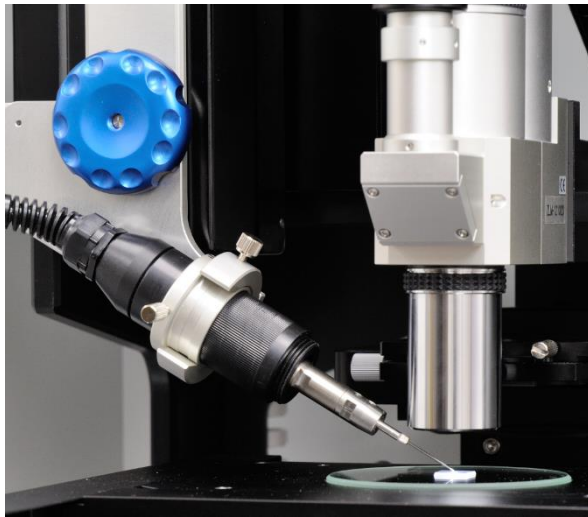


## Micro-Milling under microscope.

- ◆ Milling Pro is an attachment that allows access to embedded substances in resins and other materials easily and quickly.
- ◆ Possible to extract foreign substance buried 2 to 300 $\mu$ m below the surface with visual confirmation on a PC monitor using Micro Support's Axis Pro micromanipulator.
- ◆ Difficult sample removal can be semi-automate if performed with the Axis Pro for repetitive milling to gain access to a foreign substance.
- ◆ The milling area and depth can be controlled though selection of the appropriate milling tool.



### Applications ※example※

- Extract embedded foreign substance from resin material
- Planar cutting to exact part of a buried foreign substance (for ATR microscopy)
- Wide range plane cutting by fixed depth(50 $\mu$ m ~)
- Marking of glass, wafer, or a metal sample
- Pinpoint cutting of IC package or liquid crystal panel
- Contact with internal defect (sample pretreatment for X-ray microscopy or ruler drawing on an IC chip)

### Materials ※example※

#### ◆ Resin ◆

Polycarbonate, Polyimide, Polyethylene, Polystyrene, Polybutylene, Methacrylate, PET, Fluorocarbon polymers, coating film

#### ◆ Inorganic ◆

Iron, Non-ferrous metal, rock, Silicon wafer, gold wires



### 《Milling Pro》

- ① Controller main unit ② Startup SW  
③ Milling main unit ④ Safety cap

⑤ Arm for Axis-Pro (Angle fixing arm)

※ We change the arm depends on type of micromanipulator

#### ⑥ Milling Tools

- MPE-1M (Micro Peelers(tungsten carbide)/tip size 50 $\mu$ m)
- MPE-2M (Micro Peelers(tungsten carbide)/tip size 100 $\mu$ m)
- CP-M (Tungsten carbide Probes/Needle, tip diameter 10 $\mu$ m)
- TP-M (Tungsten Probes/Needle, tip diameter 0.5 $\mu$ m)

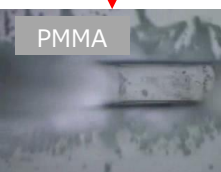
### 《Specifications》

- Controller unit : 85mm $\times$ 290mm $\times$ 140mm (3kg)
- Milling unit :  $\phi$ 28mm $\times$ 140L (0.2kg)
- Power supply : AC100V 50/60HZ
- Rated power consumption : 25VA

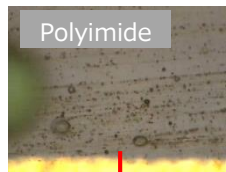
#### MPE-1M



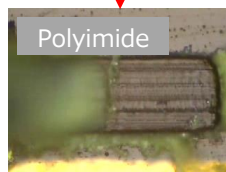
PMMA



#### MPE-1M



Polyimide



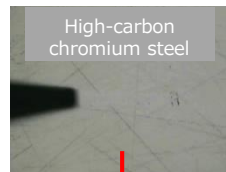
#### MPE-1M



Polycarbonate



#### MPE-1M



High-carbon  
chromium steel



#### CP-M



Aluminum  
A5052 Anodized



#### MPE-1M



Surface of  
slide glass



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