Plasma Cleaner

PDC-200/210/510

Model		
200	210	510
Plasma Mode		
RIE or (RIE/DP)		RIE/DP
RIE : Reactive Ion Etching DP : Direct Plasma		
High-frequency Output		
Max.300W		Max.500W
Oscillating Frequency		
13.56 MHz		
Dimension of Stage(mm)		
250×170		410×170

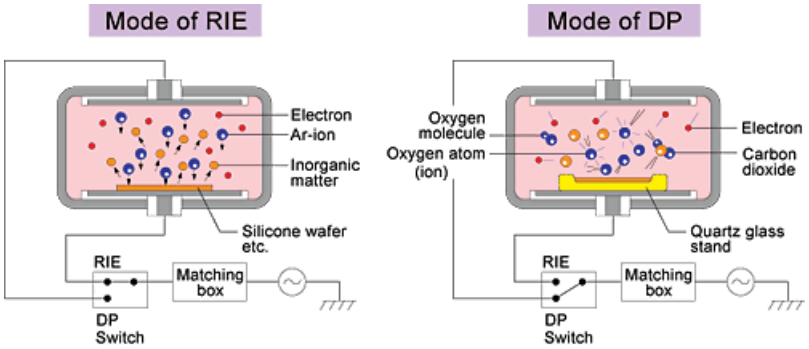
Purpose : Removal of Organic films, Surface cleaning, Surface reforming, Surface etching etc.

- Despite being desktop models, they feature high performance, are simple to use, and can obtain data easily.
- They are genuine RIE systems, and can be DP systems with the use of options.

PDC210

Interior

Composition figure



Specifications

Model	PDC-200/210/510
■ **Plasma Mode**	PDC-200&210 : RIE(RIE/ DP:option) / PDC-510 : RIE/ DP
■ **Main Unit**	
Aluminum chamber	Internal dimension: 400mmW×250mmD×150mmH
Electrode	Parallel flat stage plate: 230mmW×170mmD
Vacuum gauge	Capacitance manometer
Reaction gas system	Two systems(Ar,O2)
Controller	Programmable controller
Display	LCD Touch panel Display
■ **Radio-Frequency Power Supply**	
Input	PDC-200: AC 100V,Single phase, 8A (50/60 Hz) / PDC-210: AC 200V,Three phase, 15A (50/60 Hz)
Radio-frequency output power	PDC-200:300W / PDC-210:500W
Reference oscillator	Quartz oscillator
Oscillating frequency	13.56 MHz
Matching adjustment	Automatic tuning
■ **Discharge System (Vacuum Pump) only PDC-210 / PDC200 Optional**	
Displacement	Total 345 liters/min.
Input power supply	Three phases, AC200V, 4A, 50/60 Hz / PDC-200 Single phase ,AC100V,4A,(50/60Hz)
Inlet configuration	NW25
Outlet configuration	NW25
■ **Gas Systems**	
Purge gas	Nitrogen (N2) and a regulator (3 kgf/cm2) with a manometer
Reaction gas G1	Oxygen (O2) and a mass flow controller (500 secm) / PDC-200:(200 secm)
Reaction gas G2	Argon (Ar) and a mass flow controller (100 secm)
■ **Safety Mechanisms**	
● System Protections	(1) Watching Vacuum Pump and RF generater Watching over current by Thermal Protector Magnetic relay. (2) Product Quartz oscillator When Matching unit have miss matching,protect quartz oscillator. (3) Door Panel Inter lock Build Inter lock 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 treatment process timer stops.
■ **REQUIRED UTILITIES**	
● **Power Supply**	
Main unit with vacuum pump	PDC-200: Single phases, AC100V, 15 A, 50/60Hz PDC-210: Three phases, AC200V, 15 A, 50/60Hz (with an accessory power cable of 3 meters long, and exposed crimp-style terminals of 8 millimeters long)
● **Gases**	
Purge gas	Nitrogen (N2) (Feed pressure: 2〜7 kgf/cm2)
Reaction gas G1	Oxygen (O2) (Feed pressure: 1.5 kgf/cm2)
Reaction gas G2	Argon (Ar) (Feed pressure: 1.5 kgf/cm2)
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	NW25 (with a flexible stainless steel hose of 1 meter long)
Vacuum pump's outlet port	NW25
	Note: Every port has a connector designed for a flexible hose.