



VPN-600

智慧化真空滲氮爐

綠色 × 安全雙驅動 實現智慧製程永續化
打造ESG導向的環保製程&智慧防護系統

規格一覽表

安裝尺寸	Width	4500 mm
	Length	4500 mm
	Height	4000 mm
加熱區尺寸		Ø 900 x L 1300 mm
工作區尺寸		Ø 600 x L 900 mm
載重限制		600 kg
加熱體功率		鐵鉻鋁加熱器
絕熱系統		外加熱襯套、陶瓷纖維板
最高溫度		650°C(超溫限制700°C)
冷卻		2HP 鼓風機*2
分壓氣體選擇		N ₂ / NH ₃ /C ₂ H ₂ / H ₂
備壓氣體選擇		N ₂
均溫性		650°C 九點均溫測試 ±5°C
最終真空度		5 x 10 ⁻¹ Torr
抽氣速率		清潔空爐，精抽 30 min至少達5 x 10 ⁻¹ Torr
腔體漏率		5 x 10 ⁻⁸ mbar L / Sec (氦氣測漏)
最大冷卻速率		空爐下650°C冷卻至150°C，150分鐘內
回充分壓設定範圍		微正壓

VPN-600 智慧化真空滲氮爐

智慧化功能,讓新手也能像老師傅

- 人機系統直覺式觸控操作使用
- 智慧化資料庫與搜尋系統，讓企業知識得以傳承
- 透過數據庫資料，系統自動運算建議滲氮時間
- 支援 VNC 遠端監控，多機整合於MES系統中心

綠色與安全驅動，智慧製程永續化

- Kn系統導入，精準控制氣體避免無效浪費
- 使用變頻抽氣泵與攪拌風扇馬達效率省電
- 尾氣燃燒處理，排放氣體無毒化處理
- 每爐碳排自動統計，精準記錄利於內外稽核

在地化售服，專業快速縮短復機時間

- 全程自主研究開發、生產製造
- 模組化零件庫存完整
- 專業材料人才，協助產品製程開發

文生真空科技股份有限公司

Vincent Vacuum-Tech Co., LTD

應用知識、技術，提供完整的製程解決方案與設備



金屬 射出成型

產品代工、滑塊與夾爪件精密研磨與組裝



真空 熱處理

各式真空熱處理、硬鋁、液相燒結

真空 熱製程設備

設計開發、生產製造、製程整合



▣ 地址：桃園市楊梅區民隆路30號

▣ 電話：+886-3-472-6665

▣ 傳真：+886-3-472-6675

▣ Email：sales@vvt.com.tw





VPN-600

Intelligence Vacuum Nitriding Furnace

Enviroment & Safe — Making Sustainable Smart Manufacturing
ESG Eco Process and Intelligent Protection Solutions

SPECIFICATIONS

Installation Dimensions	Width	4500 mm
	Length	4500 mm
	Height	4000 mm
Heating Zone		Ø 900 x L 1300 mm
Working Zone		Ø 600 x L 900 mm
Load Capacity		600 kg (Including : fixtures / platters)
Heater		Iron-chromium-aluminum alloy
Insulation System		External Heating Bushing & Ceramic fiberboard
Maximum Temperature		650°C(Over temperature limit : 700°C)
Cooling System		2HP Blower * 2
Partial Pressure System		N ₂ / NH ₃ / C ₂ H ₂ / H ₂
Backfill Gas		N ₂
Temperature Uniformity		Temperature uniformity is within ± 5°C by taking 9-point with PTCR at 650°C
Ultimate Vacuum Level		5 x 10 ⁻¹ Torr (The empty furnace is performed at normal temperature during dry run cycles)
Pump Rate		Pump down to 5 x 10 ⁻¹ Torr (During dry run cycles)
Chamber Leak Rate		5 x 10 ⁻⁸ mbar x L / Sec (By helium leak detective)
Maximum Cooling rate		150 min (Cool down from 650°C to 150°C during dry runs)
Setting Range of Partial Pressure		Slightly Postive Pressure

VPN-600

Intelligence Vacuum Nitriding Furnace

Intelligent with convenient operation

- User-friendly touchscreen interface with intuitive HMI design.
- Smart database and search functions ensure the sustainable development of the enterprise.
- The system automatically calculate the nitriding time based on data analysis
- Remote monitoring via VNC & MES integration for centralized control.

ECO Equipment & Sustainable Future

- With the implementation of the Kn system, the equipment can accurately control gas usage.
- Energy-saving design with frequency-controlled vacuum pumps and efficient fan motors.
- Non-toxic treatment of exhaust gases.
- Automatic CO₂ tracking per furnace — full transparency for sustainability reports.

Reliable Support, Anytime and Anywhere

- Localized service teams ensure fast response and minimal downtime.
- Professional materials experts to support your product development.
- Modular component inventory for fast maintenance and upgrades.

Vincent Vacuum-Tech Co., LTD

Application of knowledge and technology to provide complete process solutions and equipment.



Metal Injection Molding (MIM)

OEM services, including precision grinding and assembly of sliders and grippers.



Vacuum Heatreatment Process

Specialized vacuum heat treatment, brazing, and liquid phase sintering

Vacuum Thermal Process Equipments Professor

Design & development, manufacturing, and process integration



- No. 30, Minlong Rd., Yangmei Dist., Taoyuan City 326019, Taiwan
- Tel : +886-3-472-6665
- Fax : +886-3-472-6675
- Email : sales@vvt.com.tw

