

# ADVANCED AUTOMATION AND COMPLETE TRACEABILITY FROM ISHIDA

Case Study  
**Gastro Star**

## Facts and figures

- » The Ishida IX-GA 2475, can not only detect unwanted metal, plastic, glass, stone, rubber and bone, but can also draw attention to underfilled or damaged packs.
- » Product giveaway as little as 1-2%
- » The 30-40 packs per minute achieved with the new line is double that of the former fastest line at Gastro Star.

Ishida Europe has designed and installed a complete packing line enabling three to four operators to produce prepared salads at up to 40 trays per minute, whilst automating inspection and making every pack traceable to a stored X-ray image. Gastro Star AG produces 30 tonnes of fresh products every day, ranging from vegetables and salads to fruit, including ready to use salad mixes under the Betty Bossi and Weight Watchers brands.

## Challenge

The company was an early adopter of automation in salad packing, and the new line is part of a wider series of measures Gastro Star has taken to increase capacity and efficiency in the face of steady demand for its products.

## Solution

The Ishida design enables crates of prepared leaves, which have been cut to size and washed, to be run via an elevator above the multihead weigher, where the salad is tipped into an infeed system. The tray sealer at the heart of the line is a state-of-the-art Ishida QX-1100. It handles four trays at a time, flushing them with an atmosphere of oxygen, nitrogen and carbon dioxide, and delivering a neat, economical seal with no protruding edges.

The new line has ensured that previously labour intensive elements to the weighing and packing of products have become more efficient. The stainless steel contact surfaces and sophisticated vibratory system of the 10-head Ishida RS-series weigher reduce the possibility of clumping or sticking of leaves, and the need to manually rectify potential product-in-seal problems is largely eliminated by a distribution system that delivers the leaves to the tray in a neat and discrete batch via a feeder tube and dipping funnel, that gently tamps them to below the tray edge.





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At the end of the line, the IPS (Ishida Packing System) pick-and-place system not only automates what used to be the most labour-intensive part of the line, but does it at high speed and with far greater flexibility by picking individual packs rather than pre-determined lots or layers. The addition of a plastic cup containing product-specific additions, such as salad dressing, cheese or croutons, accounts for much of the small amount of labour involved.

The new Ishida line has been designed so that the weigher is mounted on wheels, for easy movement around the floor, and both weigher and infeed system can be effortlessly raised and lowered for full cleaning access. Together with the general Ishida policy of designing contact parts to be removable and replaceable without tools, this means that hygiene standards can be improved while man-hours spent cleaning are reduced.

The Ishida Vision Seal Tester integrated into the line can optically (by comparing images of perfect with imperfect packs) detect a 0.75mm hole or gap in the seal at high speed. Mounted on it, and capable of using its rejection system, is an Ishida Vision System which verifies that each label is appropriate and positioned correctly, as well as relating the overprinted data to the company’s information systems in order to check that dates, weights, prices and barcodes are correct, providing extra protection for the end-customer as well as for retailers and brand reputations.

Gastro Star decided to incorporate an X-ray inspection system into the line to ensure complete traceability for every pack of packaged salad. The chosen X-ray inspection system is an Ishida IX-GA 2475, which can not only detect unwanted metal, plastic, glass, stone, rubber and bone, but can also draw attention to underfilled or damaged packs.

The monitoring system can record the exact gas mixture received by each modified atmosphere pack, and the temperature at which sealing took place. It also provides the company with an X-ray image associated with the pack, which can be used in order to settle any dispute about its contents. The 30-40 packs per minute achieved with the new line is double that of the former fastest line at Gastro Star, with product giveaway as little as 1-2%, by comparison with 10%. Currently working no more than 2 shifts per day, Gastro Star calculates that the line will pay for itself within five years.

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“The whole project has been very well and very professionally managed,” comments Ueli Forster, Managing Director of Gastro Star. “Ishida is an expert in line solutions and made the best integrated proposal. The line’s layout was convincing and service, as well as guaranteed line availability, was included. In addition, we were keen, as we lacked experience with such a line, to be able to rely on a one-stop-shop supplier”

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