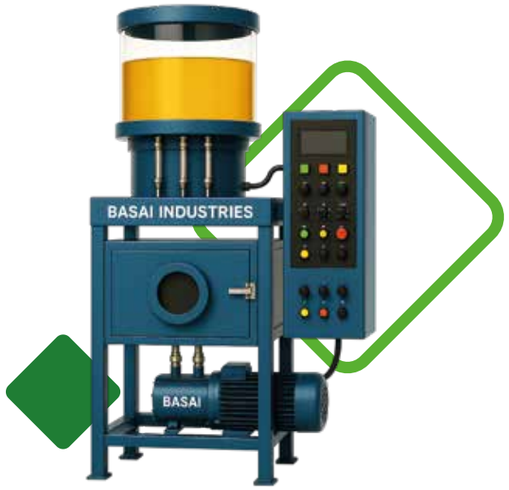
OIL FILING OVENS

In the medical industry, an oil filling oven (sometimes called an oil-heated drying oven or thermal processing oven) is used for heat treatment, drying, sterilization, or curing processes–specifically involving oil as the heat transfer medium instead of air or electric heaters. Here's an overview of its role and significance.

Maximum temperature: 250 degc.
Ultimate vacuum: 5 x10-3 mbar.
Chamber volure: customised.

Advantages:

- Uniform Temperature Distribution: Oil as a medium reduces hot spots.
- High Temperature Stability: Ideal for processes needing tight temperature tolerances.
- Energy Efficient: Better thermal transfer compared to air ovens.
- Non-contaminating: Closed-loop systems avoid exposure to fumes or particles.



TOP HAT FURNACE

The top hat furnaces have the advantage of easy loading/unloading and tight sealing. The furnace chamber has pneumatic, hydraulic or manual actuated movement. The bottom earth is fixed. The heating elements are installed in all walls, resulting in excellent temperature uniformity.

- Maximum Operating Temperature: 1100/1200/1300/1500/1600/1700/1800ºC.
- Fast heat up and cool down rates.
- Heating elements with Kanthal metallic alloys or Kanthal Super (MoSi2).
- Insulation with Rigid Ceramic Fibre.
- Temperature Control with Eurotherm Temperature Controllers.
- Power Control through Solid State Relays or Thyristor Units (phase angle fired).



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HIGH TEMPERATURE TECHNOLOGY

Innovative, Reliable & Unstoppable Vacuum Experts.

Basai Industries

Basai is specialized in manufacturing a wide range of standard and customized furnaces for various applications both in the industrial, laboratorial and R&D fields. From 25°C to 2500°C, with metallic, SiC, MOSi2, graphite heating elements and using the best available vacuum, power and temperature control technologies, a wide range of solutions can be found to suit your application.

Chamber Furnaces:

- Maximum Operating Temperature: 1600 / 1700 / 1800 ºC.
- Fast heat up and cool down rates.
- Dimensions from 3 up to 1000 litres.
- Kanthal Super heating elements (MoSi2).
- Insulation with Rigid Ceramic Fibre.
- Temperature Control with Eurotherm Temperature Controllers.
- Power Control through Thyristor Units (phase angle fired).



Model	T Max.(C)	Useful Dim (WxHxD) (mm)	Volume(l)	Power (KW)	Voltage (V)
BMF 12/6	1200	150x150x250	6	2,5	230
BMF 12/12	1200	200x200x300	12	3,75	230
BMF 13/12	1350	200x200x300	12	4	230
BMF 13/25	1350	200x200x400	25	9,5	400
BMF 16/5	1600	150x160x210	5	4,5	230
BMF 16/12	1600	200x200x300	12	9	400
BMF 18/5	1800	150x160x210	5	4,5	230
BMF 18/12	1800	200x200x300	12	8	400

TUBELAR FURNACE

The Basai Compact Tube Furnace is an ideal solution for high-temperature applications, featuring a maximum temperature of 1800°C and a tube diameter of 40mm with a 450mm heated length. This versatile tube furnace is equipped with the eurotherm or equivalent controller, providing precise temperature control for various applications, including material testing, sintering, and research. Its compact design makes it suitable for labs with limited space, offering excellent performance without compromising on reliability.

