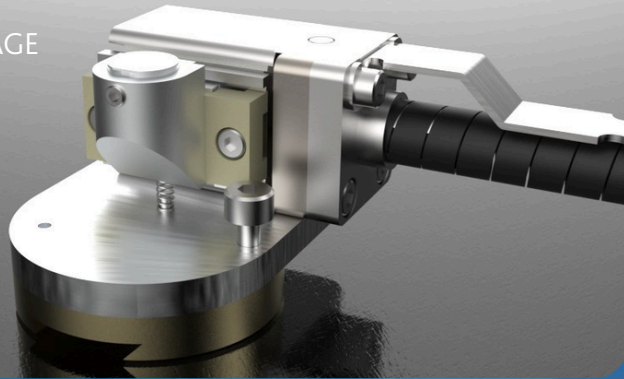


# DEBEN

## COOLSTAGE

### SEM PELTIER HEATING AND COOLING

ULTRA  
COOLSTAGE



Silica

#### Features:

- Maintain sample hydration
- Easily fitted and removed
- Available for all common SEMs



Pollen



Latex

Recommended for use in:

#### High Vacuum HV-SEM

Combined with X-Ray EDS detection, the deben Coolstage allows simultaneous chemical analysis and temperature control under high vacuum.

#### Low Vacuum LV / VP-SEM

By cooling a specimen in low vacuum, changes in specimen structure caused by dehydration can be minimized; extending viewing time.

#### Environmental E-SEM

Provides the ability to study the interaction of liquid water with materials and to maintain the structure of fauna and flora by preventing dehydration.

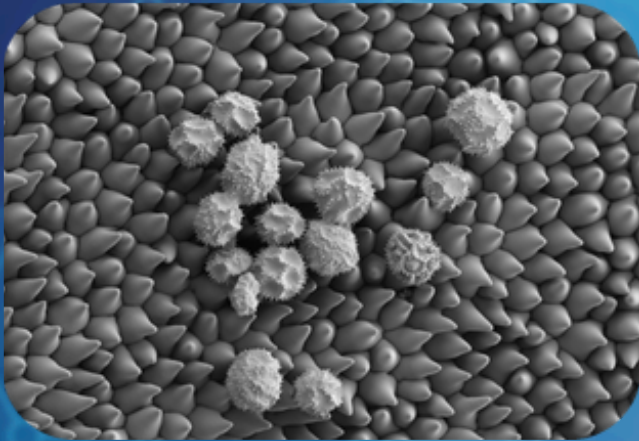
#### Focused Ion Beam FIB-SEM

Removes the need for liquid nitrogen cryo systems. Reduce heating at the sample generated from the ion source.

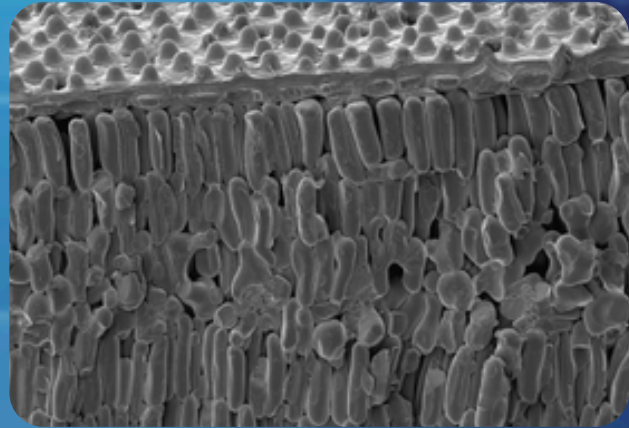
#### Applications:

Biomaterials - Pharmaceuticals - Polymers -  
Temperature sensitive materials - Low melting point materials -  
Plant Microstructures

# DEBEN:

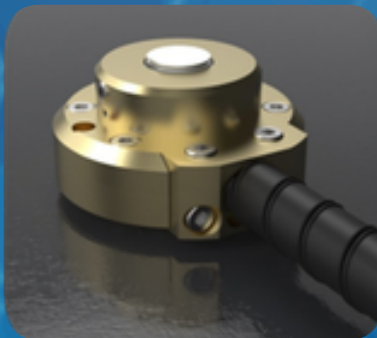


Forget Me Not



Leaf Cross-Section

Systems are fully self-contained and comprise of: a thermally isolated **specimen holder**, either a single or dual stage **Peltier device**, vacuum feed-through flange, water chiller/power supply unit, keypad for digital temperature readout & control.



## System Specifications

- Temperature range between -50°C up to +160°C
- Temperature accuracy: +/-1.5°C or 2%, whichever the greatest
- Temperature display resolution: 0.1°C
- Maximum Specimen size: 5mm height & 10mm diameter
- Temperature stability: +/-0.2°C
- Temperature display resolution: 0.1°C
- Maximum cooling/heating rate: 12°C per minute
- Microprocessor controlled
- Keypad/display for temperature display and control
- Vacuum feed-through display and control
- Supplied with 15x standard & 15x dished specimen stubs
- RS-232 or USB interface to enable remote readout and control
- 100V, 115V or 230V
- CE & RoHs compliant

## Deben COOLSTAGE range

- **Standard:** -25°C to +50°C
- **Enhanced:** -25°C to +160°C
- **Ultra:** -50°C to +50°C

## Additional Features

- FE-SEM airlock compatibility
- Extend imaging time
- Control dehydration and produce condensation
- Heat & cool samples
- Chiller and water circulator supplied
- Simultaneous display of actual & target temp.
- Design optimized for minimal image drift

