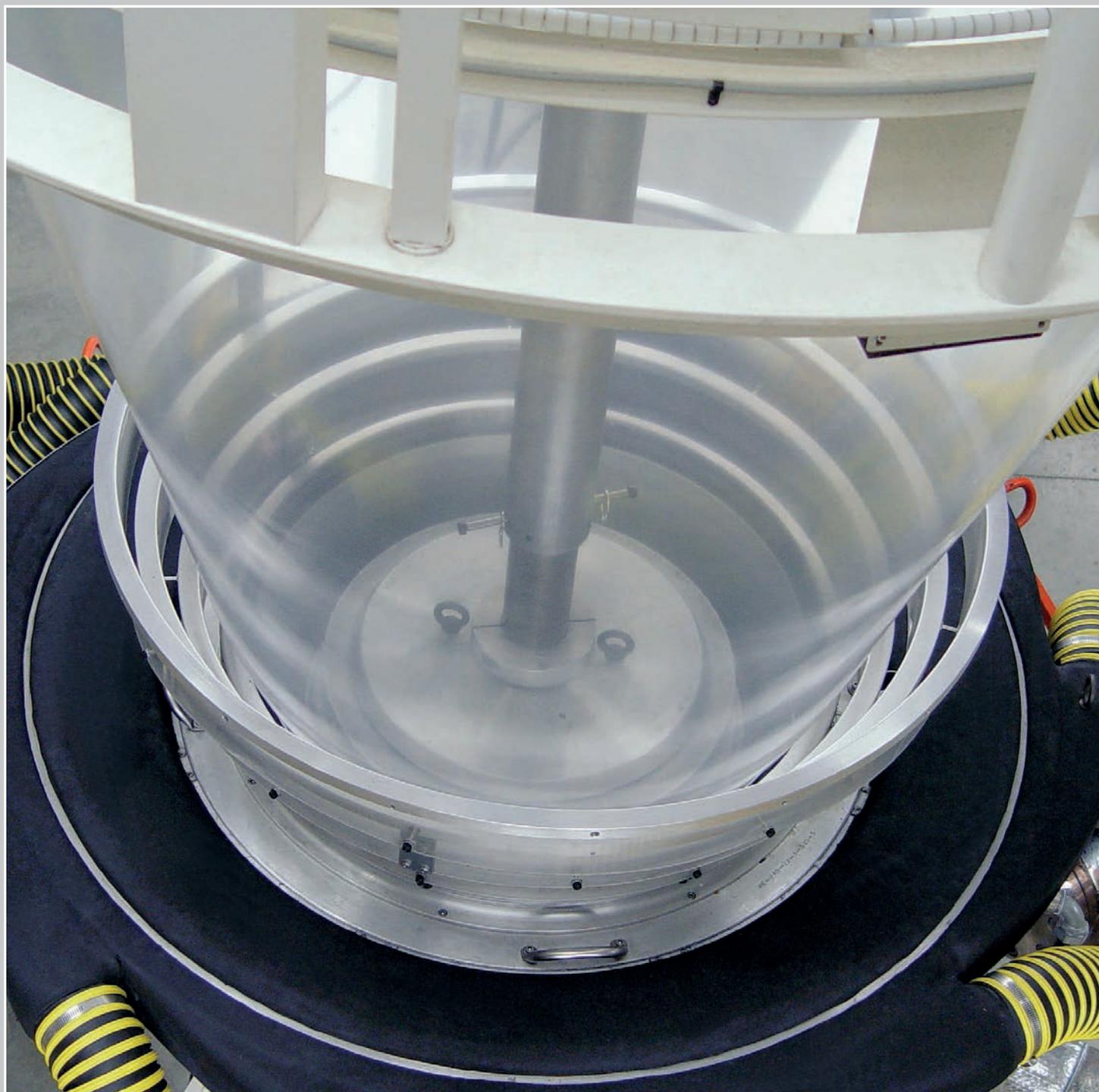


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New flow spiral geometry

DUAL SPIRAL SYSTEMS ■ After extensive development and testing the manufacturer has fine-tuned a new flow spiral geometry called *Hi-Flow 10*, the purpose of which is to reduce blown film thickness deviation by approximately half.



The design development is a result of a re-designed flat spiral capable of distributing polymer melt more accurately over the length of the spiral channel. The net result is an extrusion die capable of producing films with a thickness deviation of only $\pm 2\%$ (2 Sigma) on barrier

film structures containing EVOH/ Nylon, and without a thickness correction device.

