

Orlando blooms

As the Orange County Convention Centre prepares to open its doors on the triennial NPE show, **Paul Hill** asks what visitors can expect to see

Returning to The Sunshine State for the second time since its relocation from Chicago, Illinois, NPE 2015 brings the plastics industry together this month to discuss resins, machinery, packaging and, no doubt, Florida's weather.

This year's event is expected to attract more than 60,000 plastics professionals over five days (23-27 March) and features 2,000 exhibiting companies.

Blow-by-blow account

French company **1 Blow** (S34091) will exhibit a flexible 2-cavity PET blow moulding machine with capacity for up to 4,000 bottles an hour. The compact machine (2 x 2 metres) has the ability to produce standard round and square bottles as well as bottles with neck orientation using standard preforms (for flip-top closures). It can also produce bottles using existing shell moulds from competitive suppliers.

Italy's **Sipa** (W151) will unveil an 80-tonne injection stretch blow moulding (ISBM) machine at NPE, which is said to use up to 30 per cent less energy than the industry average.

The XFORM 300 features an electrically-driven two-platen clamp unit, which accepts moulds with anything up to 96-cavities. At the show it will be equipped with a 72-cavity preform mould, produced by Sipa's own mould-making operation.

Possessing the ability to produce a wide range of preform shapes and sizes, including thick-walled types, the system has also been engineered for quick and easy mould changeovers. In addition, it can be fitted with a post-mould cooling system that, in its DUO configuration, cools the preforms for up to six cycles.

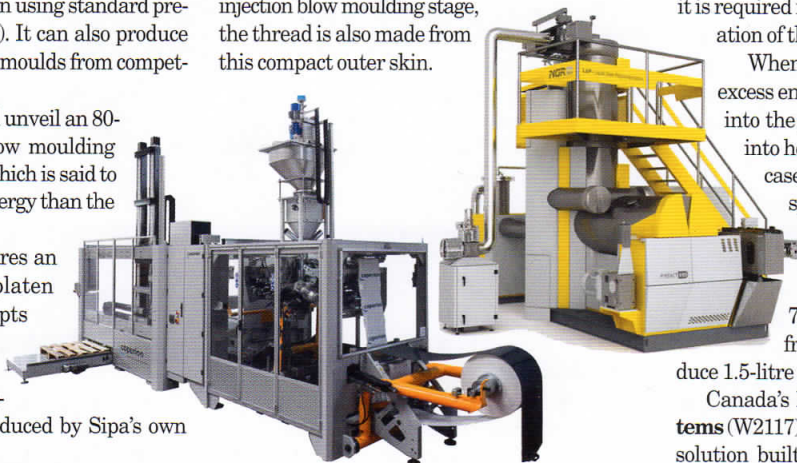
The ISBM system on show is a four-station model, originally developed by Italian PET machine maker Automa, whose ISBM business Sipa acquired last year.

An injection of new equipment

German mould maker **Foboha GmbH** (W4103) will demonstrate, for the first time in the US, the production of preforms using MuCell technology with a cube mould.

The foamed core component generates a metallic effect after blow moulding without the need for added metallic pigments. Based on Plastics Technology's oPTI process, a 2x4-fold cube mould manufactures four PET preforms within one cycle with a shot weight of 124g and a cycle time of 25 seconds.

The mould runs on a two-component injection moulding machine K-TEC 200 Cube with 2,000kN clamping force from **Ferromatik Milacron** (W2703). The machine consists of a horizontal injection unit that is connected with a MuCell system by Trexel. This injection unit blends a gas-nitrogen mixture with the melt and this expands in the mould and generates foam. After a 90-deg turn of the cube, the inner foam is sheathed with a second injection unit. At the later injection blow moulding stage, the thread is also made from this compact outer skin.



Above left: Coperion's IBP 250 provides accurate weighing and dosing. Above right: NGR's P:REACT system follows the design principles of LSP to improve PET properties

Introducing its 'true' hybrid electric injection-moulding machine to the US market, Italy's **BMB SpA** (WZ562) will explain how power savings in the region of 50 per cent can be achieved. Essentially all-electric, the machine features hydraulic accumulated injection, which enables high injection speeds suitable for thin wall applications.

The continued push for energy efficiency in the high-performance packaging industry will be demonstrated by **Engel** (W1303) with the introduction to North America of its e-speed 720 US injection moulding machine. The machine is



based on the all-electric technology of its Engel e-motion and Engel e-cap series, while the electric clamping unit of 720t-tonne hybrid machine utilises a new drive solution.

To avoid power peaks when short cycle times are combined with high clamping forces, a fly-wheel acts as a kinetic energy reserve. This stores the braking energy from the platen movements and transfers this energy back to the motor when it is required for processes such as the reacceleration of the clamping movements.

When the storage capacity is reached, excess energy from the generator is fed back into the grid, rather than being converted into heat by braking, which has been the case until now. This allows the Engel e-speed 720 US to run with a relatively low and above all constant connected load.

At the show, an Engel e-speed 720/90 US with a 4+4 cavity mould from Canada's StackTeck will produce 1.5-litre containers.

Canada's **Husky Injection Molding Systems** (W2117) will use NPE to introduce a barrier solution built on the HyPET HPP5 machine, which claims to allow manufacturers the ability to explore PET as a packaging material for beverages, sauces and other food products yet with the possibility to make cost savings.

Wittmann Battenfeld (W2743) will feature six injection moulding work cells with integrated robots, automation, material handling and auxiliary equipment. A highlight will be the EcoPower 240/1330 machine with in-mould labelling (IML) station, which will mould and label stadium cups.

Part of the KraussMaffei Group, **Netstal** (W903) will also demonstrate the production of stadium cups. The company will demonstrate the production of 44oz cups with IMLs on a hybrid Elion 3200.

From a technical perspective, says the company, the production of drinking vessels is highly