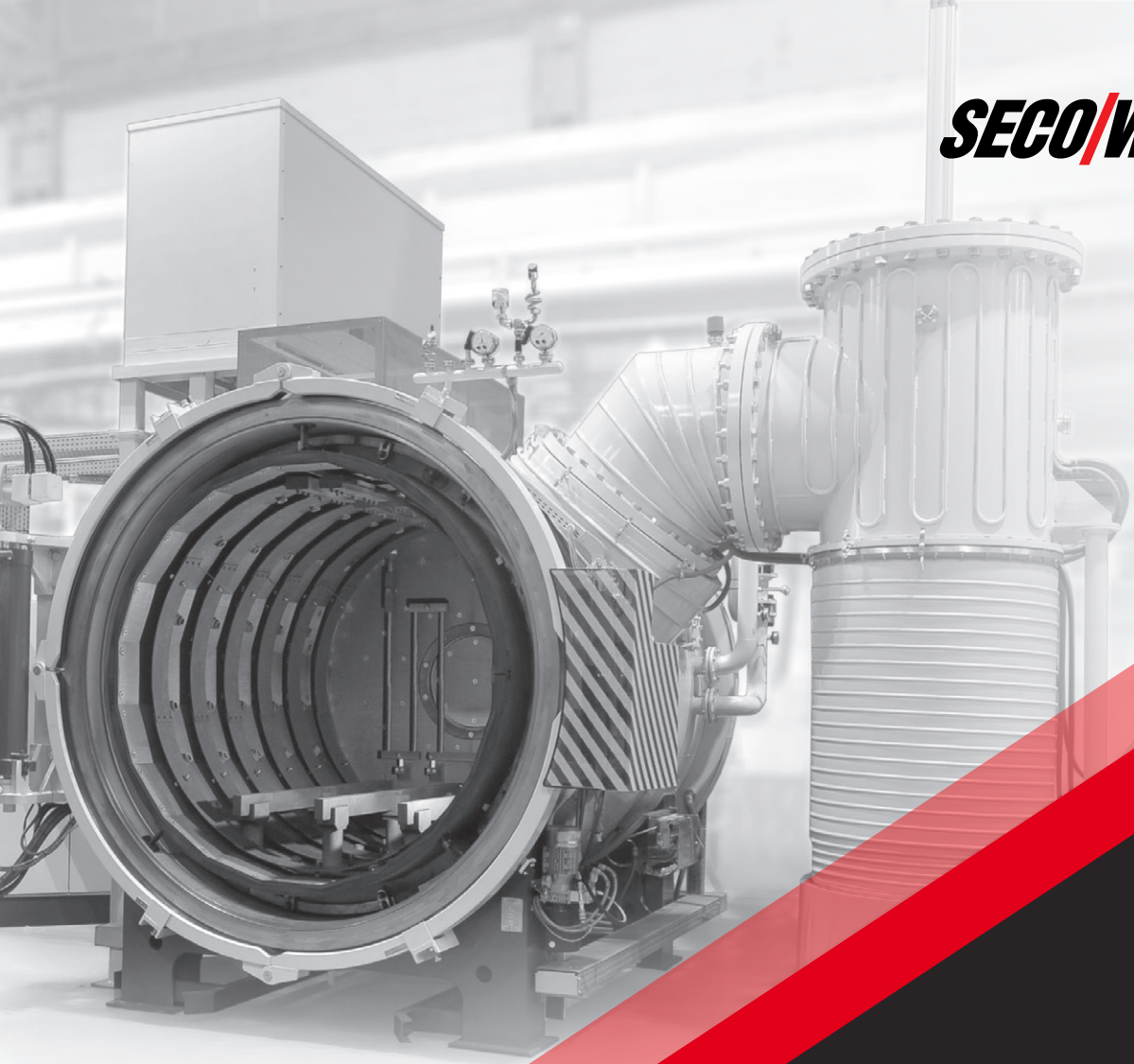
SECO/WARWICK



VECTOR HV

Single-chamber High Vacuum Furnace

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Single-chamber High Vacuum Furnace

INDUSTRIES

- Aerospace
- Energy
- Nuclear
- Heat exchanger
- Automotive
- Electronic Science
- R&D
- Metallurgy
- Commercial heat treatment
- Special applications

MATERIALS

- Alloyed steels
- Stainless steels
- Alloys and superalloys
- Titanium and titanium alloy
- Metals
- Ceramics
- Composites
- Coatings

PROCESSES

- Brazing
- Annealing
- Normalizing Homogenizing
- Stress relief
- Solution heat treating
- Aging
- Quenching
- Diffusion bonding
- Outgassing
- Sintering
- Tempering
- Special

Vector HV is a horizontally or vertically oriented single-chamber high vacuum furnace using gas cooling which can be used for a wide variety of heat treating processes and applications. It provides important capabilities for producing high-uniformity in heat-treated parts, high process cleanness, high consistency in workloads, and efficient processing with low consumption of power and process gases.

