BAUSCH+STRÖBEL
Maschinenfabrik Ilshofen GmbH+Co. KG
Parkstraße 1 - Postfach 20
74530 Ilshofen

PRESS RELEASE

Flexible production thanks to VarioSys

"Flexible production" is a focus topic of ACHEMA 2018. But what does "flexible production" mean in the context of pharmaceutical product filling? Bausch+Ströbel's answer to this question is the modular VarioSys production system, which will feature a new component in Frankfurt. Thanks to a newly developed machine module for fully automatic tub opening and RTU vial denesting, VarioSys is now even more user-friendly.

Today, VarioSys is an established brand name in the pharmaceutical sector. Developed in collaboration with Böhringer Ingelheim, it essentially consists of two components:

- a standardized SKAN cleanroom isolator
  and
- a similarly standardized, interchangeable machine module by Bausch+Ströbel which works on the key-lock principle.

This space-saving modular system owes its tremendous scope and versatility, in part, to the possibility for combining a specialty isolator with a range of different machine modules. In addition, multiple isolator chambers can be linked together in combination with sterilizing tunnels, cleaning machines or a special GEA freeze-dryer to build a production line.
This means that VarioSys is just as suitable for small-batch processing in the laboratory as for use as a fully automatic, low-volume production line.

VarioSys machine modules can process vials, syringes, cartridges and ampoules, both as RTU containers packed in various makes of nest, tub or tray and as bulkware, in combination with a Bausch+Ströbel cleaning machine and sterilizing tunnel. Harro Höfliger's product portfolio includes a suitable IV bag filling module. Depending on application, machine modules are available with various degrees of automation – from manual and semi-automatic to fully automatic. It is even possible to convert a laboratory system with manual handling steps into a fully automatic production line, or vice versa, at any time.

New module for in-nest processing of vials

Thanks to a newly developed machine module for fully automatic tub opening and RTU vial denesting, VarioSys is now even more user-friendly. This module comes equipped with special clean room robots. Used in combination with the KSF5105 bulk filling and closing machine, it offers fully automatic in-nest opening, denesting, filling, stoppering, crimp capping and tray loading of RTU vials over a length of just meters, i.e. inside two isolator chambers.
The advantage is that nested vials can now be processed with 100% In Process Control (IPC) at maximum machine output (up to 60 tubs per hour).
The module is designed primarily for processing RTU vials, but can also be used in combination with a nest filling module by deactivating the denesting function.

High-tech in a small package

The modules meet exacting requirements within a tiny footprint. Although each production module is only 2 meters long and 1.5 meters wide, cutting edge drive and control systems provide aseptic-toxic filling and closing of RTU vials to the same high standard as industrial production systems – and using identical technology. This has the advantage that process data can be transferred between VarioSys and conventional B+S filling systems.

Versatility through interchangeable machine modules

“Bausch+Ströbel uses container-specific machine modules for the production process. This enables customers to achieve a higher level of process reliability with less expenditure on validation, as well as ensuring a highly robust production process,” explains Heiko Schwarz, the engineer in charge of VarioSys development in the Product Management department at Bausch+Ströbel. "Versatility is always at the top of our minds. We achieve this, firstly, through fast and simple module changing, but also through short isolator sterilization cycle times,” adds Schwarz.

Another important consideration for Schwarz is the ease of expandability of the system. “VarioSys is not so much a machine as a system solution. For example, a system originally used solely for bulk processing can, by adding on a nest filling module, also be used to process RTU syringes. The line concept can also be expanded subsequently to include additional isolators, machine modules and freeze dryers,” elaborates Schwarz. “This degree of expandability ensures that our customers stay flexible and competitive in the long term,” adds Lukas Bindewald, B+S product manager with responsibility for VarioSys.

Low cost of investment thanks to standardization

A time and space saving system for small-scale production, VarioSys can not only be converted easily – it can also combine a wide variety of components individually and can easily be adapted to new requirements by adding extensions. Moreover, this can be done with a minimum of investment and (thanks to standardization) with short qualification and validation times: a major advantage in the race to bring new developments to market.

Achema 2018 BS VarioSys 1:
VarioSys: a highly versatile, time and space saving system for small-scale production. Multiple components can linked together to create the required production line.

Achema 2018 BS VarioSys 2:
The principle behind this new solution is extremely simple in practice: a special isolator designed for production under clean room class A conditions can accommodate individual production modules on the lock-and-key principle.

Achema 2018 BS VarioSys 3:
Thanks to the newly developed machine module DDM 9105 for fully automatic tub opening and RTU vial denesting, VarioSys is now even more user-friendly.

Achema 2018 BS VarioSys 4:
Module KSF 5105: A fully automatic machine for filling and closing bottles or vials with outputs of up to 3,600 containers per hour.

Achema 2018 BS VarioSys 5: The module for processing ampoules AFV 5105 integrates numerous functions within a very small space, yet its design is very straightforward.

We will be pleased to supply further information on request.

Please contact: Tanja Bullinger
Phone: +49 7904 - 7013447
E-Mail: tanja.bullinger@bausch-stroebel.de

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