Ishida screws deliver long-lasting performance in a task which can speedily wear out less robustly constructed equipment.



Pool hopper photocell control

With smaller target weights, weighing can be more efficient when there is just one product piece to a head. On some models, a photocell in the pool hopper can sense when one piece has fallen from the trough above, causing the screw to stop turning until the contents have been used in a weighment.



Smooth weigher exits assured with the new Ishida Coruglide discharge chutes

Corrugated polished stainless steel, resists sticky product pieces. Ribbed surface encourages steady, controlled fall. Coruglide, embossed and C4 options available.

Practical, efficient, accurate weighing...

Ishida screwfeeder multihead weighers are in use around the world, weighing fresh protein products such as red meat, poultry, fish and seafood with relentless accuracy, speed and efficiency. Many of these products were seen only a short time ago as too sticky to undergo automatic handling.

Here, for example, topside beef is being weighed into 400g trays. Before the Ishida was installed, it was necessary to crust freeze the meat briefly to facilitate handling on a conventional weigher. Now the freezing step is no longer needed and the meat can be packed immediately. This is seen by the food processing company as a step towards preserving the meat's full natural flavour.



Weighing fresh topside beef

This 20-head Ishida Screwfeeder Weigher benefits from ultra-fast combination calculation technology that increases speed and accuracy, while practically eliminating inefficiencies such as missed cycles.

Powerful centrifugal dispersion

A rotating table moves product into the feeder troughs. The top cone prevents any build-up at the slowest point on the table.

Scraper hoppers for decisive transfer

All hoppers are fitted with scrapers to prevent product from clinging.

Fast double discharge

The model has two discharge chutes, and can fill up to 110 trays per minute.

Hygienic weigher-platform interface

The weigher is designed into the platform floor to give a junction that is uncomplicated, easy to clean and free of residue or bacteria traps.

Ishida hygienic washwall

This wall (top left of picture) firmly holds weigher contact parts as they are hosed down.

...and all that's needed to make the most of it

Ishida can do much more than supply you with the world's most advanced screwfeeder weighers.

We can test-pack your product in our temperature-controlled demonstration facilities in Birmingham or Kyoto, ensuring your weigher is perfectly tuned to your needs. We can design the surrounding equipment (such as infeed conveyors, weigher-to-pack distribution systems and QX traysealers) to get the best from your system overall.

When it comes to installation, we won't leave your site until everything is performing fully to specification. We also offer the best-resourced support and spares network in our field, with Ishida centres, distributors or agents within easy reach of your sites.



Just three of the ways Ishida makes weighing better

In the above application Ishida's overall packing line expertise was called on in areas well beyond weigher supply and installation.

Mounting

Ishida designs and installs all necessary gantrywork to international standards or works closely with your local supplier.

Feeding

We offer world class expertise in product supply via reservoirs, bins, conveyors or elevators, as well as in weigher infeed arrangements.

Cleaning

To achieve effective hygiene routines, Ishida puts continuous R&D and factory-floor time into designing delay out and 'cleanability' in.

The broader picture that makes Ishida simply a better commercial proposition

Putting screwfeeding in its proper context

Ishida designs and builds entire packing lines and complete packing halls, whether as upgrades of existing facilities or starting from greenfield sites.

