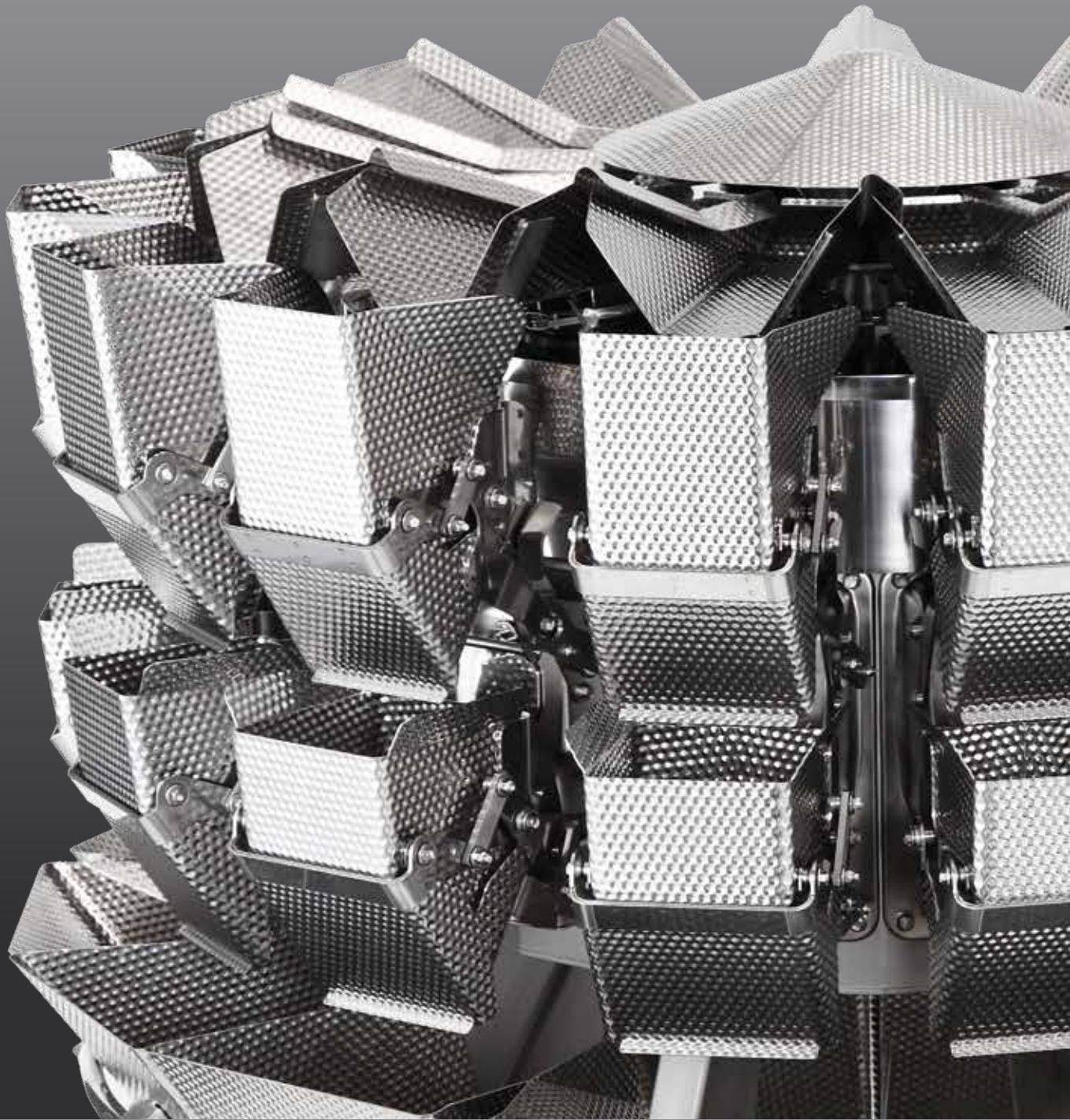


Range Brochure

Ishida multihead weigher guide



Our company



Takahide Ishida (President)

Ishida is a privately owned family run business, with our worldwide headquarters in Kyoto, Japan. Our President, Takahide Ishida, is the 5th generation of the Ishida family, having succeeded his father Ryuichi Ishida in 2010.

As a world leader in the design, manufacture and installation of weighing, packaging and quality control solutions, Ishida has vast experience and knowledge of many diverse food industries, ranging from snacks and dry food to fresh and frozen food applications.

Ishida opened its first overseas subsidiary, Ishida Europe, in 1985. The Ishida Europe headquarters is in Birmingham, UK, and serves Europe, Middle East and Africa (EMEA). We have wholly-owned Ishida sales and service operations in 9 countries, and have committed, experienced agents and distributors in a further 30 countries.

Innovative weighing and packaging machines, ancillary equipment and complete line solutions for these territories are designed and manufactured in our manufacturing and R&D facilities in both the UK and Japan.

Our people

The wealth of knowledge and experience of Ishida personnel ensures that our customers receive best in class solutions to improve their weighing, packing and quality control operations. This means our customers can focus on their core business, while we focus on solving their challenges.

Our innovations

Research and development are central to the philosophy of Ishida's business. Ishida Europe uses experience, creativity and state-of-the art technology to develop solutions to enable our customers to push new competitive boundaries.

To support the requirements of evolving food markets and in addition to our product development centre in Kyoto, Japan, we have UK product development facilities in Birmingham and Poole. This enables us to deliver locally designed and tailored solutions to suit our customers needs.

Aiming for continuous technical improvement, our latest innovations include tray sealers, x-ray inspection systems and end of line packing solutions.

Our customers

In 1972, we developed the first ever multihead weigher for whole peppers. Since then we have provided weighing equipment for thousands of food and non-food applications with more than 45,000 machines installed.



