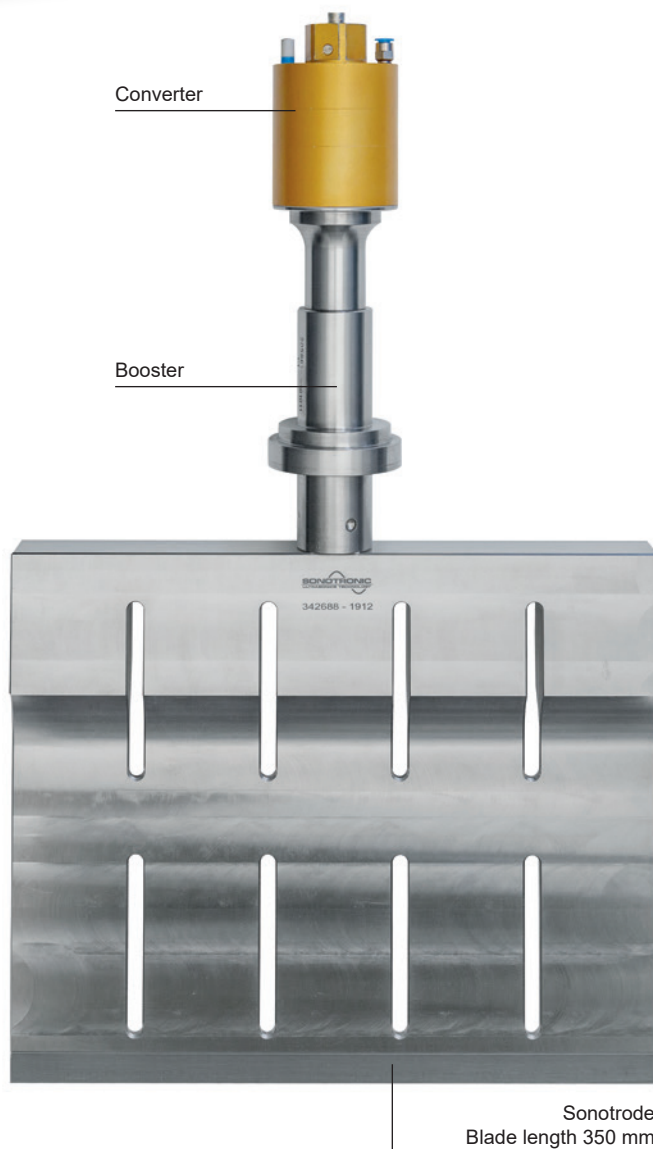


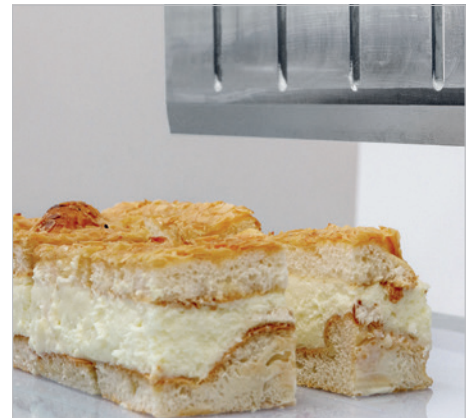
Precise cutting with ultrasonic technology by SONOTRONIC

Ultrasonic technology by SONOTRONIC enables cutting and separation processes for various products in the food industry to be automated. The units and systems can be easily integrated into existing machine concepts. Special tools (sonotrodes), which are made to oscillate by ultrasound, cut the particular product into pieces. As a result of the oscillation and the optional coating, the nonstick characteristics of the cutting sonotrodes are especially good. Cutting with ultrasound makes it possible to cut both very soft and very hard products efficiently.

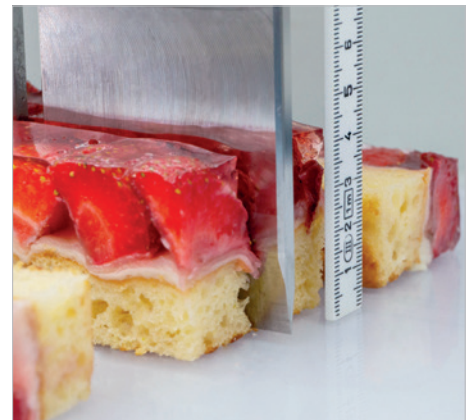
CUTTING WITH ULTRASOUND



Balanced ultrasonic oscillating unit with converter, booster and sonotrode for integration into machine systems for the precise cutting of food



Pleasing cut and form stability



Product-specific cutting geometries



Cutting sonotrodes with little product adhesion and self-cleaning action

SONOTRONIC components portfolio for food cutting

All ultrasonic components are manufactured in our modern tool production centre. SONOTRONIC guarantees highest quality and short delivery times. Whether generators, converters, boosters, sonotrodes, we adapt the tools and systems to your individual requirements.



Generators

The generators convert energy from the electrical grid into a high-frequency sine wave of 35 kHz or 20 kHz. The design of the generator modules in connection with our housing variants and subracks allows the integration into almost every machine concept. The 20 kHz generator offers an output power of 4,000 W and the control parameters are adjustable. It is packed in a very compact format including active cooling. The ultrasonic generators of the iSONIC series and type DN 20 M/MD in the power range from 400 to 4000 W are also designed for the requirements in the high-power ultrasonic range.



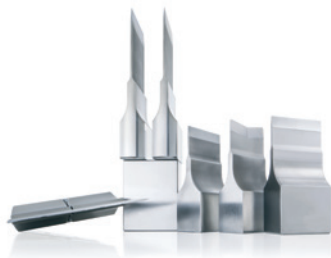
Converters

The converters convert the electrical oscillations generated by the ultrasonic generator into mechanical sound waves. SONOTRONIC offers a wide range of converter types with frequencies of 20 kHz and 35 kHz and outputs from 1,200 to 4,000 watts.



Boosters

The booster is intermediately stored in the converter and the sonotrode. It is used to amplify the amplitude of the mechanical oscillation emitted by the converter and then to transmit it to the sonotrode. SONOTRONIC produces boosters (amplitude transformation pieces) for ultrasonic frequencies of 20 kHz and 35 kHz in various transmission ratios.



Ultrasonic cutting sonotrodes

The sonotrodes conduct the ultrasonic oscillation into the workpiece and are individually tailored to size according to the application. Shape and contour can be adapted to your requirements. The development and production is based on the finite element method (FEM), which ensures optimum ultrasonic processing of the applications. SONOTRONIC offers cutting sonotrodes with a blade length of up to 750 mm and a cutting height of up to 170 mm.

