worldwide for excellent rates, improved bubble stability, and excellent gauge uniformity and control.

Other highlights include its Medical Extruder Direct Drive (MEDD), a compact extruder with a direct drive motor for more energy efficient operation; and a 3.5in (90mm) version of its Super Blue extruder, which has an increased torque capacity to handle high viscosity resins and custom options.

And the company will not just be showcasing extrusion equipment. A new PLC control for Davis Standard's ram stuffer extruder – which can increase productivity for recyclers of low bulk density polymer scrap such as films, fibres and thermoformed sheet – will also be seen at NPE, courtesy of **ADG Solutions**, the North American distributor of Davis Standard's reclaim and compounding equipment.

The new control maximises efficiency in reprocessing lightweight scrap, said Sandy Guthrie, president of ADG Solutions.

"Bulk density variations in light feedstocks can cause substantial reductions in extruder throughput," he said. "The PLC control automatically monitors motor amperage and eliminates the operator adjustments that, until now, were needed to increase productivity."

The ram stuffer single screw extruder has a pneumatic reciprocating ram mounted at the feed throat which stuffs material into the screw. The PLC adjusts the timing of the ram stroke in accordance with variations in extrusion drive amperage caused by changes in material bulk density.

Since the ram cycle governs the rate at which material is fed into the extruder, the PLC ensures that production will continue at the maximum level. It can be retrofitted on existing ram stuffer extruders.

Plastics recycling equipment supplier **Erema** North America will show a 1514 TVEplus for the first time in the US.

It is the most advanced model in Erema's family of vented systems, capable of 2000lbs/hour throughput. All models in the TVEplus range are specifically designed to recycle contaminated material: tests of the TVEplus with heavily printed packaging film, for example, shows an increase of approximately three times the efficiency at removing gases derived from ink, binding agents, and other additives and contaminating materials.

The machine on show has already been bought by **Jadcore**, a plastics recycler based in Terre Haute, Indiana that has a monthly production capacity of 6m lbs.

Rob Doti, Jadcore vice president of manufacturing, expects the machine to open new recycling markets for the company through its ability to handle heavily inked and contaminated material.

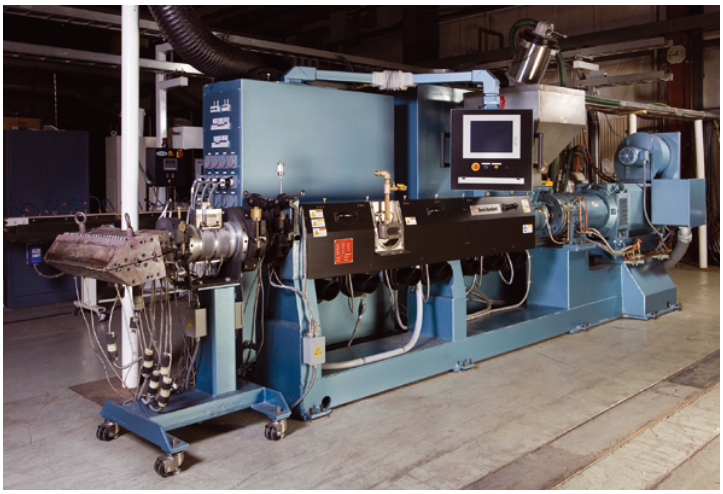
Also on show will be a KAG automatic edge trim recycling system that produces high quality, pellet-like reclaim that may be directly routed to extruders or stored for future reuse. The KAG 605, on show at NPE, is capable of throughput of 150lbs/hour.

Thermoforming

CMT Materials will demonstrate new technology and techniques that allow thermoformers to reduce sheet thickness when forming heavy-gauge materials.

It will also show new tools that reduce machining and processing time of Hytac syntactic foam plug-assist materials. Also featured will be CMT's reformulated Hyvac hold-down fixture material for rapid, low-cost production of vacuum hold-down trim fixtures.

"Our customers continue to be pushed for higher quality attributes like more even material distribution, improved transparency with less scratching, and more demanding part geometries – at a time when plastics and other production costs are on the rise," said Terrence Woldorf, general manager of CMT Materials.



Davis-Standard's new 40:1 L/D high-speed extruder is targeted for use with PS and PP resins for sheet and in-line thermoforming

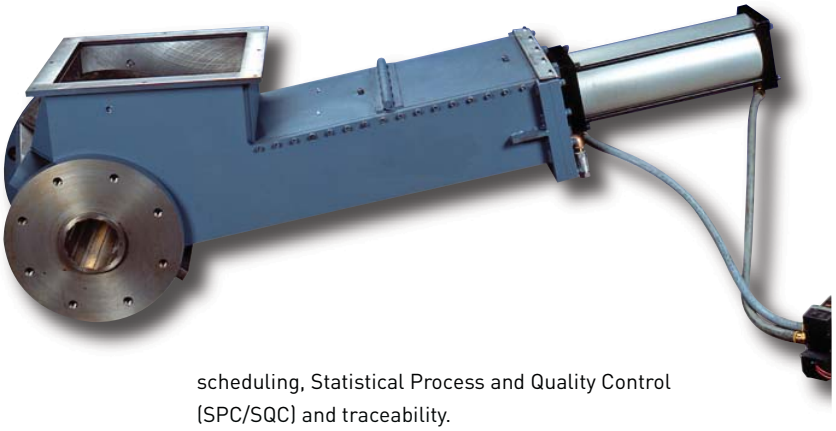
The company has developed new ways to use Hytac syntactic foam materials to reduce start-up time, cycle faster, and reduce heating time/temperatures.