Offering a complete line solution

Ishida is capable of offering complete line solutions of our own or outsourced products.

1. Weighing & filling

Everything you need to interface with modern weighing/filling system to get your product into a tray and on its way to the tray sealer.

- Multihead weighers
- Distribution systems
- Tray denesters

2. Sealing

Advanced tray sealer technology from Ishida's world-leading QX range delivers the look, the seal type, the modified atmosphere your pack concept or your customer demands.

- Snack food bagmakers
- Ishida iTPS® (Integrated Total Packaging System) High speed weighing and packing systems for snacks
- Tray sealers

3. Quality control

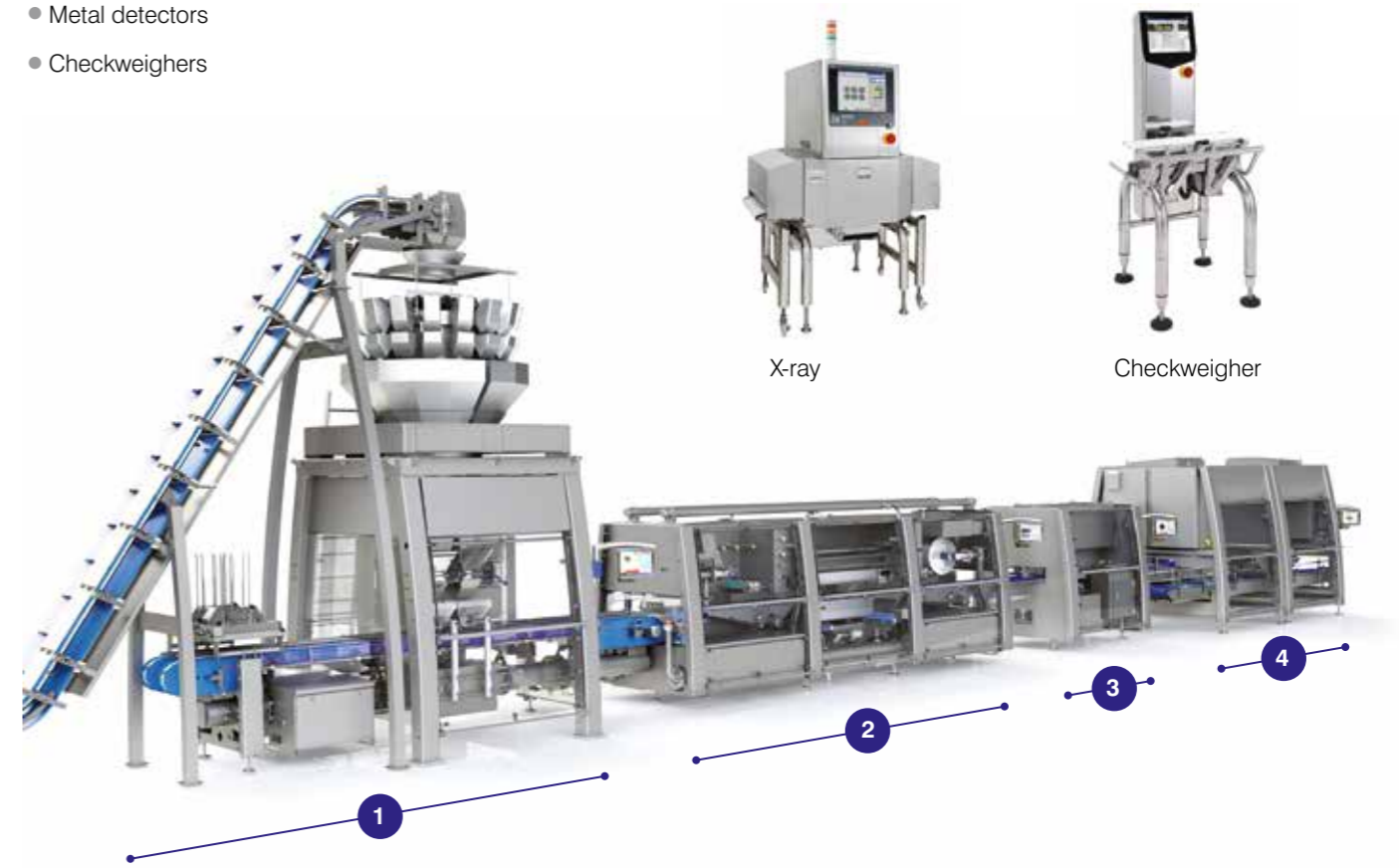
Ensuring everything about the pack is right, from contamination to label orientation and from data to weight.

- Seal testers for pillow packs
- Seal testers with vision systems for trays
- X-ray inspection systems
- Metal detectors
- Checkweighers

4. End of line packaging

Choose the exact fill and layer geometry you want in your boxes and create and vary it at will. Options include single and twin robots.

