

**MEDICAL DEVICE INDUSTRY**

**RINCO ULTRASONICS – Ultrasonic welding technology**





## Experienced in ultrasonics

RINCO ULTRASONICS has been a specialist in the development and manufacture of high-quality ultrasonic welding machines and ultrasonic cutting equipment for more than 30 years. Since 1997, the Swiss company has been part of the internationally active CREST GROUP and employs approximately 80 people worldwide.

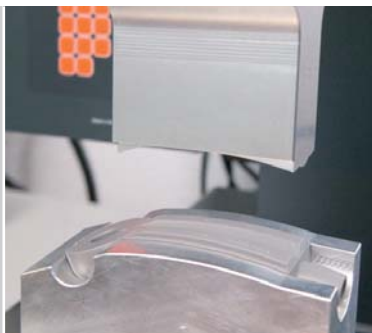
Our long experience in advising and developing solutions for application technology is employed in many sectors. One of the most important and certainly most challenging fields of application of ultrasonic welding and cutting technology is medical device industry.



Ultrasonic welding in cleanroom environment



Welding of a thrombectomy system in cleanroom environment



Left-hand picture:  
Welding of the handhold for  
a thrombectomy system

Right-hand picture:  
Welding of the cap for a  
thrombectomy system



## Various medical applications

RINCO ULTRASONICS has a broad know-how and a large wealth of experience in developing solutions for medical technology applications. Whether it is the joining of thermoplastic plastics or the cutting of synthetic textiles, our wide product range offers the optimal solution for almost every application.



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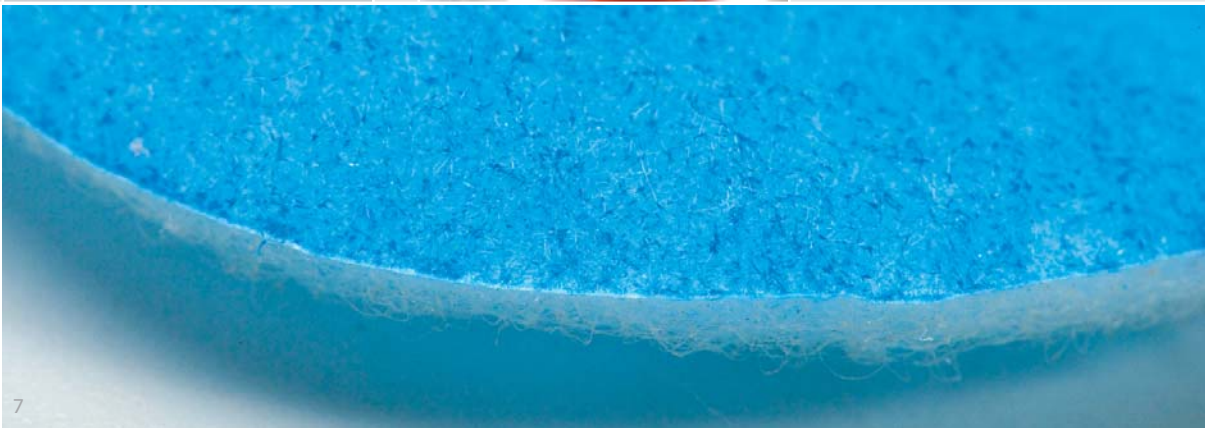


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- 1 Welded joint of an inhaler
- 2 Ultrasonic spot welding for the joining of a plastic tube
- 3 Sealing of a tube on a blood plasma bag
- 4 Ultrasonic punching of a medical tube
- 5 Welding application on an injection
- 6 Welding of a mixing valve for a filter system
- 7 Ultrasonic cutting and sealing of a textile filter



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Ultrasonic welding machine  
*Dynamic 3000 (20 kHz)*

## Highest precision with Dynamic Series

The servopneumatically controlled ultrasonic welding machines of the Dynamic Series have integrated speed and force control. In order to give maximum welding strength to the multiphase structure of semi-crystalline polymers, Dynamic Series machines are also equipped with force profiling whereby plastification during the welding process can be adjusted. This guarantees maximum precision, meeting in particular the high requirements of the medical device industry.

## Welding in the micro sector

RINCO ULTRASONICS is the absolute market leader in the 70 kHz-frequency range! The *Standard 50* was specially developed for small welding applications. The small tabletop unit is also often used in medical device industry for bonding filigree plastic parts. Like all RINCO products, the *Standard 50* has a modular design and can therefore be easily integrated into special purpose machines and production lines.



