













Table 1. Tabulated MTI Plasma Enhanced CVD & ALD Tube Furnaces Tube Furnaces (PECVD)

No	Model	Working Tube Dia.	Plasma RF Power Supply	Working Temperature	Features	Item Image
1	KSL-1100X-HV-LD	2" - 3.14" OD	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 200W max Reflection power. 	<p>Max: 1200 °C (<1 hour) Cont: 1100°C</p>	<p>It is a compact PE-CVD (Plasma Enhanced Chemical Vapor Deposition) tube furnace system, which consists of 300W RF plasma source, 2" or 3.14" O.D optional split tube furnace, 4 channels precision mass flow meter with gas mixing tank, and high-quality mechanical pump. The PE-CVD furnace is an ideal and affordable tool to deposit thin films or grow nanowire from a gas state (vapor) to a solid-state.</p>	
2	PECVD-8-16	8.5" O.D x 8.2" I.D x 51" Length	<ul style="list-style-type: none"> - 20-10000W Output Power. - 13.56 MHz RF frequency 	400 - 1100 °C	<p>PECVD-8-16 is a CCP type PECVD system for a small batch of 12 pcs 6" wafer. The system consists of an 8"ID quartz tube furnace up to 1100°C, a batch type graphite boat for 12 wafers, 1000W plasma generator, and a 4-channel programmable gas delivery system. It is an excellent tool for a pilot test of thin-film research of solar cell and 2D materials.</p>	
3	VTC-PECVD	100 mm Dia	<ul style="list-style-type: none"> - 20-10000W Output Power. - 13.56 MHz RF frequency 	-	<p>It is a CCP type (Capacitively Coupled Plasma) plasma-enhanced chemical vapor deposition (PECVD) system with a high vacuum chamber. It is designed for plasma-assisted thin-film coating at lowered temperature (200 ~ 500°C), compared to the normal deposition at 700~950°C. The high vacuum chamber also provides a clean environment which greatly improves the film size, uniformity, and film quality.</p>	

4	OTF-1500X-III-PEC4SL	81 O.D x 73 I.D x 2133 L mm	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 200W max Reflection power. 	-	OTF-1500X-III-PEC4SL is three zones 1500°C PE-CVD tube furnace system consists of 300W RF plasma source, 81Dx 2133mm mullite tube furnace with an integrated channel precision mass flow meter with gas mixing tank, and a high-quality oilless vacuum pump. Such a PE-CVD furnace is a new tool to grow nanowire or graphene or SiC coating.	
5	OTF-1200X-II-PE-RR		<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. 	- 5~45 °C	OTF-1200X-II-PE-RR is a lab-scale Roll to Roll PE-CVD (Plasma Enhanced Chemical Vapor Deposition) tube furnace system, which consists of 300W RF plasma source, 80mm O.D two heating zone split tube furnace at 1200oC Max., 3 channel MFC gas delivery station, and high-quality mechanical vacuum pump, and two vacuum chambers with substrate reeling in and out, as well as touch screen control panel. The R2R system is designed for exploring flexibility to grow graphene or other two-dimension films continuously for the industry.	
6	OTF-1200X-II-50-PEC4SL	2" (50 mm) OD x 1.7" D x 71" Lenght	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 200W max Reflection power. 	- 5~45 °C	OTF-1200X-II-PEC4SL is a multi-zone slidable PE-CVD tube furnace system consists of 300W RF plasma source, with optional tube size and an integrated slidable rail, 4 channel precision mass flow meter with gas mixing tank, and a high-quality oil-less vacuum pump	
	OTF-1200X-II-80-PEC4SL	3.14" (80mm) OD x 2.83" ID x 71" Lenght				
	OTF-1200X-III-5-PEC4SL	5" (130mm) OD x 4.8" ID x 79" lenght				
7	OTF-1200X-II-50-PEMSL	50 mm OD	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 200W max Reflection 	Max: 1100 °C	OTF-1200X-II-50-PEMSL is a dual-zone PE-CVD tube furnace system which consists of 300W RF plasma source, speed controlled slidable mechanism, a pre-heater for sublimating the solid material and a high-quality oil-less vacuum pump	