- Pick-and-place systems



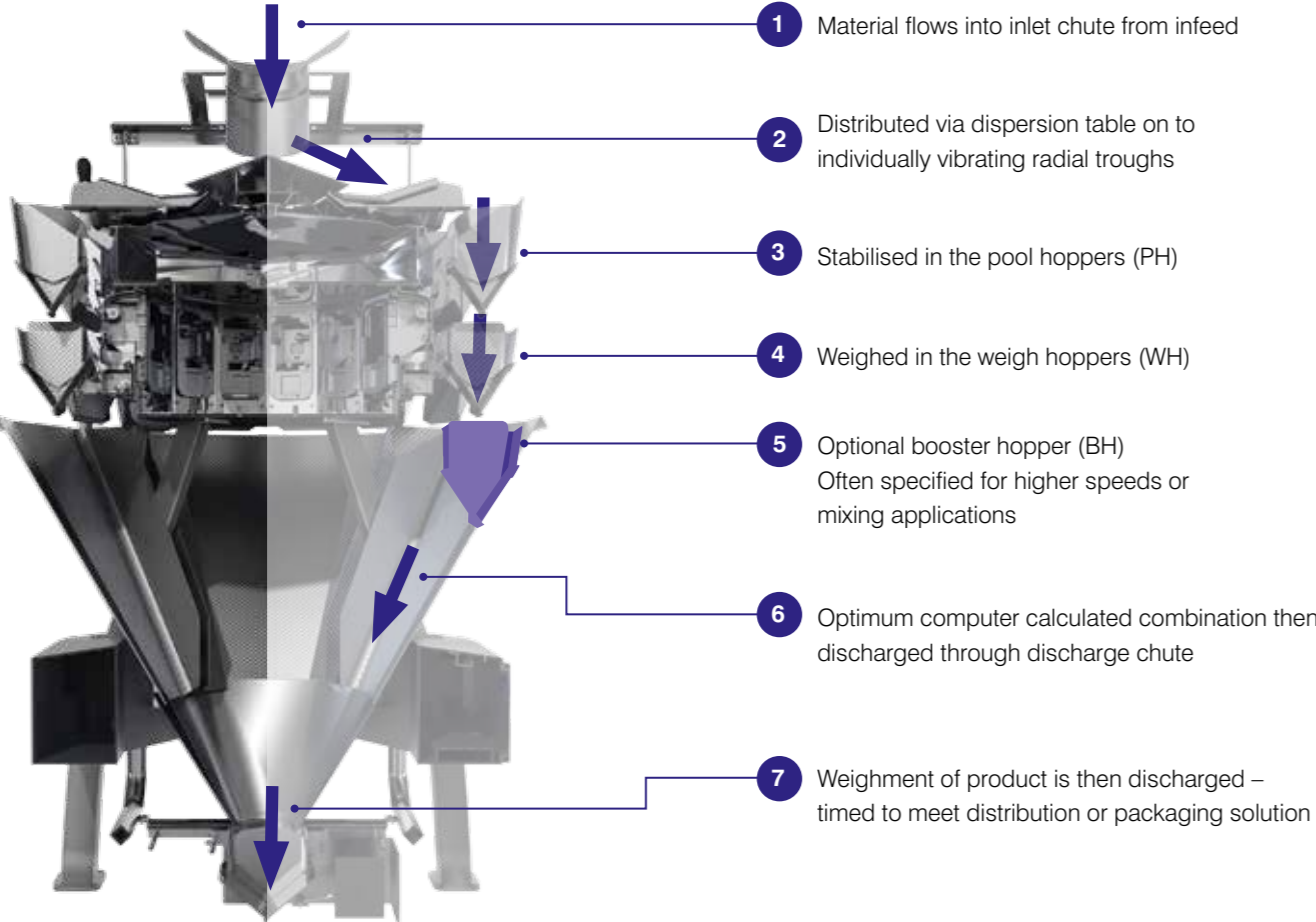
X-ray

Checkweigher

CCW concept

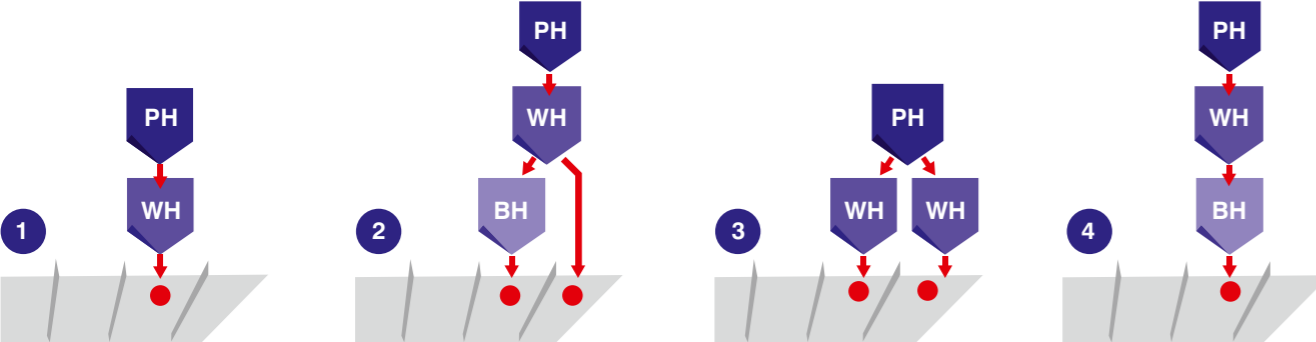
Product flow in circular weigher format

A multihead weigher or computer combination weigher (CCW) is an industrial weighing machine which delivers highly accurate, reliable and high speed weighing of food and non-food products.