Ultrasonic welding machine  
*Standard 50 (70 kHz)*



## Absolute process control



Clean and constant welding results are vital prerequisites for the production of medical products. In addition, it is important that the welding process is accurately logged and can therefore be reproduced to the last detail. The peripheral software *ACUcapture* makes this possible! Parameters, measured values and process graphics can be easily

The ultrasonic welding machine *Dynamic 745 Cleanroom* is suitable for welding operations in cleanroom class 7 (ISO) and 10000 (FED) respectively.

transferred from the ACU generator to the processor unit and statistically evaluated. *ACUremote* allows the user to change parameters externally and this facilitates remote maintenance. Both programs work over the serial interface RS232 and over the Ethernet.

Dynamic machines can be calibrated, enabling their incomparable precision to be converted into long-term optimal welding results.



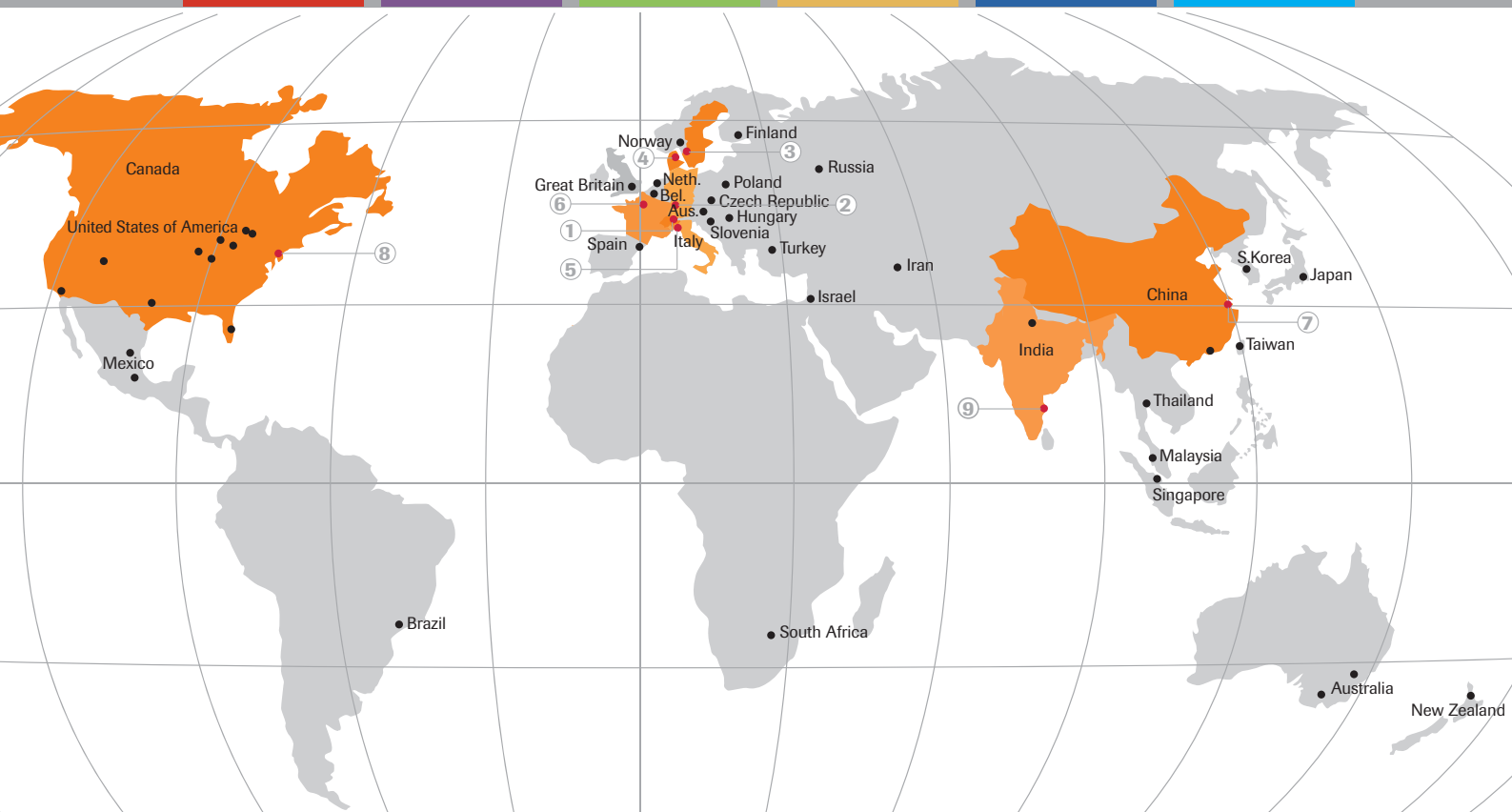
## Automated welding



RINCO ULTRASONICS is also the ideal partner for system integrators and special purpose machine builders. Beyond our AGM generator as a link to the works' own PLC, we provide different components and special actuators for

automated welding and cutting applications. It goes without saying that our customers not only benefit from high quality products but also from our integration consultancy.

Ultrasonic special actuator *SPA* (20 kHz)  
Ultrasonic special converter *SPC* (35 kHz)



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