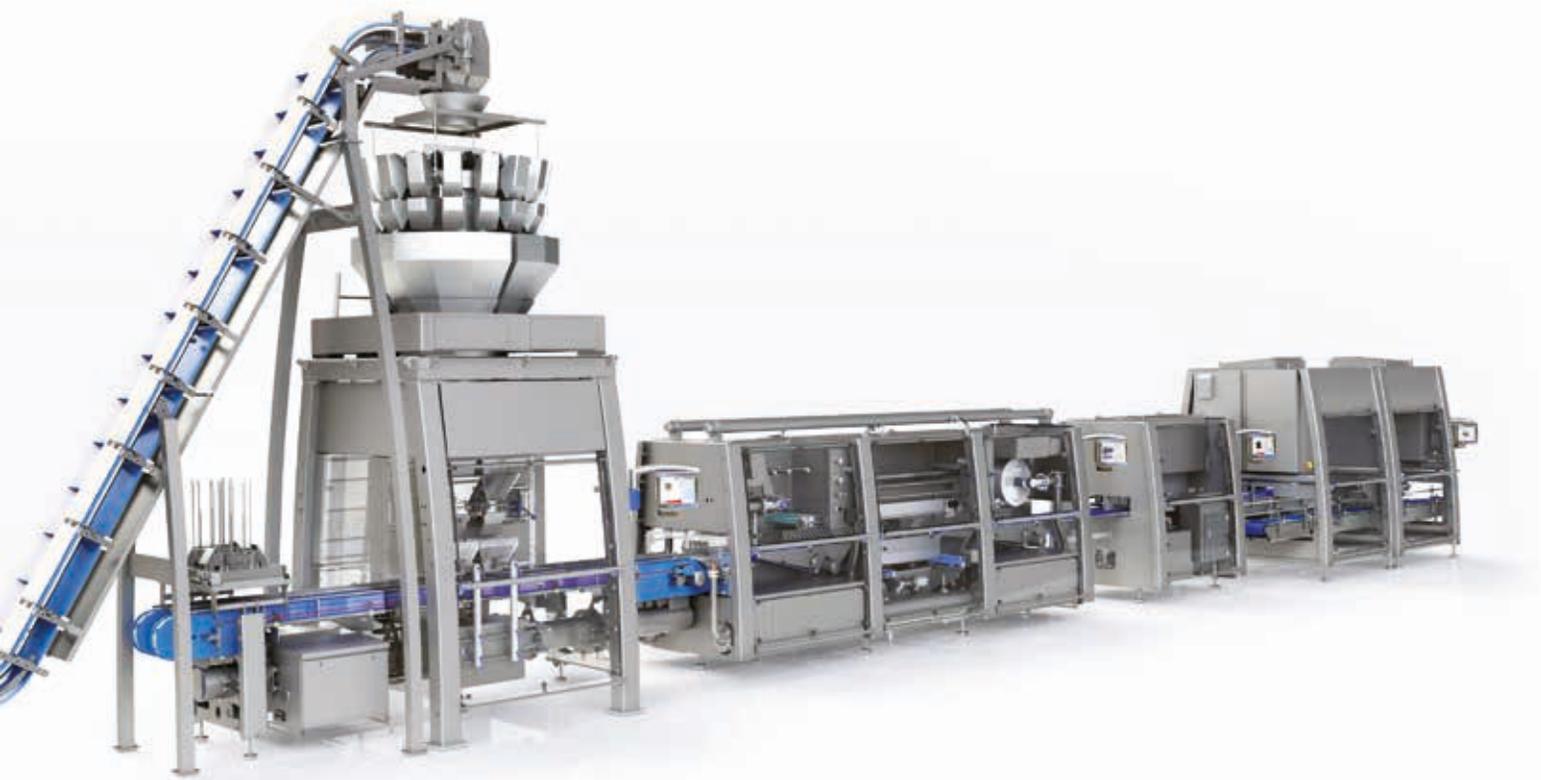
It does so for the widest range of packing applications, many of which involve fresh protein, such as meat, poultry and seafood.

For example, the packing line below includes everything needed to take a product infeed direct from a processing operation or from storage and deliver trays neatly packed in Eurocrates.

Customers find that this breadth of experience is relevant and helpful whether they are acquiring a single weigher, a part packing line or a complete factory.

This line delivers the full benefits of single source supply, with every part being available directly from Ishida.

- Full packing line including multihead weigher, gantry, infeed, conveyor, batching table, traysealer, X-ray inspection, seal testing, labelling, vision system and pick-and-place casepacking.
- Delivers sealed, labelled and inspected product ready to meet the most rigorous standards anywhere in the world.
- High performance with rapid product changeovers, integrated cleaning routines and minimum downtime.



Ishida screwfeeder multihead weighers use coreless steel screws. Development of spiral structures to propel sticky products (begun over 20 years ago) continues as new ideas and materials become available.



Enhancing competitiveness in real-world situations

Ishida provides systems that maximise your profitability.

Three approaches are shown below that enable staff to carry out batching and styling work rapidly and efficiently, in harmony with Ishida screwfeeder weighers. In the Weigh Batcher approach, for example, you can maximise yield across a number of pack types.

Assume you are producing 1kg packs and 750g packs for retail, as well as maintaining a bulk tray output to go to butchers in retail outlets. Here, a weighment too heavy for a 750g pack will go straight for consideration as part of a 1kg pack, rather than needing to be recycled, greatly increasing efficiency. Anything unsuitable for either retail pack will be directed to the bulk system.

When screwfeeding is not the answer

With our broad knowledge of weighing and its overall role in packing, we will advise you when there are alternatives to screwfeeder weighing which may suit your particular circumstances. For example when dealing with on-the-bone products, a vibration-driven approach is often preferable, while in some cases a linearly-arranged Fresh Food multihead weigher may be economically advantageous.

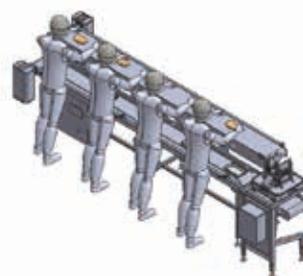
Ishida Weigh-Batcher

A unit combining weigher with operator stations and sophisticated signalling to maximise man-machine synergy.



