

Telsonic's Ultrasonic Packaging Technology keeps G's Salad Produce Fresh

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SIEVING



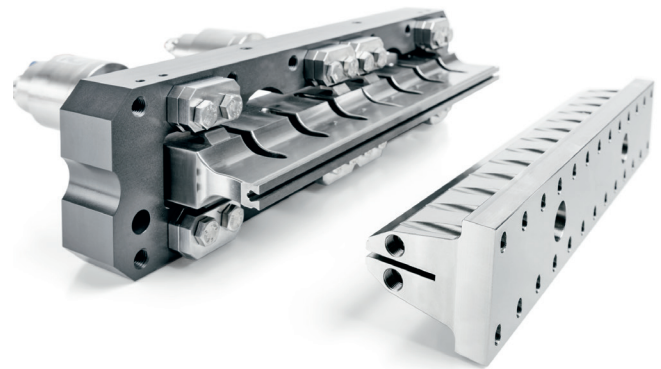
01 Telsonic's VFFS tubular bag module is optimised in terms of rigidity, allowing high production rates whilst delivering consistent sealing quality

Bronschhofen (CH), 7/2024

When we pick up our bags of pre-prepared salad and vegetables in the supermarket, little if any thought is ever given to the considerable effort that goes into growing the crops, harvesting them and the ultimate packaging processes required to present us with the high quality and aesthetically pleasing packs which we see on the shelf. In reality, our ready to eat fresh produce is the result of a partnership between the grower, the packaging machine manufacturer, and the supplier of the innovative technology used to seal the produce within the bags.

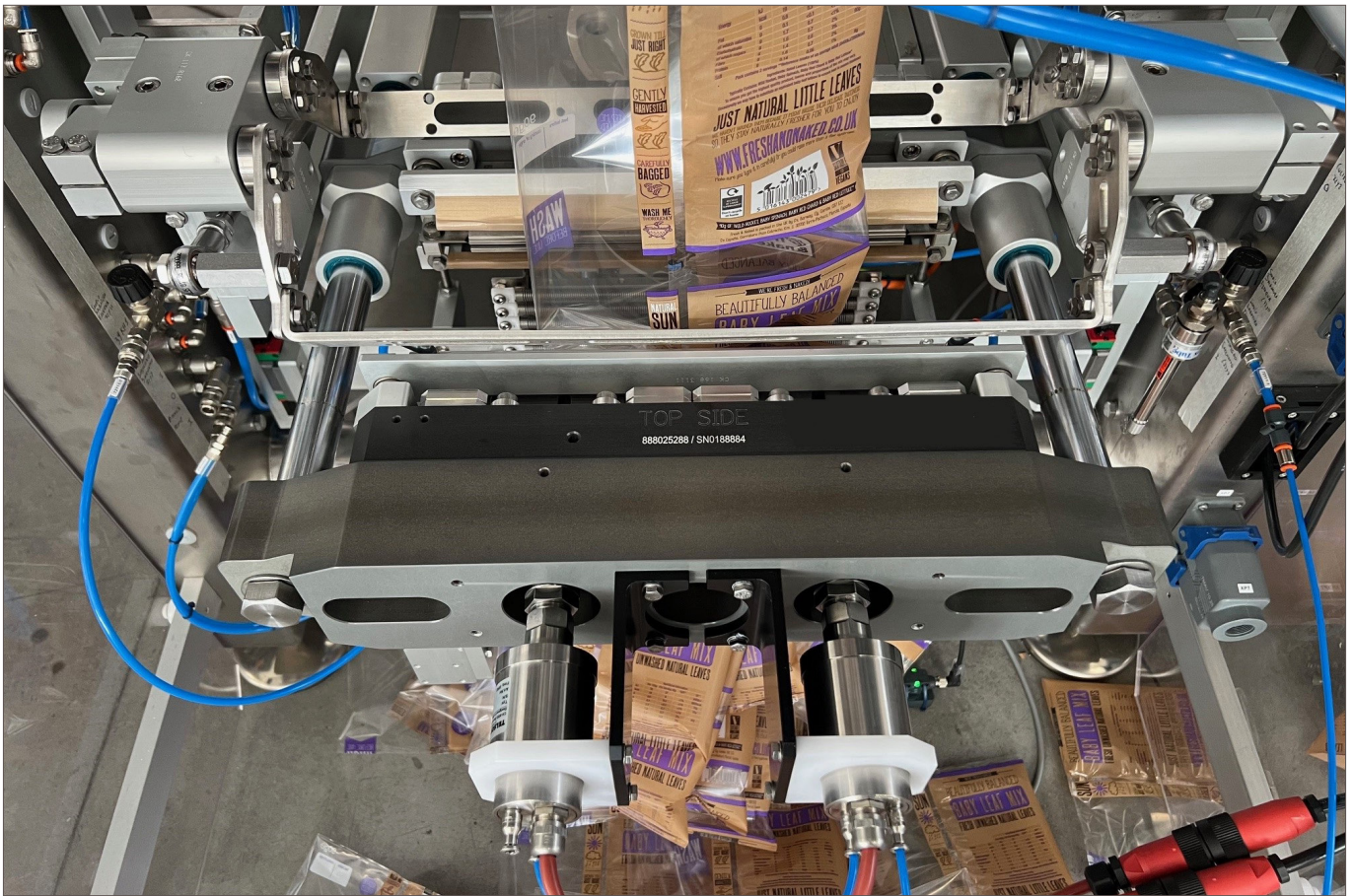
As one of Europe's leading family owned, fully integrated fresh produce companies, G's grows crops over some 17,500 hectares. The company supply's quality salads, vegetables and added value produce to major retailers across Europe, UK and North America. Comek Srl (<https://comek.it/en/>) is recognised internationally as one of the leading manufacturers of a variety of packaging solutions, including VFFS packaging machines. The company's packaging technology is a key component in the production of a diverse range of foodstuffs including fresh vegetables and salads.

