

## AUXILIARY EQUIPMENT

### Large desiccant dryer uses 25 per cent less energy

Based on its successful 750 FM design, **Dri-Air Industries Inc.** recently introduced the new 1500 FM model that expands the company's range of large desiccant dryers while continuing its reputation for the smallest footprints in the dryer industry.



With a compact footprint of 30 square feet, the 1500 FM has a new regeneration air flow design that reduces the previous energy usage level, already one of the industry's lowest, by an additional 25 per cent. And dry air is used for regeneration or cool down of desiccant towers, allowing for dewpoints of  $-26^{\circ}\text{C}$  ( $-80^{\circ}\text{F}$ ) or lower.

The unique regeneration valve with positive sealing is positioned so that it can easily be seen for quick troubleshooting without removing any dryer panels, and all external panels are hinged for quick access to internal components. To conserve space, the panels can be slipped off their hinges at will.

The high-pressure fan reduces the ambient noise level to less than 70 dB and allows the dryer to operate at very low process temperatures to accommodate resins such as PLA.

Additionally, the 1500 FM has Dri-Touch controls that display the important operating parameters on a highly visible seven-inch touchscreen. The menu screen provides immediate access to all settings and other parameters needed for set-up and troubleshooting.

**Dri-Air Industries Inc. (East Windsor, Conn.);**  
[www.dri-air.com](http://www.dri-air.com); 860-627-5110

**Maguire Products Canada Inc. (Vaughan, Ont.);**  
[www.maguirecanada.com](http://www.maguirecanada.com); 905-879-1100

## EXTRUSION

### Discontinuous large-area in-line filtration system

New from **PSI-Polymer Systems Inc.**, the *ILF-55* in-line filtration system is a discontinuous, high-capacity filter designed for long-batch production runs where the extrusion process can't be disturbed and where uncompromised ultra-high filtration levels must be continuously maintained.

ILF filters are typically used where screen changers are either too large for the application or otherwise can't satisfy the filtration level requirement without incurring an unacceptable pressure drop. These



new filtration systems feature a canister housing into which the filter pod assemblies are inserted. Vessel size and filtration media are selected according to application-specific data, and are designed to minimize pressure drop for optimal flow and run time.

ILF vessels can be fixed in-line or interchangeable, and are supplied with three or seven filter tubes. The interchangeable vessel option accommodates quick change-outs. Standby vessels can be preheated to minimize downtime. Vessels can be arranged for electric heat or jacketing for steam/oil heat systems.

All models are designed for operating pressure up to 4,500 psi (310 bar) and process temperatures to  $400^{\circ}\text{C}$  ( $750^{\circ}\text{F}$ ).

**PSI-Polymer Systems Inc. (Conover, N.C.);**  
[www.psi-polymersystems.com](http://www.psi-polymersystems.com); 828-468-2600

## BLOW MOLDING

### Universal two-stage PET SBM machine

The new all-electric two-cavity *Flex-Blow2* blow molding machine from **FlexBlow** is designed to be the most universal two-



stage PET SBM machine on the market, enabling the production of a wide range of PET containers on one piece of equipment, with necks ranging from 18 up to 110 mm and bottle volumes from 50 up to 6,000 ml.

Changing the bottle format — including molds, neck, and gripper parts — and fine-tuning the machine afterwards takes no longer than 30 minutes.

A dedicated Siemens control panel now has several new functions to make the experience of operating the machine intuitive, and an integrated operator's manual guides the user along every step of operation to make it repeatable and to minimize the impact of the human factor. There's also an integrated catalogue to achieving top PET bottle quality with a pictured troubleshooting guide, as well as machine production and efficiency statistics for performance tracking.

