



Vacuum Thermal Process Equipmenmts Professor

文生真空科技股份有限公司
Vincent Vacuum Tech CO., LTD.

Vacuum Burnout Furnace
Vacuum Heat Treatment Furnace
Vacuum Debinding and Sintering Futnace

32663 No.30,Minlong Rd., Yangmei City,
Taoyuan County, Taiwan(R.O.C.)
Tel:886-3-4726665 Fax:886-3-4726675
www.vvt.com.tw



VINCENT

Vacuum Burnout Furnace



Features:

Vacuum Burnout Furnace is designed to support LED manufacturing in cleaning MOCVD deposits on the graphite platters/susceptors in heating process.

Applications:

1. Maintain high performance of graphite platters by removing contaminating residues and deposits.
2. Reclaimed wafers polishing and cleaning in LED industry

Vacuum Burnout Furnace-Specs

Model		HBM 465G	HBM 650G	HBM 800G	HBM 1000G
Installation Dimensions-mm	Width	2210	2480	2650	2780
	Length	2350	2800	2819	3260
	Height	2200	2140	2200	2415
Heating Area -mm		∅ x L: 620 x 800	∅ x L: 750 x 1020	∅ x L: 893 x 1120	∅ x L: 1050 x 1440
Effective Radiation Work Zone -mm		W x H x L: 367 x 367 x 600	W x H x L: 460 x 460 x 740	W x H x L: 565 x 565 x 900	W x H x L: 710 x 710 x 1200
Load Capacity -kg ※1		120	200	250	350
SCR Power Supply		Graphite Heaters: circular arrangement of graphite rods			
		380V/480V/3 phase 85 KVA, max.		380V/480V/3 phase 100 KVA, max.	380V/480V/3 phase 120 KVA, max.
Graphite-based Insulation		Multi-layered graphite felt, Graphite sheets(soft)			
Maximum Temperature -°C		1400			
Partial Pressure System		N ₂ / Forming gas			
Backfill Gas		N ₂			
Maximum Heating Rate --°C/min ※2		12	12	12	10
Temperature Uniformity		Temperature uniformity is within ±5°C by taking 9-point with PTCR at 800 °C and 1000 °C			
Ultimate Vacuum Level ※3		10 ⁻³ Torr			
Pumping Rate ※2		Pump down to 10 ⁻² Torr range in 30min			
Chamber Leak Rate		4.5*10 ⁻⁸ mbar*L/S			
Maximum Cooling Pressure -Torr		550~650			
Maximum Cooling Speed- min ※4		100	150	150	110
Setting Range of Partial Pressure for Venting -Torr		0.1 ~ 25			

※ 1 : Including fixtures/platters

※ 2 : During dry run cycles

※ 3 : The empty furnace is performed at normal temperature during dry run cycles

※ 4 : Cool down from 1400°C to 60°C during dry runs
Nitrogen gas partial pressure / orming gas partial pressure

Vacuum Heat Treatment Furnace



Features:

Heat treatment is the process where a number of heating and cooling operations are performed below atmospheric pressure for the specific purpose of altering the physical properties of an alloy.

Applications:

Solid Solution Treatment, Precipitation Hardening, Bright Treatment, Annealing, Quenching & Tempering, Normalizing, Diffusion Bonding, Vacuum Brazing

