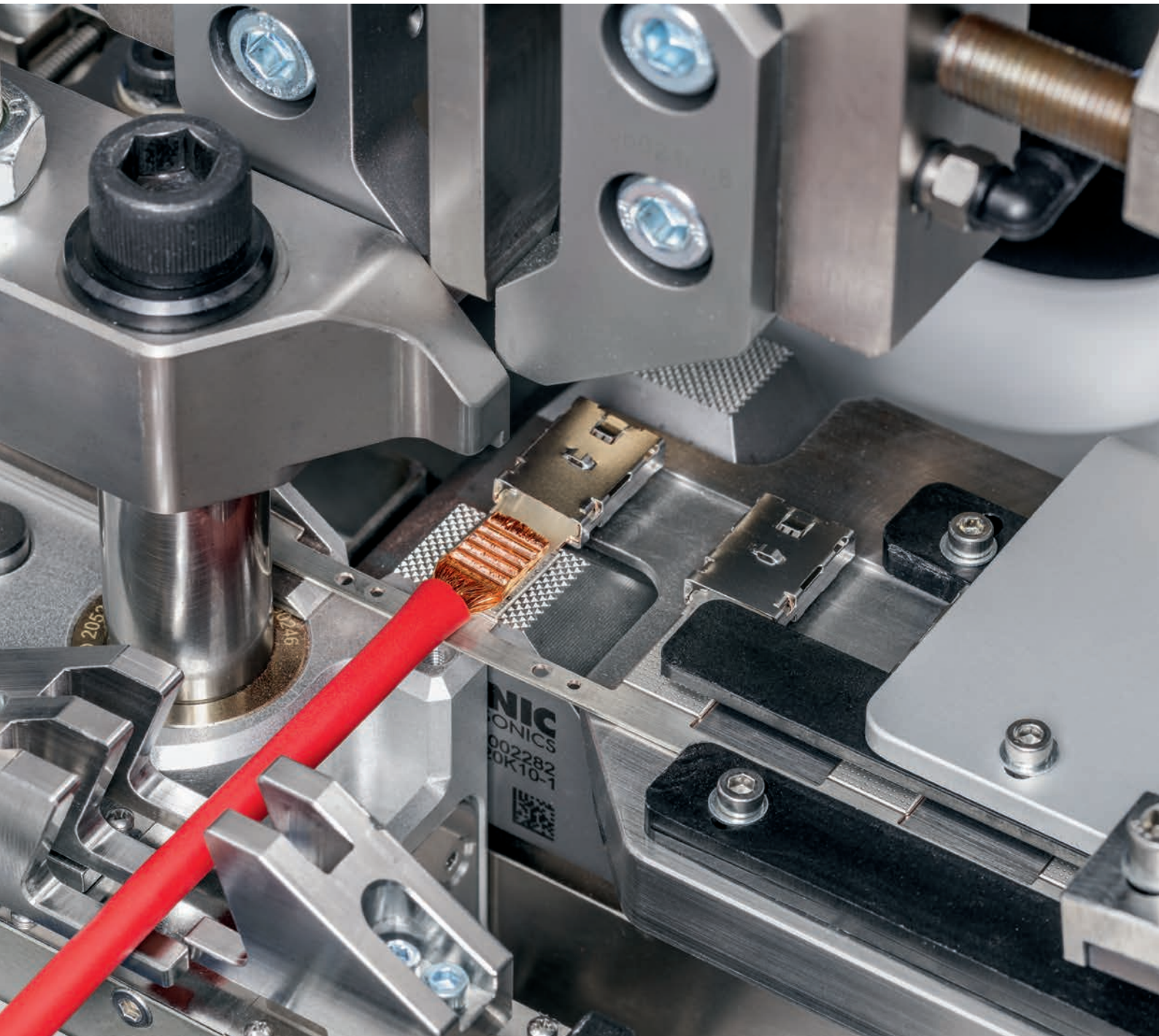
TELSONIC
ULTRASONICS

Product information

MPX Ultrasonic metal welding system



MPX Metal Welding System – Terminals and Foils

The MPX is a versatile system for the production of cable assemblies and battery manufacturing. Thanks to the modularity of the press, various applications can be easily tooled and welded on the MPX universal welding system. An automatic terminal feeder and a crimping module for insulation relief can also be easily added.
The Telso®Flex software is designed for optimum functionality. It is intuitive and it enables the user to have a high level of control over the process. Furthermore, all welding parameters and results are available via modern interfaces, and can be stored externally.