Hopper configuration

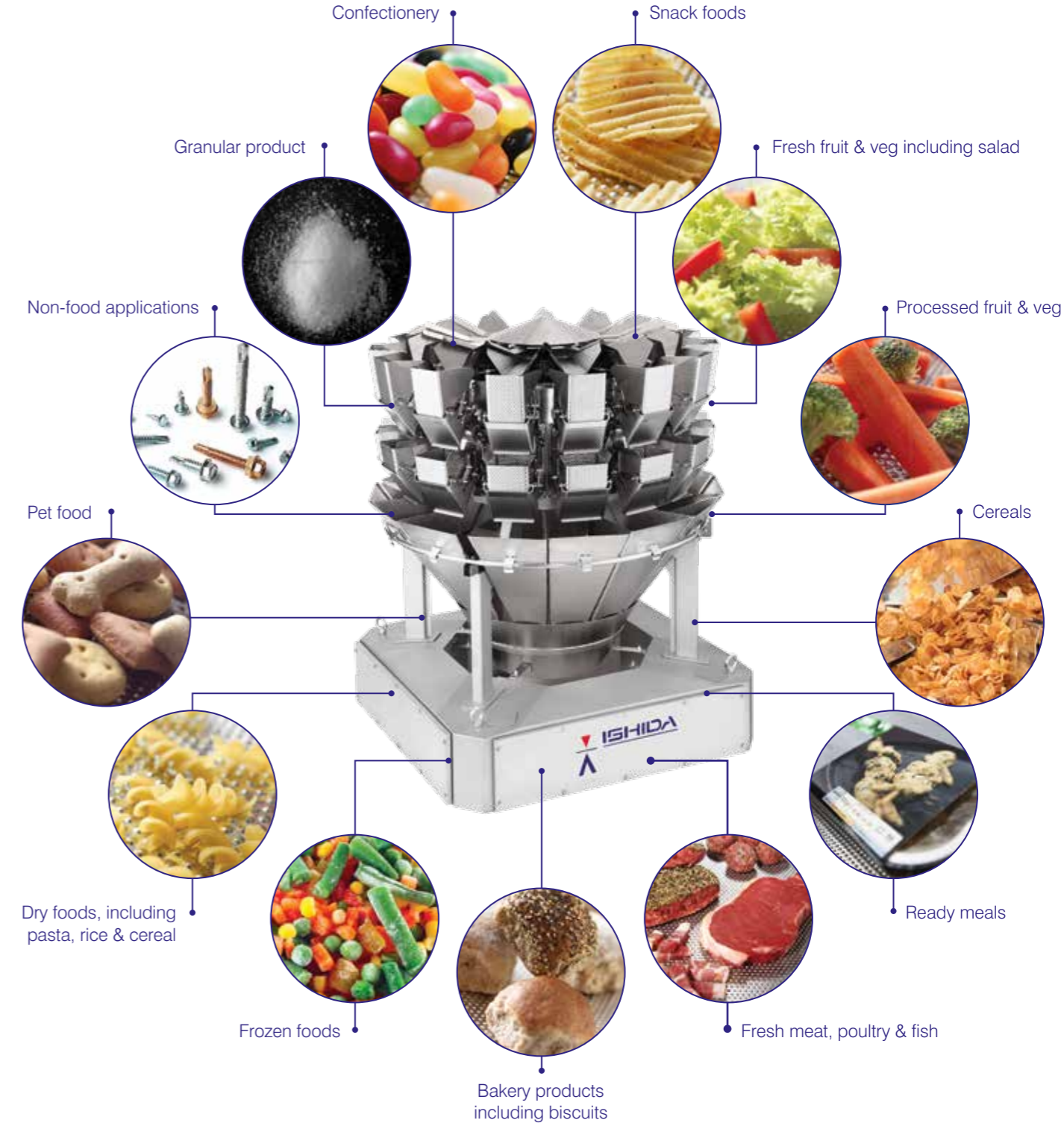
- 1. PH to WH relationship
- 2. PH to WH to BH relationship
- 3. PH to double WH relationship (RB and PL series)
- 4. PH to WH to BH relationship (no direct discharge option from WH)



Wide variations

In CCW solutions/applications

Multihead weigher solutions vary widely based on customers' diverse application needs – incorporating:



Breadth, depth and timescales of application experience

- More than 45,000 CCW machines installed
- Ishida has offered virtually every known CCW application solution
- If not yet supplied, the Ishida range and global engineering capacity means we have the resource and capability to do this



Product challenges:

- Free flowing to sticky
- Different bulk densities
- Varied product piece size

Application challenges:

- Different target weights
- Acceptable upper and lower weight limits
- Variations in product characteristics within same application
- Product mixes (pre-mixed or mixed on machine)
- Multiple-outlets
- Different target speeds
- Feeding system design
- Available manufacturing space
- Packaging and distribution requirements



CCW circular range

Positioning and key features

Ishida has a broad CCW range to meet each customer's price and performance needs.

SE3 Series – Entry level excellence in multihead weighing

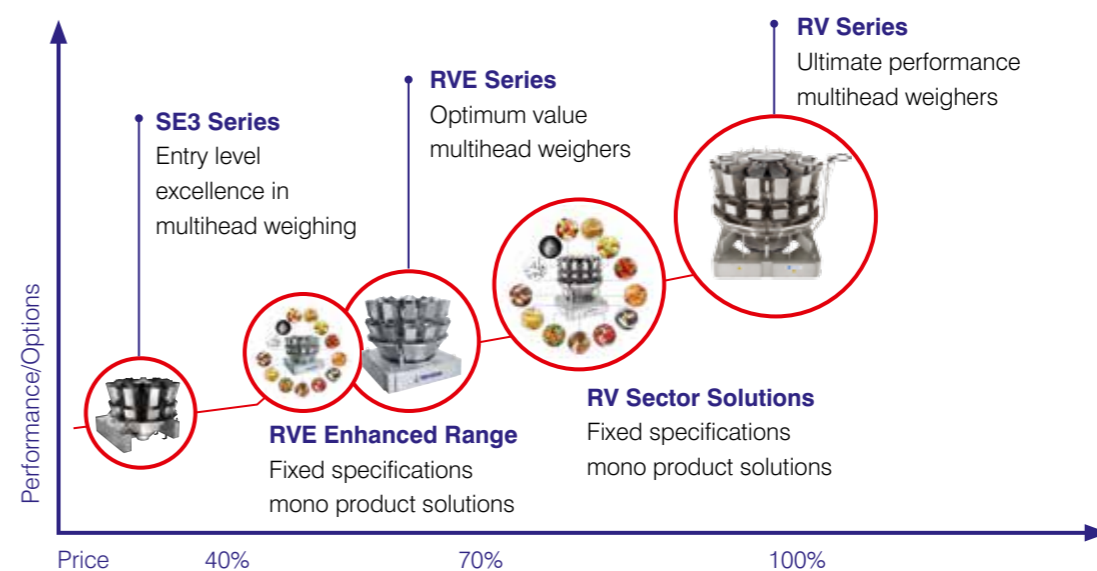
- Ishida designed and manufactured multihead weigher but with narrower range of options
- Free flowing dry products, small target weights
- Entry level price position with competitive performance