The challenge of automatically loading a range of preforms with significant differences in neck diameter, from narrow neck to wide mouth, has been tackled by the use of a dual-preform loading system. When it comes to minimizing the support ring, FlexBlow uses the adjustable feeding ring, FlexBlow uses the adjustable feeding slides that allow loading preforms with support rings starting from 0.8 mm. Inversed preforms with the body wider than the support ring are also compatible with the FlexBlow universal feeding system due to an innovative gate-like structure that opens slightly at the end of the preform

slide, allowing the thicker preform body to come out.  
**FlexBlow/K&G Machinery Works Ltd. (Mississauga, Ont.);**  
[www.flexblow.com](http://www.flexblow.com); 905-361-0605

## PROCESS COOLING

### TCUs use water instead of oil

**Frigel** recently announced the availability of its *HB-Therm* TCUs in North America that use water — not synthetic oil — as a heat transfer fluid to cool plastic molds at operating temperatures of 200 to 230°C (392 to 446°F), allowing processors to maintain precise cooling at high temperatures without the environmental concerns normally associated with the use of oil as a heat transfer fluid.



The portable HB-Therm units are highly compact with footprints from 1.3 to 3.2 square feet. With the HB-Therm racking system, users can easily stack multiple units together to deliver precise cooling to as many as eight mold zones and with an available central control module for as many as 16 separate zones.

HB-Therm TCUs come standard with user-friendly digital controls for highly accurate and automatic optimization of temperature control. The controls eliminate temperature fluctuations and also support rapid start-up. In addition, users can record operating data for up to 10 molds. A unique, non-contact heater design ensures process water does not come into contact with the heater. As such, it eliminates scaling and stress cracks, in turn, increasing heater reliability and longevity.

Additionally, ultrasonic flow meters detect changes in flow rate and issue an alarm if the rate violates limit settings, which helps to ensure product and part quality. The flow meters also allow for fast responses and highly accurate temperature control even at low flow rates, further contributing to product and part quality.

The high-temperature water HB-Therm TCUs complement Frigel's existing line of HB-Therm water TCUs rated to deliver and maintain process cooling water from 100 to 180°C (212 to 355°F).

**Frigel North America Inc. (East Dundee, Ill.);**  
[www.frigel.com](http://www.frigel.com); 847-540-0160

## PACKAGING

### Five-in-one system for water and CSD beverages

The new *Super Combi* from **Sidel Inc.** integrates five process steps — preform feeder, blower, labeller, filler/capper, and cap feeder — in an all-in-one smart system to enable

continuous production optimisation and enhanced performance for producers of PET bottled water and CSD.

For improved reactivity of the operator, the system has an automated alert system to provide advanced timely reports through the Efficiency Improvement Tool audio and smart portables, on events such as changeovers, label or cap shortages, and possible faults. Additionally, guided troubleshooting reduces operator skill requirements and offers increased repeatability of changeover and maintenance procedures.

To ensure sustainable production, the Super Combi minimizes the use of resources. Consumption of electrical power is reduced by up to 45 per cent, the preform heating time is lowered by up to 15 per cent, and the use of compressed air is reduced by 35 per cent. To further reduce the environmental footprint, the entire system is based on brushless motors.

With different machine configurations possible based on the output required, the labelling process is highly efficient, with the integrated labeller being able to carry out different labelling processes, including the application of pressure sensitive labels and roll-fed labels.

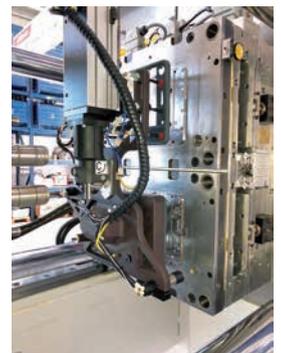
The labelling process can be optimised to work with up to three stations running simultaneously or with a “master/slave” format, in which the one or two stations run while the designated “slave” station remains idle; and when a reel-change is required, the roles automatically switch.

**Sidel (Canada) Inc. (Laval, Que.);** [www.sidel.com](http://www.sidel.com); 450-973-3337

## AUTOMATION

### Wear-monitoring function simplifies maintenance

A new *wear-monitoring function* for the suction cups now available for all **Wittmann Battenfeld** W8 servo robots is designed to simplify the scheduling of maintenance work.



Previously, the Wittmann R8 robot control system already allowed operators to set the vacuum level on the TeachBox for every individual suction circuit and to save these settings as a part of the process sequence. Now, the updated vacuum analysis function provides an additional advance warning system. Should the vacuum levels deteriorate — which could be an indicator of increasing wear — a warning signal to that effect will be issued. The robot, however, can continue to operate until an actual part loss occurs; or until early remedial action in the automatic system is taken, which