			power.			
8	OTF-1200X-5L-PE	130 ODx122 IDx2000L mm	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 200W max Reflection power. 	Max: 1200 °C Cont: 1100 °C	OTF-1200X-5L-PE is a PE-CVD (Plasma Enhanced Chemical Vapor Deposition) tube furnace system, which consists of 300W RF plasma source, 130ODx122ID, mm quartz tube furnace, and high-quality vacuum pump with a cold trap. The PE-CVD furnace is an ideal and affordable tool to deposit thin films or grow nanowire from a gas state (vapor) up to 4" wafer.	
9	OTF-1200X-II-PEC4	4" O.D Fused quartz	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 100W max Reflection power. 	Max: 1300 °C Cont: 1200 °C	OTF-1200X-II-PEC4 is a 1200°C Rotatable Two-Zone Plasma-Enhanced Hybrid-Physical-Chemical Vapor Deposition (PE-HPCVD) system. It consists of a Tiltable Frame, 300W RF Plasma Generator & Matching Network, Up-Stream Source Evaporation Boat with Power Supply, Four-Channel MFC Gas Delivery, and High-Performance Vacuum Pump. Such a complete system is an excellent tool for heat-treating inorganic compound powders with superior temperature and surface coating uniformity.	
10	OTF-1200X-III-R5-PECVD	-	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. - 100W max Reflection power 	Max: 1200 °C (<1 hours) Cont: 1100 °C	OTF-1200X-III-R5-PECVD is a 1200°C Rotatable Three - Zone Plasma-Enhanced Chemical Vapor Deposition (R-PE-CVD) system which is designed fro powder surface coating to form core-shell structure particles at the relatively lower temperature. The automatic powder feeding and receiving system is built in for continuous powder coating. Temperature, plasma power, and 4 channel gas MFC is controlled by touch screen panel and laptop computer for easy operation	
11	OTF-1200X-S-II-PECVD	2" O.D Fused quartz	<ul style="list-style-type: none"> - 5-300W Output Power. - 13.56 MHz RF frequency. 	Max: 1100 °C (<1 hours) Cont: 1000 °C	OTF-1200X-S-II-PECVD is a 1000°C Rotatable Two-Zone Plasma-Enhanced Chemical Vapor Deposition (PE-CVD) system. It consists of a 300W RF (Ratio Frequency) Plasma Generator & Matching Network, and High-Performance Vacuum Pump. Such a system is an excellent tool for heat-treating	

			- 100W max Reflection power		inorganic compound powders with surface coating uniformity	
12	OTF-1200X-S-II-PEC4	2" O.D Fused quartz	- 5-300W Output Power. - 13.56 MHz RF frequency. - 100W max Reflection power	Max: 1100 °C (<1 hours) Cont: 1000 °C	OTF-1200X-S-II-PEC4 is a 1200°C Rotatable Two-Zone Plasma-Enhanced Hybrid-Physical-Chemical Vapor Deposition (PE-HPCVD) system. It consists a 300W RF (Ratio Frequency) Plasma Generator & Matching Network, Up-Stream Source Evaporation Boat with Power Supply, Four-Channel MFC Gas Delivery, and High-Performance Vacuum Pump. Such a complete system is an excellent tool for heat-treating inorganic compound powders with superior temperature and surface coating uniformity (e.g. prepare Li-Ion battery cathode powders with conductive coatings on sample surface)	
13	OTF-PECVD-RF	50, 80 or 125 mm OD	- 5-300W Output Power. - 13.56 MHz RF frequency. - 100max Reflection power	-	13.56MHz RF generator up to 300W for DIY of PECVD (Plasma Enhanced Chemical Vapor Deposition) for Plasma etching, Plasma cleaning, and plasma polymerization etc.	