Machining and ultrasonic cutting of honeycomb core

The CRENO 2 in 1 solutions has been specifically designed to increase productivity and quality of your products. The 2 in 1 process consists of a mechanical milling combined with the ultrasonic cutting all in 1 machine. The Creneau offers a turnkey solution as well as on multi-axis machines or on robot.

For 6 years, the process is used and continuously improved by our R&D department. It offers many advantages such as reduced investment, flexibility, versatility and less floor area occupancy. In only one machine, you can realize complex shapes using mechanical cutting where the ultrasonic cutting would not be suitable.

Our machines combined an electro spindle, able to process composite and honeycomb core materials with ultrasonic cutting heads. This combination brings high quality and accuracy to your production. The process offers a traditional roughing and ultrasonic cutting finishing. Both of cutting process are transposable, adaptable and complementary depending on the uses.

Advantages of the ultrasonic cutting:
- Reduces materials wastes and avoids chips
- High profile accuracy
- Brings higher part quality with no deformation of the honeycomb structure
- Smooth cutting edges (Chamfer edge up to 1 mm (0.04”))
- Increases productivity

Creno acquired a real know-how which brings us as a key player in combined machining. Our teams will support you in every step of your project and will help to define the best process for your requirements.

ABOUT LE CRENEAU INDUSTRIEL
Le Créneau Industriel has 40 years of experience in the development of innovative machining solutions, providing our customers worldwide, especially in the aerospace industry, state-of-the art machines and process. This is made possible through an ambitious R&D development program, with a dedicated in house R&D team and numerous partnerships. Le Créneau Industriel is dedicated to provide local support to customers with technical teams in Europe, USA and Asia.

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The ultrasonic cutting is a process using a very high speed vibration at an ultrasonic frequency (not hearable by the human ears) of a cutting device. The power is created by a generator. The electrical power is then converted by a converter into a mechanical pulse, amplified by a booster and transmitted to a cutting device. Vibrating 20 000 times per second, the cutting device significantly reduces the blade penetration effort into the product and allows perfect control of the position of the products and thus gain accuracy.

**Ultrason heads**
- HSK attachment
- Integrated tool cooling system
- Storage in tool magazine
- Specific interface

**Parts holding**
- Vacuum table
- Porous carpet
- Adhesive film
- External preparation table

**CAM Software**
- Cutting strategy
- Nesting
- Simulation
- Post-processing

**Generator**
- Power 1 200W
- Frequency 20 000 Hz with automatic frequency adjustment

For more information on Le Créneau Industriel solutions or to request a demonstration, contact us at

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