



[UCM ultrasonics®](#) is a leading manufacturer of ultrasonic food cutting machinery based in Milan (Italy). At UCM we apply the skills and expertise achieved in the ultrasonic cutting technology to the food industry, by designing and manufacturing the full range of cutting components (also available for separate purchase) as well as standard or bespoke food cutting machinery.

BENEFIT FOR THE CUSTOMER:

- A single interlocutor and supplier.
- Full exploitation of the ultrasonic technology as directly designed by UCM ultrasonics®.
- The most competitive prices for ultrasonic cutting components and machines on the market.
- Quick resolution of the problems.
- A remote assistance system designed by UCM ultrasonics® provided on all ultrasonic cutting machines.
- 24-hour real-time assistance in the use of the machines.
- 90% real-time resolution of the problems.
- Minimization of production downtime.
- Our [ultrasonic cutting components](#) are designed and constantly improved for the food cutting industry.
- A single high-tech ultrasonic generator to be run remotely or by digital I/O.
- Our [ultrasonic cutting machines](#) are 100% servomotor-driven. NO PNEUMATIC ACTUATORS.
- Both ultrasonic cutting components and ultrasonic cutting machines are permanently and real-time connected to our data server, which monitors their behavior.
- A UNIQUE 24-HOUR REAL-TIME ASSISTANCE SYSTEM TO AID THE CUSTOMER IN THE USE OF THE MACHINE AND COMPONENTS.
- BOTH THE MACHINERY AND THE ULTRASONIC CUTTING COMPONENTS SHARE THEIR CONTROL SYSTEM BETWEEN THE CUSTOMER AND UCM ultrasonics®.

UCM ultrasonics[®] is a prominent company dedicated to enhancing the quality of food cutting through consistently updated **ultrasonic cutting equipment**, typically comprised of:

Ultrasonic Generator: This component converts the electrical supply into a high-frequency electrical signal. This signal is then used to drive the transducer.



Transducer: The transducer, made of piezoelectric ceramics, converts the high-frequency electrical signal into mechanical vibrations.



Booster: This component can amplify the mechanical vibrations generated by the transducer.



Cutting Tool (Blade): This is the part that comes into direct contact with the material being cut. The blade vibrates at the ultrasonic frequency, which reduces the friction between the blade and the material, allowing it to cut through the material cleanly and with less force.



ADVANTAGES OF ULTRASONIC FOOD CUTTING:

Ultrasonic food cutting technology offers a modern solution to many of the challenges faced in food processing, providing both producers and consumers with higher quality products. It is particularly beneficial for products that are delicate, sticky, layered, or filled, where traditional cutting methods might struggle to maintain the product's integrity and appearance. Here's a summary of the advantages and the types of products suitable for ultrasonic cutting:

1. **Precision:** Extremely thin and consistent slices.
2. **Cleanliness:** Reduced smearing and sticking to the cutting tool.
3. **Efficiency:** Faster cutting times and reduced downtime for cleaning the cutting tool.
4. **Filling Protection:** No displacement or squeezing of the fillings during cutting.
5. **Integrity Preservation:** Minimal dragging, shattering, or deformation of the products.

SUITABLE PRODUCTS FOR ULTRASONIC FOOD CUTTING:

1. **Cooked tuna and sushi.**
2. **Confectionery:** Cakes, cheesecakes, pies, Swiss rolls, pastries, cookies, brownies, candy bars, soft candies, candied fruits, etc.
3. **Bakery:** Bread, sandwiches, wraps, tortillas, pizzas, focaccias, etc.
4. **Frozen Products:** Like frozen cakes, confectionery and bakery items.
5. **Nougat and Nougat Products.**
6. **Snack Bars:** Including healthy bars, granola bars, cereal bars, etc.
7. **Pasta:** Such as lasagna sheets and other pasta products.
8. **Cheese:** Especially soft and semi-hard varieties.
9. **Products containing fillings,** such as jams, creams, nuts, chocolate chips, dates, dried fruits, etc.

REMOTE ASSISTANCE SYSTEM:

We have developed a remote assistance system that allows us to have total control over the machine's status in real-time.

Each machine is equipped with a mini-server, placed inside the electrical panel. The device connects to our server in an encrypted and completely secure manner, enabling us to monitor the machine's operation and check and effectively optimize the machine's parameters. Additionally, it enables us to operate on the touchscreen simultaneously with the operator, facilitating the teaching of the machine's operation whenever the customer requires it.

Furthermore, a camera that monitors the cutting station is installed on each machine. The combination of images and data allows us to have complete control of the machine.

WASHING OF THE MACHINE:

For the dairy and fish industries, the machines are designed so that the conveyor and the lower part are washable. The electrical cabinet is placed on the roof of the machine. The conveyors have a tilting head, enabling an operator to completely loosen the belt. This way, the operator can easily wash both the belt and the conveyor frame.



Tuna fillet cutting machine