

Oxford Cobra ICPRIE

Overview

The PlasmaPro 100 Cobra ICP utilises high-density plasma to achieve high-rate etching. The process modules offer excellent uniformity, high-throughput, high-precision, and low-damage processes for wafer sizes up to 150 mm.

LMACS Name	ICPRIE (Cobra Reactive Etch)
Confluence Label	oxford-plasmapro-100-cobra
Process Area	PLASMA ETCH
Model	PlasmaPro 100 Cobra
Vendor	Oxford Instruments
Team	Devin Fortier Scott Munro Aaron Hryciw

Equipment Configuration



Configuration Schedule

Please refer to the Oxford Cobra ICPRIE tool page on [LMACS](#) for the liner installation and 100 mm / 150 mm clamp change schedule. By default, the Cobra is in 100 mm mode without liners. Conversions to 150 mm mode can be done by LMACS request; please contact nanoFAB staff for more information.

N.B. Sputter-based etches (e.g., Au, Pt, Cu) are only allowed in the tool when liners are installed. Users must book the tool using ICPRIE (Cobra Sputter Etch) in LMACS and only during the times when liners are installed. The total volume of metal being etched may not exceed 0.04 mm³ (4e7 µm³) between cleaning cycles. This corresponds to etching through a 100 nm thick film with an exposed area of 4 cm² (e.g., ~5% of a 100 mm wafer).

Different pre-process and post-process chamber cleaning recipes are required to be run depending on the tool configuration and the materials being processed. Please contact a nanoFAB staff member if you are unsure of what the proper cleaning schedule for your process should be.

System Features

Wafer Handling	pieces (mounted)	100 mm	150 mm	
Gas Species (Inert)	O ₂	CHF ₃	SF ₆	Ar
Gas Species (Toxic)	Cl ₂	HBr	BCl ₃	
ICP RF Power	3 kW			
Chuck RF Power	300 W			
Chuck	-150 °C (min)	300 °C (max)	mechanical clamp	HBC

Documents

Operating Procedure	Oxford Cobra ICPRIE SOP
Hazard Assessment	Oxford Cobra ICPRIE Hazard Assessment - HA
Process Information	

Related Documents

- [Oxford Cobra ICPRIE Hazard Assessment - HA \(Equipment\)](#)
 - [hazard-assessment](#)
 - [oxford-cobra-icp](#)
 - [plasma](#)
 - [etch](#)
 - [plasma-etch](#)
- [Oxford Cobra ICPRIE \(Equipment\)](#)
 - [equipment](#)
 - [plasma](#)
 - [etch](#)
 - [plasma-etch](#)
 - [icp-rie](#)
 - [oxford-cobra-icp](#)
 - [oxford-plasmapro-100-cobra](#)
- [Oxford Cobra ICPRIE SOP \(Equipment\)](#)
 - [sop](#)
 - [oxford-cobra-icp](#)
 - [plasma](#)
 - [etch](#)
 - [plasma-etch](#)
- [Oxford Cobra ICPRIE SOP & HA Listing \(Equipment\)](#)
 - [procedure](#)
 - [oxford-cobra-icp](#)
- [Cobra Cryo Table Cooling - LN60 \(Equipment\)](#)
 - [cryo-cooling](#)
 - [ln2](#)
 - [oxford-cobra-icp](#)