



VACUUM
TECHNIQUES PVT. LTD.

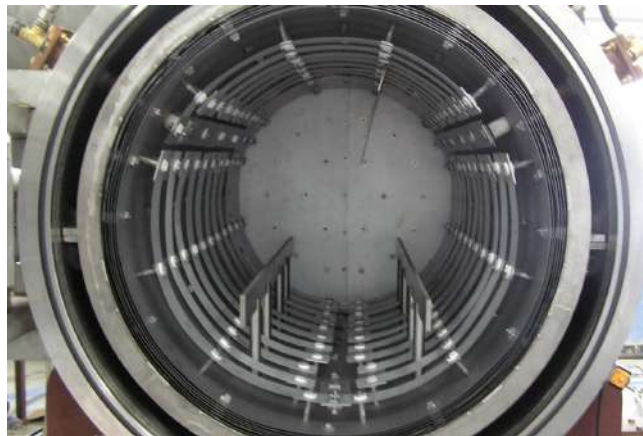
VACUUM FURNACE

PERFORMANCE, QUALITY & RELIABILITY

For over 35 years, Vacuum Techniques Pvt. Ltd (VTPL) has been designing, developing and supplying various standard as well as customised configurations of vacuum furnaces to the Defence, Nuclear, Space, Automotive, Academic and Metallurgical industries. Vacuum furnaces are designed with FEA modelling and conform to advanced design standards including AS901, NADCAP, CE, and AMSE 2750 E, besides complying to industrial ergonomics, repeatability, and automation.

VTPL vacuum furnaces have some unique differentiators:

- Designed to be rugged and rated for continuous operations
- Built with safety provisions and industry-standard certifications
- Fully automated operations provide continuous monitoring
- Customisation in specifications, chamber dimensions, and operating range
- Single furnace can be used for a variety of applications such as hardening, tempering, annealing, brazing, low pressure carburising, and sintering.



VACUUM FURNACE TYPES

- **Vacuum Heat Treatment Furnaces:** These are highly reliable heat treatment furnaces with automation for vacuum, heating up to 1450°C, multi-point soaking and gas quenching cycles. This process can suppress oxidation of metals and create a shiny appearance. It can be used for a variety of materials, including super alloys, reactive materials, and stainless steel. Vacuum heat treatment can also be used for processes like sintering and degreasing. These systems deliver high value and consistency with low operational costs.
- **Vacuum Annealing Furnaces:** These are highly efficient annealing furnaces with controlled heating, automation for vacuum, heating up to 1350°C with deterministic recipes. They can be used for a variety of materials, including alloys, devices, magnetic materials, and stainless steel. Vertical annealing vacuum furnaces are often used for lengthy components, such as rod shaft parts.
- **Vacuum Brazing Furnaces:** These are highly specialised vacuum brazing furnaces for demanding applications such as aerospace, medical, automotive and other industrial segments. These systems are designed for low contamination and high consistency for repeatable and reproducible results.

APPLICATIONS

- Hardening
- Tempering
- Annealing
- Brazing
- Aluminium Brazing
- Low pressure carburising
- Sintering
- Solution heat treating / solutionizing

PRODUCT SPECIFICATIONS

PARAMETERS	DESCRIPTION
Configurations	Horizontal, vertical, side-loading, bottom-loading, top-loading
Hot Zone Size (mm)	300 (Dia) x 300 (L/H) 400 (Dia) x 600 (L/H) 600 (Dia) x 900 (L/H) Custom sizes are available upon request
Hot Zone Options	Graphite / Molybdenum
Temperature	600°C - 1450°C
Vacuum	10 ⁻² to 10 ⁻⁷ mbar
High Pressure Gas Quenching	2 - 10 bar (Nitrogen, Dry Air, other options available)

SERVICE

We provide a full range of services including:

- Spares & upgrades
- Installation
- Non-comprehensive maintenance
- Comprehensive maintenance
- Extended warranty services
- Onsite repairs

We also offer wide range of training for all aspects of technology, operations and maintenance of the products and services.

We have a global service network as well as local service teams in all major cities in India including Bangalore, Mumbai, Delhi and Hyderabad.

CUSTOMERS

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