

# Horizontal form, fill & seal

## Machine Case Study



### STAND-UP POUCH AND SACHETS

- Versatile recipe and data handling
- Secure remote access
- Total machine automation supplier

# Horizontal form, fill & seal

## Machine description

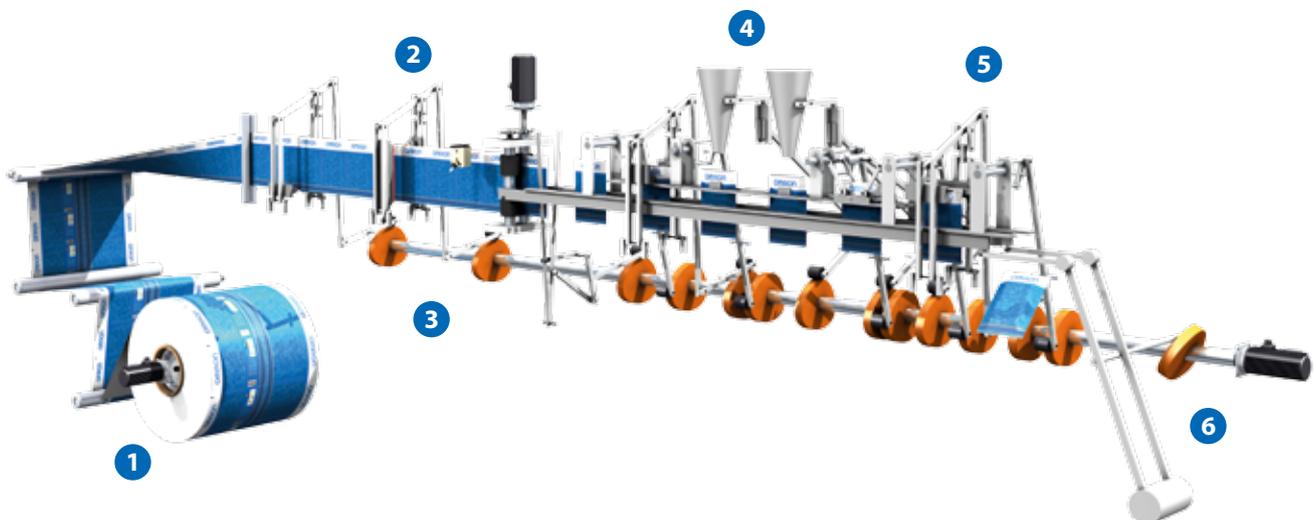
In an HFFS machine a flexible web/foil is unwind, the packs shaped and then sealed on 2 sides, optionally the bottom too. After filled vertically with product, the top side is then sealed to closed the pack. Optionally before the final seal is made, a spout can be added. This all happens with the flexible packaging material moving horizontally, but with the pack orientation still vertical. The picture below shows an intermediate operating, cam driven machine. Also continues machines exist, with these the sections 4 till 6 are often in a carousel set-up.

## Stand-up pouch pack

With a sachet, the foil is folded and sealed. With stand-up pouch the foil at the bottom is shaped like a "W" first and then sealed only in the corners. This creates a oval bottom shape allowing the pack to stand-up.

## Machine Function

- 1 Film unwind and shaping**  
Takes the flexible web and fold into base shape.
- 2 Pouch/Sachet making**  
Seals sides and optionally the bottom.
- 3 Mark, pull and cut**  
Register slip, correct and separate packs.
- 4 Open and fill**  
Prepare pack to fill with product.
- 5 Stretch and close**  
Close and seal the top of the pack.
- 6 Transport arms**  
Guides the movement of the separated packs.



