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ZSE 12 HP-PH: The perfect lab extruder!

From 26 - 28 September, 2017 German Leistritz Extrusionstechnik GmbH will be presenting their range of products and services from the pharmaceutical extrusion sector at the Powtech fair in hall A3/booth 515. The highlight will be the ZSE 12 HP-PH twin screw extruder in GMP design.

Nuremberg (July 2017) – „We will show the machine concept of our smallest extruder at the Powtech,“ says Albrecht Huber, Head of Pharma Extrusion at German Leistritz Extrusionstechnik GmbH. He refers to the ZSE 12 HP-PH twin screw extruder with sophisticated features which makes it a perfect R&D machine. “Additionally, it has all characteristics of a production machine which facilitates scale-up,“ adds Huber.

ZSE 12 HP-PH

The ZSE 12 HP-PH realizes a throughput of 50 to 2,000 g/h and is therefore ideal for research and development. „We designed a mobile plug&play solution: Just connect it to the water and power supply and it is ready for operation,“ explains Kathrin Nickel, Processing Engineer at Leistritz Extrusionstechnik GmbH. „Besides its mobile design this machine also comes with a unique and innovative C profile for the barrels.“ With this it satisfies the demand for easy cleanability and (dis-)assembly by fulfilling the following tasks: On the one hand, it ensures that the hinged barrels are tight. On the other hand, all relevant media connections for heating and cooling of the processing unit are integrated there. „Heating and cooling is an important topic which we focused on,“ says Nickel. Eight separate zones can be heated and cooled due to the barrel design. “The remarkable thing about it is, the temperature can be exactly set and kept steady, allowing only minimum heat exchange between the neighboring zones.“ A further highlight is a powerful drive. The high torque of 20 Nm ensures a stable operation in various process conditions and the scale-up to the next machine size. After all, the geometrical characteristics of the ZSE 12 HP-PH comply with the larger ZSE HP-PH machines. All this is rounded off by a PLC

control with a large touch screen that controls and monitors all necessary extruder functions like screw speed and heating/cooling. Additionally, a firmware is available. It gives the possibility to qualify the extrusion line with all associated documents. The extruded material can be further processed by using a conveyor belt (can be fixed directly on the machine frame) and a strand granulation which are also available.

Additional options

For those who want to simulate a process prior to running actual trials, Leistritz offers a simulation software. “Especially in the beginning, when only little material is available, this software is a reasonable solution. With this, the processing window can already be limited to the most important processing parameters,” explains Nickel. For those who are in need of a containment solution, the extruder specialists also have the right alternative. „In early development stages, oftentimes not entirely investigated actives are used or are classified as highly potent,” says Huber. „That’s why we have different kinds of containment options that meet the operators’ requirements.” All interested can experience the ZSE 12 HP-PH extruder live at the Powtech fair. „Of course, it is also available for trials in our new ISO 8 certified cleanroom laboratory in Nuremberg,” says Huber.

Leistritz Extrusionstechnik GmbH at the Powtech fair in **hall A3/booth 515**.

Image (© Leistritz):



Leistritz' smallest:
ZSE 12 HP-PH twin screw extruder



The innovative C profile allows for easy (dis-)assembly of the barrel.

Leistritz Extrusionstechnik GmbH

For 80 years Leistritz Extrusionstechnik GmbH with its headquarters in Nuremberg/Germany has been building twin screw extruders for the processing of plastics and pharmaceuticals. Leistritz customers benefit from the know-how in various areas of material processing such as masterbatch, compounding, direct, lab and pharmaceutical extrusion. The company employs around 190 people worldwide and keeps subsidiaries in the US. (Leistritz Advanced Technologies Corp.), China (Leistritz Machinery (Taicang) Co. Ltd.), and Singapore (Leistritz SEA Pte. Ltd.) as well as sales offices in Italy and France.

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