

Tray sealer

Machine Case Study



GRIPPER-ARM TRAY TRANSPORT

- Optimum temperature control for sealing
- One sensor of all tray types
- Total machine automation supplier

Tray sealer with gripper-arm tray transport

Machine description

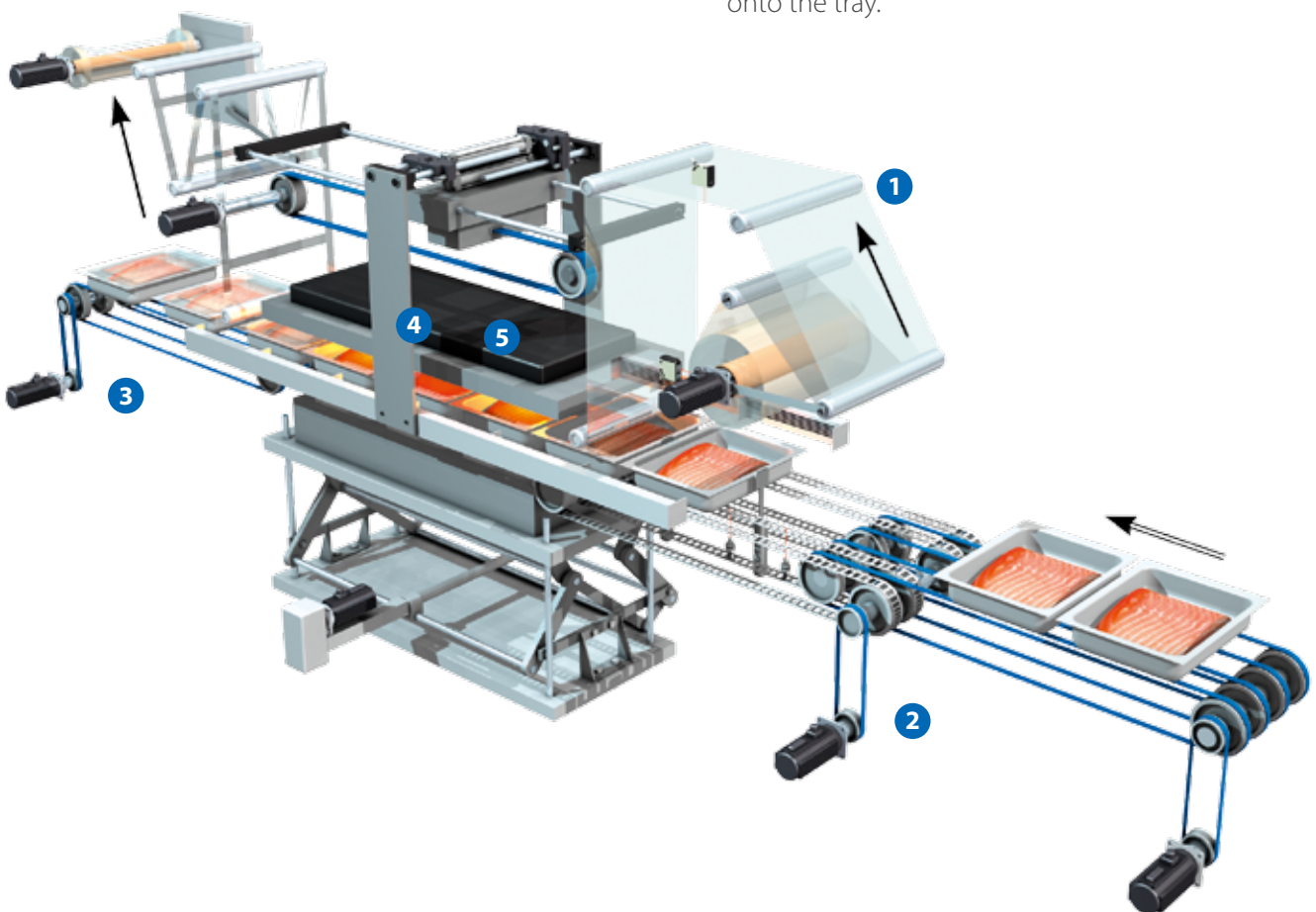
Tray sealers apply a top-film to a tray. An integrated part of the machine – often a de-nester – is used to un-stack the empty trays. After the trays are filled with product they are sealed by applying the film. Finally, the sealed tray is moved to the next step, most likely secondary packaging.

Gripper-arm tray transport

In new generation tray sealers, the packaging process is carried out “in-line” from start to finish. The transport system moves the trays along in a very gentle fashion, suitable for (semi) liquid filled trays. The machine below has side-gripper-arms to transport of trays in and out of the sealing station.

