

Ohmura Technical Report

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Machining center manufacturing using Freeze-fixation (ES chuck) technology

A revolutionary freezing chuck system which allows coolant fluid to be freely used through the utilization of a highly water repellant low temperature coagulant as the freezing chuck's frozen medium. This is used for fixing chucking work that is difficult to fix in place for reasons such as the material's properties, size, or shape when machining.

The operators



We can make things like these!

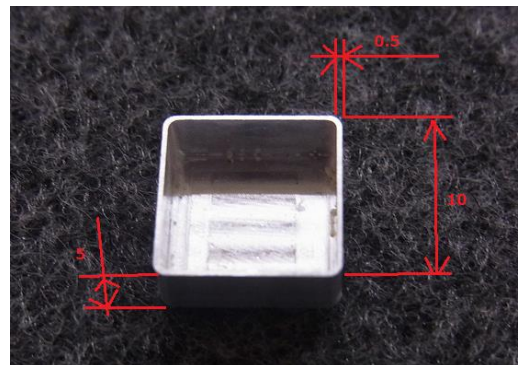
① Heart-shape bento-box

- cut from aluminium block
- 0.8 mm bottom and wall thickness
- even though it has curved surfaces and hollow shape, clamping is still possible



② Small case

- 10mm side, 5mm depth, 0.5mm thickness
- we manufacture even one piece
- small lot is the optimum



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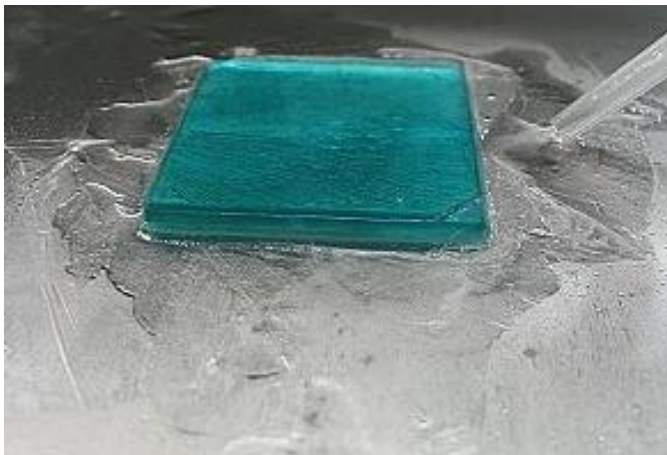
③ Nameplate

- 0.5mm thickness
- cut from a 3 mm aluminium plate without hold margin



We can do it!

- suitable for thin material machining
- jig is not needed
- can choose any kind of material
- prevent chatter marks
- radial corner is entirely finished
- increased tool service life
- able to clamp atypical shapes
- able to clamp spheres
- able to clamp glass
- able to clamp small objects
- hardly any aluminum work hardening
- able to prevent titanium thermal deformation



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