

Tousimis Critical Point Dryer

Operating Procedures LINK



Process Description:

Critical point drying uses transitional fluids such as liquid carbon dioxide to dry a sample without surface distortion. The samples are placed in a pressure chamber and the transitional fluid is slowly introduced to the chamber. Under pressure and heat, the fluid changes to a gaseous state and dries the sample. Critical point drying is used to release suspended structural layers in MEMS processing. After a sacrificial layer is wet etched from beneath the structure, the structural element must be freed from the surface.

Equipment Description:

The Tousimis Automegasamdri 915B can process wafer sizes up to 6 inches. The microprocessor controller provides completely automatic process steps of cool, fill, purge, heat, bleed and vent using liquid CO₂. The various chamber inserts gives the user control of wafer size, LCO₂ consumption and process time.

<i>Materials Allowed</i>	<i>Materials Not Allowed</i>
Glass	Metals
Polysilicon	Photoresists
Silicon	Polymers
SiO ₂	
Si ₃ N ₄	