

Ultrasonic Bonding

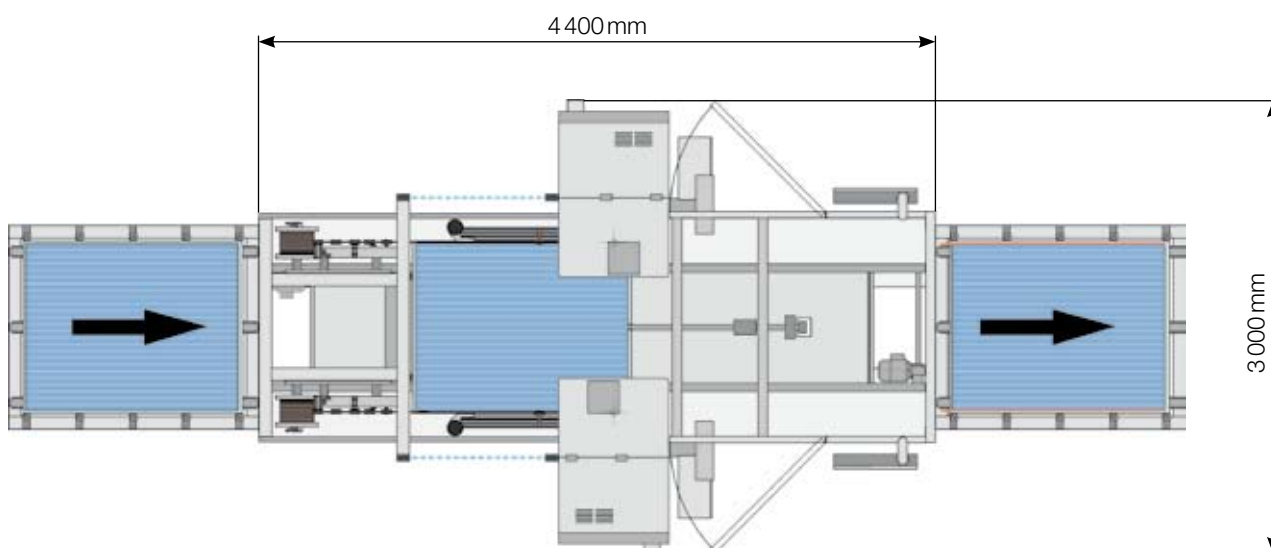
Ready for the future, with ultrasonic bonding from Komax Solar.

komax SOLAR

Technology

Ultrasonic bonding is a proven contacting technology used in the semiconductor industry. It allows solar modules to be reliably contacted without the use of additional materials such as conductive adhesive, solder or flux. This approach helps to eliminate major costs in the production of solar modules. Ultrasonic bonding works with all three thin film technologies.

In ultrasonic bonding, the ribbon (preferably aluminum) is moved back and forth on the back metal at a specific frequency, amplitude and power. The two materials are welded together without any noticeable increase in the temperature of the substrate. The metallic connection between the ribbon and the back metal means minimal contact resistance and great mechanical strength. Extensive reliability tests have proven the outstanding long-time stability of this contacting method.



The two ribbons are bonded to the substrate on the left and right at the same time with two ultrasonic bonders. The most important parameters are monitored on-line during the process. The ribbon is fed from large reels, which makes the unit highly autonomous. Komax Solar also has systems for low voltage modules with multiple contact ribbons.

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Your benefits:

- Cost-effective process (no additional materials, no additional fixation processes)
- Integrated, on-line process control
- Reliable and proven contacting technology
- Short material changeover times
- User friendly design
- Compact design

Komax Solar is your contact partner for all backend needs. The Photovoltaic Competence Center in Rotkreuz offers you solutions for reliable, ultra-precise thin-film technology. Please contact us!