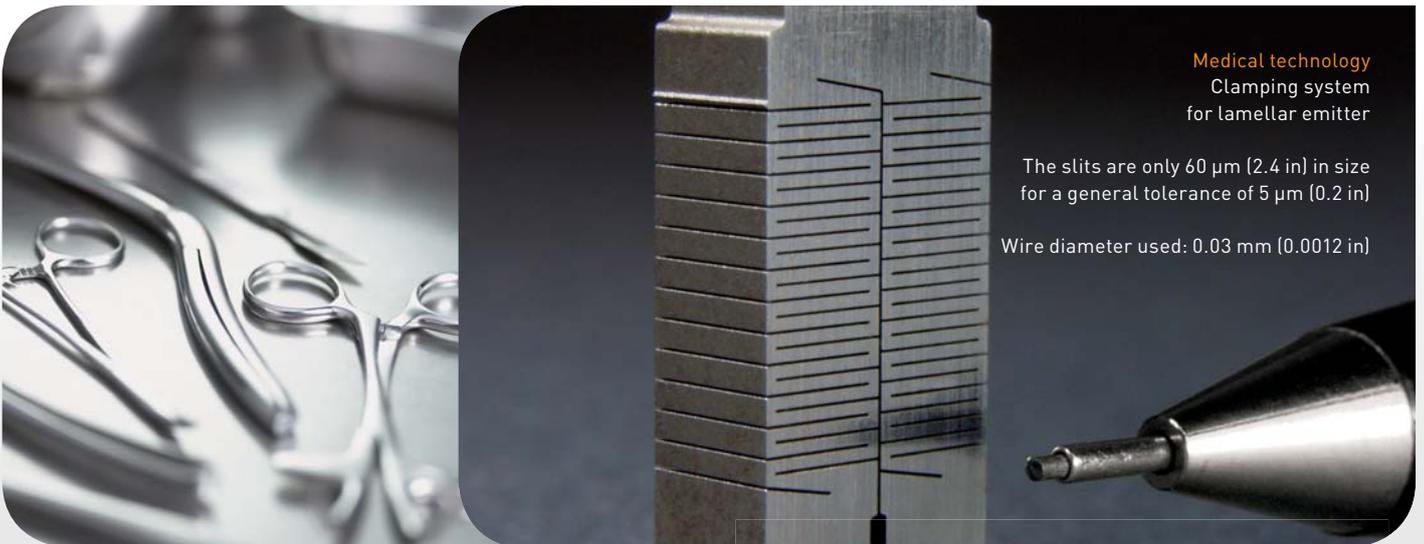


CUT 1000
CUT 1000 OilTech

Applications Range

For ultra-accurate microapplications



Watch industry

High accuracy in the inner radii

Exactness in machining the small details with provision for machining inner radii down to 0.02 mm (0.0008 in)

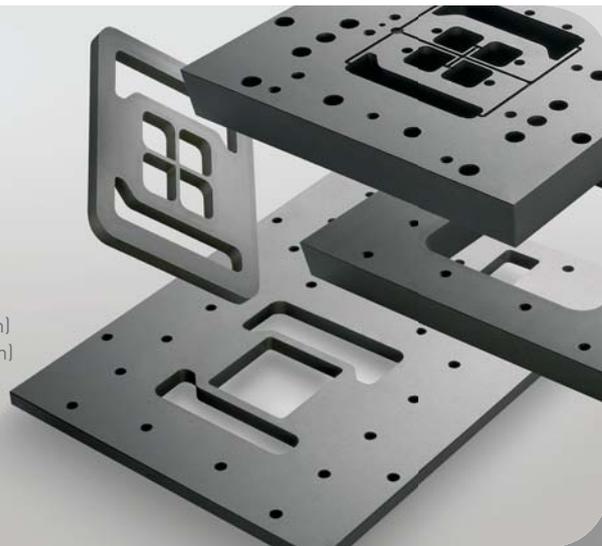


Food industry

Positioning accuracy

Mass production requires high precision cutting tools, above all for the manufacture of articles just a few hundreds of mm in thickness