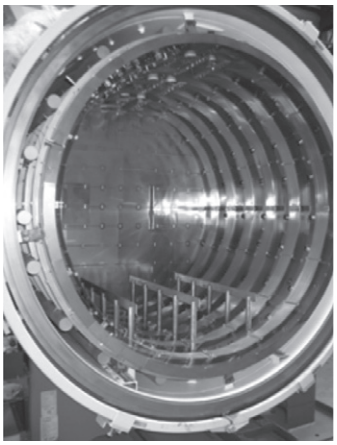
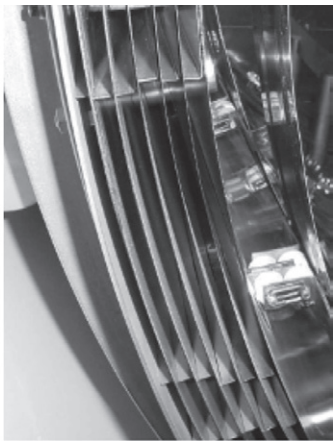
Vector HV furnaces are equipped with round graphite or metal hot zone and are the ideal solution for highly demanding heat treating in terms of high process purity and part's surface quality. With hundreds of systems installed worldwide, SECO/WARWICK's high vacuum furnaces have a proven record of high-performance technology.

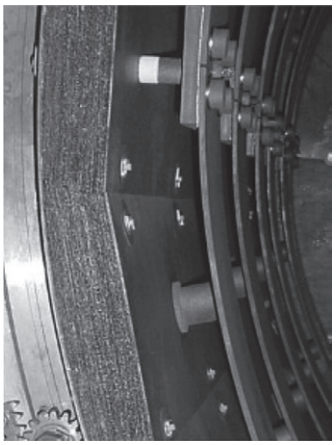
FEATURES

- High vacuum processing – up to 10-8 mbar.
- Pperational temperature – 1450°C / 2640°F.
- Temperature uniformity +/- 6°C / +/- 10°F.
- Uniform and efficient radiation heating 360°.
- Partial pressure control.
- Controlled, forced convection cooling.
- Cooling gases: N_2, Ar, He up to 15 bar.
- Computer control system (PLC + IPC), operator-friendly.
- Remote control and monitoring.
- NADCAP and AMS specifications readiness.
- Global industrial standard compatible.

BENEFITS

- Wide range of heat treatment processes and applications.
- High quality and ideal parts surface protection.
- Guaranteed and repeatable process results.
- Low consumption of energy, process gases, and other utilities.
- Environmentally friendly with low emissions.
- Predictive maintenance support.
- Compact, modular design.
- Fitted and adjusted to plant conditions.
- Fast delivery and easy installation.
- Customizable.



FURNACE OPTIONS

- Vertical or horizontal.
- Metal or graphite, cylindrical heating zone.
- High vacuum by diffusion, cryogenic, or turbomolecular pumps.
- Higher temperature operation.
- Improved temperature uniformity to class 1 (AMS2750).
- Multi-zone temperature control.
- Convection heating.

Type		VP - horizontal					
		446	646	669	9912	101015	121218
Working zone (WxHxL)	mm inch	400x400x600 16x16x24	600x400x600 24x16x24	600x600x900 24x24x36	900x900x1200 36x36x48	1000x1000x1500 40x40x60	1200x1200x1800 48x48x72
Load	kg lb	200 440	400 880	800 1760	1500 3300	2500 5500	3000 6600

Type		VVP - vertical			
		1313	1515	1818	
Working zone (DxH)	mm inch	Ø1300x1300 Ø52x52	Ø1500x1500 Ø60x60	Ø1800x1800 Ø72x72	Other sizes available
Load	kg lb	1500 3300	2000 4400	2500 5500	

SECO/WARWICK
Invention Meets Reliability

SECO/WARWICK is the 1st Choice Supplier
of Solutions for Heat Treatment and Metallurgy.

We create innovative products that provide our customers with reliable, safe and environmentally friendly solutions for heat treatment and metallurgy and ensure the economic efficiency of their businesses. Expertise includes end-to-end solutions in 5 categories: vacuum heat treatment, atmosphere, and aluminum thermal processing, controlled atmosphere brazing of aluminum heat exchangers and vacuum metallurgy.

SECO/WARWICK Group, with 7 companies located on 3 continents, has customers in nearly 70 countries with more than 5000 deployed solutions. The company provides standard or customized state-of-the-art heat processing and metallurgy equipment and technologies to leading companies in the following industries: automotive, aerospace, electronics, tooling, medical, recycling, energy including nuclear, wind, oil, gas, solar and production of steel, titanium, and aluminum.

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