

# FROM GOOD TO GREAT: SNELLMAN'S JOURNEY TOWARDS THE PERFECT MINCED MEAT PACKING LINE

## Case Study **Snellman**

### Facts and figures

- » The new line is working at 106 packs per minute, a 32.5% improvement in speed.
- » The QX-1100, with its fast, servomotor controlled cycles and high, twin-lane capacity is another important factor in speeding up the packing process.
- » The previous line needed five people, a sixth was looking after the supply of trays and crates. The new line has just two dedicated workers, freeing valuable staff for other duties.

Many companies would be satisfied with a minced meat packing operation that runs at 80 trays per minute, and Snellman was achieving this on a regular basis with its 400g packs in its packing hall at Jakobstad/Pietarsaari in Finland.

"We were looking not just for more capacity, but for greater efficiency," says Anders Snellman, Project Manager.

"For us, it is not enough just to be present in the market," confirms Technical Manager Marcus Snellman. "One always has to try to do better and better."

### Challenge

However, the company has a deeply-held belief in continuous improvement. With demand at a high level for its fresh minced meat, it consulted Ishida Integrated Solutions for a summary of the latest advances in automation. Snellman's managers were able to see these in action at a minced meat plant at Valencia in Spain.

### Solution

Grinding, forming and cutting take place at the start of the line. Packing functions include tray supply, a portion-to-pack system, tray sealing, labelling, comprehensive pack inspection and robotic placing of the packs into crates.

The finished minced meat is formed into a continuous 'loaf' which is fed onto backing paper and guillotined into portions of the correct weight. Each portion passes over a checkweigher and, when it reaches the end of the belt, is carried by its own impetus into a tray which arrives on a belt just underneath.





“ You always have to be trying to do better, to go from good to great, but at this moment I am confident we have the best minced meat operation in Finland ”

Electronic signalling and a tray pause-and release mechanism ensure the timing is correct, but the meeting of tray and meat takes place when both are moving at a considerable pace. The light plastic tray could be knocked off course if it were not held in place by a vacuum system under the conveyor belt. This unique Ishida innovation contributes significantly to the high speed at which the line can operate. The tray stream is now split into two, using a diverger, and the twin streams pass into the Ishida QX-1100 Tray sealer.

The QX-1100, with its fast, servomotor controlled cycles and high, twin-lane capacity is another important factor in speeding up the packing process. It also has other advantages: “With another tray sealer we could expect repairs, including problems with tools, to cost up to €50,000 per year,” comments Marcus Snellman. “It is already clear that we will only have a tiny fraction of that with the Ishida.” “What’s more, if someone damages one of the heads, you don’t have to stop production in mid-shift to deal with it. You can isolate that head and carry on to finish the work.” “It’s also a very quiet machine,” adds Anders Snellman.

After sealing under modified atmosphere, the trays are converged once more into a single stream and top-labelled. They next pass through an Ishida IX-GA-2475 X-Ray Inspection System and an Ishida Seal Tester,

on which is mounted a vision system for checking label positioning, orientation and data.

The crate-packing function is now carried out automatically by an Ishida IPS pick-and-place system. “On the new line,” explains Anders Snellman, “we have just two dedicated workers, while tray and pallet handling amount to the equivalent of half a person or less.” This is partly due to the new tray supply system

“ We have found the Ishida team very open-minded, and ready to listen to our suggestions and concerns ”

In fact, Snellman was impressed enough with the efficiency of the Ishida inspection and end-of-line equipment to keep the previous minced meat line operating (it now handles the larger pack sizes) and to add the same combination of X-ray inspection, seal testing, vision system and IPS to it. This has enabled similar manpower savings on that line, freeing valuable staff for other duties.

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