

## K Trade Fair – LPW Press Release

The Laser Plastic Welding business unit of Leister Technologies AG is presenting the latest laser technology products and processes at the shared Leister exhibition stand.

Plastic welding using lasers has established itself in the market by now. Welding process developments are therefore increasingly focusing on optimizing the system and tools but less on the processes. Nevertheless, Leister is dedicated to the further development of all aspects.

Leister will present new tools combined with an optics concept at the K trade fair. The concept consists of two base optics that different beam forming modules can be attached to. Points, rings, lines, and surfaces can be easily modeled as a result. The BT (base technology) optics consist only of optical elements while the AT (advanced technology) optics monitor the process with electronic components. Thus, a wide variety of processes can be modeled with both optics. Since Leister offers other optics in addition to this optics concept, it is the largest supplier of processes and process versions from which customers can choose the optimum process for their application.

The optics and laser source are the central tools in a laser welding system. However, the layout depends on the production conditions and the component itself. That is why Leister is presenting not one but two manual workstations at K, differing in size and performance. The NOVOLAS TTS equipped with BT optics is a compact tabletop system. During the trade fair, customers will have the opportunity to use it for welding their own magnifying glasses which they can take with them. The TTS is an example of an integration solution of the Basic AT systems. These systems are designed for integration

and consist of a laser system, optics, and process software. The processing cell of the TTS can be set up separately from the Basic AT compact and is controlled by a PLC that allows the processing cell and the Basic AT compact to communicate with each other.

A NOVOLAS WS-AT combines two processes with each other – GLOBO welding with the through heating method. With the through heating method, transparent films are heated via an additional absorbing component that is positioned under the films. The laser energy is transformed into heat by this absorber and heats the films positioned on the absorber layer by layer. Then the parts are joined under pressure. The glass sphere of the GLOBO optics serves as the pressing tool and final optical element. With additional air bearings, the sphere is guided along the configured contour by an axis system. Various welding contours illustrate the flexibility of the overall process regarding welding seam design and component exchange. The inflated end product to take with you proves the excellent strength of the welds – a balloon for everyone.

Laser welded balloon