Application areas

In the simplest version, the components of the MPX are integrated into automation lines or used as manual workstations for spot welding, e.g. for battery applications. It is also possible to add standardized modules, which allows more complex tasks to be solved, such as welding automatically fed terminals. In addition, the application can be changed in a few minutes.
The modules have a robust design and are ideal for 24/7 operation.

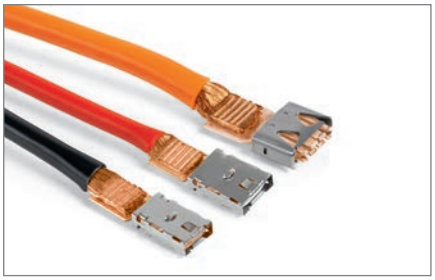
Typical applications

- **Flat terminals**
- **Wall terminals**
- **3D terminals**
- **Terminals with insulation crimp**
- **High current contacts, e.g. MAK**
- **Ground terminals**
- **Power rails & busbars**
- **Battery connections**
- **Foil stacks and connecting tabs**
- **Voltage taps**

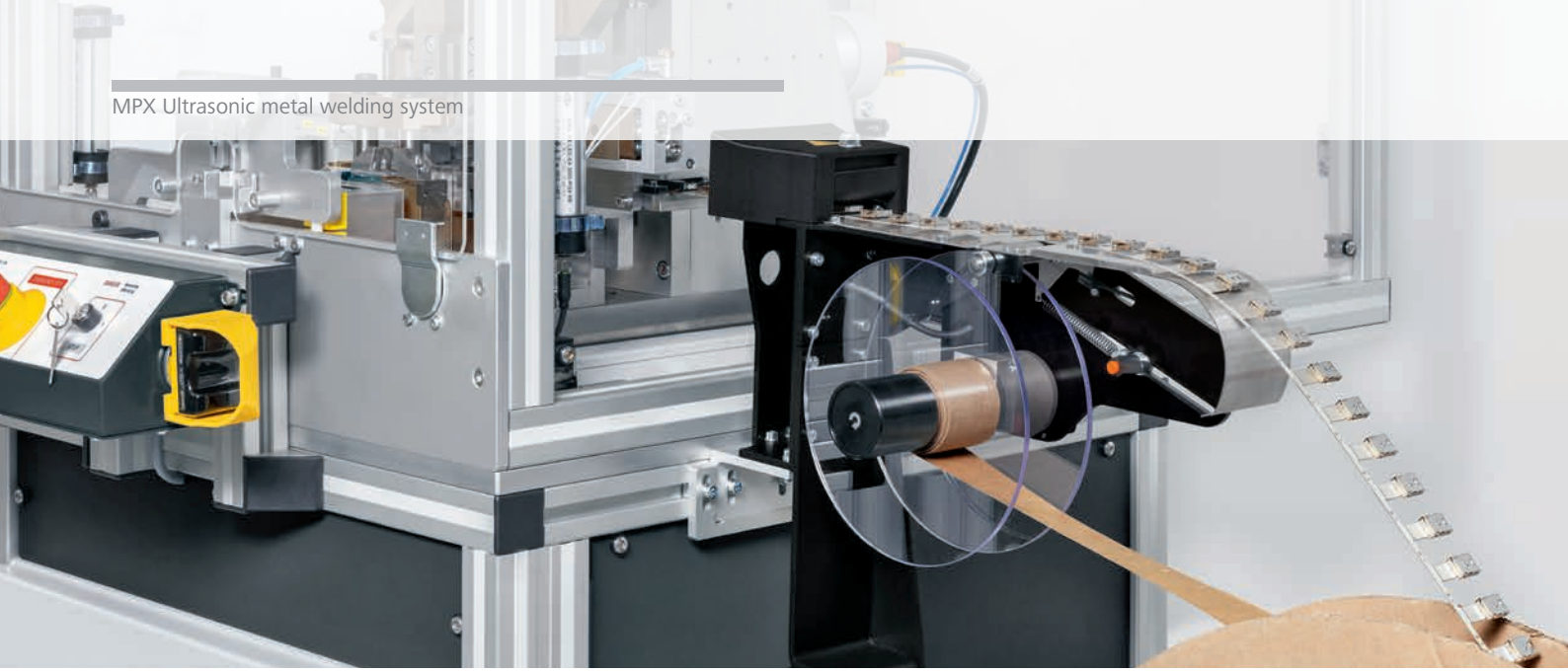
Application examples


Wall terminals with insulation crimp


High-voltage line on 3D terminal


High current contacts

MPX Ultrasonic metal welding system



Automatic feeding of taped MAK terminals

Highlights

SHORT CYCLE TIME, HIGH PRODUCTIVITY

The ergonomic design and durable tools allow short cycles and quick application changes. Options such as automatic terminal feeding and automatic wire clamping further increase productivity.

HIGH PROCESS RELIABILITY

The MPX utilizes precise welding power and displacement measurements. All welding results are checked against the defined limits and clearly visualized. The wire cutter or the scrap box prevents rejects from being reused.

