

ULTRACUT 2.0

Precise. Robust. **Food Certified.**

New solutions for safe & clean
cutting of food





ULTRACUT 2.0 – Precise. Robust. Food Certified.

Traditional food cutting technologies face numerous challenges, including high component wear and frequent replacements, resulting in substantial maintenance costs. Furthermore, product adhesions, deformations, and increased residue formation lead to reduced quality and elevated waste rates.

Many food products also present a challenge due to their temperature sensitivity, which restricts the allowable processing window.

In this white paper, you will discover a safer, efficient, and more sustainable way to cut your products with the new ULTRACUT 2.0 system from Herrmann Ultraschall.



Why cut with Ultrasonic?

- High and precise cutting quality
- Short downtime
- Low maintenance costs
- Certified for food

Ultrasonic technology enables a very high cutting quality while simultaneously allowing for precise material separation. With ultrasonic cutting, there is no pressure-related deformation on the product, and there are fewer product adhesions. This leads to less waste during the cutting process.



Ultrasonic technology enhances machine efficiency by enabling significantly higher process speeds. Furthermore, it dramatically reduces maintenance costs and production downtime by minimizing wear on components. This eliminates issues associated with traditional methods, such as rapidly dulling blades and broken wire cutters.



Reduced pre-cutting cooling and a temperature-stable cutting process contribute to lower energy consumption.

The ULTRACUT 2.0 system delivers reliable, high-quality cutting for a wide range of products, including cakes, chocolate, cereal bars, and cheese, ensuring consistent results in any production environment.



Certified for food applications

Our ULTRACUT 2.0 system complies with the current EU standard for food contact materials and can be easily used in your production.

The cutting sonotrodes are made of titanium and approved for contact with food. Compliance with Regulation (EC) No. 1935/2004, German Civil Code (BGB) I p. 4253; 2022 I p. 28, Resolution CM/Res(2020)9 and its supplementary technical guideline has been confirmed by an external laboratory.

This makes it easy for you to maintain your quality standards and cut your products safely.

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02.10.2024
Dr. Dr. Thoma

UNBEDENKLICHKEITSERKLÄRUNG
CERTIFICATE OF COMPLIANCE
CERTIFICAT DE CONFORMITE

eingetragen registriert no. registré	63083 U 24
für für pour	Herrmann Ultraschalltechnik GmbH & Co. KG Descenstr. 3-11 76307 Karlsbad
Produkt Product Produit	Titan Ti6Al4V VNL 3.7184 Artikelnummern 4009980, 4008712, 4008504, 4009222, 4011353 und 4010517

Das von der oben genannten Firma hergestellte Produkt ist eine Titanlegierung, welche zur Herstellung von Schneidsonotroden für Lebensmittel verwendet wird.

Sie wurde von uns nach den spezifischen Vorgaben der Technischen Leitlinie

Metals and alloys used in food contact materials and articles - A technical guide for manufacturers and regulators, 2. Auflage 2024,

auf den Übergang bestimmter Elemente geprüft.

Das Produkt entspricht den Bestimmungen der

Verordnung (EG) Nr. 1935/2004 des Europäischen Parlaments und des Rates vom 27. Oktober 2004 über Materialien und Gegenstände, die dazu bestimmt sind, mit Lebensmitteln in Berührung zu kommen und zur Aufhebung der Richtlinien 80/590/EWG und 89/109/EEWG, Amtsblatt der Europäischen Union L 338 vom 13.11.2004, zuletzt geändert durch Artikel 5 der Verordnung (EU) 2019/1381 vom 20. Juni 2019, Amtsblatt der Europäischen Union L 231/1 vom 06.09.2019, Artikel 3, Absatz 1 a) und b).



How does ultrasonic cutting work?

- Simple and robust principle
- One large cut divided into a thousand small cuts
- Minimal product deformation

The principle of ultrasonic technology is very simple and essentially consists of two components – the generator and the oscillating structure.

The generator transforms the low-frequency voltage of 50/60 Hz from the power grid into a high-frequency signal of up to 35 kHz. In the oscillating structure, this electrical signal is converted into a mechanical movement. The cutting tool – the sonotrode – moves up to 35,000 times per second with a small deflection in the cutting direction. One large cut is thus divided into thousands of small cuts.

Less force required compared to mechanical processes leads to less deformation of the cut material. The reduced friction of the small cuts results in a smoother cutting surface and significantly less product adhesion to the cutting tool.



ULTRACUT digital

The secret star in the background – our ULTRACUT digital generator. Optimized for use in food cutting, it guarantees maximum performance and reliability. Compatible with all common fieldbus protocols, it can be integrated into your production facility seamlessly.



Our ULTRACUT 2.0 system – your success story

- Benefit from over 60 years of experience in ultrasonic technology
- Increase your production efficiency
- Integrate our solution into your existing systems

Herrmann Ultraschall has decades of experience and outstanding expertise in the field of ultrasonic technology. An established standard product portfolio contributes to effective solutions. High quality standards in manufacturing guarantee trouble-free operation in the field and long operational time. Customer-specific cutting applications can be investigated and tested in our in-house application laboratory.

Practical Examples – Optimizing Maintenance Intervals and OEE sustainably

Consider a practical example: a bar manufacturer previously relied on mechanical blades for cutting. This resulted in unsatisfactory cutting quality and required blade replacements multiple times per month. By implementing the ULTRACUT 2.0 system, the manufacturer experienced a dramatic improvement in cutting quality and extended maintenance intervals to 18 months. This case demonstrates the significant benefits of transitioning to ultrasonic cutting technology.

In another application, switching from wire cutting to the ULTRACUT 2.0 system improved machine capacity and OEE by 5%.

Both examples illustrate how the ULTRACUT 2.0 system can also add value to existing systems. Join us in writing your own success story!



Your benefits at a glance

+ High and precise cutting quality

No sticking or deformation of the product. Our ULTRACUT 2.0 system ensures flawless cutting quality in your production – whether you are cutting cakes, chocolate bars, or cheese

+ Low maintenance costs

Our component design ensures extended operational lifespan, leading to minimal maintenance requirements and significantly reduced production costs.

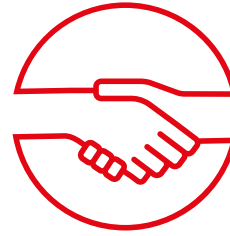


+ Short down-times

Designed to last. Our technology enables what matters most- a high-quality cutting process with minimal downtime.

+ Certified for food

Our ULTRACUT 2.0 system is certified according to current EU standards for use in the food industry. This ensures that your cutting process meets your high quality standards.



Benefit from your Trusted Advisor

Change now and cut your products more efficiently!

The ULTRACUT 2.0 system is a simple way for companies in the food industry to cut more efficiently and sustainably.

A key advantage is the ULTRACUT 2.0 system's adaptability to existing mechanical cutting setups. Our Trusted Advisors provide comprehensive support throughout every project phase, including ultrasonic parameter optimization, seamless integration, ongoing maintenance, and thorough training.

Make your cutting process precise, robust, and safe. Contact us to explore the transformative power of the ULTRACUT 2.0 system in your production.

Questions? We are here to help!

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Impressum



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