The spiral design has been tested in production lines at specific output rates exceeding 1.4 kg/hr/

mm die diameter. Consequently the new spiral geometry has resulted in improved performance over traditional flow distribution technologies and has been incorporated in *Dual Spiral Systems'* multi-layer coextrusion dies.

→ www.dualspiralsystems.com

Roll-to-roll coating

SCHMID GROUP ■ *TetraBlue* is a roll-to-roll coating system which is made for the single side Aluminium coating of up to 2850 mm (112") wide foils for the packing industry.

The machine stands out from its competitors by conceptual improvements and new developments. These are a robust design for long lifetime, an innovative evacuation system, a newly developed efficient

Aluminium evaporator and a capable plasma treatment integrated into a new winding system.

The Schmid Group develop-



ment team paid great attention to the user-friendly design of the whole *TetraBlue* system.

→ www.schmid-group.com

Making flat film effectively and economically

REIFENHÄUSER ■ It is not only a question of optical appearance, but flattened films can be printed, laminated and handled faster and more cost effectively in the conversion processes than would be possible with unflattened films. For this reason, most of the manufacturers of multi-layer films, in particular label film, tube laminate film, surface protection film, and any other type of film to be converted (printed or laminated) are not facing a problem of »whether«, but of »how« to produce truly flat film. The new *Evolution Ultra Flat* module makes this possible and this new *Evolution* module from *Reifenhäuser Kiefel Extrusion* is more effective and economically efficient than all past systems.

The advantage of optimised film flattening system lies mainly in its location. While in the past, flattening units were arranged just in front of the winder, *Evolution Ultra Flat* is installed exactly at the point where optimum processing conditions are available for flattening – between the haul-off and turner bar systems. The advantages of moving the unit to this forward position are: At this stage of the process the film

has a temperature of over 50 °C (122 °F), which means it is still not fully crystallised. During this phase, stretching of the film is much easier and also more energy efficient compared to all other systems available in the market which are used at the end of the process where the film has already cooled down and must be heated up again to approx. 40 °C (104 °F). *Evolution Ultra Flat*, unlike those other systems, uses the »first heat« for stretching which means that the film only needs to be heated up a little. In addition, extreme cooling of the film is avoided due to the longer distance between flattening and winding systems. With energy costs rising, manufacturers will be able to save thousands of Euros a year. The savings potential can be exploited from the first day of production since the investment cost for *Evolution Ultra Flat* is lower than for systems used in the past.

Nevertheless, *Evolution Ultra Flat* offers more than cost advantages. It features high functionality and flexibility at lower investment costs: Heating-cooling rolls designed for independent speed and temperature control allow manufacturers to adjust the amount of

stretch and optimise flattening results, depending on the production process. In addition, extreme sagging of the web can be reduced by targeted control of the rolls. The result is less waste and faster and easier handling in further conversion processes.

Proof of this has been established in trials conducted by *Reifenhäuser Kiefel Extrusion's* developers and customers. Interested customers are invited to visit the technology centre in Troisdorf/D and prove to themselves the advantages of the new system.

→ www.reifenhäuser-group.com

→ www.reifenhäuser-kiefel.com

Enhanced atmospheric surface improvement

VETAPHONE ■ The Danish surface treatment specialist and Coating Plasma Industrie have established a technical and commercial partnership joining together their respective expertise for offering state-of-the-art plasma technology at atmospheric pressure to the benefit of their customers. The direct benefits of this »all-in-one« eco-efficient plasma process are a reduction of costs, energy and impact to the environment.

Enhanced atmospheric surface improvement (EASI) with Plasma is sustained not in air but in a pure nitrogen atmosphere without or with small quantities of dopants gas such as H₂ or N₂O for functionalisation and dopant monomers such as organosilicates for nanocoating. According to Vetaphone, the EASI plasma is more homogeneous and »softer« than corona, with low heat impact to the surface and it enables the realisation of a versatile controlled surface chemistry. Consequently it can be considered as a gas primer replacing efficiently both the use of corona treatment and liquid primer.

→ www.vetaphone.com

→ www.cpi-plasma.com

Our sales people will welcome you at CHINAPLAS 20-23 May 2013 You can find us in Hall 8.1 Stand S55

