



ants

CERAMICS | HEAT TREATMENT | PROJECTS



www.antslab.in / www.antsglobal.in

WHO WE ARE..

Ants Group – Empowering Innovation Through Knowledge and Technology

Founded in 2005, Ants Group is a knowledge-driven organization at the forefront of India's industrial and advanced materials sectors. With a foundation built on academic research, technological collaboration, and engineering excellence, the Group unites two pioneering entities – Ants Innovations and Ants Ceramics – under one vision: to drive progress through innovation, quality, and partnership.

Ants Innovations – Leaders in High-Efficiency Heating Solutions

Ants Innovations is India's leading manufacturer of high-efficiency, import-substitute heating systems, serving research and industrial applications across the country. We design and manufacture a comprehensive range of custom-engineered furnaces and ovens, including:

- Muffle, Retort, Tube, Split Tube, Hydrogen, Inert, Vacuum, and Induction Furnaces
- Chemical Reactors and Process Systems

With over 15 years of design and manufacturing expertise, our solutions are recognized for their superior performance, durability, and innovative design. Today, more than 1,500 satisfied customers across India rely on our equipment for cutting-edge research and production.

Our collaborations with premier institutions such as BARC, VSSC, CMET, and the IITs enable us to develop state-of-the-art equipment and technologies that define new industry standards.

antslab – Pioneers in Advanced Ceramic Materials

Established in 2006, Antslab is a leading innovator in the field of oxide ceramic materials and components. We specialize in the manufacture of alumina, fused silica, zirconia, zircon composites and SiC produced through advanced techniques including powder compaction, injection molding, isostatic pressing, slip casting, and gel casting.

Our product portfolio – featuring alumina crucibles, trays, boats and other high-performance components – is globally recognized for its quality, precision, and reliability. antslab exports to markets in the USA, Europe, South Africa, South Korea and Japan.

We have also established one-of-a-kind facilities for micro-machining sintered ceramics, enabling the production of complex, high-precision shapes comparable to metal machining. This capability positions us as a key global player in advanced materials for niche and high-tech applications.

Unified Vision and Values

As part of Ants Group, both divisions share a unified commitment to technological excellence, collaboration, and continuous improvement. Our mission is to transform challenges into opportunities by combining creativity, knowledge, and technology to deliver solutions that exceed expectations.

Our strength lies in our people – a team driven by curiosity, innovation, and the pursuit of perfection. Together, we strive to empower our partners across industries to achieve their most ambitious projects – whether in industrial heating or advanced materials.

At Ants Group, we believe that with the right blend of imagination, knowledge, and technology, anything is possible.

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STANDARD FURNACES

Muffle Furnace
(600 °C - 1800 °C)



Retort Furnace
(600 °C - 1200 °C)



Horizontal Tube Furnace
(600 °C - 1800 °C)



Horizontal Split Tube Furnace
(600 °C - 1400 °C)



STANDARD FURNACES

Vertical Tube Furnace
(Up to 1700 °C)



Vertical Split Tube Furnace
(Up to 1600 °C)



Vacuum Heat Treatment Furnace (Annealing, Sintering, Brazing. etc.)
(600 °C - 1600 °C)



RTA Furnace
(Up to 1000 °C)



Rotary Tube Furnace
(Up to 1350 °C)



CPT Furnace
(Up to 350 °C)



2-Zone Split Tube Furnace
(600 °C - 1400 °C)



UTM Furnace
(600 °C - 1600 °C)



CVD Furnace (Chemical Vapor Deposition)
(600 °C - 1600 °C)



Rocking Furnace
(600 °C - 1350 °C)



TGA Furnace
(600 °C - 1600 °C)



Bridgeman Furnace
(Up to 1400 °C)



Biomass & Plastic Pyrolysis Furnace
(600 °C - 1000 °C)



Muffle cum Tube Furnace
(600 °C - 1600 °C)



Gettering Furnace
(300 °C - 900 °C)



Gas Mixing Furnace
(600 °C - 1600 °C)



Induction Furnace with and without Vacuum (Up to 2500 °C)



Graphitization Furnace System (Up to 3000 °C)



Vacuum Arc Melting Furnace (1700 °C - 2800 °C)



Vacuum Hot Press (Up to 1800 °C)



Custom Vertical CVD Furnace Setup



Iron Reduction Furnace using Ammonia/ Hydrogen (Up to 20Kg)



Softening & Melting Furnace (Up to 1800°C)



Integrated Salt Bath Heat Treatment System



Vertical split tube furnace for Decarburization kinetic studies from slag/metal



Continuous Magnesium Vacuum Distillation System



Coke Oven (600 °C - 1100 °C)



Pyrolizer Setup



Vacuum Furnace
(800 °C - 2600 °C)



Muffle Furnace with Automatic Water Quenching Facility
(600 °C - 1200 °C)



Bio-Char Kiln Setup



Scientific Carbon Fiber Heat Treatment Line (Furnace) {Black Line}



Ashing/VM Furnace
(600 °C - 1000 °C)



Raising Hearth/Bottom Loading Furnace
(600 °C - 1600 °C)



Hydrogen Furnace
(600 °C - 1600 °C)



Stack Type Tube Furnace
(600 °C - 1300 °C)



SOFC Testing Furnace (600 °C - 1100 °C)



Impedance Measurement at High Temperature Setup (600 °C - 1200 °C)



Vacuum Tube Sealing Unit (Tube Up to 25mm)



Custom Reactor (Up to 900 °C and 100 bar Pressure)



STANDARD OVEN

Hot Air Oven
(Up to 300 °C)



Deep Freezer Cum Oven
(-60 °C to 300 °C)



Vacuum Oven
(Up to 300 °C)



**Liquid Precursor
Generator**
(RT to 200 °C)



Planetary Ball Mill



**Hydraulic Pellet Press
(Up TO 200 KN)**



Gas Sensing Unit



**Hydrothermal Autoclave
(Up to 200 °C and 3MPa
Pressure)**

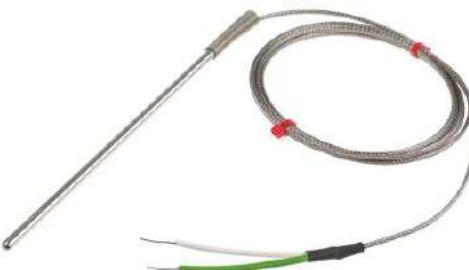


FURNACE ACCESSORIES

Heating Elements
(MoSi₂, Kanthal, Silicon Carbide)



Thermocouples
(K, N, S, R, B)



Insulation Materials
(Up to 1800 °C)



Mass Flow Controllers (MFC)

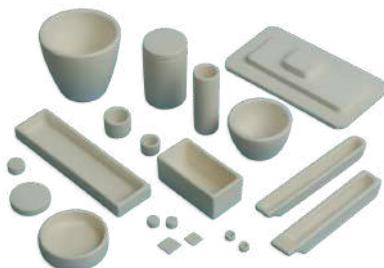


FURNACE ACCESSORIES

Viton - O - Rings



Alumina Labware



Radiation Shielding (Ceramic, Quartz, Inconel)



Tubes (Quartz, Alumina)



FURNACE ACCESSORIES

Controllers & Data Loggers



Agate Mortar & Pestle (Up to 8 Inches)



Rotameter



Vacuum Flanges



OUR PATRONS



OUR PATRONS





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