## Your automation partner in packaging

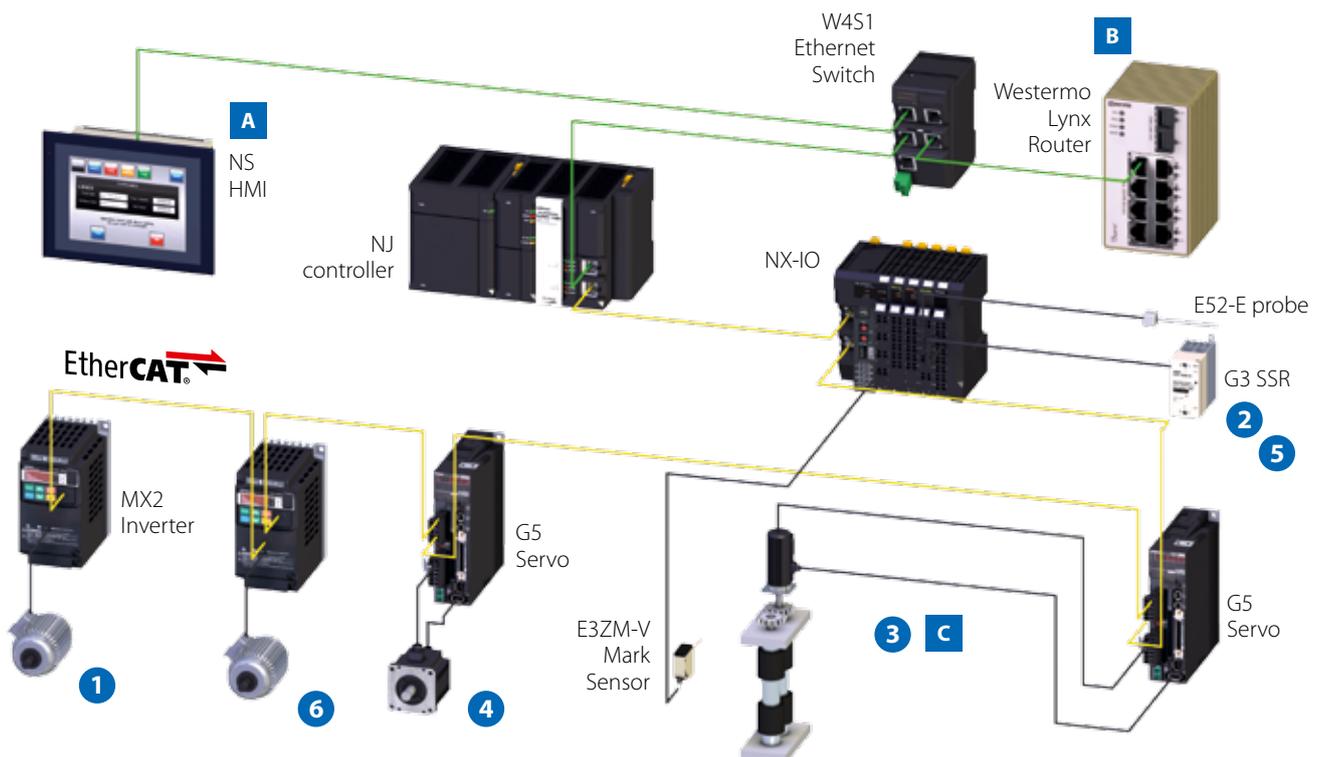
We Automate Machines! We supply all the automation products for HFFS machines, including the logic and motion or hybrid controller. In addition we provide all motors, drives, position sensors, safety devices, temperature sensors and other panel components. All devices are easy to integrate and carry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

### A Versatile recipe and data handling

When exporting machines, there is a need for a multi-language operating interface with simple to execute recipe handling. Other key issues like CIF card data logging (CFR21) and file handling for PDF open, flash and video are not to be ignored. Omron NS series HMI offers these features in a mature and stable machine interfacing solution.

### B Secure remote access

For machine builders it is essential to diagnose and service the machines at their customer's site. Also the end-user will benefit from remote access, as the machine is easily accessible and can provide real time production information. Omron has a solid experience in secure remote access solutions.



### C Servo CAM synchronization

To achieve smooth film movement in-sync with the mechanical CAM shaft, there is need to create a virtual CAM profile for the film pulling servo. The Omron G5 is optimized to perform this function by using its latch input taking the signal of the E3ZM-V mark sensor. All brought together and managed by the NJ machine controller.

*Would you like to know more?*

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