Ishida Batching table

Weighments from a screwfeeder are handled efficiently in a linear manner using simple team routines.



Ishida Rotobatcher

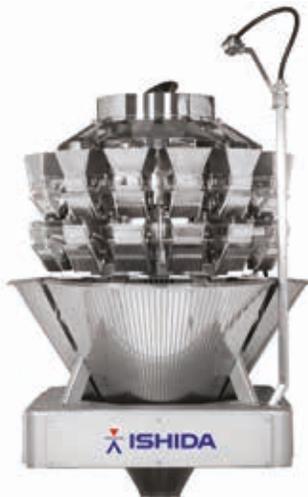
Ishida's latest approach places the screwfeeder directly above the batching/styling team for maximum return on floorspace.



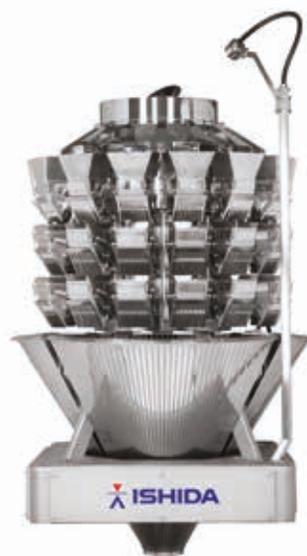
Off-the-peg or custom-built, Ishida has exactly the screwfeeder you need



CCW-RV-214W-S/15-WP-SH-SF

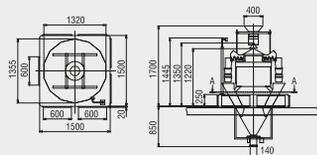


CCW-RV-214W-1S/30-WP-SF

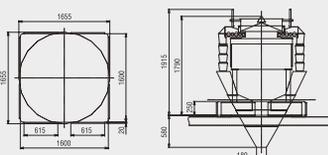


CCW-RV-214WB-1S/30-WP-SF

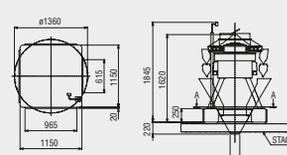
Dimensions



CCW-RV-214W-S/15-WP-SH-SF



CCW-RV-220WB-1D/20-WP-SH-SF



CCW-RV-214W-1S/30-WP-SF

Specifications

Model	CCW-RV-214WB-1S/20-WP-SH-SF		CCW-RV-220WB-1D/20-WP-SH-SF		CCW-RV-214W-S/15-WP-SH-SF		CCW-RV-214W-1S/30-WP-SF	
Weighing Capacity/Range (per single dump)	up to 1000g	up to 2000g	up to 1000g	up to 2000g	up to 500g	up to 1000g	up to 1000g	up to 2000g
Maximum Volume for Weighing (per single dump)	3 litres		3 litres		1.2 litres		4.5 litres	
Weighing Speed (Max)*	70 WPM		100 WPM (50+50)		60 WPM		60 WPM	
Minimum Graduation	0.2g	0.5g	0.2g	0.5g	0.1g	0.2g	0.2g	0.5g
Touch Screen Display (RCU)	12.1" TFT Colour LCD				12.1" TFT Colour LCD			
Weigh Cell	Double-beam strain gauge load cell				Double-beam strain gauge load cell			
Number of Presets	200		200		200		200	
Material	Product surfaces are made of stainless steel or other sanitary materials				Product surfaces are made of stainless steel or other sanitary materials			
Machine Weight	800kg		1050kg		550kg		550kg	
Options	Various options are available - Please contact Ishida distributors				Various options are available - Please contact Ishida distributors			
Structure of Waterproof Machines	IP66 Approval		IP66 Approval		IP65 Approval		IP66 Approval	
Air Consumption (Waterproof Models)	200 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) Note: Air compressor must be provided by the end user		240 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) Note: Air compressor must be provided by the end user		200 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) Note: Air compressor must be provided by the end user		110 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) Note: Air compressor must be provided by the end user	
Power Consumption	200 - 240V 0.6kW 50/60Hz							

Design and specifications are subject to change without notice. *Depends on product shape, product density, target weight etc

Standard range

Ishida's standard range includes models to meet all the circumstances and applications for which screwfeeder technology is now seen as tried and tested. It is the most comprehensive range of ready-to-install weighers available today.

