

MT8000 PowerWheel®

Copper and aluminium cable welding to contact parts



Advantages at a glance

- 10 kW PowerWheel® welding power and 8 kN pressing force
- Excellent access to the welding zone
- Strand welds of up to 160 mm² copper and 200 mm² aluminium
- Up to 30% narrower welds to save material and space
- Greatest amplitude in the splice centre – no wire strand damage in the edge area
- Excellent welding strength
- Simple operation via touchscreen

PowerWheel® uses a new kind of sonotrode oscillating behaviour that is stimulated by a torsional resonator. The welding movements takes place in a rocking, rolling movement directly into the weld. This ensures the maximum amplitude is always in the centre of the welding surface and the power can be applied precisely.

For example, with wire strand connections the PowerWheel® allows the welding splices to be welded higher and up to 30% narrower, without losing strength in the process.

The PowerWheel® permits savings in material, installation area and costs. The robust MT8000 PowerWheel® metal welding press guarantees a maximum of process control. A range of welding modes and trigger types enable optimum ultrasonic welding of large cross sections up to 160 mm² of copper cables and up to 200 mm² of aluminium cables.

The patented construction of the sonotrode and its new oscillating behaviour with 8 kN welding pressure and up to 10 kW power allows substantially more power to be introduced into the weld than conventional process.

Application area and industries

The PowerWheel® technology is suitable for the welding of copper, aluminium, nickel, bronze, brass and other compound metal combinations. The strengths of this new technology are particularly apparent in the automotive industry where, for example, large wire cross-sections are welded on power rails or high-voltage lines in tubular cable lugs.

Features and benefits

- Patented PowerWheel® sonotrode
- Simple operation via touchscreen control
- Pressing force up to 8 kN, welding power 6.5 kW or 10 kW
- Vertical, mobile sound protection for safety and optimal access
- Welding head can be swivelled through 90° for freely selectable welding direction
- Large installation area for additional functions inside the sound protection
- Various available options
- Solid machine construction with stable machine frame
- Massive anvil systems with adjustment options in two axes
- Automatic, software-supported weight compensation
- Process control using precise proportional valve and precise force and distance measurement
- Robust, service-friendly design



Aluminium HV wire 50 mm² to barrel tube lug



Aluminium wire 120 mm² to aluminium busbar



Aluminium cable 85 mm² on angled terminal (copper, nickel-plated)



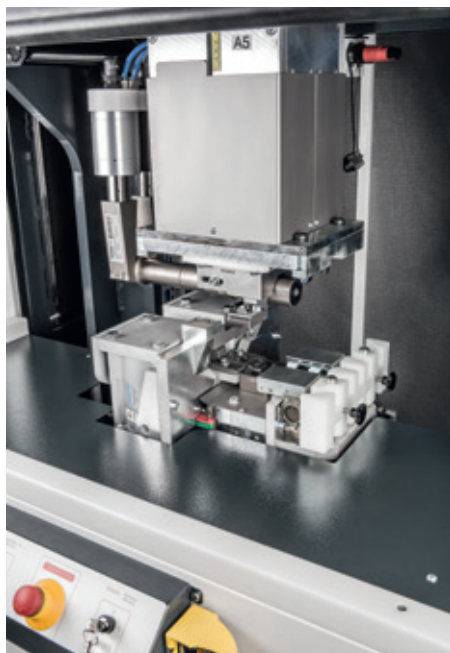
Copper wire strand 85 mm² welded on terminal

Welding press MT8000

Welding force	8000 N
Stroke	80 mm
Welding power	10 kW
Dimensions W x H x D	1500 x 1200 x 2300 mm
Sound-damping hood	Integrated
Various welding modes	✓
Clear method administration	✓
Quality window for process monitoring	✓
Intuitive graphical interface	✓

Options

Bad part cutter	✓
Wire catch	✓
Wire clamp	✓
Temperature regulation anvil	✓



Large opening for optimal access



Userfriendly touchscreen



Robust downholder system with cable clamping



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