

Plasma Reactor (Barrel Chamber)

Compact, Barrel Type, Low Temperature Ashing Device

PR200/300/301

High frequency
output

200W
PR200

300W
PR300/301

Reaction
chamber

ø100×160mm×1
PR200

ø64×160mm×3
PR300

ø118×160mm×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

Control Panel

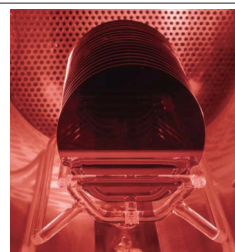


PR200



PR300, PR301

Interior



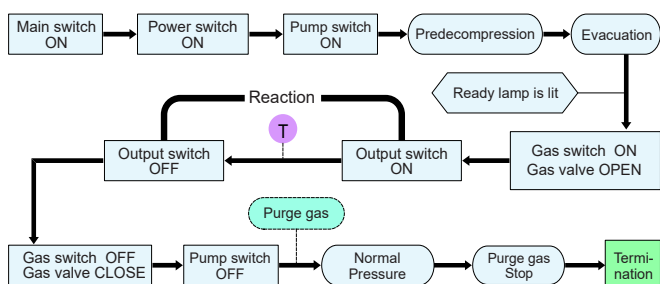
The gas plasma equipment has a wide range of applications from ashing, etching, dry cleaning, etc.

■ Specifications

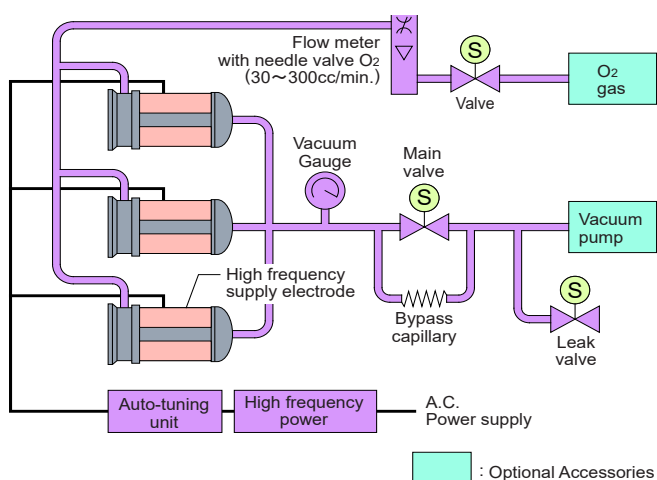
Product code	215016	215006	215008
Model	PR200	PR300	PR301
Plasma mode	Barrel type chamber direct plasma (DP)		
High frequency output	Max. 200W	Max. 300W (100W×3 chambers)	Max. 300W
Oscillation frequency	13.56MHz		
Tuning method	Auto matching	Manual biaxial	
Reaction chamber	Pyrex glass, ø100×160mm×1 chamber	Pyrex glass, ø64×160mm×3 chambers	Pyrex glass, ø118×160mm×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	W350×D400×H500mm	W438×D520×H556mm	W438×D520×H630mm
Weight	Approx. 25kg	Approx. 36kg	Approx. 34kg
Power source (50/60Hz)	AC115 / AC220V Single phase with step-down transformer		
Standard accessories	Specimen stand×1pc	Sample dish (large and small)×1 each, Sample shelf×1 pc, Vacuum grease×1 pc, O-ring for reaction chamber×3 pcs	Vacuum grease×1 pc, O-ring for reaction chamber×1 pc

External dimensions do not include projections.

Operation Flowchart



Piping System (PR300)



Chamber



PR200
1 chamber (ø100 x 160mm)

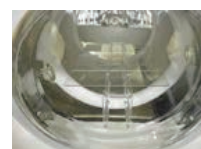


PR300
3 chambers (ø64 x 160mm)
Contamination free

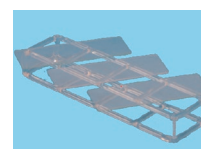


PR301
1 chamber (ø118 x 160mm)

Accessories



Specimen stand for PR200
(Standard)



Sample shelf for PR300
(Standard)

Example application: asbestos analysis pre-processing

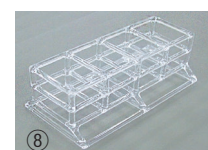


Optional items (PR200)

No.	Description	Model	Product Code
①	Stand	OPR12	215070
②	Seismic bracket	OPR14	215071
③	Vacuum pump	PQ-30	242284
④	Oil mist trap	OMT-050A	242058
⑤	Vacuum rubber hose I.D. 15 mm×2 m)		281014

Optional items (PR300/301)

No.	Description
⑥	Stand
⑦	Vacuum pump (160L/min. or more)
⑧	Sample shelf (for PR301)



Sample shelf for PR301
(Optional)