Vacuum Hot Press Furnace

Item Number: KT-VHP

Introduction

Discover the advantages of Vacuum Hot Press Furnace! Manufacture dense refractory metals & compounds, ceramics, and composites under high temp and pressure.

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Specification	• The electric furnace is heated by a vertical furnace body (pressure ranges from 5-800T, and the pressurization method is divided into one-way and two-way). The feeding and discharging methods are divided into top and side. , electronic control system and other components.
Furnace shell	• The furnace shell is a double-layer water-cooled structure, the inner layer is strictly polished stainless steel, the outer layer is stainless steel sandblasting matte treatment or carbon steel anti-rust treatment, water cooling is passed between the double layers, and the furnace shell does not exceed 60 °C. The furnace cover is lifted by a mechanical mechanism, manually rotated backwards to open (one-way pressure), and a locking device is installed on the furnace cover.
Stove side	• The side of the furnace is equipped with an observation window, a thermocouple automatic entry and exit mechanism, an infrared thermometer and a water-cooled electrode (three-phase). The automatic entry and exit of the thermoelectric cell is electric, with high and low temperature automatic switching. In order to prevent accidents caused by abnormal furnace temperature, there is also an over-temperature protection thermocouple on the side of the furnace.
The heating element	• The heating element is made of graphite tube (or molybdenum wire), which can be divided into single-phase and three-phase heating. The rational design of the heating element improves the uniformity of the furnace temperature.
The insulation layer	• The insulation layer is made of graphite (or graphite paper), carbon felt, etc., which has good insulation performance, and the unique structural design reduces the vacuuming time. The insulation layer of the molybdenum wire hot pressing furnace is a metal reflective screen.
The vacuum system	• The vacuum system consists of two-stage vacuum pumps, one oil diffusion pump and one mechanical pump to complete the high and low vacuum. The vacuum valve adopts the high-vacuum baffle valve designed and produced by our company, which can realize automatic switching and control of high and low vacuum with digital display vacuum gauge and PLC.
The main circuit of the electric control system	• The main circuit of the electric control system is low-voltage and high-current input. The electric control cabinet is made with reference to the standard cabinet of Rittal. It is humanized design. There are graphic simulation screens and buttons on the control panel. The operation is intuitive and convenient. The temperature and pressure control are controlled by imported brand programs. Instrument, the cabinet is equipped with a PLC, and the sintering process is automatically completed near the preset program. The control system has sound and light alarm functions for abnormal phenomena such as water cut-off, over-temperature, over-current, and thermocouple automatic switching failure.

Working temperature	1500℃ / 2200℃
Heating element	Molybdenum/Graphite
Working pressure	10-400T
Press distance	100-200mm
Vacuum pressure	6x10-3Pa

Effective working area diameter range	90-600mm
Effective working area diameter range	120-600mm