Thickness of the sheet to be blanked: 0.04 mm (0.0016 in)
Required accuracy: <math>< 2 \mu\text{m}</math> (80 $\mu\text{in}</math>)$



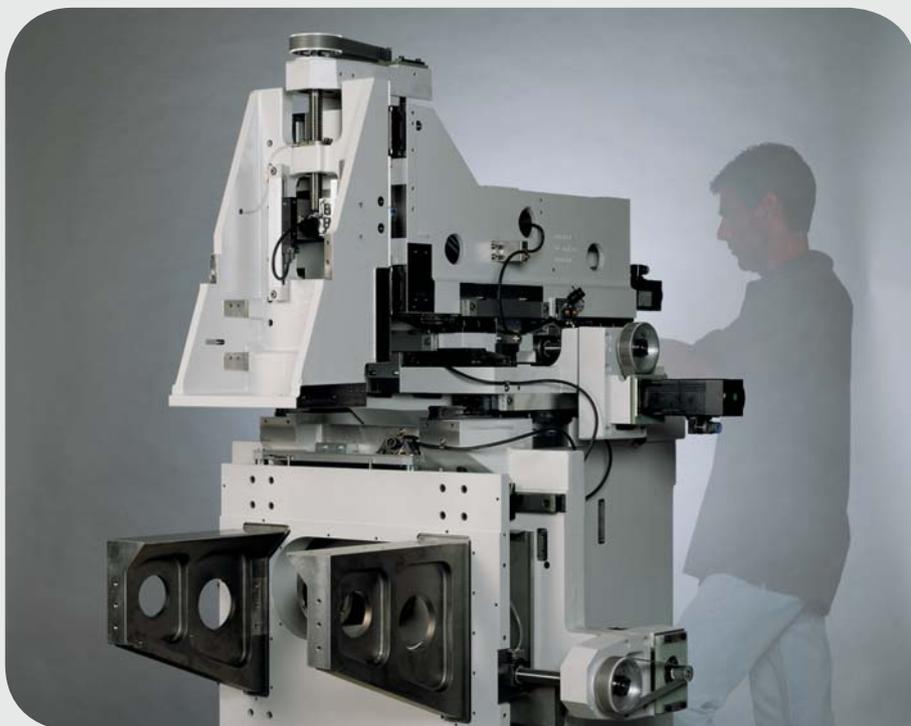
CUT 1000 / 1000 OilTech

The most accurate EDM wire-cutting machine in the world opens up a world of applications never before accessible

CUT 1000

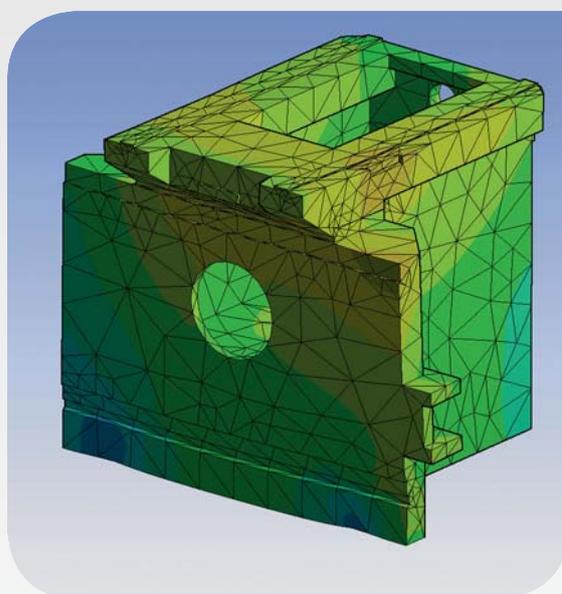
At a glance

Designed for ultraprecision



Patented monobloc

With a modulus of rigidity that is twice as high as normal designs, a particular accurate rectangularity of the two main axes X and Y is achieved. The slide blocks run in roller guide rails which are arranged directly on the monobloc. The guideways of X and Y axis are separate so that mutual interference is impossible and no tripping errors occur in the end sections of the travel paths.