Main Features:

- Maximum Operating Temperature: 1200/1300/1500/1600/1700/1800ºC.
- Fast heat up and cool down rates.
- Heating elements with Kanthal metallic alloys, Kanthal Silicon Carbide or Kanthal Super (MoSi2).
- Insulation with Rigid Ceramic Fibre.
- Temperature Control with Eurotherm Temperature Controllers.
- Power Control through Solid State Relays or Thyristor Units (phase angle fired).
- Possibility of data acquisition through Eurotherm Software 'I-Tools.
- Over temperature protection.
- Possibility of multi-zone temperature control.
- Vacuum or/ and gas control accessories.
- Alumina recrystallized, mullite, or quartz tubes, with cooled flanges sealed by Viton O'rings, to work under vacuum or controlled atmosphere.
- Insulation plugs and radiation shields to avoid heat loss and increase temperature uniformity.



HYDROGEN FURNACE (ATF)

Basai Hydrogen Furnaces also known as our ATF Series (Advanced Technology Furnace). Designed for high temperature processing of materials in wet or dry hydrogen, fully dissociated dry ammonia, inert gases or vacuum these furnaces meet the highest standards of safety in the industry. Basai hydrogen furnaces utilize full refractory metal hot zones and radiation shield systems for a clean processing environment and the highest vacuum performance. Rapid heating and cooling enable high material throughput for economical processing of high end products. All systems feature side heating elements with optional top and bottom trim heaters available for excellent temperature uniformity throughout the entire hot zone.

Element Type	Radiation Shields	Maximum Temperature
Tungsten Weave	Tungsten	2700°C
Tungsten Mesh	Tungsten & Molybdenum	2300°C
Molybdenum	Molybdenum	1800°C

The furnace configuration is tailored to the customer application either as a vertical or horizontal configuration. The loading can be either be front, top or bottom, with the most common being a bell-jar style where the material being processed is stationary during loading and unloading when the furnace chamber is raised to an open position for access. Options such as high vacuum, ultra-high vacuum, wet or dry hydrogen, and rapid cooling systems are easily accommodated. The ATF Series systems are designed to the highest quality with safety and long service lifetime in mind.

Hydrogen Furnace (ATF) Standard Design Features:

- Round or Square Hot Zones.
- All Stainless Steel Chambers.
- Stainless Steel Gas Plumbing.
- Fully Automatic Operation.
- Automatic Data Logging.
- High Quality Refractory Metals.
- Rapid Vacuum Pump-down.
- PLC and Touchscreen HMIs.
- Overtemperature Control.
- Monitored Water Circuits.



HIGH VACUUM FURNACE

Basai High vacuum furnace is an cold wall furnace, with cylindrical water cooled vessel and windows for visualisation. The hot zone (heating elements and shielding assembly) are produce in refractory metals (Tungsten and Molybdenum). The introduction of the sample in the hot zone can be done by the top or by the bottom through a manually or motorized lifting device. The vacuum is achieved by a rotary pump and a diffusion or turbo molecular pump.

- Maximum operating temperature: 2.500 ºC.
- Secondary Vacuum up to 10-6 mbar.
- Atmospheres: Vacuum, Inert or Reducing.



INDUCTION MELTING FURNACE

Basai induction Furnaces easily handle a wide range of materials used in everything from automotive and consumer products to critical, directionally solidified, or single-crystal aerospace parts.

Maximum temperature: 2500 deg c.
Ultimate vacuum: 1x10-6mbar.
Chamber size: as customer request.
Temperature monitoring by pyrometer or tc.
Induction power supply from CEIA Italy/ Trumpf Germany.