TRACEABILITY AND CONTROL

Each weld is recorded with all parameters and results. Access can be defined via the user rights management in order to make changes.

STANDARDIZED FOR HIGH EFFICIENCY AND LOW COSTS

The tools and components are standardized. The advantage: training, quality control and maintenance are simplified and the number of required spare parts is reduced.

TELSO®FLEX: FORWARD-LOOKING SYSTEM CONTROL

The clear and intuitive user interface allows for just-in-time display of all relevant information.The data can be stored on network drives and FTP servers. The 12" touch panel can easily be operated, even when wearing gloves.

EASE OF INTEGRATION INTO PRODUCTION LINES

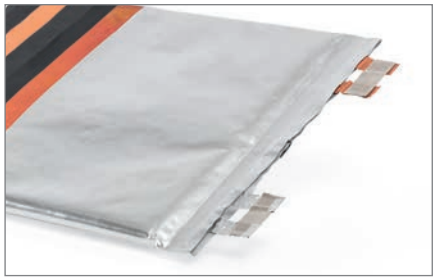
The modular structure of the MPX is designed to allow seamless integration into automation lines. The standardized OPC UA interface delivers all the relevant information. A secure VPN connection provides remote access.

FLEXIBLE APPLICATION SOLUTION

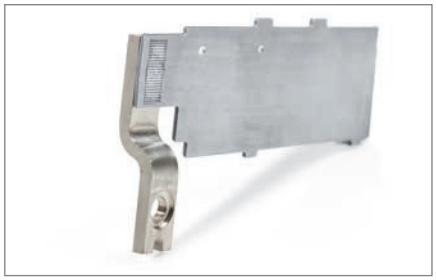
With the "Energy", "Time", and "Distance" welding modes and thanks to the multi-stage welding profiles, the Telso®Flex software offers the necessary flexibility to implement even complex application solutions.

SAFE AND RELIABLE

The robust MPX has proven itself in 24/7 shift operations. The system meets the high safety and ergonomic standards according to CE and additionally offers protection for third parties.



