

# VACUUM FURNACES HEAT TREATMENT

Totally automated, computer controlled, recipe driven, vacuum heat treatment furnaces. Cycles are coordinated using temperature programme controller, PLC, instruments and thermocouples to achieve programmed heat treatment cycle.





## FEATURES

- Wide range of standard size vertical and horizontal vacuum furnaces and choice of pumping systems and gas cooling options
- Wide range of hot zones
- Choice of hot zone as simple as selecting the design and construction materials applicable to the process requirement
- Optimized cooling system and design
- Gas quenching system has been engineered to optimize for more efficient cooling
- Excellent temperature uniformity ± 5°C or better
- Superior pumping performance
- State of the art process cycle control system

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### **SPECIFICATIONS**

Parameters	Horizontal	Vertical
Hot zone size (mm) (vertical)	400 (D) x 400 (H) x 600 (D) 600 (D) x 600(H) x 900 (D) 900 (D) x 900 (H) x 1200 (D) Custom sizes	500 (D) x 500 (H) 1200 (D) x 1700(H) 1500 (D) x 1500 (H) Custom sizes
Hot zone option	Graphite/Molybdenum	Graphite/Molybdenum
Charge weight (Kg)	300/600/1200	600 – 1500
Temperature ( Deg. C)	1000 -1350	1000 -1350
Vacuum (mbar)	10 <sup>-2</sup> to 10 <sup>-3</sup> 10 <sup>-4</sup> to 10 <sup>-5</sup> (Optional)	10 <sup>-2</sup> to 10 <sup>-3</sup> 10 <sup>-4</sup> to 10 <sup>-5</sup> (Optional)
High pressure gas quenching (bar(A))	2-10 bar (N <sub>2</sub> , Ar)	2 & 4 (N <sub>2</sub> , Ar)



## APPLICATIONS

• Annealing • Hardening • Solution ageing • Stress relieving • Tempering

Over the last 5 decades of its expertise in vacuum science and technology, HHV Thermal Technologies has become an international supplier of high quality vacuum furnaces in the world. Its furnaces are designed with NADCAP standards and are certified for CE. We are an ISO 9000, 14000 and 45000 certified, and has an advanced research and manufacturing program for metallurgy and special purpose vacuum furnaces.

#### HHV THERMAL TECHNOLOGIES PVT LTD

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