

Trexel showcases striking additions to its product portfolio for light-weight, foamed thermoplastic components

- New SCF metering systems for the P Series for packaging production
- Successful T Series available as satellite variants
- TecoCell chemical foaming agent expands Trexel’s product portfolio
- Foaming blow-molded components for the automotive industry

(Siegen, Germany, August 2018) – Trexel will be making a strong showing with new products and systems at the Fakuma 2018 in hall A4, stand 4007. Leading-edge developments include physical foaming for thin-walled packaging, chemical foaming agents added to the company’s product portfolio and microcellular foaming for blow-molded components. Building on many years of experience in physical foaming, Trexel is implementing a systematic expansion into new application areas and moving into new sectors. Even broader service and engineering support completes the product portfolio.

Thin wall packaging with MuCell offers huge potential for savings

It’s not only in technical applications that foamed plastic components offer benefits, in the packaging industry too, foam injection molding offers huge potential for savings. Benefits include weight savings resulting from the lower densities; down 3-6% in packaging applications. Even more important are smoother flow behavior, lower cavity pressures in the mold and reduced clamping force requirements. “This means packaging components can be thinner walled or even designed with a thicker sealing edge at the flow-path end,” explained Brian Bechard, CEO & President of Trexel Inc. “It’s fair to say,” he continued, “that potential savings can run to 20% lower weight, 15% reduced cavity pressure and 30% lower clamping force.” These advances are made possible by the use of the new MuCell P Series gas dosing units where the dosing control system is adapted for the short plasticizing times. Paired with suitable injection units, the system achieves consistent, high-precision dosing, even with minimal SCF (Super Critical Fluid) volumes, together with a long-term stable and repeatable process. The Fakuma 2018 will be its European premiere.

MuCell T Series dosing units with new satellite solution

The successful T Series dosing units guarantee reliable and consistent series production of MuCell components. Shot by shot the foam content is precisely and consistently metered and also documented. Customers confirm the advantages. “Absolutely simple to operate and a highly reliable, stable and consistent process”, says Michael Ludwig, Business Director Europe at Trexel, “this is what all our customers say regardless of the region in which they operate”. The T Series sets new standards for ease of use and precision processing. At the Fakuma, Trexel is showcasing a new variant of the dosing system, the T Series satellite model. “The satellite solution offers an easy and cost-competitive entry route into MuCell microcellular foaming”, points out Ludwig, “and it can be very easily expanded for further machines”. This makes the Trexel system a futureproof and cost-competitive way of equipping several injection molding machines for MuCell molding, especially for interconnected production cells. From autumn 2018, Trexel will be offering booster stations in two sizes with different performance ranges to supply the different satellites with the physical blowing agent.

TecoCell chemical blowing agent expands MuCell

Already widely known for its MuCell physical foaming technology, Trexel is now applying its extensive know-how to chemical foaming. Decades of experience have given the company the knowledge base to select the optimal foaming process for each application, which will generate the maximum benefit for each customer. Trexel is the first company to offer both chemical and physical foaming solutions complete from a single-source supplier. This product range puts the company in an optimal position to help customers choose which applications, given their particular circumstances, are best suited to chemical foaming and which to MuCell, or even to a combination of the two processes. The patented TecoCell chemistry is far superior to traditional foaming agents. Utilizing only CaCO₃ nano particles of 0.08 microns or less, TecoCell produces highly uniform cell structures evenly distributed throughout the molded part. The outcome is components with impressive weight savings, outstanding mechanical characteristics and good surface quality.

Foamed automotive blow molded components with impressive attributes

Foaming plus injection molding is a well-established technology and the advantages of foaming are now being extended to other areas, for example, blow molding automotive components. Apart from weight savings, there is the fact that the microcellular material structure improves thermal insulation and heat capacity. Furthermore, increased wall thickness for the same weight sharply increases the stiffness of the part and improves the acoustical properties. Both MuCell physical and TecoCell chemical foaming can be successfully combined with blow molding to deliver these benefits for a wide variety of materials and processes. In many cases, an existing production system can be refitted with no great effort so as to deliver a rapid return on investment. Customers and processors can rely on constant expert support from Trexel engineers throughout – from component design and process planning to implementation.

Pictures:



Picture : 2018-004_P-300 packaging system Photo HR
 P-300 SCF dosing unit for thin-walled packaging



Picture: 2018-005_MuCell-IML-yoghurt-cup
 MuCell foamed IML yogurt cups with 0.25mm wall thickness



Picture: 2018-006_T-Seires satellite SCF-system type T-S00
 MuCell dosing unit from the T Series as satellite model for use in production cells



*Picture: 2018-007_TecoCell
 TecoCell, a chemical foaming agent capable of achieving highly uniform microcellular structures, has been added to Trexel's product portfolio*



*Picture: 2018-008_Blow-Molding_Air-Duct
 Blow-molded MuCell foamed automotive air duct*



*Picture: 2018-009_T-series SCF system type T-400
 T-Series foaming units, like this T-400 stand-alone model with its own touchscreen, are extremely user-friendly.*

For more information visit:

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About Trexel

Trexel is in the business of providing technology which places tiny cells of gas in plastic parts, and our passion is manifested in the broader benefits that these micro bubbles can deliver. Our microcellular foaming technology reduces production cost while increasing environmental sustainability. We make it possible for designers to break some of the rules of thermoplastic part design, resulting in design for function instead of design for manufacturability.

Our technology enables lighter, more dimensionally stable products which can be produced faster on smaller, more energy efficient equipment.

Since 1995 we have been applying our technology to thousands of applications in dozens of industries. We have developed unsurpassed know-how, continuously improved our technology and enhanced our services, growing into the global leader in microcellular foaming technology we are today.

We deliver systems for physical foaming injection molding, chemical foaming agents and provide extensive technical advice up to complete handling of engineering projects. Mold trials, services and education or training activities complete our activities.