SMARTER THERMOFORMING AND EXTRUSION PROCESSES

Commodore is a global technology leader in the design and manufacture of machinery and tooling for the production of EPS foam products. Philip Yorke talked to Brad Braddon, the company’s CEO, about their latest innovative products, as Packaging Europe previews what is being showcased at the forthcoming K-Show trade fair in Dusseldorf.

Commodore is an independent, privately owned company based in Bloomfield, New York with more than 35 years experience in the design and manufacture of machinery for the production of EPS (Expanded Polystyrene) foam-based packaging products. The company was founded by George Braddon in the 1980’s after he was a process engineer at Mobil Chemical in New York.

By the late 1980’s, Commodore had become a leading specialist in refurbishing thermoforming equipment, which set the stage to move into the design and manufacture of its own advanced manufacturing equipment in 1988. Since then, the company has seen consistent growth, even overcoming the setback of a major fire in 1991 to emerge as a technology leader in its own right. Today the company sets industry standards worldwide, in particular for thermoformers and extruders for manufacturing foam trays used by the food industry.

Driving servo technology forward

Commodore Technology recently introduced two new thermoforming lines for EPS foam in the narrow and wide-web markets. With its flagship product, the SX-28S, the company converted the form station from hydraulic to servo operation. In the spirit of introducing leaner manufacturing processes, this completely eliminated the hydraulic systems.

With its latest equipment, Commodore has transformed the efficiency of its existing line by eliminating over 50 per cent of the mechanical components of a traditional servo form station. This has been achieved by replacing the toggles on each corner with a center drive for forming platens on a 28-inch wide machine. This form station can run at up to 50 cycles per minute (CPM). Correspondingly, the trim press CPM output has almost doubled by utilizing FEA and vibration modeling tools to isolate/eliminate the reciprocating effects of trimming.

Furthermore, a longer movable oven design and a stretched forming platen allows for greater flexibility via more oven shots and longer moulds with extra rows. This unique adaptability translates directly to higher productivity and expands the potential for other applications, including absorbent trays. In addition, Commodore operates a foam production facility and is now using its latest SX-28S for three shifts per day.

Braddon said, "Our equipment is tailor-made to meet the needs of the food packaging industry of today and in particular the requirements of the supermarket retail sector which wants custom sizes for better product fit. We develop and build our own equipment, which is designed for the diverse needs of our customer base."

Utilizing Commodore’s foaming expertise they have expanded their market offerings to extruding PE and PP while introducing annular die co-extrusion. This expands their market reach to medical, automotive and building industries.

Commodore also offers gas injections systems for new or existing extruders. Traditional chemical foaming gives off CO2 creating small cells and lowers density by 30 per cent. With gas injection of physical blowing agents it dissolves in the process to get much lower densities than chemical foaming.

Our machinery foot print is ideal for small producers and for serving regional markets, where we can offer 550mm wide sheets of up to 1.4 meters long."

Braddon added, "We have a lot of experience and knowledge in the foam business, as we make and sell our own trays and we also act as consultants to our clients and other manufacturers. We offer the whole picture concerning thermoforming and extrusion, so we can offer a comprehensive one-stop-shop service."

Setting the standards

Commodore Technology designs and manufactures foam extruders and foam thermoformers, as well as manufacturing tooling and auxiliary equipment, including software for remote machine monitoring and control, at its state-of-the-art facility in Bloomfield, New York.

Commodore has the unique opportunity for continuous improvement by having daily feedback from the foam plant operations. Currently, they operate five of their own foam extruders in the Bloomfield plant, and are uniquely aware of the problems that face foam producers on a day-to-day basis. In addition, the global customer base also provides a tremendous insight to the evolution of technology. Having access to this rich feedback loop provides constant innovation. As a result, Commodore's systems are designed to perform specifically while facing these challenges.

For further details of Commodore Solutions’ innovative products and services visit: www.commodoresolutions.com