



Sonosystems®



Ultrasonic welding

for battery applications

ultra fast. ultra strong. **ultrasonic.**

Our 300 employees worldwide develop and produce innovative ultrasonic welding machines - and, together with our representatives, are always close to our customers. In addition to our headquarters in Wetzlar (Germany), we have locations in Graefenwiesbach (Germany), Boston (USA), Moscow (Russia), Kenitra (Morocco) and Taicang (Jiangsu Province, China). We also have a global sales and service network.



Wire Harness

- Wire / Wire
- X-/Y-Splices
- Cascade
- Ground and high current contacts
- Busbars



Power Electronics

- IGBT Modules
- IPM Modules
- Cell contacting Systems
- Signal Terminals to substrates



Cooling Technology

- Copper tubes for refrigeration circuits
- Capillary tubes for thermostats
- EX-certified



Service

- Technical advice and support
- Process development and integration
- Software development
- Training system



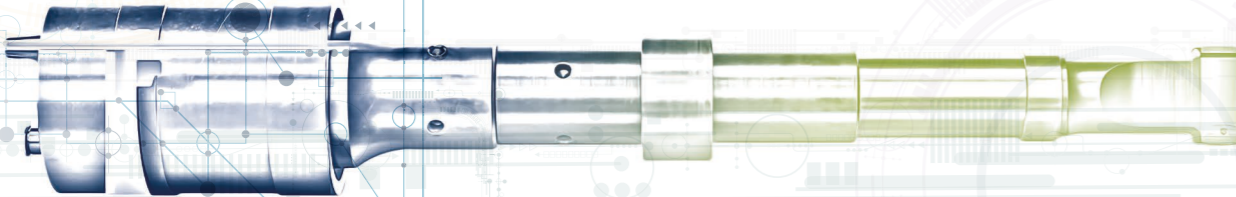
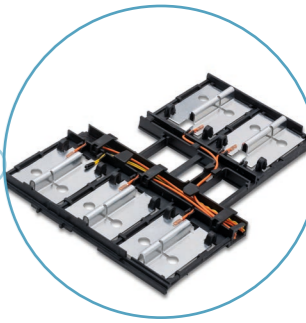
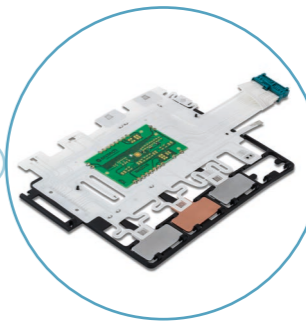
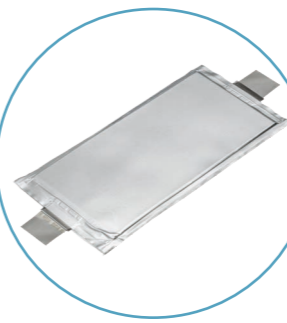
Innovations

- Cutting
- Punching
- Welding of plastics and textiles
- Cut & Seal by combined procedure



