

Film and Sheet

EXTRUSION



INNOVATION IN WATERPROOF MEMBRANES

TECHNOLOGY UPDATE: SHEET MATERIALS

NEW DEVELOPMENTS IN MATERIALS HANDLING

IMAGE: MAGUIRE



Above: Maguire says its Ultra vacuum dryer can save up to 80% in energy costs

Fast drying

Maguire Products showcased several materials handling technologies at last year’s Fakuma in Germany.

One example was its Ultra vacuum dryer. With high energy efficiency and drying speed, it offers savings of up to 80% in energy costs – drying materials up to six times faster than traditional desiccant drying methods, says the company. At the show, it featured its Ultra 150 and 300 models, as well as showcasing an interactive savings calculator.

“The Ultra dryer’s revolutionary technology allows processors to reduce energy consumption while enhancing production efficiency,” said Chris Crittenden, director at Maguire Products in Europe.

In addition, its MGF feeder family – recently expanded to over 60 models – provides high dosing accuracy for additives and masterbatch. It claims 20-30% savings over volumetric systems. Featured models, including the MGF and MGF+100X-3 with integrated extrusion control, showed enhanced precision for both extrusion and moulding applications.

Maguire also showed two of its established gravimetric batch blenders – the WSB MB Micro and WSB 240R – which are engineered for precise dosing, material traceability, and rapid material changes.

Film recycling

US-based film producer Omnova Solutions has improved recycling by investing in rotary batch

mixers from **Munson Machinery**.

Omnova supplies printed flexible and rigid films for applications including kitchen cabinets, home and office hospitality furniture and vehicle interiors.

Its main output is PVC films. Despite significant reductions in waste, its calendaring process was still generating process waste that could be recycled. Omnova’s recycling options were initially limited, but adding a Munson 700-TSC-300 rotary batch mixer helped it to improve. The mixer has a capacity of 8,165kg and 8.5 cu m. The company began by granulating its start-up and process waste material, to reduce its particle size, then blended it in the mixer.

“The homogeneous mixing action of the Munson machine produced high-quality recycled blends that could be added back into compound formulations in-house or sold outside to brokers,” said Steve Reed, a plant process engineer at Omnova.

One benefit of the mixing efficiency was to reduce variations in particle size distribution, which prevented particle segregation and problems arising from different melt temperatures during re-processing. The blender was also able to produce consistent blends, despite recycling a number of different colours at the time.

“The blends we were releasing to production had to be within a pretty tight colour tolerance,” said Reed.

The mixer achieved homogeneous blending thanks to specially designed internal mixing flights that tumble, turn, cut and fold the batch. The gravity-fed process produces uniformly mixed batches in three minutes or less and achieves full discharge. The mixer has a small footprint, dust-tight operation and low energy consumption.

As more materials and colours were added,

Omnova invested in a second mixer, with a capacity of 2,268kg. The Munson machine stood out in two ways: distribution of particles by particle size (ie, good mixing); and colour consistency.

Mobile dryer

The Drymax Plus mobile dryer model from **Wittmann** is now available with EcoDrive. This means that the dry air output is dynamically adjustable to the precise quantity needed for the material – with helps cut energy consumption further.

Wittmann says that EcoDrive



IMAGE: WITTMANN

Right: Wittmann’s Drymax Plus mobile dryer is now available with EcoDrive, helping to cut energy use