RVE Series – Optimum value multihead weighing

- Offering features and performance to cover a broad range of applications at mid to high speeds
- Free flowing and semi-sticky products – for dry, fresh or frozen applications (small to large target weights)
- Competitive and balanced price/performance position

RV Series – Ultimate performance multihead weighing

- High technology as standard – for very high speeds, precision and accuracy
- Broadest range of solutions from 10-32 heads, 0.05 to 7.0l hopper size, single to 8 mix
- Offers bespoke solution to satisfy customers' individual high performance needs
- Premium price and market leading performance
- Sector-specific fixed solutions are also available at an attractive price point



“Whatever your needs, Ishida has a solution to match”

CCW range differentiation

	SE3	RVE	RV
Application type operation			
Head number variation configurations available	10, 14, 20	10, 14, 16 + booster, 20	10-32 + booster
Hopper size variations available	2ltr	1.5, 3, 5, 7ltr	0.5, 0.8, 1.5, 2, 3, 5, 7ltr
Discharge outlet options	Single, double	Single, twin, double	Single, twin, double, 3, 4, 6, 8
Anti-floor vibration (AFV)			●
Maximum hopper numbers for combinations	10	14	14
Single combination calculation (with double check)	●	●	
Triple combination calculation (with double check)			●
Max. weighing speed (per single discharge)	100wpm*	120wpm*	210wpm*
	*14 head, 2ltr combination sample		
Construction			
IP rating options: SS models (PB SE3 only)	IP54	IP54	IP54
IP rating options: WP models	IP65	IP66	IP69K
Interface			
10.5" remote control unit (RCU)	●	●	
12.1" remote control unit (RCU)			●
Number of product pre-sets	50	200	200
Colour touchscreen	●	●	●
Feeder control			
Pulse width modulation (programmable feeder drive)			●
Automatic feeder drive setting (AFD)		●	●
Camera monitoring options			
Dispersion feeder camera		●	●
With wide-angle lens			●
Contact part material options			
Stainless steel (SS)	●	●	●
High embossed (HX)	●	●	●
C4		●	●
Connection options			
Serial cable	●	●	●
Ethernet	●	●	●
Wireless access			●
Hopper type options available			
Pool hopper - single opening	●		●
Pool hopper - double opening		●	●
Weigh hopper - single opening	●	●	●
Weigh hopper - double opening		●	●
Diverting weigh hopper		●	●
Booster hopper		●	●
Software			
Enhanced average weight control software			●
Windows Embedded Standard 2009		●	●
Bespoke software options			●

Ishida Europe Ltd reserves the right to change specifications at any time.
 Technical information is based upon information available at the time of Print - 05/2017.
 Confirmation is provided via Sales enquiry.



Dust test for IP6X



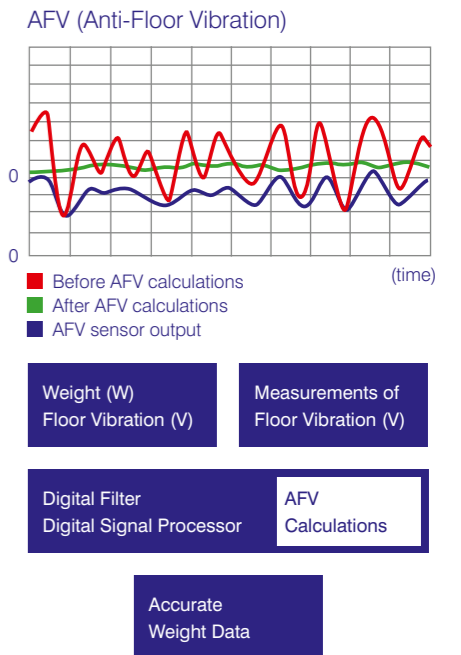
Under-going powerful water jet test for IPX6



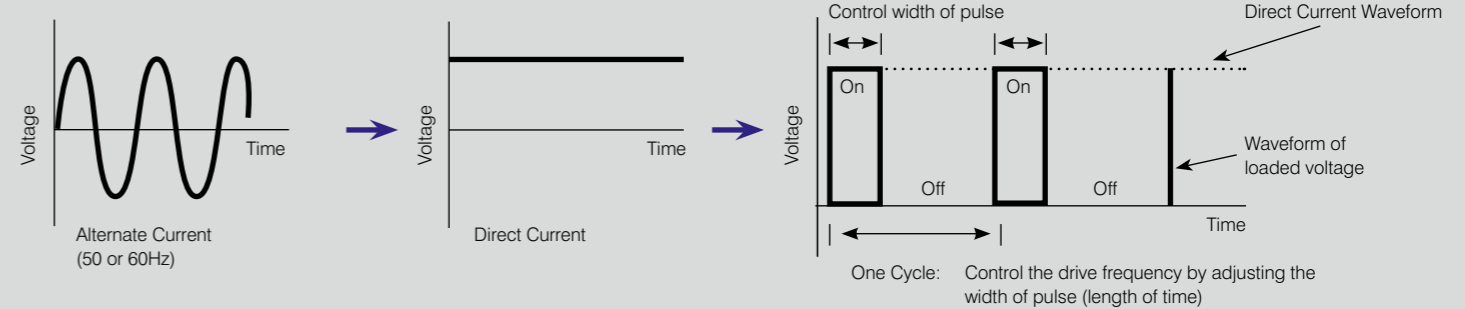
Under-going high pressure jetting test for IPX9k