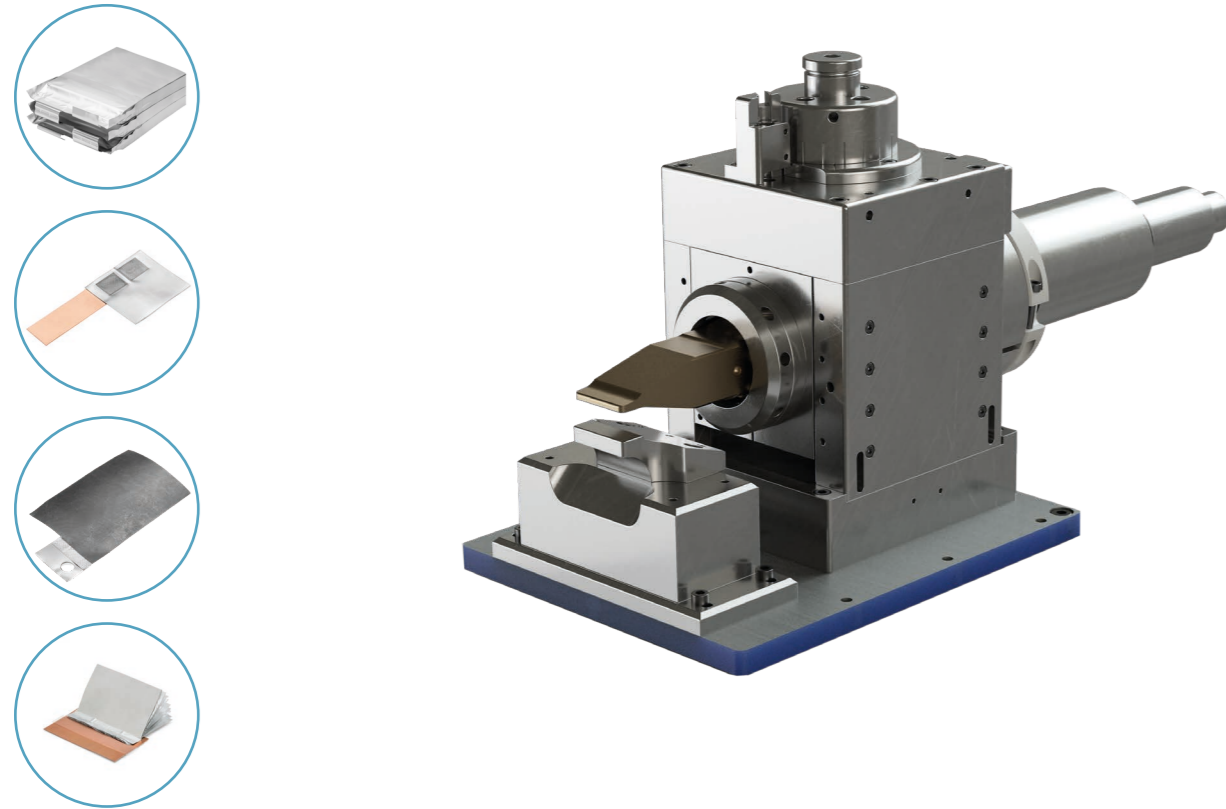
Ultrasonic welding in battery production

In battery technology, Li-ion cells have become widely accepted today. Schunk Sonosystems covers the complete range of applications from cell production to interconnection and battery contacting. No matter whether you use your mobile phone in the morning, drive to work in your e-car or boot up your laptop: Metal welds on Schunk Sonosystems Li-Ion cells reliably accompany you all day long. The range of applications for Li-ion cells extends from ultrasonic welding of thin-walled Al and Cu foils to welding of high-current contacts and wire elements.



C20-B

- suitable for standard cells
- the system has a modular design and can be easily integrated into production lines
- simple and precise adjustment of the upper and lower end stops for the sonotrode
- precision cross roller guide with low friction to ensure trouble-free and high quality operation