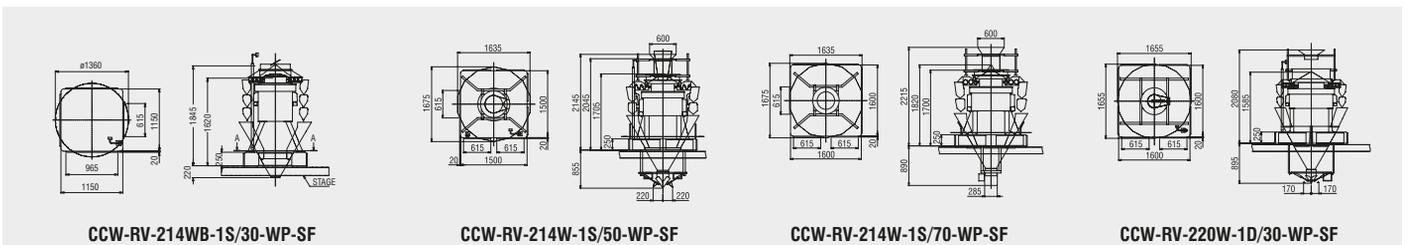
Options and custom building

The above range is greatly extended by readily available options such as special attachments for handling large products and fragile fish, by hopper and dispersion table choices and many more. And, when it comes to meeting challenges that have never been tackled before, our screwfeeder weigher engineering team is there to rapidly respond with all the expertise and resource of the world's leading multihead weigher manufacturer.

Ishida Sentinel™

The new Ishida Sentinel™ software connects compatible Ishida machines, anywhere in the world, to a central system manned by Ishida engineers. This provides complete monitoring of machines, however widely distributed, with Ishida experts on hand to identify and rectify any faults or poor performance.

With a number of different Sentinel™ pack options available customers can mix and match the different services to their needs.



Specifications								
Model	CCW-RV-214WB-1S/30-WP-SF		CCW-RV-214W-1S/50-WP-SF		CCW-RV-214W-1S/70-WP-SF		CCW-RV-220W-1D/30-WP-SF	
Weighing Capacity/Range (per single dump)	up to 1000g	up to 2000g	up to 4000g	up to 8000g	up to 4000g	up to 8000g	up to 1000g	up to 2000g
Maximum Volume for Weighing (per single dump)	4.5 litres		10 litres		14 litres		4.5 litres	
Weighing Speed (Max)*	70 WPM		60 WPM		60 WPM		100 WPM (50+50)	
Minimum Graduation	0.2g	0.5g	0.5g	1.0g	0.5g	1.0g	0.2g	0.5g
Touch Screen Display (RCU)	12.1" TFT Colour LCD				12.1" TFT Colour LCD			
Weigh Cell	Double-beam strain gauge load cell				Double-beam strain gauge load cell			
Number of Presets	200		200		200		200	
Material	Product surfaces are made of stainless steel or other sanitary materials				Product surfaces are made of stainless steel or other sanitary materials			
Machine Weight	650kg		1000kg		1000kg		1100kg	
Options	Various options are available - Please contact Ishida distributors				Various options are available - Please contact Ishida distributors			
Structure of Waterproof Machines	IP66 Approval		IP66 Approval		IP66 Approval		IP66 Approval	
Air Consumption (Waterproof Models)	110 litres/min (ANR) 0.4-1.0 Mpa, Air hose - PT 3/8" (for air dryer connections) <small>Note: Air compressor must be provided by the end user</small>		110 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) <small>Note: Air compressor must be provided by the end user</small>		110 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) <small>Note: Air compressor must be provided by the end user</small>		110 litres/min (ANR) 0.5 Mpa, Air hose - PT 3/8" (for air dryer connections) <small>Note: Air compressor must be provided by the end user</small>	
Power Consumption	200 - 240V 0.6kW 50/60Hz		200 - 240V 0.6kW 50/60Hz		200 - 240V 0.6kW 50/60Hz		200 - 240V 0.6kW 50/60Hz	

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.

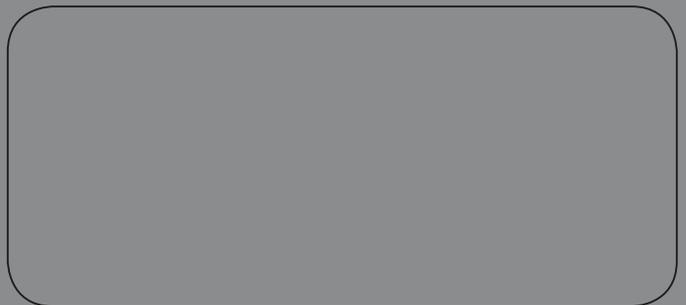
When you are ready to make contact, a well-resourced network of Ishida companies, distributors and agents, extending across Europe, the Middle East and Africa, can provide advice and organise demonstrations and trials.

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.



helpline • spares • service • training



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