In a recent project to package a selection of Wild Rocket, Baby Spinach and Little Leaves for their client G's, Comek turned to ultrasonic technology specialists Telsonic, to develop a robust



solution which would be capable of producing Lap Seals and Fin Seals on packaging film thicknesses of 30 μ , 35 μ , and 40 μ .

Telsonic conducted a series of trials on these materials within their laboratory to determine the optimum parameters such as amplitude, welding time, welding pressure and hold time required to produce consistent and reliable seals. In addition to determining the optimum weld parameters, when sealing and separating tubular bag packaging with low film thicknesses, such as those for this application, the stiffness and structure of the ultrasonic sealing module plays an important role in achieving seal quality and consistency. The design of Telsonic's VFFS tubular bag module is optimised in terms of rigidity, allowing high production rates whilst delivering consistent sealing quality.



02 The result of the trials determined the most suitable parameters for each of the different pack types

The result of the trials by Telsonic's ultrasonic specialists determined the most suitable parameters for each of the different pack types, as follows:

Little Leaves 125g/OPP40/Fin Seal:

90% Amplitude, 140 ms welding time, 3.5 bar welding pressure at 100 mm plunger diameter.

Approximately 60 to 260 ms of holding time.

Baby Spinach Generic 250g/OPP30/Lap Seal:

80% Amplitude, 100 ms welding time, 3.5 bar welding pressure at 100 mm plunger diameter.

Approximately 100 to 300 ms of holding time.

So Organic Young Spinach 200g/OPP25/Lap Seal:

80% Amplitude, 140 ms welding time, 4.5 bar welding pressure at 100 mm plunger diameter.

Approximately 60 to 260 ms of holding time.

During the trials, the anvil was water cooled using a chiller to maintain a temperature of 160 °C. Following welding, all of the sample parts were tested and successfully passed the required 400 mbar

pressure test, conducted over a 20 second duration. The trials also uncovered several important factors such as the fact that the film material being used required best possible mechanical parallelism between the two halves of the tooling if optimum results were to be achieved.

Telsonic's VFFS ultrasonic tubular bag sealing module is designed for easy installation within vertical tubular bag packaging lines, delivering reliable sealing and separation of thin packaging films, such as those typically used for salads or vegetables. The technology can be integrated into virtually any VFFS machine, and used in conjunction with Telsonic's MAG digital ultrasonic generator, the combination ensures high cycle rates thanks to dynamic control.

This application demonstrates not only the capability of ultrasonic technology to provide high quality seals on thin packaging films, but also highlights the benefits of collaboration between the machine supplier and Telsonic, as a reliable ultrasonic sealing technology partner, capable of offering full support from initial contact, through product trials, component specification to commissioning.

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