

HAOYUE Vacuum Furnace

Pre-Installation Facility Planning & Utility Guide

A comprehensive workbook for process engineers and MEP contractors to prepare the shop floor for advanced thermal processing equipment.

Designed for Engineering Excellence

www.vacuum-sintering.com

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Section 1: Equipment Layout & Footprint Requirements



⚠ INSTRUCTIONS FOR ENGINEERS:

Please use the baseline dimensions below to plan your shop floor layout. It is absolutely critical that the "Maintenance Clearance" is strictly adhered to. This space is required for safe loading/unloading, opening the main chamber door, and



performing routine vacuum pump oil changes.



Equipment Series	Furnace Type	Base Footprint (L x W x H) mm	Min. Ceiling Height (mm)	Floor Load (kg/m ²)	Required Maintenance Clearance
P2 Series	Gas Pressure Sintering (Sinter-HIP)	3500 x 2500 x 2800	4500	2500	Front: 2000mm Rear: 1500mm Sides: 1200mm
V2 Series	High Vacuum Sintering Furnace	3000 x 2200 x 2500	4000	1500	Front: 1500mm Rear: 1200mm Sides: 1000mm
S Series (S1-S4)	Spark Plasma Sintering (SPS)	2800 x 2200 x 3200	5000	2000	Front: 1500mm Rear: 1500mm Sides: 1500mm
D2 Series	Vacuum Debinding Furnace	2500 x 1800 x 2200	3500	1000	Front: 1500mm Rear: 1000mm Sides: 1000mm
G2 / H2 Series	High Temp Graphitization / Hot Press	3200 x 2400 x 3500	5000	2200	Front: 2000mm Rear: 1500mm Sides: 1500mm

Section 2: Utility Interface Configuration

Matrix

This matrix details the specific water, power, and gas connections required before the HAOYUE installation team arrives on site.

Parameter / Specification	P2 Series (Sinter-HIP)	V2 & D2 Series (Vacuum)	S & H2 Series (SPS/Hot Press)
 ELECTRICAL POWER			
Main Supply Voltage	380V/415V, 3-Ph, 50/60Hz	380V/415V, 3-Ph, 50/60Hz	380V/415V, 3-Ph, 50/60Hz
Est. Installed Power (kW)	150 kW - 350 kW	80 kW - 200 kW	100 kW - 400 kW
Grounding Resistance	< 4 Ohms (Dedicated)	< 4 Ohms (Dedicated)	< 2 Ohms (Critical)
 COOLING WATER			
Flow Rate Req. (L/min)	150 - 300 L/min	80 - 150 L/min	200 - 400 L/min
Inlet Pressure &	0.2-0.4 MPa	0.2-0.4 MPa	0.3-0.5 MPa

Parameter / Specification	P2 Series (Sinter-HIP)	V2 & D2 Series (Vacuum)	S & H2 Series (SPS/Hot Press)
Temp	15-25°C	15-25°C	15-20°C
Pipe Interface Size	DN40 / DN50 Flange	DN32 / DN40 Flange	DN50 Flange
 PROCESS GAS (Ar/N2)			
Gas Purity	≥ 99.999%	≥ 99.999%	≥ 99.99%
Supply Pressure	High Press (Up to 10 MPa)	0.2 - 0.5 MPa (Standard)	0.2 - 0.5 MPa
 COMPRESSED AIR & EXHAUST			
Pneumatic Air Pressure	0.5-0.7 MPa (Dry/Clean)	0.5-0.7 MPa (Dry/Clean)	0.5-0.7 MPa (Dry/Clean)
Exhaust Pipe Diameter	DN100 - DN150	DN80 - DN100	DN100

Section 3: Pre-Installation Site Readiness Checklist

Project managers should complete this checklist prior to scheduling equipment delivery and commissioning.

Category	Preparation Task / Requirement	Done	Remarks / Sign-off
CIVIL & SPACE	Foundation poured, cured, and meets kg/m ² load bearing req.		
	Transport path from loading dock to final spot is clear.		
	Forklift or overhead crane arranged for unloading.		
ELECTRICAL	Main distribution box installed within 3 meters of location.		
	Appropriate gauge power cables routed from facility panel.		
	Independent grounding line tested.		
WATER	Industrial Chiller/Cooling tower installed and tested for leaks.		
	Inlet/Outlet water pipes routed with manual shut-off valves.		

Category	Preparation Task / Requirement	Done	Remarks / Sign-off
GAS & AIR	Gas cylinders or liquid gas station installed safely.		
	Stainless steel gas lines routed to the furnace location.		
	Air compressor installed, with FRL unit ready.		
	Exhaust ducting routed to the facility exterior.		

Customer Signature: _____ **Date:** _____