

# S-series: Spark Plasma Sintering

## 简介 / BRIEF INTRODUCTION

# S系列: SPS放电等离子烧结系统

SPS(Spark Plasma Sintering)放电等离子烧结系统是当今世界上最先进的烧结系统之一，是在两电极间施加脉冲电流和轴向压力进行粉末烧结致密化的一种新型快速烧结技术。它具有升温速度快、烧结时间短、组织结构可控、节能环保等鲜明特点，可用来制备金属材料、陶瓷材料、复合材料，也可用来制备纳米块体材料、非晶块体材料、梯度材料等。



升温速度快 / 烧结时间短 / 组织结构可控 / 节能环保

Fast Heating Rate / Short Sintering Time / Controllable Organizational Structure / Energy-saving and Environmental Protection

The SPS (Spark Plasma Sintering) DCS discharge plasma sintering system is one of the most advanced sintering systems in the world today. It is a new rapid sintering technology that applies pulse current and axial pressure between two electrodes to densify powder sintering. It has distinct characteristics such as a fast heating rate, short sintering time, controllable organizational structure, energy conservation and environmental protection. It can be used to prepare metal materials, ceramic materials, composite materials, as well as nano bulk materials, amorphous bulk materials, gradient materials, etc.

## S6等轴测图

S6 Isometric Drawings

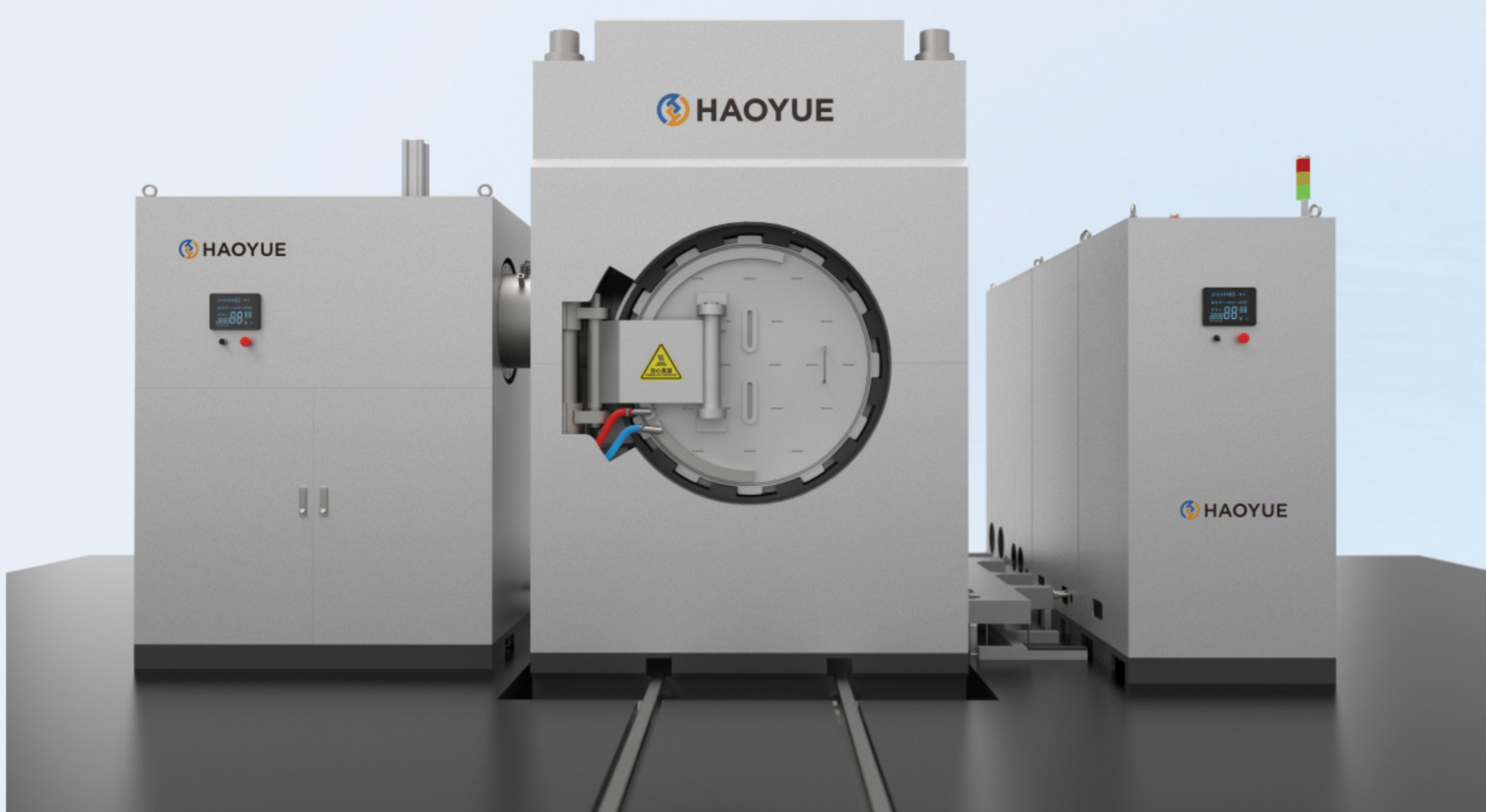


## 应用领域 / APPLICATIONS

- 金属: Fe、Cu、Al、Au、Ag、Ni、Cr、Mo、Sn、Ti、W、Be;
- 陶瓷氧化物: Al<sub>2</sub>O<sub>3</sub>、Mulitex ZrO<sub>2</sub>、Mg、SiO<sub>2</sub>、TiO、HfO<sub>2</sub>;
- 碳化物: SiC、B<sub>4</sub>C、TaC、WC、ZrC、VC;
- 氮化物: Si<sub>3</sub>N<sub>4</sub>、TaN、TiN、AlN、ZrN、VN;
- 硼化物: TiB<sub>2</sub>、HfB<sub>2</sub>、LaB<sub>6</sub>、ZrB<sub>2</sub>、VB<sub>2</sub>;
