FREEZE CLAMPING WITH KRYOTOOL

MADE IN GERMANY

MATERIALS

All common materials made of metal, plastic, wood and ceramics can be fixed and fastened by freezing. The surfaces must be wettable. So workpieces made of silicone cannot be frozen.

GEOMETRIES

Workpieces that do not have a flat surface can be frozen as well as shallow parts. If necessary, an adapter plate is frozen on with it, into which the cavities are worked to clamp the workpiece by a corresponding ice film in a form- and force-locking matter.

REFRIGERATION TECHNOLOGY

In all KRYOTOOL systems innovative refrigeration technology enables the effective and economical generation of the necessary cooling capacity. According to the state of the art, modern refrigerants are environmentally friendly and easy to maintain. The laboratory device is operated with the slightly cheaper Peltier-technology.

DIMENSIONS

The freezing plates are available in different dimensions as standard in the dimensions from 140 x 200 mm to 250 x 500 mm. The freezing surfaces can be made of aluminium, steel, brass or copper.
As special dimensions, sizes up to 1.5 m^2 have already been implemented and operated with free-standing compressors.

EFFICIENCY

A great advantage of this clamping technique is the flexibility in terms of the geometries and sizes of the workpieces. The elaborate production of auxiliary equipment for secure and rapid clamping can be saved.

ICE CRYSTALS AS CLAMPING ELEMENTS

FREEZE CLAMPING - A „COOL" FIXING TECHNOLOGY

INTECCS LTD
Webershohl 53
44319 Dortmund
Germany

Tel.: +49 231 6103944
Fax: +49 231 6104869
E-Mail: kontakt@inteccs.de
Internet www.inteccs.de

TÜV NORD CERT GmbH
DIN EN ISO 9001/DIN EN ISO 13485
Freiwillige Zertifizierung

INTECCS

KRYOTOOL

CLAMPING WITH ICE

When clamping with KRYOTOOL, flat workpieces are frozen securely and absolutely plane parallel by means of water on a base in order to machine them on a milling-, grinding- or drilling machine.

KRYOTOOL is thus the innovative clamping system for solving special problems in the clamping of complex geometric structures, e.g. extremely flat workpieces or completely irregularly shaped parts, which are difficult to grasp and may also have a low mechanical strength.

With **KRYOTOOL** it is possible for the first time to be able to fix and machine even small and micro workpieces without time-consuming gluing and the subsequent laborious cleaning.

The **KRYOTOOL** clamping plate is connected via a hose line with the refrigeration control unit.
From this device, the freezing and thawing process is controlled and regulated by microprocessors.

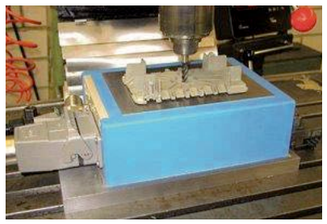
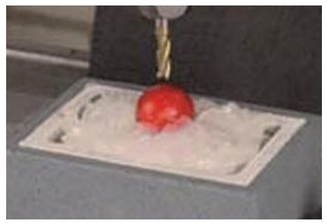
The **KT 1** system is equipped with **2 cooling circuits**. This makes it possible to machine a workpiece on one clamping plate and to fix the next part ready to be machined on the second.

Due to the high efficiency of the refrigeration unit, the **freezing process only takes a few minutes**.
After finishing the machining, the first clamping plate is switched to "defrost", the workpiece is easily removed and the clamping plate is refitted

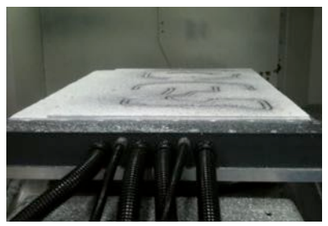
A **rotary chuck** is available for machining of turning parts. In addition to the compressor systems, the **KT 5** is equipped as a small and less expensive **laboratory device with Peltier elements** for cooling.

For machining larger components such as NOMEX honeycomb panels, we offer freezing plates of over 1 m^2. Here the powerful compressors can also be placed a great distance from the control unit and the workplace.



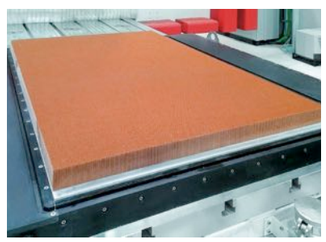
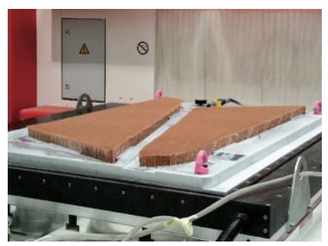




INNOVATIVE FASTENING TECHNOLOGY FOR MECHANICAL PROCESSING

KRYOTOOL S

FREEZING PLATE SYSTEM FOR SPECIAL APPLICATIONS


CUSTOMISED APPLICATIONS
E.G. FOR MACHINING HONEYCOMB CORES MADE OF ALUMINIUM OR NOMEX®