

Plasma Cleaner

V1000/V1000X/V1000XS

Model		
V1000	V1000X	V1000XS
Plasma Mode		
RIE and DP		
RIE : Reactive Ion Etching DP : Direct Plasma		
High-frequency Output		
1000W	1000W/1500W	
Oscillating Frequency		
13.56 MHz		
Dimension of Stage(mm)		
280×280	300×300	400×375

Purpose : Removal of Organic films, Surface cleaning, Surface reforming, Surface etching etc.



V1000

Control Display



Programmable control
(touch panel)

Chamber



V-1000



V-1500XS

Specifications

Model	V-1000	V-1000X	V-1000XS
■ Plasma Mode	RIE and DP		
■ Main Unit			
Electrode structure	Parallel flat stage plate		
Stage size	280mmW×280mmD	300mmW×300mmD(Double stage)	400mmW×375mmD
Chamber size	400mmW×400mmD×380mmH	400mmW×400mmD×380mmH	600mmW×554mmD×440mmH
Vacuum gauge	Capacitance manometer		
Reaction gas system	Two systems		
Controller	Programmable controller		
Display	Programmable terminal (touch panel)		
■ Radio-Frequency Power Supply			
Input	AC 200/220/380V, Three phase,		
Radio-frequency output power	1,000W	1,000 & 1,500W	
Reference oscillator	Quartz oscillator		
Oscillating frequency	13.56 MHz		
Matching adjustment	Automatic tuning		
■ Discharge System (Vacuum Pump)			
Displacement	670 & 1,000 liters/min.	670 & 1,500 liters/min.	1,000 & 1,500 liters/min.
Inlet configuration	NW40 with a flexible stainless steel hose (1 meter long)		
Outlet configuration	NW40		
■ Gas Systems			
Purge gas	Nitrogen (N ₂) and a regulator (3 kgf/cm ²) with a manometer		
Driving gas	Air or nitrogen (N ₂) and a regulator (alarm contact at 10 kgf/cm ²) with a manometer		
Reaction gas G1	Oxygen (O ₂) and a mass flow controller (1000 secm)		
Reaction gas G2	Argon (Ar) and a mass flow controller (100 secm)		
■ Safety Mechanisms			
System Protections	*Oscillator protection circuit *Front-door interlock switch (interlocked with the startup) *Safety switches (interlock switch on the side panels) *Vacuum leak test function *Air-purge end buzzer *Alarm buzzer *Emergency stop push-button switch		
Actions against a trouble of the vacuum pump	The plasma scrubber takes the counteractions listed below and show an Alarm message on its display when something wrong happens on the vacuum pump. *The main valve closes *The gas feed valve closes *The isolation valve closes *The oscillator stops outputting *Treatment process is suspended *The Alarm buzzer starts sounding * The alarm indicator lamp lights up to notify the trouble of the vacuum pump *The treatment process timer stops		
■ REQUIRED UTILITIES			
■ Power Supply			
Main unit with vacuum pump	Three phases, AC220V, 30 A, 60Hz (with an accessory power cable of 3 meters long, and exposed crimp-style terminals of 8 millimeters long)		
■ Gases			
Driving gas	Air or nitrogen (N ₂) (Feed pressure: 5 to 7 kgf/cm ²)		
Purge gas	Nitrogen (N ₂) (Feed pressure: 2 to 7 kgf/cm ²)		
Reaction gas G1	Oxygen (O ₂) (Feed pressure: 1.5 kgf/cm ²)		
Reaction gas G2	Argon (Ar) (Feed pressure: 1.5 kgf/cm ²)		
Connection port	1/4" swagelok joint bulkhead union (SS-400-61)		
	Note: Pressure regulators, filters and other protective devices shall be prepared by others.		
■ Connection Diameter of the Discharge Duct (and inlet Port)			
Vacuum pump's inlet port	NW40 (with a flexible stainless steel hose of 1 meter long)		
Vacuum pump's outlet port	NW40		
Main unit's ozone outlet port	163mm diameter		
Oscillator's ventilation port	163mm diameter		
	Note: Every port has a connector designed for a flexible hose. Connect a duct to these inlet and outlet ports.		