

# D-series: Vacuum Diffusion Welding Furnace

## D系列：真空扩散焊炉



温度均匀性好 / 升温速度快 / 压力精度高 / 安全性能好 / 冷却速度快

Good Temperature Uniformity / Fast Heating Speed / High Pressure Accuracy / Good Safety Performance / Fast Cooling Speed

### D8MO14等轴测图

D8MO14 Isometric View



### D8MO14正视图

D8MO14 Front View



## 简介 / BRIEF INTRODUCTION

扩散焊是指将工件在高温下加压，但不产生可见变形和相对移动的固态焊方法。扩散焊特别适合异种金属材料、耐热合金和陶瓷、金属间化合物、复合材料等新材料的接合，尤其是对熔焊方法难以焊接的材料，扩散焊具有明显的优势，日益引起人们的重视。

Diffusion welding refers to a solid-state welding method in which a workpiece is pressurized at a high temperature, but does not produce visible deformation and relative movement. Diffusion welding is especially suitable for the joining of dissimilar metal materials, heat-resistant alloys and new materials such as ceramics, intermetallic compounds, composite materials, etc., especially for materials that are difficult to weld by fusion welding methods, diffusion welding has obvious advantages and has attracted more and more attention.

## 应用领域 / APPLICATIONS

扩散焊特别适用于要求真空密封，要求接头与母材等强度，要求无变形的小零件。它是制造真空密封、耐热、耐振和不变形接头的唯一方法，因此在工业生产中得到广泛的应用。在电真空设备中金属与非金属的焊接，切削刀具中硬质合金、陶瓷、高速钢与碳钢的焊接，都有采用扩散焊接的方法。超音速飞机上的各种钛合金部件都是用超塑性成形-扩散焊接法制造的。还特别适用于焊接异种金属材料、石墨和陶瓷等非金属材料、弥散强化高温合金、金属基复合材料和多孔烧结材料。扩散焊接已广泛应用于反应堆燃料元件、液压泵耐磨件、钻机、钻头、耐腐蚀件、蜂窝结构板、静电、叶轮、冲压模具、过滤管和电子元件的制造中。

Diffusion welding is especially suitable for small parts that require vacuum sealing, equal strength of joints and base metals, and no deformation. It is the only way to manufacture vacuum-sealed, heat-resistant, vibration-resistant, and deform-free joints, so it is widely used in industrial production. Diffusion welding methods are used for the welding of metals and non-metals in electric vacuum equipment, and the welding of cemented carbide, ceramics, high-speed steel and carbon steel in cutting tools.

Various titanium alloy components on supersonic aircraft are manufactured using the superplastic forming-diffusion welding method.

The joint performance of diffusion welding can be the same as that of the base metal, and it is especially suitable for welding dissimilar metal materials, non-metallic materials such as graphite and ceramics, dispersion strengthened superalloys, metal matrix composites and porous sintered materials.

Diffusion welding has been widely used in the manufacture of reactor fuel elements, hydraulic pump wear parts, drilling rig oil shoe parts, corrosion resistant parts, honeycomb structural plates, electrostatics, impellers, stamping dies, filter tubes, and electronic components.

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

产品编号 Numbering	产品型号 Model	有效区尺寸(mm) Chamber Size (mm)	极限真空度(Pa) Ultimate Vacuum (Pa)	压力(吨) Pressure (ton)	工作温度(°C) Operating Temperature (°C)	压头数量 Punch Qty.	气冷压强 Cooling Gas	应用范围 Applications
D4MO14	VHDBmo-40/40/60-1400	400×400×600	6.7×10 <sup>-4</sup>	30~300	1400	1/2	2-10Bar	扩散焊 Diffusion Welding
D6MO14	VHDBmo-60/60/60-1400	600×600×600	6.7×10 <sup>-4</sup>	50~500	1400	1/2	2-10Bar	扩散焊 Diffusion Welding
D8MO14	VHDBmo-80/60/80-1400	800×600×800	6.7×10 <sup>-4</sup>	200~1000	1400	2/4	2-10Bar	扩散焊 Diffusion Welding
D10MO14	VHDBmo-100/60/100-1400	1000×600×1000	6.7×10 <sup>-4</sup>	300~1000	1400	2/4	2-10Bar	扩散焊 Diffusion Welding