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Press Release

Improved Function and New Feeder Platform:

Coperion Optimizes ZSK 18 MEGAlab Extruder Design for Significantly Greater Flexibility

Stuttgart, January 2024 – Coperion has equipped its ZSK 18 MEGAlab laboratory extruder with numerous new functions that provide significantly greater flexibility and safety in handling. Pluggable cartridge heaters instead of hard wired ones now allow for rapid barrel reconfiguration as well as straightforward cartridge heater exchange. An electrically securable maintenance door on the gearbox lantern increases operational safety and at the same time provides quick access, reducing downtimes for screw changes and system maintenance. Moreover, feeders for this laboratory machine can now be placed on a newly developed patent-pending feeding platform which allows up to four feeders to be arranged with maximum flexibility for adding ingredients in myriad ways.

The ZSK 18 MEGAlab, with a screw diameter of 18 mm, has a specific torque of 11.3 Nm/cm³ and achieves a maximum rotation speed of 1,200 min⁻¹. It is ideally suited for use in research and development projects as well as for production of minimum quantities.

Optimized feeding platform

The new, patent-pending feeding platform makes adding ingredients noticeably easier. It is firmly attached to the ZSK 18 MEGAlab extruder, allowing for flexible positioning of up to four feeders on all barrels of the process section as well as on the ZS-B side feeders. Moreover, the new feeding platform, which can be moved laterally along the machine, allows the feeders to be rotated and raised or lowered as needed. This feature creates enormous advantages

January 2024

particularly in the areas of research or recipe development, since feeding can be located flexibly at various points, in accordance with the process requirements. Elaborate, costly reconfiguration tasks and cumbersome additional frames for feeders are a thing of the past. Moreover, cleaning is simplified since the feeder can simply be pivoted away from the process section, thanks to the new platform. Where the previous model required a separate frame for each feeder, now up to four feeders can be mounted on the new platform. Time-consuming solutions for mounting additional feeders, or reconfigurations, have likewise become a thing of the past. This improvement significantly increases flexibility as well as efficiency in the production process.

New functions for safe, simple handling

Along with optimizing feeder positioning, Coperion has also incorporated proven functions from the ZSK series into the ZSK 18 MEGAlab. Among these, for example, are pluggable cartridge heaters. They are individually connected using IP67 plugs and can be removed for maintenance and barrel reconfiguration in no time, no electrician needed. Another improvement involves the gearbox lantern with easy access that can be equipped with an electronically secured maintenance opening. As soon as the screw shafts come to a complete stop, the door can be opened without tools. The screw shaft coupling is immediately accessible for maintenance purposes; machine downtimes drop significantly and completely safe servicing is assured. The machine can only be restarted when the maintenance doors are closed.

As part of the ZSK 18 MEGAlab redesign, Coperion separated the mechanical and electrical machine components and recently mounted the control cabinet laterally onto the base frame. Thus, mechanical maintenance tasks on the base frame can likewise be performed without an electrician. The control cabinet is available in various designs: standard, stainless steel, or as a junction box if, for example, an external control cabinet is necessitated due to ATEX requirements. Coperion engineers have even improved the design of the base frame itself. Along with height-adjustable leveling feet, combined with casters, the cable routing has also been optimized to keep the floor around the extruder free of clutter and easier to clean. All supply lines have been centrally connected to the rear of the machine and distributed inside the base frame so that any possible impediments to working on the machine are reduced to a minimum.

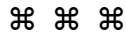
“This optimized ZSK 18 MEGAlab extruder combines proven ZSK series functions and new developments specifically for laboratory operation that make its handling especially flexible and

January 2024

intuitive. This allows us to offer our customers a versatile extruder solution that is characterized by maximum efficiency, especially for small production batches and numerous recipe changes”, opined Johannes Heyn, Development Engineer with Coperion Research & Development.