Battery foils and connections

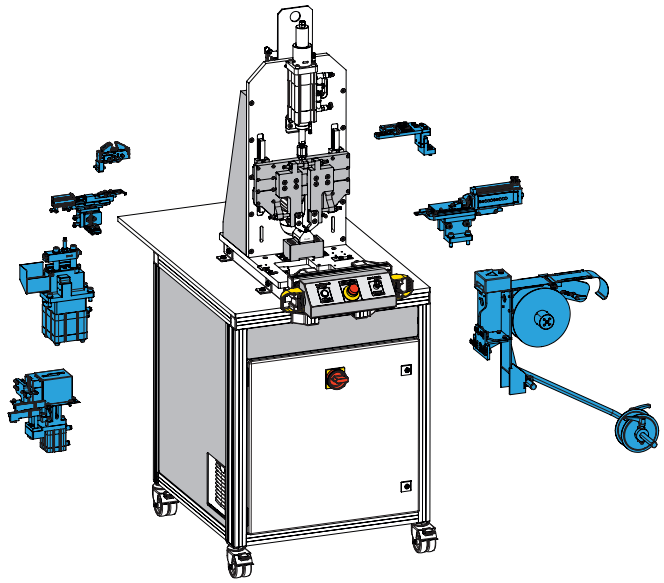


Connecting tabs

Switching contact assembly

Standardized, modular, process-safe

The MPX metal welder is designed to be a modular system. Standardization allows the same system to be used for a wide range of applications. By exchanging a few components such as part positioning mechanism or the sonotrode, the system can be reconfigured for a different application in just a few minutes.



The modular system covers a wide range of applications

Expandable modular system

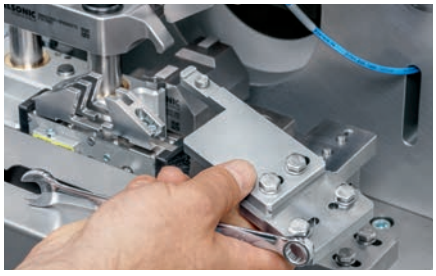
The welding system is built on the foundation of the modular MPX to suit the specific application.

- Advance stroke MPX, two force levels
- Welding generator, four power levels
- Vibration-free anvil
- Hold-down devise for terminal clamping
- Parts positioning
- Wire clamping
- Wire stopper, two types of movement
- Wire position detection
- Wire cutter
- Automatic terminal feeding
- Insulation crimping unit
- Base frame on rollers
- Third-party protection

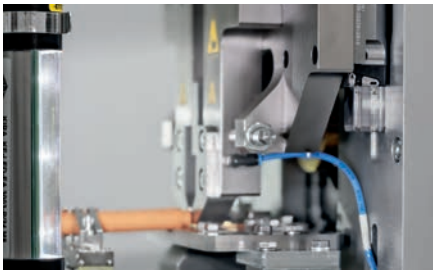
Wire cutter

Wire positioning

Insulation crimper



Quick change application



Illuminated welding room

Automatic wire clamping

MPX ultrasonic metal welding systems

Advance stroke MPX for easy integration into automation lines

Integration into production lines

Integration into production lines requires a clearly defined and flexible interface for hardware and software. The MPX advance stroke was designed precisely with this focus in mind.
With Open Platform Communication, the Telso®Flex software offers a standardized and future-proof interface for all relevant information. This gives the integrator maximum flexibility, while the operator retains control of the process at all times.

Semi-automatic welding presses

A good view of the work area and ergonomically designed processes are essential in enabling operators to carry out their work reliably and without fatigue.
The MPX welding press is designed for short cycles and high productivity and thus optimally meets these requirements.
This facilitates the process parameters developed in the laboratory to be transfered to the automation seamlessly and without the need for changes or alterations.