WM Wrapping Machinery, a Swiss supplier of in-line and off-line thermoforming plant, will present the latest version of its roll feed, vacuum-pressure forming machine with steel rule cutting.

FC 780E Speedmaster Plus has a forming station with four tie-bars, a clamping force of 75 tonnes and can work with 'in-mould cut' configured tools. The thermoforming machine has a second press with four tie-bars and cutting force of 60 tonnes, for use as a separate steel rule cutting station.

The machine is completed with a vertical stacking unit driven by servo-motor.

It is also available with a servo-motor to drive the



ADG Solutions will showcase a PLC control for Davis Standard's ram stuffer

plugs, 'third motion' and a 2- or 3-axis 'robot stacker'. The machine can accommodate moulds with maximum dimensions 780 x 570mm and can also form products with positive and negative depth up to 130mm.

Addition of full digital control improves process control, as well as recording all tool setting recipes and eases set-up.

Process control

Invensys Eurotherm will feature its Maco Compact Control family at NPE2012. Addressing processing improvements in plastics moulding, extrusion and thermoforming, the Maco Compact family is an integrated, application-specific logic control platform with built-in diagnostics, process monitoring, and advanced control of processing and temperature settings.

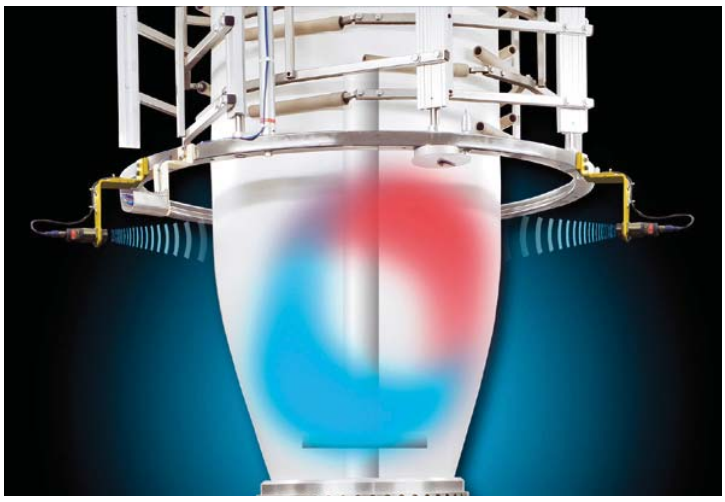
One particular improvement to the system is specific to extrusion.

The EM-3c temperature and pressure control system is specifically designed for small extruders but has all the features of the EM-3 PC-based Extrusion Control System.

The standard package can be used just for extruder temperature and pressure control, or expanded for complete line control. Manufactures can save on installation costs and engineering time and expense due to the EM-3c's preconfigured screens package and standard control system definitions.

The eCool control system from Brampton Engineering boosts bubble diameter control using temperature compensated ultrasonic sensors

BMSvision will show the latest version of its PlantMaster Manufacturing Execution System (MES) for injection moulding, blow moulding and extrusion, based on wireless data collection technology. All these systems include software modules for real time production and process monitoring, production scheduling, Statistical Process and Quality Control (SPC/SQC) and traceability.



A new version of the report generator allows the combination of real time data and history information in the same report.

BMSvision will also present its EnergyMaster system for monitoring reducing energy consumptions and for reporting the CO_2 footprint of the company. It maps the different energy consumptions (electricity, water, gas, compressed air, steam, etc) for further analysis and optimisation.

Syscon-PlantStar has added new features to its suite of real-time production and process monitoring systems. These will enhance the manufacturer's ability to see what is happening on the plant floor.

An expanded Overall Equipment Effectiveness (OEE) dashboard allows users to drill down into each category to get detailed information. For example, a user can click on the 'quality' link on the computer screen and get the quality-related details for a job, such as reasons for unexpectedly high scrap rates.

It has also expanded its Process Journal module to allow a supervisor to review, check and approve the notes after the completion of the process.

"Our Process Journal has a Labour log-in that automatically adds the date and time of the journal entry," said Gary Benedix, vice president of Syscon-PlantStar.

Other new features include a new KanBan scheduling module, a 'tool conflict' alert mechanism and remote hosting option.

Italy's **Gamma Meccanica** will show several new technologies at this year's NPE.

Firstly, its Ecotronic control unit, used with its Compac line of reclaim systems, provides for easier operation and more flexibility when feeding different materials with varying densities. It can also operate effectively at much higher temperatures, meaning that 10-15% moisture can be removed for most applications without affecting throughput or material quality.

A new transmission design with frequency drive technology for rotor control, coupled with a specially designed software program, enables precision tem-