Exclusive machining project for the Micro application range

Requests for increasingly higher accuracy in terms of positioning and shape of the machining operations mean ever tighter machining tolerances as well as a very high mechanical stability. These new frontiers have led to a detailed study of the framework of the CUT 1000 machine. This has enabled introduction of more modern and precise measuring systems in order to ensure a perfectly uniform accuracy over the entire work zone of $\pm 1 \mu\text{m}$ (40 μin).



User friendliness

With the new design of the touch remote control, the preparatory operations for a machining operation with axis movement, measuring cycles and start of erosion are quicker and more reliable.

This user friendliness is combined with the user interface Vision 5, which allows flexible data input, adaptable to the surrounding environment.

Double wire system

With AC Duo it is possible to work with two wire spools, each with a different wire type. Thus, for example, the main cut can be carried out automatically with a 0.10 mm (0.004 in) wire and the trim cuts with a 0.05 mm (0.02 in) wire. One single wire guide is designed for all wire diameters from 0.2 mm (0.008 in) to 0.02 mm (0.0008 in).

The complete sequence of wire operations takes place fully automatically and is monitored by patented sensors.

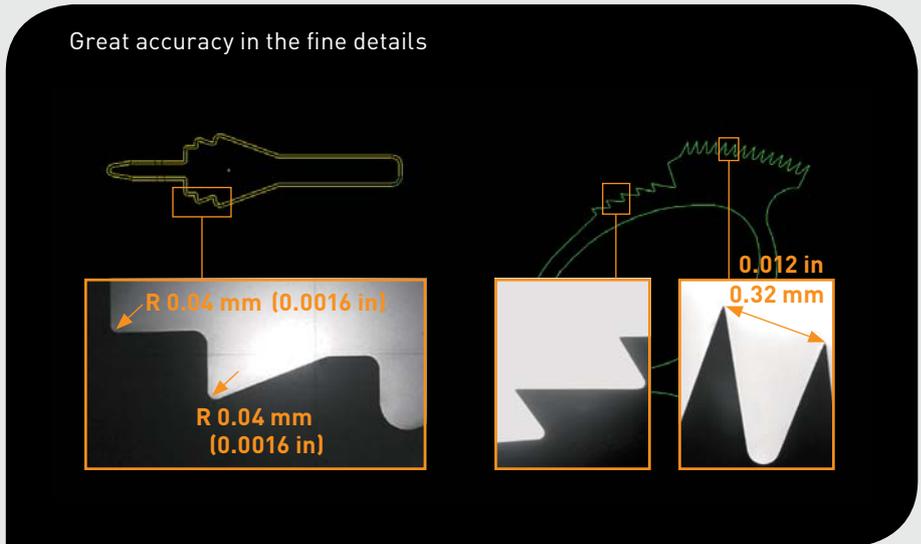




| Technical Data | | CUT 1000/1000 OilTech | |
|-------------------------------------|------------|------------------------|----------------------------------|
| Dimensions (L x W x H) | mm (in) | 1500 x 2000 x 1970 | (59 x 78.7 x 75.5) |
| Total weight | kg (lbs) | 3200 | (7055) |
| X, Y, Z axes | mm (in) | 220 x 160 x 100 | (8.66 x 6.29 x 3.93) |
| U, V axes | mm (in) | ± 40 | (1.57) |
| Taper angle/height | °/mm (in) | ± 3/80 | (3.14) |
| Workpiece dimensions (L x W x H) | mm (in) | 300 x 200 x 80 | (11.81 x 7.87 x 3.14) |
| Max. workpiece weight | kg (lbs) | 35 | (77.1) |
| Volume of dielectric | l (us gal) | 420 | (111) |
| Available wire diameter (Variant F) | mm (in) | 0.1 – 0.2 [0.02 – 0.2] | [0.004 – 0.079 [0.0008 – 0.008]] |
| Best surface finish Ra | µm (µin) | 0.05 | (2) |

Finest wires

With the F-module for finest wires, the normal scope of EDM wire cutting applications is expanded into the micromachining dimension. New possibilities are opened up for the manufacture of electronic, medical, watch and precision mechanical parts. Wires down to 0.02 mm (0.0008 in) diameter can be used with which radii of just 0.015 mm (0.0006 in) can be achieved.