MPX Semi-automatic welding press

Forward-looking control technology with user-friendly interface

Telso®Flex – the innovative control technology

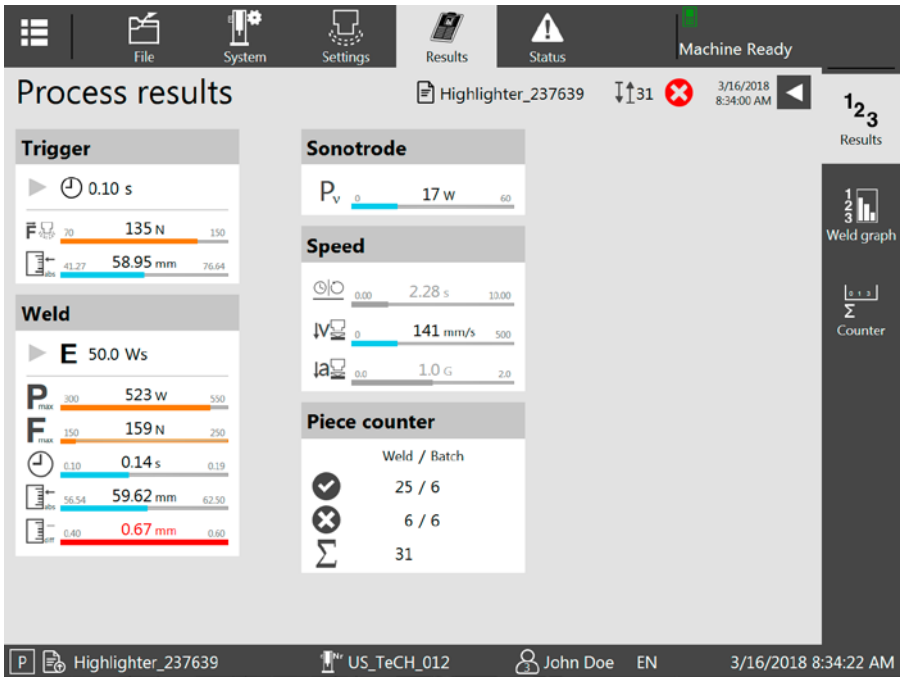
Demands on a system controller can change over time, especially when the production environment has to be adapted. Other interfaces may become necessary or different operating languages may be required due to production relocations which may redefine the process sequence. Thanks to its modern architecture, the Telso®Flex software can be easily adapted to changing requirements. As a result, new functions can be easily installed later as well.

Remote access

Do you want to keep track of the progress of the current production lot or the system status at all times? The standardized and encrypted VPN protocol gives you full access to the user interface. This allows you to remotely check the system status and support the operators via remote access.

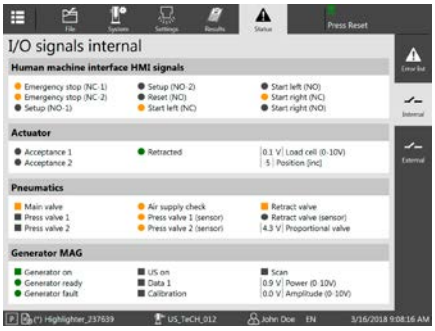
Increase your productivity

Productivity depends on various factors. The Telso®Flex offers various functions that ensure better quality and equally shorter process times. This begins with the design of the application for process-safe parameters. During production, the Telso®Flex enables continuous quality monitoring. The system detects trends, which means that possible production errors can be quickly identified and avoided. Operators also have the option of adjusting the batch size of the packaging unit when producing large batches. In addition, the software offers them valuable information and topic-related assistance, which keeps the downtime for maintenance and service to a minimum.



All welding results and job information are clearly displayed. The results are evaluated by color and trends are visualized.

The welding profile can also be designed in several stages



The sensor and actuator status display helps with diagnostics

Logging, data export and import

To ensure traceability and quality control, all welds are logged - including all parameters and results. The log can be stored locally on a USB stick, network or FTP drive and can therefore be continuously updated.
If customers need support, they can export the error log and have it analyzed by Telsonic. As such, Telsonic offers fast and efficient support - worldwide.

TELSONIC
ULTRASONICS

Your Contact

www.telsonic.com

This brochure may show parts which are available as options rather than as part of the standard equipment. In some cases, safety covers have been opened or removed in order to show machine details more clearly. Subject to changes to dimensions, design and equipment. See separate data sheets for technical data.

Certified to ISO 9001 & 14001

666004066 / 0323 / en / Subject to technical modifications