About Coperion

Coperion (www.coperion.com) is a global industrial and technological company in the areas of compounding and extrusion machinery, sorting, shredding and washing equipment, feeding systems, bulk material handling and services. Coperion develops, produces, and services plants, machinery, and components for the plastics and plastics recycling industry as well as for the chemical, food, pharmaceutical, and minerals industries. Coperion employs over 5,000 people worldwide in its three business areas: Polymer, Food Health & Nutrition, and Aftermarket Sales and Service, as well as in its 50 sales and service companies. Coperion is a subsidiary company of Hillenbrand (NYSE: HI), a global industrial corporation offering highly developed processing machinery and solutions that are relevant to processes for customers in a variety of industries around the world. www.hillenbrand.com

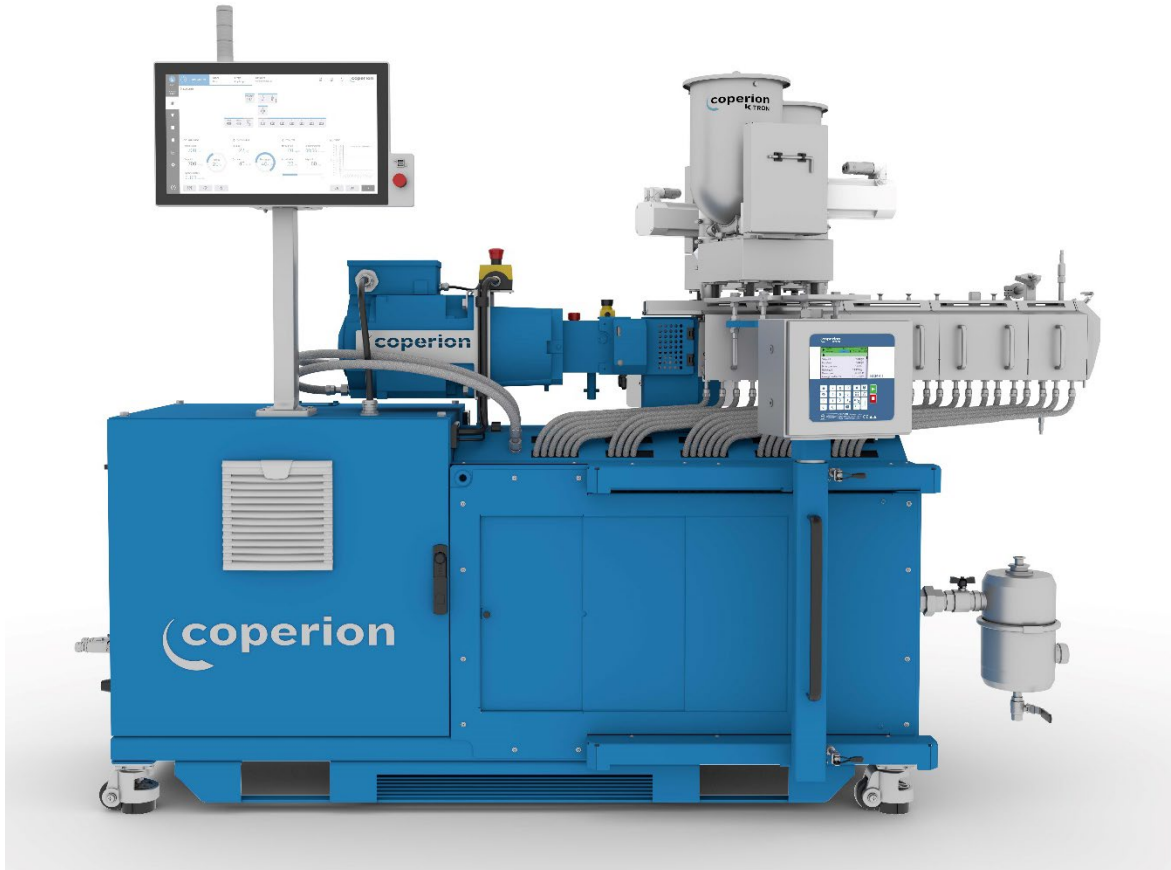


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January 2024



The latest generation of the Coperion ZSK 18 MEGAlab laboratory extruder combines proven ZSK series functions with new developments that focus on flexible and intuitive handling.

Photo: Coperion, Stuttgart/Germany