

Samco Model UV-1 UV-Ozone Stripper/Cleaner

Operating Procedures [LINK](#)



Process Description:

Dry, particulate-free oxygen is fed into a silent-discharge ozone generator. This internally generated ozone then flows into the cleaning chamber, which contains a UV lamp and a heated sample stage. Ozone decomposes into oxygen molecules and atomic oxygen when exposed to long-wavelength (200-300 nm) UV radiation. Simultaneously, organic materials such as photoresist, solvent residues, human skin oil and pump oil are excited or dissociated by the long wavelength UV radiation. The atomic oxygen is highly reactive and oxidizes the excited organic molecules to form simpler, harmless products such as carbon dioxide, water or nitrogen. This process cleans or removes organic contaminants from the substrate.

Equipment Description:

Substrates are processed at atmospheric pressure using a combination of UV light, ozone, and heat. The air-cooled ozone generator is mounted in the chassis of the system and the flow of oxygen is controlled by a mechanical flow meter with a range of 0 – 5.0 liters/minute. The effluent is removed via an exhaust duct. The ultraviolet lamp is mounted in the reactor lid. The lamp is a low-pressure, mercury vapor/inert gas discharge and generates UV bands at 185 and 254 nm.

The system is to be used only for cleaning and activating the surfaces of substrates. No photoresists or metals are allowed in the system.