

Cryogenic Probing System Model 441



KEY FEATURES

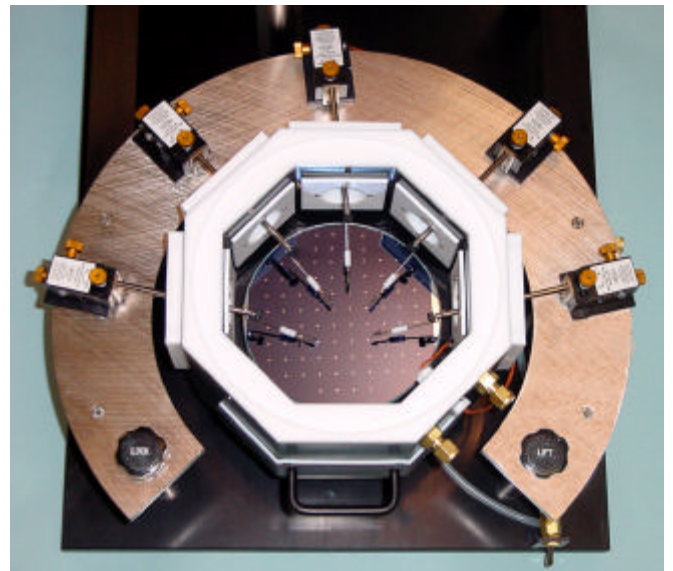
- ❖ Cold chuck chilled by liquid nitrogen.
- ❖ Shielded dewar for low-noise measurements.
- ❖ Dewar can be purged with dry nitrogen or other gas to prevent condensation.
- ❖ Convenient access slot to load or unload wafers without removing top of dewar.
- ❖ Probe micropositioners are outside dewar for convenient adjustment.
- ❖ Probe platen moves all probes at once.
- ❖ Computer controllable lamp for inversion stabilization.
- ❖ Integrated optical and video optics options.
- ❖ Choice of chuck sizes, and probe configurations.

GENERAL DESCRIPTION

The **MDC Cryogenic Probing System**, Model 441, provides a shielded, electrically quiet, atmosphere-controlled environment for high sensitivity capacitance and current measurements at near liquid nitrogen temperatures, 77°K.

The **MDC Cryogenic Probing System** is the ideal companion to computerized C-V plotters to perform doping profile and capacitance-voltage measurements. The **Cryogenic Probing System** also facilitates a wide variety of other device measurements at low temperatures such as interface trap density determination or current-voltage tests.

MDC Cryogenic Probing Systems are available in a variety of standard and custom configurations with a choice of chuck sizes, and probe configurations.



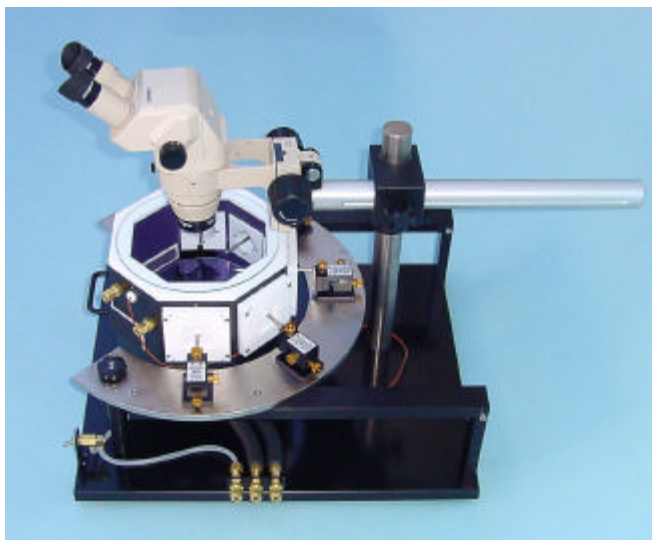
SPECIFICATIONS

Facility Requirements

Power:	For microscope illumination only.
Coolant:	Liquid nitrogen at low pressure.
Purging:	Dry nitrogen. Maximum pressure of 2 PSI (0.15 Kg/cm ²).
Vacuum:	Process Vacuum, 5-15" (100-400 mm) Hg.
Dimensions:	Width 19" (49 cm); Depth 22" (56 cm); Height 12" (33 cm)

Thermocouple, Range, and Accuracy

Thermocouple Type:	E
Temperature Range:	-200°C to 40°C.



INSTRUMENTATION

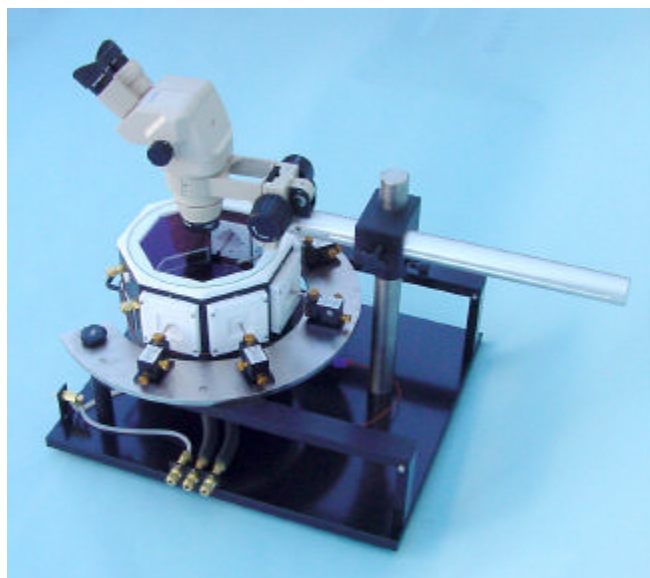
CSM/Win Systems from MDC are the ideal instruments to make the most of your cryogenic measurements. CSM/Win Systems include extensive software to perform a variety of tests on semiconductors and MOS devices.

MDC CSM/Win Systems are available with a wide selection of voltage ranges and capacitance, conductance, and current measurement capabilities. Systems performing single frequency, multiple frequency, and quasistatic measurements are available. MDC also offers the most complete choice of integrated hot chuck systems and mercury probes for your other measurement requirements.

MODELS AVAILABLE

The basic Model 441 **Cryogenic Probing System** includes a cold chuck mounted in a sturdy aluminum light-tight dewar with a computer-controlled light, a probe stand for up to 5 probes, one Model 825 Probe, operation manual, and all cables. Standard chuck size is 150 mm (6"). Other sizes are available as a special order.

Custom **Cryogenic Probing System** configurations are available. Microscopes can include both optical and video capabilities.



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