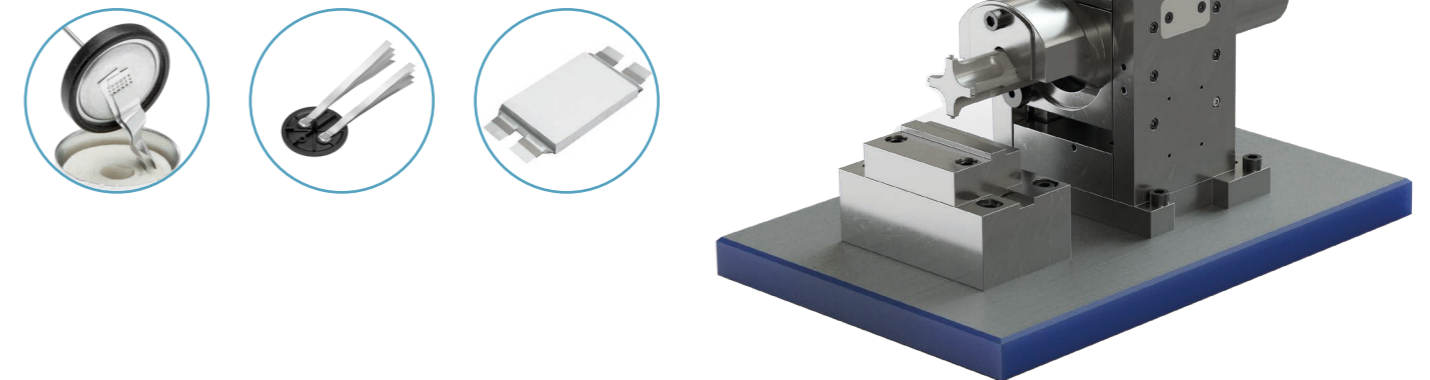
USC-4 Controller

- Power: 3 kW / 4 kW (C20-B), 0,9 kW / 1,2 kW (C35-B)
- Frequency: 20 kHz (C20-B), 35 kHz (C35-B)
- PC & PLC
- various operating modes can be selected via key switch, the operation mode is additionally password protected
- networkable



C35-B

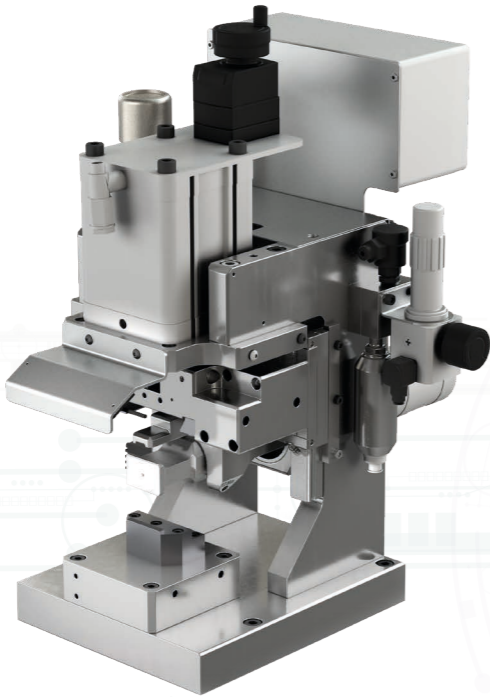
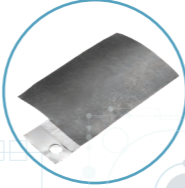
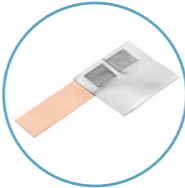
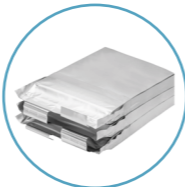
- suitable for supercapacitors and filigree applications
- the precise mechanical design is designed for an operating cycle of millions of welds
- can be easily integrated into production lines
- simple and precise adjustment of the upper and lower end stops for the sonotrode



The C20-B and C35-B machines are each supplied with a USC-4 controller. The DS20-B (see next page) is equipped with a Compact-II controller.

DS20-B

- suitable for welding large cells
- robust frame construction
- modular machine design enables integration into automated production lines
- quick-change system for exchanging the oscillation unit
- optimum accessibility of the welding area
- extensive log file contains all process data



Specifications

	C20-B	C35-B	DS20-B
Stroke	20 mm / 30 mm / 55 mm	20 mm	55 mm
Generator power	3 kW / 4 kW	0,9 kW / 1,2 kW	4 kW / 6 kW / 9 kW
Frequency	20 kHz	35 kHz	20 kHz
Maximum pressing force	3250 N	575 N	> 4000 N
Voltage supply	3 x 400 V, N, PE	1 x 230 V, N, PE	3 x 400 V, N, PE
Compressed air	6 bar	6 bar	6 bar
Dimensions (mm) L x B x H	460 x 240 x 400	270 x 120 x 230	615 x 240 x 560
Weight (kg)	39	50	80 (without controller)

Compact-II Controller

- Power: 4 kW / 6 kW / 9kW
- Frequency: 20 kHz
- PC & PLC
- various operating modes can be selected via key switch, the operation mode is additionally password protected
- controlled cooling of the converter and the sonotrode
- networkable





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