

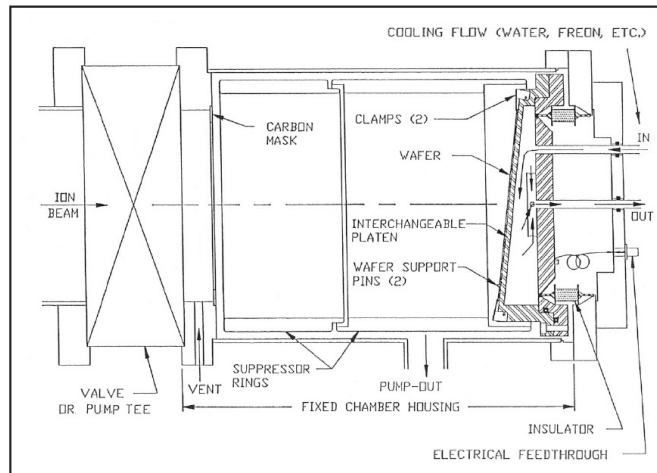
Single Wafer Implant Endstation

The Implant Endstation is a manual single wafer handler. The chamber is designed to ensure accurate dose monitoring with uniform deposition.

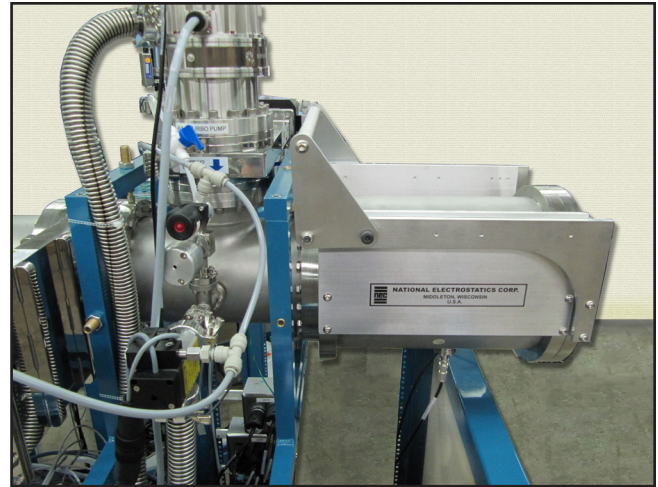
DESIGN

The wafer is attached to a platen which can be electrically heated from 0°C to 500°C with a 7° tilt from the beam axis. The platen is mounted on a flange for access. Beam current is measured on the platen to determine dose using a Brookhaven Instruments 1000D dose integrator or equivalent. The chamber supports 6" (15 cm) wafers.

Immediately in front of the wafer are two suppression rings of opposite polarity. These rings are designed to suppress ions and electrons coming from the wafer in order to maintain an accurate dose reading. There is a carbon mask holder immediately in front of the suppression rings. The beam overscan is incident on the carbon mask.



Cross-section sketch of implant endstation.



VACUUM SYSTEM COMPONENTS

There is a roughout port on the fixed chamber housing. The chamber vent inlet is located near the beam entrance to the chamber housing. There is a pneumatic gate valve on the chamber entrance. Located prior to the gate valve is a turbo-molecular pump station, which will pump the beamline and endstation.

OPTIONS

A high temperature implant endstation is also available. Please contact NEC for further information.