

pre-owned
equipmentnew surplus
oem partsrefurbished
equipmentrefurbished
subsystems

Equipment Refurbishment

NxEdge provides Novellus Concept One CVD systems refurbished to OEM specifications. Our portfolio includes a full range of OEM upgrades and enhancements. In addition, we provide 90 percent of the parts used on the Novellus Concept One.

Each refurbished system or chamber is disassembled to its base components and rebuilt with a combination of new and high-quality refurbished parts and assemblies. Process-related components are always replaced new.

Refurbishment Process

Complete System Disassembly:

- Remove all components and assemblies
- All cables inspected and replaced as needed
- All O-Rings replaced

Gas Dispersion / Showerheads:

- Replace showerheads and associated hardware
- CO₂ clean ceramics and replace as needed
- Chem clean gas distribution chamber
- Replace gas distribution tubing
- Chem clean gas trombone

Anodizing / Plating:

- RF drum and top plate cover
- A/B gas line cover and Thompson Rod
- RF enclosure and feedthrough enclosures

RF Distribution Assembly:

- Check air caps and inductors
- Clean brass and copper connections
- Check, calibrate high/low frequency generators

Vacuum System:

- Replace purge panel gas filter
- Chem clean vacuum stack forelines
- Rebuild throttle valve and gate valve

Wafer Spindle Assembly:

- CO₂ clean ceramics
- Replace all Ni hardware, O-Rings, and T-Seal
- Replace linear & rotation bearings in spindle shaft

Top Plate:

- Chem clean top plate and chamber ring
- Replace water lines
- Calibrate match network
- Replace quartz window, filter and RF screen

Gas Panel Refurbishment:

- Replace: gas filters, gas lines, pneumatic couplings, and lines
- Clean and calibrate MFC's per customer specs
- Nupro valves: replace / rebuild as needed
- Paint gas panel enclosure
- Leak check gas panel

Paint:

- Frame, panels, main AC, and AC boxes

Bottom Plate:

- Chem clean bottom plate
- Inspect / replace as needed, RF shunt
- Replace thermocouples and inspect assembly
- Clean and calibrate manometer assembly
- Replace heater feedthroughs
- Install new heater block (OEM)
- CO₂ clean ceramics-replace as needed
- Replace all Ni hardware
- Replace insulated heater wires, LF bias xtraps, and heater ground straps

Loadlock Chamber:

- Chem clean loadlock chamber
- Replace O-Rings and Filter

Control Systems:

- Calibrate throttle valve controller and Hasting Gauge controllers
- Check terminal panel operation
- Check multibus operation
- Check computer operation

Testing, Inspection, and Installation:

- System final tested as per OEM specifications, 1500-Wafer marathon with no failures
- Customer source inspection prior to shipment
- Installation at customer facility (*optional*)

Novellus Concept One

