

Laced up

Sustainable Nonwovens catches up with Marco Fano, Managing Director, Autefa Solutions, to discover how sustainable production is playing a major part in the company's latest advances in the spunlace sector.

Sustainable Nonwovens:
Can you outline Autefa's latest developments for the Spunlace sector?

Marco Fano: A new hydroentanglement machine with better performance, energy savings and the next generation of machine handling.

Our new V- Jet Futura machine incorporates all these concepts. Showing ways how to increase productivity, quality and at the same time saving energy in Spunlace production lines is a huge topic for our company. Examples for such new solutions are the Square Drum Dryer SQ-V that saves 35 per cent of drying energy, the V- Jet injector which can be operated with up to 20% lower water pressure as well as the patented suction geometry on the V-Jet FUTURA.

As a customer oriented company it is our continuous obligation to offer new ways how to increase productivity, improve quality and at the same time reduce energy consumption as much as possible.

All those energy efficient technologies were recently introduced to the market. We have reached our goal to achieve even better performance with less energy – which is especially important in the hygiene industry, where energy and raw material representing a big share of manufacturing costs. Autefa Solutions offers complete lines for the production of direct and crosslapped spunlace products. The web forming process, consisting of the unique Injection Card and Crosslapper Topliner series, is the key for high and consistent nonwoven fabric quality.

SNW: What are the advantages of this technology compared to previous Autefa technologies?

MF: With the Hydroentanglement Machine V-Jet FUTURA, Autefa Solutions successfully closed the missing link in our portfolio between the very successful Autefa web forming technology and the drying technology.

The Hydroentanglement Machine V-Jet FUTURA and the Square Drum Dryer SQ-V, stands for an advanced and unique technology. This new technology offers a significant reduction of energy consumption compared to any state-of-the-art line. The V-Jet Injector for example decreases the distance between nozzle and injector bottom from 15 mm - 25 mm now to 0.5 mm.

Thus energy losses by friction with air, air turbulences and jet expansion can be

Autefa Solutions Hydroentanglement Machine V- Jet FUTURA and Square Drum Dryer SQ-V.



reduced to a minimum. Autefa Solutions Square Drum Dryer SQ-V combines the advantage of a horizontal belt dryer, and the better drying efficiency with the space advantage of a drum dryer resulting in increased drying length with small footprint.

SNW: A crucial part of high-speed lines is to keep fibres and the process stage under control? How does Autefa enable this?

MF: Autefa Solutions Injection Card enables web forming at very high production. The Injection Card uses a unique combination of mechanical and aerodynamic principles for a gentle fibre treatment. This carding concept joins some benefits of the cotton card with the advantages of traditional cards with workers and strippers.

On the main cylinder, the traditional mechanical principle using workers and strippers has been replaced by an aerodynamic principle. The fibres are taken off the worker rollers by an aerodynamic effect generated by specifically shaped devices, that are replacing the traditional strippers. This avoids considerable mechanical stress on the fibres which results in less fibre shortening and less nep formation.

The Injection Card delivers a quality web at the highest productions with a better MD/CD ratio. With the Topliner CL4006 SL Autefa Solutions offers a crosslapper with special features for the Spunlace application. The highest layering speeds and precise weight distribution are possible thanks to the integrated drafting unit, compensation belt, antistatic equipment and new designed transport aprons. These features are very important especially for lightweight applications in spunlace lines.

SNW: The spunlace sector is becoming increasingly competitive for end product manufacturers. How does Autefa differentiate itself from its competitors when it comes to being the supplier of choice and supplying the most efficient lines for its customers?

MF: In the last year, Autefa Solutions has sold a huge amount of card- crosslapper



Autefa Solutions Spunlace applications.

combinations for spunlace applications. We have done intensive research of our new energy saving V- Jet technology, introduced during ITMA 2015.

It's fair to say that Autefa Solutions is being recognized as a well-established group. We're very pleased about that because of course we carry a lot of responsibility on account of our long-standing tradition. We are committed to delivering machines with the highest quality. Our machines and lines have to perform constantly on absolute top level and last for many years with stable performances.

To make sure that the equipment we deliver works properly, we subject our machines to extensive testing and inspection before sending them out to our customers. Service 4.0 starts in our company with virtual commissioning.

SNW: How does Autefa meet the growing demand for more sustainable manufacturing techniques?

MF: Autefa Solutions still offers machines and lines for more sustainable manufacturing. With our energy and raw material saving solutions, Autefa Solutions contributes to the increasing importance of resource saving. Energy costs are the one of the biggest shares in the conversion cost of spunlace products.

The V- Jet Injector enables customers

to modernize existing production lines with the latest Autefa Solutions hydroentanglement technology. The crosslapper of the Topliner series, combined with WebMax and CLOSED LOOP system prevents the increased weight of the fabric in the edge areas, called the smile effect. This results in an excellent uniformity in the fabric and, thanks to a considerable saving of materials, a reduction in material costs.

SNW: What next for Autefa in terms of nonwovens machinery development?

MF: Worldwide we see some general customer demands in terms for energy savings, higher productions speeds, wider machines and the need to improve embossing functions.

As a supplier of complete thermobonding lines, air through thermobonding ATB lines and spunlace systems, Autefa Solutions combines bonding and embossing/ perforation in a new in- line process.

The thermobonding oven and the new embossing unit are connected which makes high delivery speeds now possible. This continuous process revolutionizes the traditional heat embossing process, increases production speed, minimizes downtimes and optimizes cleaning processes. **SNW**