Unrivalled broad range of weighing solutions from Ishida

- Construction type (dustproof or waterproof)
- Control interface options (touch screen, tablet control, remote interface)
- Line integration options (bagmaker, distribution system, tray sealer)
- Special high performance features on premium range:
 1. AFD (automatic feeder drive)
 2. AFV (anti-floor vibration)
 3. PWM (pulse width modulation)
 4. Triple combination calculations
 5. Camera monitoring
 6. Unrivalled water and dust proof protection – accredited to IP67 and IP69K
 7. Screw feeder option



PWM (Pulse Width Modulation)



Seamless control and interface for operators

Across the Ishida range, a touch screen RCU is supplied as standard. Operators are guided through the functionality of the machine with a clear menu-driven interface. Due to the critical nature of the application, different levels of security settings are in place to limit the changes to the parameter settings – based on level of training and understanding of equipment performance.

A range of security protection options are available from password verification, up to Dallas Key, finger print, tablet access and remote dial in access. Self-diagnosis is built in to the RCU interface for immediate and clear trouble shooting.



Remote control offers greater flexibility

The ability to control the weigher from practically any desktop, portable or hand-held device (including laptops, net books and tablets) allows greater freedom for operator or engineer, who are no longer limited to a fixed location.

CCW specialist solutions

High speed, mixed and multiple outlet solutions

Ishida offers a range of high performance multihead weighers, which can be configured for either multi-mix or multi-outlet applications.

The critical factor is to dedicate sufficient heads per mix or outlet section to ensure a sufficiently high combination of stable hoppers can weigh and combine up to a maximum of eight different products.

Mix weighing is used when several different products will be in a final pack. A single weigher from Ishida can mix-weigh up to a maximum of eight different products.

Multiple outlet weighing is used, for example, with a single product feeding into multiple distribution lanes (saving space and in-feed complexity when compared to using multiple weighers).

Mix weighing benefits for customers:

- Increase value of the end product (by controlling the percentage of product in the pack)
- Meet legal requirements (to be able to state the percentage of product on the pack/bag)
- Maximise profits by minimising giveaway particularly on the most expensive products
- Increase speed and efficiency
- Reduce factory production space

Ishida specialised mix weigher products



16 Heads:

CCW-RVE-216B-**-15,30-SS,WP
CCW-RV-216B-**-15,20,30-SS,WP
CCW-RV-216WB-**-15,20-SS,WP

Number of mixes/outlets:

Up to 4 mix with up to 4 outlets



28 Heads:

CCW-RV-228WB-**-05-SS,WP

Number of mixes/outlets:

Up to 7 mix with up to 8 outlets

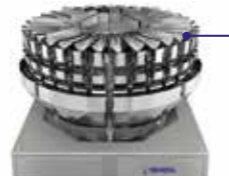


20 Heads:

CCW-RVE-220W-*D-30,50,70-SS,WP
CCW-RV-220B-**-20,30-SS,WP
CCW-RV-220WB-**-20-SS,WP

Number of mixes/outlets:

Up to 6 mix with up to 5 outlets



32 Heads:

CCW-RV-232B-**-15,SS,WP

Number of mixes/outlets:

Up to 8 mix with up to 8 outlets



24 Heads:

CCW-RV-224B-**-05,15,20,30-SS,WP

Number of mixes/outlets:

Up to 8 mix with up to 6 outlets

PL series linear weighers

The PL series (manufactured only by Ishida) are multihead weighers configured in a linear format - ideal for low target weight applications like confectionery, nuts, dried soup ingredients and dehydrated vegetables. In addition, they also offer a unique level of gentle product handling at high speeds.

The PL series delivers the following key benefits:

- Superior product handling of free-flowing products and ultra-low target weights (typically 5g to 50g)
- Compact design with small footprint for factory space saving
- Gentle product handling with minimal drop heights to maximise quality
- High precision weighing
- High speeds and operating efficiency
- Enclosed unit to contain dust, reduce the effect of external air flow and machine noise
- Available in dry and WP washdown models
- Simpler in-feed designs for multi-mix configurations
- 200cc and 500cc hopper sizes and 6, 7, 8 and 12 heads are available



Cut-gate (CG) solutions

The Ishida cut-gate weigher has been developed specifically for free flowing granulated products of less than a millimetre diameter grain such as granulated sugar, washing powder, tea and freeze-dried instant coffee (not spray dried).

Key benefits:

- Major reductions in giveaway (increases in yield) with standard deviation as low as 0.2g
- High speed, up to 30wpm per head
- Optimum product functionality and appearance is maintained
- Easy maintenance: main components detachable without tools, and simple mechanism
- Significant reduction in dust generation with optional dust-proof casing and dust extraction
- Flexible product range available from 1 to 10 heads in a Linear format and 8 or 16 heads in a Circular format
- Optional nitrogen gas flushing available



Screw feeder solutions

Ishida screw feeder weighers are designed to handle movement-resistant fresh foods, including sticky, oily and marinated products.

Key benefits of the screw feeder weigher:

- Full automation, thanks to powerful but gentle coreless screws
- Corrugated style gates prevent product from sticking during hopper emptying
- Ishida RV weighing machine accuracy minimises giveaway (typically <1%), and maximises yield of packed product
- Wash proof (IP69K) – easy wash down design



Fresh food weighers (FFW)

The Ishida fresh food weigher is a semi-automatic machine that has the versatility to handle a wide variety of products and customer requirements.

