Silicon carbide sintering furnace

Introduction of silicon carbide sintering furnace

Silicon carbide sintering furnace is the key equipment for producing silicon carbide materials. The silicon carbide products sintered by this equipment have excellent process performance. The product has complete reaction, high compound content, uniform strength and good quality.

Equipped with a dewaxing system, the dewaxing effect is enhanced. The temperature field in the furnace is uniform, and the design of the sintering chamber is reasonable. The process of removing forming agent, vacuum sintering or pressure less sintering can be completed in the furnace at one time.

The internal atmosphere is stable, prolonging the service life of carbon felt and heating materials.

It adopts resistance or induction heating graphite heater, which has long service life, good heating effect and convenient maintenance.

The process is simple, and the pressure, vacuum and atmosphere in the furnace are all controlled with effective precision.

Advanced ultra-high temperature sintering equipment capable of both pressure less sintering and low vacuum sintering.

Application field of silicon carbide sintering furnace

Silicon carbide sintering furnace is mainly used for vacuum and atmosphere sintering of silicon carbide, boron carbide, precision ceramics, hard alloy, powder metallurgy, tungsten, molybdenum, alnico permanent magnet, Smco5, Sm2co17, aluminum iron shed, titanium alloy and other materials.

Features of silicon carbide sintering furnace

1. Automated, all operations of the furnace are performed on the touch screen. Automatic monitoring of water, electricity and gas conditions during operation. The touch screen can observe the operating status of the equipment, equipment alarm indication, heating curve, etc. at any time.
2. High-quality raw materials: The furnace body is all made of 304 stainless steel, built in strict accordance with pressure vessel standards, with good corrosion resistance and airtight performance. The insulation material is made of high-purity graphite felt, which is durable. All electrical components are world-renowned brands with reliable operation.
3. High safety: the furnace body is equipped with an automatic explosion-proof valve, which is safe and reliable. The sensor part is separately installed with a water flow meter to monitor the water flow in real time. The power supply strictly and effectively sets the over-current value and over-voltage value according to the requirements.
4. Satisfy the sintering of various products: 2400℃ high-temperature furnace body can meet the vacuum sintering and pressure less sintering of silicon carbide powder of various particle sizes, silicon carbide sealing ceramics, etc.
5. High product quality: Compared with the traditional carbonization furnace, the silicon carbide sintering furnace has significantly improved the carbonization quality, complete reaction, uniform particle size, high combined carbon content, low free carbon content, high output and long service life.
6. Perfect after-sales service: one-year quality assurance, life-long technical support. Engineers can be sent to the customer site for installation and commissioning, and remote guidance for installation and commissioning is also available.

Main Technical Data

Property \ Model		Lab Furnace	Mass Production Furnace				
		CNEQS-30	CNEQS-45	CNEQS-50	CNEQS-50L	CNEQS-60	CNEQS-75
Usable Space	mm	300×260×550	450×450×750	500×500×1200	500×500×1500	600×600×2000	750×750×2000
Heating Process	/	Isostatic graphite cage heating (resistance heating)					
Control Method	/	Manual + automatic + mobile terminal remote operation					
Volume	L	36	151	300	375	720	1125
Loading Capacity	g	Loading Capacity * Density					
Power	KW	100	165	250	300	400	550
Limited Vacuum	Pa	5 Pa（room temperature, empty. Add diffusion pump to -2 Pa）					

Continuous Working Temperature	℃	2300	2300	2300	2300	2300	2300
Maximum Temperature	℃	2400	2400	2400	2400	2400	2400
Temperature Uniformity	℃	±5	±5	±5	±5	±5	±5
Working Atmosphere	/	Vacuum or Inert Gas Protection (Micro positive pressure)					

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