

Gas Plasma Reactor

Compact, Barrel Type, Low Temperature Ashing Device

PR200/300/301

High-frequency output 200W (PR200) 300W (PR300/301)

Reaction chamber $\phi 100 \times 160\text{mm} \times 1$ (PR200) $\phi 64 \times 160\text{mm} \times 3$ (PR300) $\phi 118 \times 160\text{mm} \times 1$ (PR301)

Wide range of application from ashing, etching, dry cleaning, etc.

■ Features

- Isotropy barrel type
- Compact, space saving design
- Capable of removing coated organic matter
- Adjustable RF suitable for various applications
- Outstanding operability and safety
- Can be set for a wide range of output conditions to handle a variety of testing samples

■ Applications

- Functionalization of the polymeric material surface improves adhesion
Oxidation reaction generates functional groups -OH, >C=O, -COOH on the surface (very small amount of water and carbon dioxide will impact)
- In nitrogen plasma, a nitrogen atom is incorporated onto the surface, generates a functional group -NH₂
- Resist peeling
- Surface modification of materials (metals, polymers, films, ceramics, etc.)
- Asbestos pre-processing (ashing of membrane filter)
- Low-temperature ashing (polymer material, coal, food, etc.)
- PDMS chips bonding to glass and PDMS substrate
- Production of semiconductors and analysis work



PR200



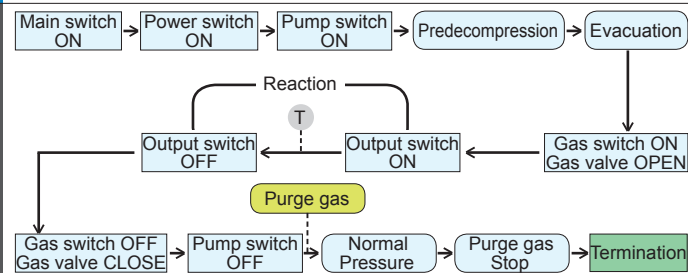
PR300

PR301

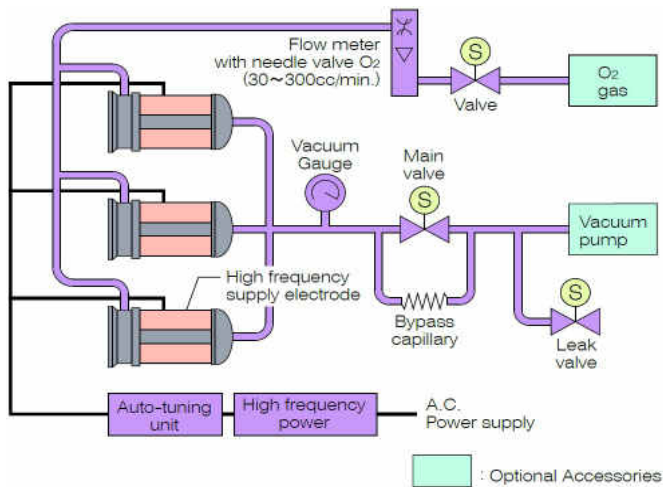
■ Specifications

Model	PR200	PR300	PR301
Plasma mode	Direct plasma (DP)		
High frequency output	Max. 200W	Max. 300W (100W x 3 chambers)	Max. 300W
Oscillation frequency	13.56MHz		
Tuning method	Auto matching	Manual biaxial	
Reaction chamber	Pyrex glass, $\phi 100 \times 160\text{mm} \times 1$ chamber	Pyrex glass, $\phi 64 \times 160\text{mm} \times 3$ chambers	Pyrex glass, $\phi 118 \times 160\text{mm} \times 1$ chamber
Reaction gas	1 system (oxygen), flow meter control with dry air purge gas		
Control system	Manual leak valve	Auto pressure reduction, auto leak valve	
Piping material	Stainless steel, Teflon	Stainless steel, Teflon, Copper and Brass	Stainless steel, Teflon
External dimensions(W×D×H)	350 x 400 x 500mm	438 x 520 x 556mm	438 x 520 x 660mm
Weight	~25kg	~36kg	~34kg
Power source (50/60Hz)	AC115V	AC115 / AC220V	
Optional accessories	Sample dish, vacuum pump	Sample dish, stand, shelf, vacuum pump	

Operation Flowchart



Piping System (PR300)



Control Panel



PR200



PR300, PR301

Chamber



PR200
1 chamber (ø100 x 160mm)

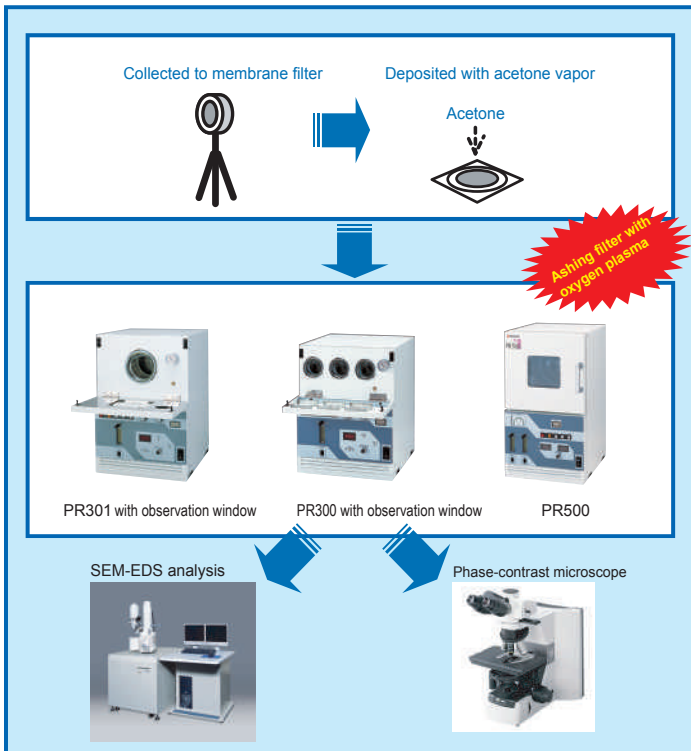


PR300
3 chambers (ø64 x 160mm)
Contamination free



PR301
1 chamber (ø118 x 160mm)

Example application: asbestos analysis pre-processing

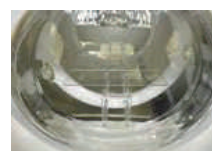


Interior



The gas plasma equipment has a wide range of applications from ashing, etching, dry cleaning, etc.

Accessories



Sample dish



Sample shelf for PR300



Sample shelf for PR301