

Business Booms For Telsonic

Telsonic's involvement with the UK spans almost 40 years and during that period the company has not only weathered the significant challenges faced by UK manufacturing, but continued to thrive year on year. This success can be attributed in part, to the Swiss parent company's philosophy of on-going product development that has allowed Telsonic to expand their activities across diverse markets including the automotive and medical sectors.

The recently expanded Poole based UK arm of the company has also evolved from initially, being a supplier of ultrasonic modules and components, to effectively becoming a Joining Technology specialist, providing solutions to a wide range of welding and joining tasks using both ultrasonic and more recently, HACS (Hot Air Cold Staking) technology.

Telsonic UK's managing director David Norton, who has been with the company since 1990, reflects on the changes in approach to component assembly, and the evolution of technologies that have in turn influenced the direction and growth of the UK organisation.

"Without doubt, one of the major drivers of growth for our joining technologies has been the steady increase in the use of plastics within the automotive industry. This has been bolstered further by the constant focus on reducing the number of components in an assembly, effectively eliminating fasteners where possible. This is especially the case on items that do not require disassembly during the product's lifecycle. Many automotive components and sub assemblies, such as door modules and other interior trim parts are made up from several individual mouldings. Welding these parts together not only saves the cost of fasteners, but eliminates the risk of parts becoming loose in service due to constant use or vibration etc. The automotive sector is, and always has been a key element of our business here in the UK. It is a fast moving industry and as a supplier you have to keep pace with developments in materials, processes and assembly techniques."

Telsonic has, over the years, maintained a philosophy of continued product development and as a result built up a comprehensive range of modules and systems which can be used either individually or in combination within volume production welding and joining systems. One example is the company's IPA (Integrated Power Actuator), which combines an actuator, generator and converter in one compact unit. Although not "industry specific" these modules are ideal for integration within special-purpose systems used to produce automotive sub assemblies, where their compact nature makes it possible to have multiple weld points in close proximity.



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David Norton continues “Another growing trend, is the integration of our ultrasonic welding technology with 6 Axis Robots, which effectively takes the process to the part. This concept allows extremely high levels of flexibility, making it possible for users to easily change the positions of weld points or easily add more weld points if required. Set up for new part types using this concept is straight forward, requiring only a new component fixture and a new robot programme.”



The Automotive sector, by its very nature, demands not only a quality and consistent solution but also the most appropriate technology for the job in hand. Telsonic UK looked closely at certain types of application, where the ultra fast cycle times available from their ultrasonic technology were not required. This in turn led to the development of a range of systems using HACS (Hot Air Cold Staking) technology, which are designed and built by Telsonic in Poole. These systems are proving to be a success, with many already installed at Tier 1 suppliers, producing components as diverse as cup holders and seat back assemblies for upmarket SUV's. Several more machines are currently in build.

(Telsonic HACS Systems are designed and built in Poole)

The overall increase in business seen by Telsonic UK, plus the decision to build HACS systems in-house has been instrumental in the company completing an extension which provides a 30% increase in floorspace. As part of this expansion, Telsonic has also incorporated a dedicated customer equipment sign-off area. This provides customers with all of the facilities they need, including a separate room to allow privacy for meetings, and telephone calls etc.

(Telsonics' New Customer Sign-Off Area in Poole)



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The latest initiative within the Poole facility, and due for completion in May of this year is a robotic development cell. At the heart of this cell will be a 6 axis robot that will allow Telsonic UK, and their customers, to trial and evaluate new applications using what is effectively production level equipment. David Norton comments "Having the ability to perform trials where we can not only prove the concepts and technology, but accurately determine for example, process reactive forces and production cycle times will be a great benefit to our customers. The robot will allow us to undertake ultrasonic welding and cutting / trimming trials on a wide range of components and materials."



(The new robot development cell will compliment what is an already comprehensive Laboratory facility in Poole)

Telsonics' ethos of on-going product development means that all of their systems and modules are regularly reviewed, with a view to continually enhancing specifications and performance. In the latest developments, the company's new E-Series range of ultrasonic welding presses offer a host of additional features, which further improve the performance and capability of these already successful systems, whilst enhancing operator ergonomics with a new two finger start system and a touch screen.

From a performance point of view the new press range boasts a high accuracy precision drive and modular design. Set up times for different applications are also much reduced with a new quick-change system and easy height adjustment over a large height range. The new E-Series press range is available with a selection of guarding, loading and tooling configurations including light curtains or pull-down door apertures and sliding tables with quick release tooling. Telsonic E-Series presses can also be supplied ready for automation integration, as actuator only form or as individual components.

(Telsonics' E-Series Ultrasonic Presses Provide Outstanding Performance Levels on Plastic Welding Plus Cutting & Sealing Applications)



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The new presses are available as either linear or torsional welding systems and when linked to the recently launched MAG generators, provide outstanding performance levels on plastic welding plus cutting and sealing applications for a wide range of industry sectors.

The MAG generator range offers many benefits including: ultra-fast response to changing resonance and load conditions and straightforward control via a programmable logic controller (PLC). State-of-the-art bus systems – Profibus and Ethernet - enable welding parameters to be adapted and results to be available in real time. The generator also has an extremely compact installation footprint - “module to module”. In addition, installation could not be simpler with plug and play connections for the mains voltage and signal connection wiring. Telsonics’ MAG ultrasonic generators are available with frequencies of 20kHz, 30kHz and 35kHz, with peak output power ranging from 1.2kW to 4.8kW



Telsonic ultrasonic modules and systems offer unprecedented levels of choice for end users, machine builders and system integrators. The company’s range of ultrasonic modules are also designed to be “automation friendly” allowing easy integration within stand alone systems or sophisticated production lines.

(Telsonics new MAG generators offer a host of benefits including compact and simple installation)

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