

# YKD 6006 MPVCD

## Eliminates Diamond Mining,

YKD provides Microwave Plasma Chemical Vapor Deposition (MPCVD) For Lab-Grown Single Crystal Diamonds.

We use an elaborate process to develop 6006 system, and we produce single crystal diamonds with Microwave Plasma Chemical Vapor Deposition. The final product can rival human exploitation diamond, and the colorless gem grade diamond.

Microwave plasma system YKD6006 is designed for chemical vapor deposition of single, poly and nano crystal diamond, Carbon nanotubes and nanowires can also be produced.

System consists of Stainless Steel Cylindrical reactor using a TM01x resonant mode. Producing highly energetic plasma, and high concentration of Atomic Hydrogen useful for production of Colorless Gem Grade Diamonds.

Multiple Seeds



Energetic 3" diameter Plasma



6006  
MPCVD

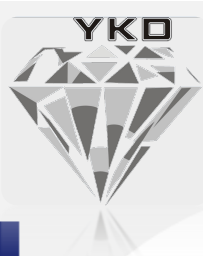
### Features:

1. Stable Plasma for long deposition.
2. Quick pump down time
3. VCR Grade SS Gas tubes for long life gas delivery.
4. Automatic maintenance and troubleshooting alert system.
5. Five Viewports to growth observation.

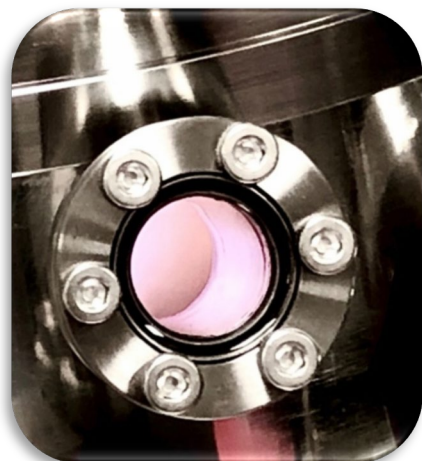


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# YKD 6006 MPVCD



Microwave Power:	6KW/2.45GHz
Reactor Chamber Material:	Stainless Steel
Stage Type:	Water-cooling
Standard Substrate Holder:	50mm(ψ2inch)
tandard Gas Channel:	3 channels(H2/CH4/N2)
(up to 6 channels)	
Operating Pressure Range:	-10~240 torr
Vacuum Leak Integrity:	<1x10 <sup>-9</sup> mbar.1/sec
(by He leak delector)	
Stage moving:	Z-axis
Vacuum Pump Type(Standard):	Rotary Vacuum Pump
	【18/22 m3/n(50/60 Hz)】
System Dimension(approx):	W1450xD840xH1950mm
System Weight(approx):	350kg

Optional Accessories
• MFC Kit(up to 6 channels)
• OES(Optical Emission Spectrometer)
• Raman Spectrometer(785 or 532 or 405nm)
• Micron Raman Device
• Dry Pump
• Dual wavelength IR pyrometer

## YKD 6006 system is capable:

- \* Loading multiple seeds in 2 inch diameter deposition area
- \* Growth Rate range : 10 to 40 micron per hour.
- \* Colorless output in 7 to 14 days

## Applications:

- \* Gem Grade Single Crystal Diamond
- \* Optical windows; Heat spreaders
- \* Cutting tools, wear coating
- \* Electro-chemical electrodes
- \* Sensors; MEMS, Radiation detectors



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