Vacuum Heat Treatment Furnace-Specs

		H600-HT	H600-LHT ※5	H800-HT	H800-LHT ※5	V800-HT	V2000-HT
Installation Dimensions -mm	Width	4200	4200	4500	4500	5300	9000
	Length	5000	5000	5400	5400	4075	9500
	Height	2800	2800	3200	3200	7500	10500
Heating Area -mm		∅ x L: 920 x 1100	∅ x L: 920 x 1100	∅ x L: 1160 x 1500	∅ x L: 1160 x 1500	∅ x L: 1000 x 1260	∅ x L: 1600 x 2000
Effective Radiation Work Zone -mm		W x H x L: 600 x 600 x 900	W x H x L: 600 x 600 x 900	W x H x L: 800 x 800 x 1200	W x H x L: 800 x 800 x 1200	∅ x L: 900 x 1000	∅ x L: 1500 x 1500
Load Capacity -kg ※1		600	600	800	800	800	2000
Graphite Heaters: circular arrangement of graphite rods							
SCR Power Supply		380V/3 phase 130KVA,max.	380V/3 phase 130KVA,max.	380V/3 phase 150KVA,max.	380V/3 phase 150KVA,max.	380V/3 phase 200KVA,max.	380V/3 phase 360KVA,max.
Graphite-based Insulation							
<i>Multi-layered graphite felt, Graphite sheets(soft)</i>							
Maximum Temperature -°C		1250					
Gas Quenching System							
<i>High HP motor fan, graphite nozzle</i>							
Partial Pressure System		N ₂					
Backfill Gas		N ₂					
Maximum Heating Rate -°C/min ※2		15 °C/min					
Temperature Uniformity							
<i>Temperature uniformity is within ±5°C by taking 9-point with PTCR at 800 °C and 1000 °C</i>							
Ultimate Vacuum Level-Range ※3		10 ⁻⁵ Torr	10 ⁻³ Torr	10 ⁻⁵ Torr	10 ⁻³ Torr	10 ⁻⁵ Torr	10 ⁻⁵ Torr
Pumping Rate ※2							
<i>Pump down to 10⁻² Torr range in 30min</i>							
Chamber Leak Rate		5*10 ⁻³ mbar*L/S					
Maximum Cooling Pressure -Bar		4 BAR					
Maximum Cooling Speed - min ※4		10 min					
Setting Range of Partial Pressure for Venting -Torr		0.1 ~ 25					

※ 1 : Including fixtures/platters

※ 2 : During dry run cycles

※ 3 : The empty furnace is performed at normal temperature during dry run cycles

※ 4 : Cool down from 1100 to 150 during dry runs

※ 5 : Exclusively for vacuum brazing & annealing

Vacuum Debinding and Sintering Furnace



Features:

Vacuum Debinding and Sintering furnace provides unprecedented value for applications in the Power Metallurgy and MIM industry.

Applications:

Vacuum Debinding and Sintering Furnace is designed for applications in the MIM (Metal Injection Molding) and Powder Metallurgy industries.

Vacuum Debinding and Sintering Furnace-Specs

SPEC		Model	VDS-90	VDS-150
Installation Dimensions-mm	Width		4200	5500
	Length		3500	5000
	Height		2900	3000
Heating Area -mm			∅ x L: 730 x 1760	∅ x L: 840 x 1840
Effective Radiation Work Zone -mm			W x H x L: 450 x 450 x 1400	W x H x L: 600 x 600 x 1620
Load Capacity -kg ※1			90	150
SCR Power Supply			Graphite Heaters:circular arrangement of graphite rods 380V/480V/3 phase ; 120 KVA, max	Graphite Heaters:circular arrangement of graphite rods 380V/480V/3 phase ; 130 KVA, max
Graphite-based Insulation		Multi-layered graphite felt		
Maximum Temperature - °C		1400		
Partial Pressure System		N ₂ 、Ar		
Backfill Gas		N ₂		
Maximum Heating Rate --°C/min(°F/min)※2		10		
Temperature Uniformity		Temperature uniformity is within ±5°C by taking 9-point with PTCR at 800 °C and 1000 °C		
Ultimate Vacuum Level ※3		5 x 10 ⁻² Torr		5 x 10 ⁻³ Torr
Pumping Rate ※2		Pump down to 10 ⁻² Torr range in 30 min		Pump down to 5 x 10 ⁻² Torr range in 30 min
Chamber Leak Rate		4.5*10 ⁻⁸ mbar*L/S		
Maximum Cooling Pressure -Torr		650		
Maximum Cooling Speed- min ※4		180		
Setting Range of Partial Pressure for Venting -Torr		1~100		

※ 1 : Including fixtures/platters
 ※ 2 : During dry run cycles

※ 3 : The empty furnace is performed at normal temperature during dry run cycles
 ※ 4 : Cool down from 1100°C to 150°C during dry runs