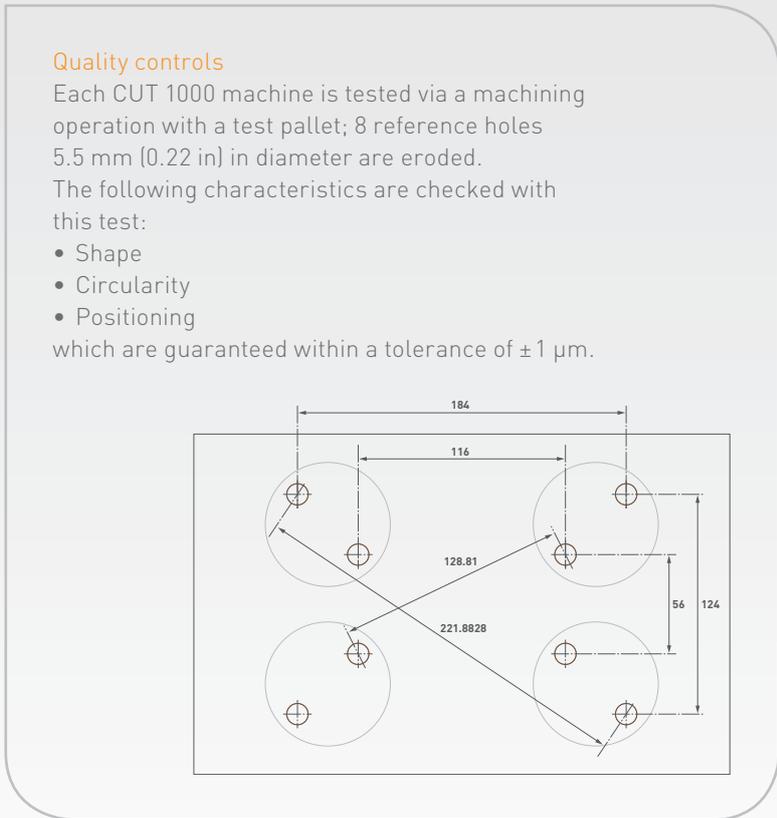


Very fine surfaces

With CUT 1000 it is possible to obtain a standard of surface finish down to 0.05 µm (2 µin).

