Spami is – and has been, for many years – technological leader in the design and assembly of automated lines for the converting of glass tubing into containers for the pharma industry. Thanks to continuous upgrades to meet the highest requests of its market sector, the company is now introducing a new generation machine for vials – the HS Line.
H S LINE: A NEW GENERATION VIALS MACHINE

Vials forming from glass tubes is a high added value process, conditioned by some major challenges: tight dimensional tolerances, geometry and correct shapes.

Thanks to its consolidated experience as a glass forming machine manufacturer, Spami, a Stevanato Group company, designs its vials lines focusing on the importance of all forming phases: glass tubing feeding, glass tubing heating, neck and shoulder forming, separation, bottom forming.

Spami’s continuous technological improvements and ongoing cooperation with Ompi (sister division dedicated to pharmaceutical glass primary packaging) guarantee the respect of tight tolerances. This is achieved by accurate in-house equipment design, constant monitoring of critical parameters that could influence forming precision and continuous upgrade of forming lines.

This results in high reliability and safety of the pharmaceutical companies’ critical phases of filling, capping and crimping. Spami guarantees these results thanks to its stable process, the result of extensive experience in solutions design and dimensional control technology.

Forming is the first phase of the entire vials manufacturing process, followed by afterforming, annealing, cosmetic control and final packing.

HS Line is the brand new line for vials forming that, thanks to Spami’s improvement in forming machines design process, implemented year after year, offers several valuable benefits:

- reduced format changeover time;
- minimized product contamination and improved cleanability;
- simplified maintenance;
- non-contact inspection systems;
- latest generation handling system (low maintenance robot).

FIFTY PER CENT INCREASE IN PRODUCTION WITHIN THE SAME FOOTPRINT OF PREVIOUS EQUIPMENT

One of the main objectives of the development of the HS Line was to develop a machine with a 50 per cent production increase (reaching 180 items per minute) that could fit within the same production spaces of the previous lines. This new generation machine can replace existing equipment without layout modification.

AUTOMATIC TUBE LOADER FROM PALLET

The HS Line is equipped with an automatic tube loader that enables to have the automatic collection of packaging material. This reduces the need of manual loading to once a shift on average.

REDUCED FORMAT CHANGEOVER TIME

Changeover time is dramatically reduced thanks to the newly introduced digital readout, the new forming device and tool free operations. The necessary time is depending on the feature of formats and is more precise and repeatable, returning to production in a shorter time.

MINIMIZED PRODUCT CONTAMINATION AND IMPROVED CLEANABILITY

Contamination can happen during the forming phase at high temperatures with the use of tools. Spami, adopting the pharma manufacturing approach in the HS Line development phase, has positioned all the main parts of the heating and forming devices away from the working area, and below the machine frame, reducing the mechanical components in the glass forming areas. This means more room and improved cleanability, without any obstacles such as tubes or complex mechanical devices.

SIMPLIFIED MAINTENANCE

The machine is divided into different areas: the tube loading area, the operations area, the actuators area and the mechani-
cal area. This provides the best possible maintenance conditions.

**NO-CONTACT INSPECTION SYSTEMS**

Glass vials are inspected after forming. On the HS Line, non-contact technologies are used to achieve measurement and defects detection, preserving the integrity of the glass vials.

**LATEST GENERATION HANDLING SYSTEM**

A six-axes anthropomorphous robot handles the movement between forming machine and annealing oven. This continuous movement further reduces maintenance activities.

**CONCLUSIONS**

Spami, strong of its 65 years' experience in forming machine development and daily cooperation with Ompi, offers a solution that, with a more intuitive HMI (Human Machine Interface), increases production, reduces maintenance, improves efficiency and simplifies cleaning activities.

This is possible thanks to the company’s commitment to R&D, experimenting and adopting the latest and most advanced generation technologies.