

# 真空脱脂烧结多功能一体炉

## Multifunctional Furnace of Vacuum Degreasing and Sintering

### Technical Features

#### 产品特点

- 均匀的加热、可靠的隔热及测温

Uniform heating, Reliable heat insulation and Temperature measurement

采用石墨电阻加热,合理的加热结构,优良的材质,保证真空状态下炉温的均匀性。

Using graphite resistance heating, reasonable heating structure, excellent material, ensure the uniformity of furnace temperature under vacuum.

- 依次进行脱气、脱蜡、烧结

Performs Degassing, Dewaxing and Sintering in Sequence

使用内置密封炉胆来排放粘接剂蒸气,防止其附着或污染炉壁或隔热层。

Using internal tight box to discharge binder vapors and prevent them from adhering to or contaminating furnace walls or the heat-insulating layer.

- 彻底蒸汽清脂系统

Complete steam grease cleaning system

配备独特的蒸气清脂系统,消除清脂烦恼。

Equipped with a unique steam fat removal system to eliminate the troubles of fat removal.

- 先进的自动控制及可靠的安全联锁

Advanced automatic control and reliable safety interlock

采用计算机实现温度、动作过程全自动控制、PLC实现安全联锁,具有超压、超温水温过高等声光报警及联锁功能。

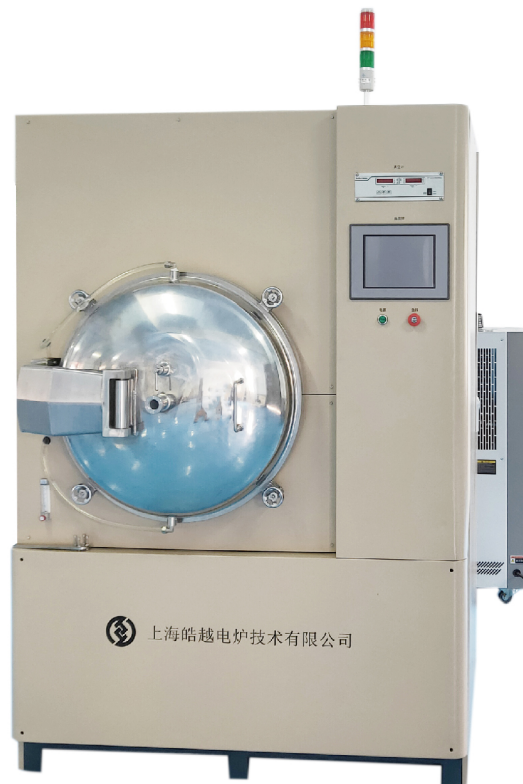
Adopt computer to realize automatic control of temperature and action process, and PLC realize safety interlock. It has sound and light alarm and interlock function such as over-pressure and over-temperature and high water temperature.

- 高效快冷系统

Efficient fast cooling system

可配置内循环或外循环快速冷却装置,高效换热技术多方向吹向工件,冷却快速均匀。

Can be equipped with internal or external circulation rapid cooling device, high-efficiency heat exchange technology blows to the workpiece in multiple directions, cooling quickly and evenly.



### Application

#### 应用

- Cemented Carbide (WC, TiC) 硬质合金

Performs dewaxing, degassing, and sintering in sequence.

- Oxide Ceramics 氧化物陶瓷

Performs dewaxing, degassing, and sintering processes in sequence  
Application: Aluminium Oxide( $Al_2O_3$ ), Zirconium Oxide( $ZrO_2$ ).

- Non-Oxide Ceramics 非氧化物陶瓷

Performs dewaxing, degassing, and sintering processes in sequence  
Application: Silicon Carbide( $SiC$ ), Silicon Nitride( $Si_3N_4$ ), Aluminum Nitride (AlN).

- Metals and Alloys 金属和合金材料

Performs dewaxing, degassing, and sintering in sequence.

- Graphite 石墨

Performs degassing and purification in sequence.

## 技术规格 / Main Specification

参数Spec.	型号Model	VHSgr-20/20/30-1600 (V2-16)	VHSgr-20/20/30-2000 (V2-20)	VHSgr-20/20/30-2300 (V2-23)
设备装料方式 Equipment Loading Method		侧开门装料 Horizontal side loading		
加热元件 Heating Element		石墨 Graphite		
极限真空度 Max.Vacuum		8.0×10 <sup>-3</sup> Pa (空炉、冷态、经净化) (8.0×10 <sup>-5</sup> torr, empty furnace, cold state, purified)		
压升率 Pressure Rising Rate		≤2.0Pa/h (空炉、冷态) (Empty furnace, cold state)		
真空烧结技术参数 (真空烧结使用) / Technical parameters of vacuum sintering (use of vacuum sintering)				
热区尺寸 Heat Area Size		200 × 200 × 300mm (宽 × 高 × 长) / (W×H×L)		
有效区尺寸 Effective Working Size		160 × 160 × 160mm (宽 × 高 × 长) / (W×H×L)		
最高温度 Max.Temperature		1600°C	2000°C	2300°C
工作温度 Working Temperature		1550°C	1900°C	2200°C
最大功率 Max.Power		30KW	45KW	60KW
控温精度 Temperature Accuracy		±1°C		
测温传感器 Thermocouple		钨铼热电偶 W-Re5/26 (C)		钨铼热电偶+红外测温仪 W-Re5/26 (C) + Infrared Thermometer
真空脱脂技术参数 (真空脱脂使用) / Technical parameters of vacuum degreasing (for vacuum degreasing)				
适用材料及脱脂工艺 Applicable material and degreasing process		CIM / MIM		
脱脂温度 Degreasing Temperature		100°C ~ 950°C		
气氛 Gases		氮气, 氩气 Nitrogen, Argon		
控制系统 Control System		PLC+HMI		
冷却水要求 Cooling Water Requirement		水压: 0.2~0.3MPa, 水流量: 8m³/小时 Water pressure: 0.2~0.3MPa, water flow: 8m³/ h		
设备外形尺寸 Equipment External Dimensions		1500×1750×1700mm (宽 × 高 × 长) / (W×H×L)		
备注 Remarks		可根据客户要求定制化 Can be customized according to customer requirements		