Punch

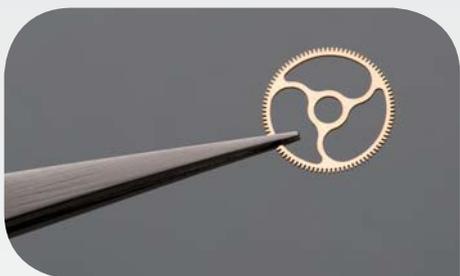
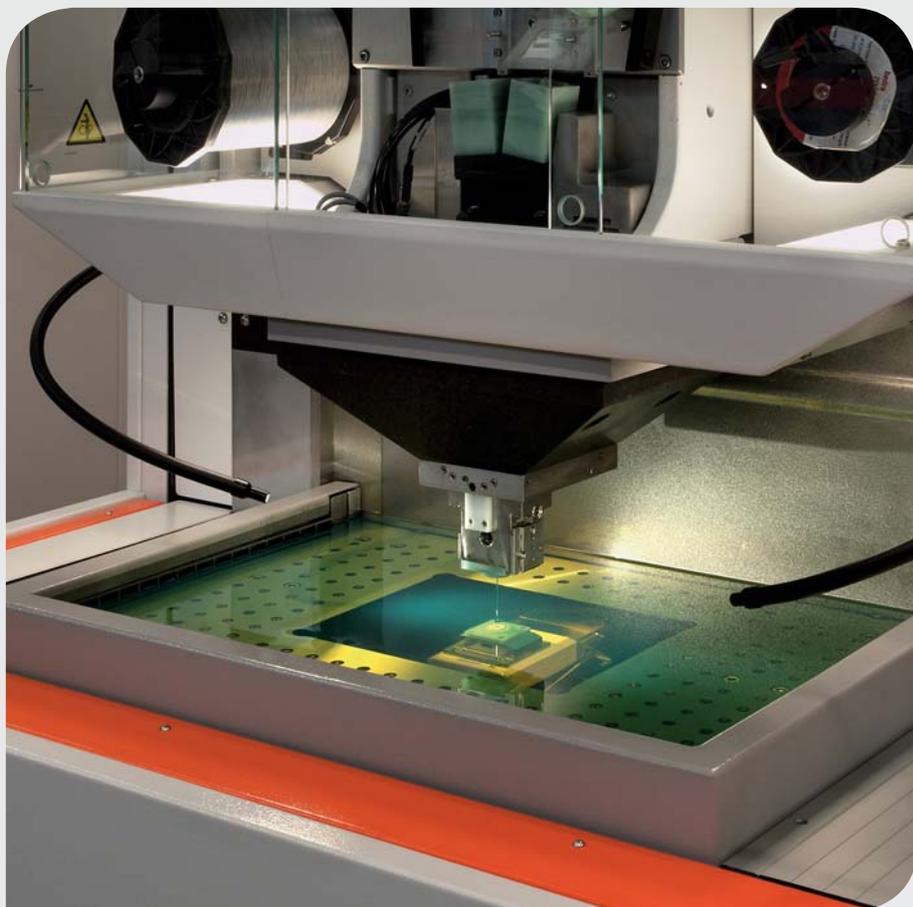
Surface finish: Ra 0.08 µm (3.15 µin)
 Shape accuracy: Tf 3 µm (120 µin)



CUT 1000 OilTech

Making surface protection a priority

High-performance generator and AC Duo allow optimum machining in specific fields of application, with increased efficiency and autonomy. Using oil as the dielectric eliminates the effects of corrosion due to long periods of immersion of the workpiece. During machining of multiple workpieces, or in the case of machining during the night or on weekends, workpieces can remain immersed in the dielectric. The operator no longer needs to quickly remove the machined parts to prevent corrosion. The AC Duo wire systems considerably reduce operating costs by using larger diameter or premium wires for the main cut and then automatically switch to smaller diameter or more economical wires for the finish cut, depending on the application. In addition to corrosion prevention, machining in oil enables a smaller distance between the wire and workpiece to be obtained. The effect of this is that smaller internal radii can now be produced when compared to water-based machining.



Very fine surface finishes of exceptional quality

Parts machined on the CUT 1000 OilTech have an exceptional surface quality. There is no coloration due to oxidation or redeposit of materials suspended in the dielectric. Therefore, the machined parts will appear sound and without defect, ready to be used and also aesthetically perfect, a sign of exceptional quality, and meeting the very high demands of the watchmaking industry.



Quality and perfect corner integrity after EDM machining

Although many current generators limit electro-chemical grinding of the corners during machining in water, the loss of cobalt (essential binder of tungsten carbide) through natural dilution is impossible to avoid. With the CUT 1000 OilTech, GF AgieCharmilles offers a machine with an inert dielectric (oil) that enables roughness values of less than $Ra\ 0.05\ \mu m$ ($2\ \mu in$) together with impeccable corner quality.

At a glance

Achieve more

We commit to a promise.
That promise is "Achieve more".
It's a commitment to create the
right conditions for our customers
to obtain competitive results.
When our customers win, we win.

GF AgieCharmilles

We enable our customers to run their
businesses efficiently and effectively
by offering innovative Milling, EDM,
Laser and Automation solutions.
A comprehensive package of Customer
Services completes our proposition.

www.gfac.com

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AgieCharmilles

Achieve more...