Machine Function

- 1 Seal film Wind/Unwind system**
The sealing film is fed to the sealing station with the exact length and the right tension.
- 2 Tray In-Feed system**
Feeding and positioning of the filled trays.
- 3 Tray Out-Feed system**
Sealed tray out-feed to secondary packing station.
- 4 Tray transport Linear system**
Servo belt-driven linear motion for smooth in and out-feeding of trays to the sealing station.
- 5 Sealing Station**
The main process where the top-film is sealed onto the tray.



Your automation partner in packaging

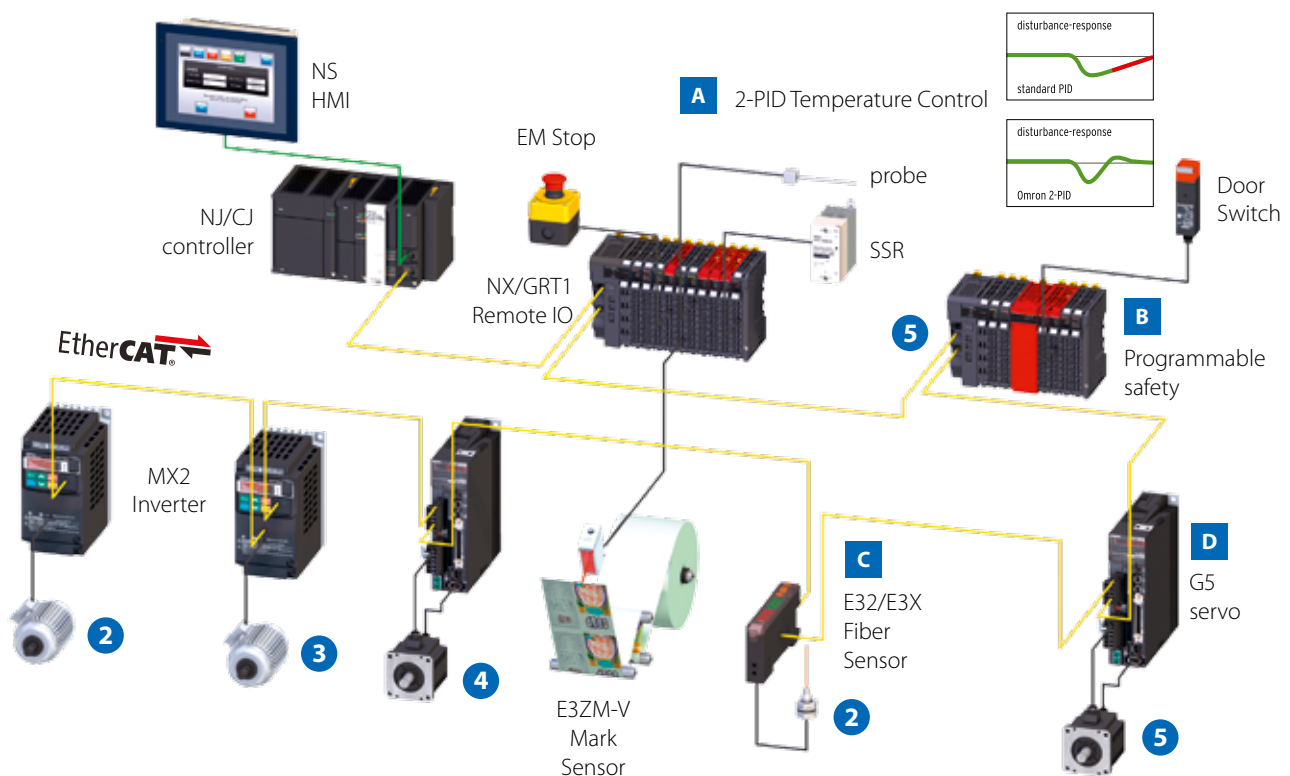
We Automate Machines! We supply all the automation products for Tray sealers, including the logic and motion or hybrid controller. In addition we provide all motors, drives, position sensors, safety devices, temperature sensors and other panel components. All devices are easy to integrate and carry the Omron mark of quality and reliability.

A Optimum temperature control for sealing

Temperature Control during sealing is critical. At each seal the mould drops in temperature and fast recovery is essential to reach high throughput. Omron's unique 2-PID control with built-in auto-tune optimizes the system for fast disturbance response, perfect for applications like sealing. Another benefit is fast start-up, giving perfect seals right from the first tray.

B Programmable safety

Without compromising machine performance, Omron delivers flexible and independent functional safety. Safety slaves can be added, also to other machines in the production line, and then be integrated with a single fieldbus into the safety controller.



C One sensor for all tray types

E32/E3X fiber and amplifier can detect all tray types with one model. Teach one set on each new tray and reuse the parameters found in the other. Distribution of the parameters can be done using the machine controller or the HMI over the connected fieldbus.

D Smooth operating servo system

The lift system in the sealing station can be driven in several ways. The benefit of a servo driven lift is less vibration and noise, making it possible to use machines in non-conventional ways such as being elevated above the factory floor. A servo system can also be modified easily during operation.

Would you like to know more?

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