- 氟化物: LiF、CaF<sub>2</sub>、MgF<sub>2</sub>;
- 金属陶瓷: Si<sub>3</sub>N<sub>4</sub>+Ni、Al<sub>2</sub>O<sub>3</sub>+Ni、ZrO<sub>2</sub>+Ni、Al<sub>2</sub>O<sub>3</sub>+Ti、SUS+WC/Co、BN+Fe、WC+Co+Fe;
- 金属化合物: TiAl、MoSi<sub>2</sub>、Si<sub>3</sub>Zr<sub>5</sub>、NiAl、NbCo、NbAl、Sm<sub>2</sub>Co<sub>17</sub>。

## S6正视图

S6 Front



- Metals: Fe, Cu, Al, Au, Ag, Ni, Cr, Mo, Sn, Ti, W, Be;
- Ceramic oxides: Al<sub>2</sub>O<sub>3</sub>, Mulitex ZrO<sub>2</sub>, Mg, SiO<sub>2</sub>, TiO<sub>2</sub>, HfO<sub>2</sub>;
- Carbides: SiC, B<sub>4</sub>C, TaC, WC, ZrC, VC;
- Nitrides: Si<sub>3</sub>N<sub>4</sub>, TaN, TiN, AlN, ZrN, VN;
- Boride: TiB<sub>2</sub>, HfB<sub>2</sub>, LaB<sub>6</sub>, ZrB<sub>2</sub>, VB<sub>2</sub>;
- Fluorides: LiF, CaF<sub>2</sub>, MgF<sub>2</sub>;
- Metal ceramics: Si<sub>3</sub>N<sub>4</sub>+Ni, Al<sub>2</sub>O<sub>3</sub>+Ni, ZrO<sub>2</sub>+Ni, Al<sub>2</sub>O<sub>3</sub>+Ti, SUS+WC/Co, BN+Fe, WC+Co+Fe;
- Metal compounds: TiAl, MoSi<sub>2</sub>, Si<sub>3</sub>Zr<sub>5</sub>, NiAl, NbCo, NbAl, Sm<sub>2</sub>Co<sub>17</sub>.

## 产品规格及技术指标 / SPECIFICATIONS & PARAMETERS

产品编号 Numbering	产品型号 Model	有效工作区(mm) Chamber (mm)	样品直径(mm) Sample Dia. (mm)	压力(吨) Pressure (ton)	极限真空度(Pa) Ultimate Vacuum (Pa)	最高温度(°C) Max. Temperature (°C)
S6	VHPsp-25/70-2200	Φ250×700	Φ150	100	1	2200
S-200	VHPsp-32/80-2200	Φ320×800	Φ200	200	1	2200
S-300	VHPsp-40/80-2200	Φ400×800	Φ300	250	1	2200
S-400	VHPsp-60/80-2200	Φ600×800	Φ400	400	1	2200