The range comprises seven models (5-12 heads), which are all ideal for difficult to handle, sticky products and short production runs, where fast product changeovers are essential. This is particularly relevant for fresh food, where the short product shelf life often demands high levels of flexibility from the production process.

Benefits include:

- Improved flow of sticky products through the weighing machine
- Accurate weighing and reduction of giveaway – achieving typically less than 1% giveaway for most applications
- Reduction in labour costs
- Fast product changeover
- Easy cleaning and conformity to hygiene regulations
- Rapid return on investment
- Space saving compared to typical manual weighing stations and automatic grading machines
- Can be used as an entry level weighing solution on almost any product



The Micro:

Some customers demand ultra-low target weights often combined with high speed requirements which creates particular challenges.

This weigher has the capability of weighing as low as 1g and is capable of handling ultra-low target weight applications at high speeds and with unsurpassed accuracy.

Benefits of the Micro:

- Superior handling of low target weight product
- High speeds and operating efficiency
- Precise weighing accuracy with 0.01g increment loadcells to minimise giveaway and save money
- Gentle product handling minimises breakages
- Compact body
- Simple operator interface, with easy-to-read colour touch screen
- Sanitary and easy-to-clean design, with stainless steel hoppers and feeders



SENTINEL™

Advanced remote customer care services from Ishida provide additional assurance to customers to optimise and protect their food manufacturing operations.

Licensing Packs:

- Reporting Pack – web report access and daily reports
- Intervention Pack – pre-paid help desk remote intervention
- Service Pack – live performance monitoring and pre-paid help desk remote intervention



Distribution systems

A distribution system (DS) is an array of hoppers and chutes mounted on an integral frame, beneath a linear or circular weigher. Distribution systems are an essential complement to the multihead weigher and can be a critical element to optimise production throughput.

Ishida can recommend and manufacture the best solution for each customer based on product, speed, drop height and tray format configuration.

Ishida DS benefits include

- Maximise throughput of production system
- Meet the needs of any factory, product and packaging needs, due to Ishida's broad product range and bespoke engineering capabilities
- Deliver an integrated design between Ishida weigher and DS
- Simplify cleaning and save time with high IP-rated systems



Snacks weighers and sticks

Ishida can supply equipment for weighing and packing a wide range of snacks food products and packaging styles. We can supply an integrated Ishida weigher and Ishida bagmaker solutions (together with specialised complementary equipment), or our Ishida multihead weigher as part of a complementary solution with our bagmaker OEM partners.

Benefits include:

- Broad range of weigher solutions for either single or twin tube bag makers
- Attractive First Range for entry level integrated weighing and bag making
- Ishida's new high performance RV weigher technology increasing weighing speeds, up to 300 wpm
- Average weight control software achieves a resolution of mean weight of two decimal places (0.01g), reducing product giveaway by up to 80%
- Charge Transfer Control (CTC) increases the production rate of potato chips
- Enhanced radial feeder vibration control improves efficiency and accuracy
- Dedicated bread sticks machine reducing breakages by 30% compared to linear weighers



Projects solutions

Complete project management

Expert project management can reduce both cost and risk associated with the design and implementation of new packing lines, halls and plants.

Ishida offers you the only internationally resourced and capable project management service specialising in the area of food packing technology.

Successful project customers include most of the world's top 10 food manufacturers as well as many small and medium-sized enterprises.

Ishida project management offers you:



Service coverage and channels to market

Ishida believes in working closely with customers, from start to finish, and has a strong commitment to providing its customers with exceptional levels of support. As a result, we ensure that service, maintenance and repairs are carried out quickly and efficiently by using an internationally-mobile team of engineers. A service contract tailored to your needs can ensure you have the right combination of support elements at a relatively small annual cost.

The seven areas in which this support is available are listed below:



1. Calibrations

- Our engineers carry out a range of comprehensive calibration checks using static and dynamic tests



2. Inspection equipment checks and audits

- Advice on worn component parts that may be affecting performance



3. Preventive maintenance (PM)

- We offer help ranging from basic inspection services through to full machine overhauls
- We take account of the type of machine, the application and the operating conditions
- Timing of maintenance can be specified to take place overnight, at weekends or during normal working hours



4. Efficiency engineering advice

- Our equipment routinely delivers over 98% efficiency
- We provide training of operating staff and an Ishida engineer attends during normal production and assists with machine set up
- Production staff are trained or refreshed in best practices
- Attention of on-site engineers is drawn to areas of potential improvement



5. 24-hour telephone support available with contract

- 24-hour technical helpdesk provides an unrivalled benefit, available 362 days a year
- A telephone call will often resolve the issue without the unnecessary expenditure of sending out an engineer
- Option of remote connectivity to Central Help Desk offers immediate response times



6. 24-hour spares support option available with contract

- Our engineers manning the telephone support desk have access to the Ishida 24-hour spares warehouse system and can arrange to have parts dispatched to you at any time of the day or night
- Spares warehouses are located close to our customers, which often reduces downtime
- We have a state of the art central UK store as well as regional stores for immediate responses



7. Guaranteed breakdown response

- The time period and the types of emergency requirements that trigger engineer attendance can all be negotiated up front
- An engineer will arrive on site within a guaranteed time period



Service and operator training packages

Flexible training approach, meeting your exact needs:

- Training can be covered at a variety of levels to suit your precise requirements through our dedicated training team
- Training can be on or off-site
- Training documentation and presentation materials can be purpose-designed
- A comprehensive interactive learning suite is also available (for self-paced learning)

Operator and customer engineering training

One and two day courses covering:

- Operator level set up and fault finding
- Advanced set up, electronic and mechanical fault finding



Overall Ishida bundled value proposition



Spare parts support and response rates (with option of i-Care program)

