

NEW

## Head Seam Module – SUP

# Telsonic's Ultrasonic Technology Stands Up To Packaging Challenges

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SIEVING



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The popularity of Stand-Up-Pouches continues as both manufacturers and the consumer alike take advantage of the numerous benefits that this packaging format provides. As the use of SUP's grows, so too does the demand for the technology used to seal these pouches. The latest ultrasonic packaging technology from Telsonic AG is playing a key role, not only in addressing the demand for this efficient technology, but also by providing a customer focused holistic approach to the planning, specification and integration of their systems.

There are a number of attributes associated with Stand-Up-Pouches which are behind the increase in market share that this packaging concept is achieving. On the shelf they provide a greater opportunity for product identification and differentiability and they are generally lighter than many other alternative packaging types which makes for more efficient and cost effective transportation. The concept is also applicable to a wide range of different product types including, sauces, processed foods and pet food plus they are also ideally suited to re-fillable product applications such as soaps or detergents.

Irrespective of the product within the pouch it is essential that the top / head seal maintains its integrity, even in the event that product particulate is present in the seal area, and that the aesthetic appearance of the top seal matches that of any side seals. From a production perspective the sealing technology must be fast, easy to use, quick to changeover for different pouch variants and of course maintenance friendly.

The traditional approach to sealing this type of packaging product has been through the use of thermo-sealing technology. Although a long established method, the thermo-sealing process does have some inherent drawbacks including the time taken to reach optimum operating temperature. This not only increases energy costs but also has a negative impact on productivity. Also, if the heat sealing temperature is too high or the sealing time too long there is the possibility that the film could be damaged which will increase scrap levels. In an increasingly demanding market-place it is essential that sealing technology is able to operate at the highest performance, quality and efficiency levels if manufacturers are to achieve a competitive advantage.



Addressing the shortcomings of the thermo-sealing process are the latest ultrasonic innovations from Telsonic which offer high performance solutions for top / head sealing SUP's based upon an ultrasonic frequency of 30 kHz and up to 2.4kW of power. Powered by the compact digital MAG generator, which can be easily integrated into control cabinets, the modular and space saving design of this technology means that it can be quickly installed within practically all filling systems. There are also options available on drive systems which can either be crank driven via a servo-motor, or pneumatically operated. An innovative quick change system aided by self-alignment features ensures extremely short tool change times, essential if the highest productivity levels are to be maintained.

The servo-motor based drive configuration, which used 2×90 degree crank movements, allows production rates of up to 70 cycles per minute to be achieved whilst delivering a maximum sealing force of 1,850 N. Telsonic's Head Seam Module – SUP is capable of sealing bag widths of up to 200mm and producing decorative seams if required. A combination of cooling devices for the sonotrode and anvil and the highly dynamic control characteristics of the MAG generator together make a significant contribution to the highest levels of process stability and reliability.

The design of Telsonic's Head Seam Module – SUP provides enhanced mechanical stability for extended service life. As a digital platform users benefit from state of the art process control, a wide range of features together with high efficiency and performance levels. Built-in self-check routines and error logs, combined with the availability of fast remote service, ensures that downtime is kept to a minimum. Telsonic engineers and process specialists also work closely with customers from the initial concept stages of a project through component and module specification to installation and commissioning, providing the support needed to ensure a smooth transition to production.

Manufacturers adopting this fast and efficient technology will quickly realise a **wide range of benefits**:

Advantage of ultrasonic technology	Customer benefit
Fast start up	Reduced scrap
Short weld time	Greater throughput
Secure welding – even with product in the seam area	Less scrap and better quality
Minimal heating of sonotrodes	No damage to film or products from thermal effects
Low maintenance system	Much reduced maintenance costs
High energy efficiency	Lower energy consumption and reduced energy costs
Narrow sealing seams	Greater material utilisation and reduced costs