- Ishida holds large equipment stocks both centrally in UK and within regional offices
- We offer the option of dealing directly with our local subsidiary, local Agent or provide the option of i-Care (Ishida Online Spares and Parts Management Service).



i-Care - Ishida online spares and parts management service

- Avoid unnecessary down-time
- Accessibility of parts manuals



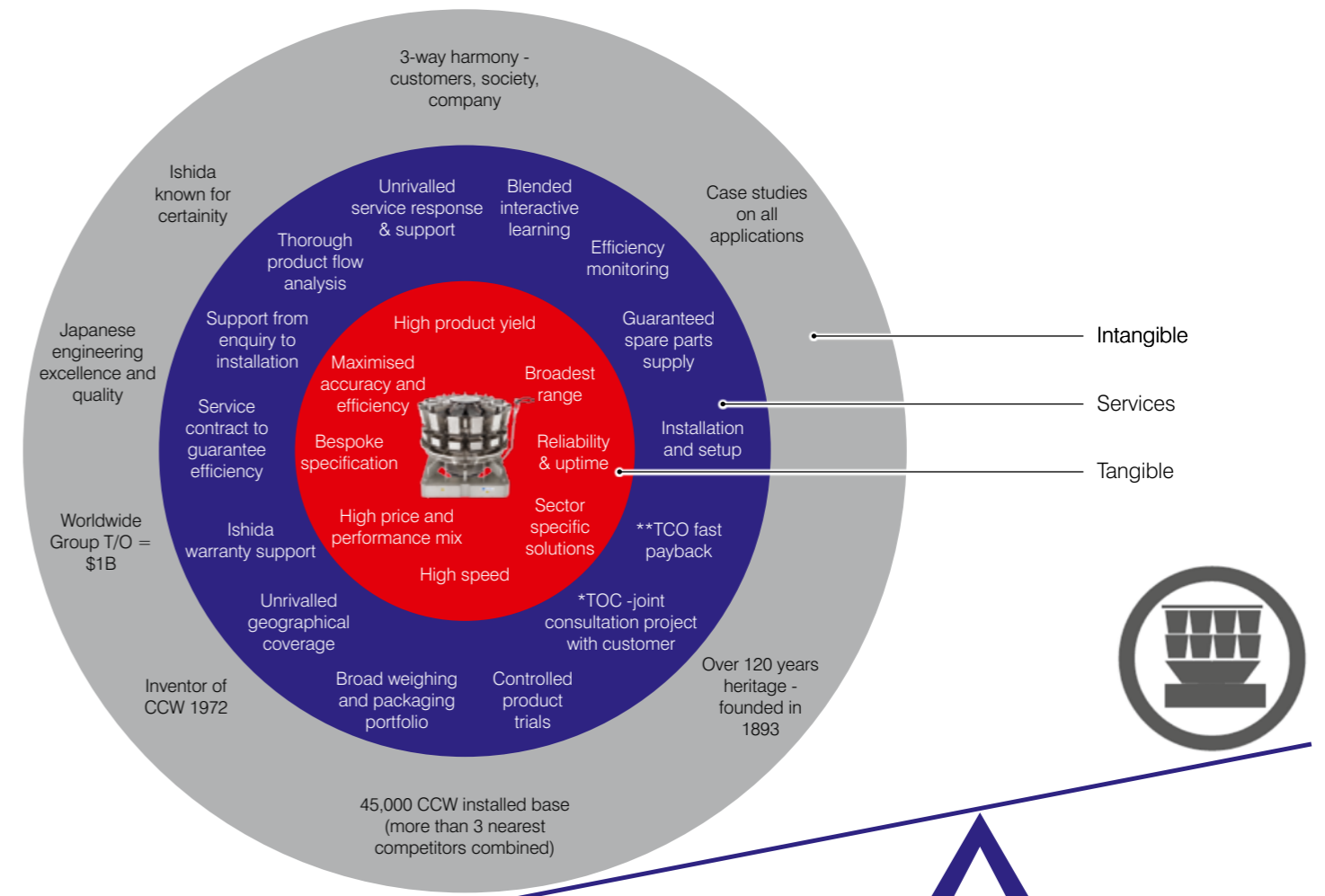
Access to your secure account 24/7



Based on the largest CCW installed base in the industry and comprehensive applications experience, Ishida can offer:

- Thorough product flow analysis upstream and downstream from CCW
- Product trials
- Supply of best fit CCW solution for application and budget
- Project design including in-feed and distribution systems
- Full line solution with productivity estimates
- Installation and compliance
- Operator and customer engineering training

With Ishida you get so much more than the market leading weigher - you also receive an unrivalled range of services focused on delivering agreed equipment performance levels (all backed up by the multihead inventor with broadest experience and global installed base).



* Total operating cost
 ** Total cost of ownership

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.

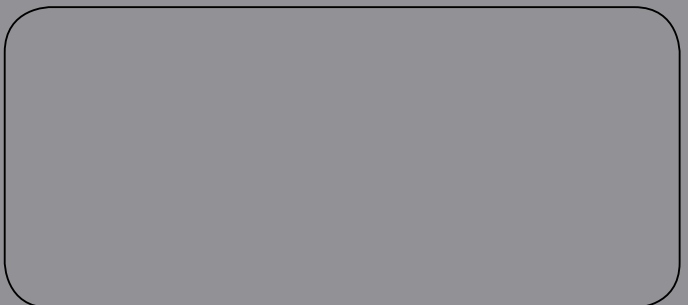
We aim to support our partners fully, from the very start of the buying process, and you will find many equipment brochures, visual animations and case studies available on our website. When you are ready to make contact, a well-resourced network of Ishida companies, distributors and agents, extending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