Turbo²Treater®
Efficiency in Power
Ipsen’s Turbo²Treater® furnace continues to set new standards in quality, versatility and efficiency. In addition, with high quench speeds and uniform cooling and heating, enhanced part quality is consistently achieved. Re-engineered for ease of installation and global operation, the Turbo²Treater now offers the latest technical solutions. Its reliable, cost-effective design and standardized production process allow us to provide quick delivery times and pass on savings to you.

Achieve maximum flexibility, faster cycle times and minimized part distortion with the Turbo²Treater furnace’s advanced standard and optional features, as well as its ability to adapt to a wide range of materials, geometries and loads.

The Turbo²Treater is a high-quality vacuum furnace that adheres to a consistent global standard, all while offering a range of sizes, versatility of processes, speed and uniformity.

Find out more about the Turbo²Treater furnace’s unique features, capabilities and benefits by visiting www.IpsenUSA.com/T2T

**Turbo²Treater At-A-Glance**

- Global system capable of operating in 20-plus languages and meeting the most common industry standards
- Compact design
- Fits into a standard truck or shipping container
- Short standard delivery time
- Rapid startup at customer site
- Cost-effective pricing, delivery and operation
- A variety of standard processes offered – bright hardening, bright annealing, bright tempering, brazing and more
- A range of optional processes available – vacuum carburizing (AvaC®), carbonitriding (AvaC-N), high temperature solution nitriding (SolNit®) and more
- Quench pressure up to 12 bar is ideal for hardening low-alloyed materials
- Offers several advanced standard features, including high vacuum preparation and a Variable Frequency Drive for the cooling fan blower
- Standard vertical cooling gas flow
- Optional alternating flow direction of cooling gas helps increase quench uniformity and minimize part distortion
- Intuitive control software with an extensive material database and an optional process simulation
- Energy-efficient design with the use of intelligent pumps, enhanced insulation and more
- Excellent temperature uniformity of ±10 °F (±5 °C) during convection and vacuum operation
- Capable of meeting AMS 2750, Nadcap and CQI-9 requirements
Industry-Focused Solutions
Ipsen’s Turbo Treater furnace is ideal for multiple industries, including:

- Aerospace
- Automotive
- Commercial Heat Treating
- Medical
- Tools

Component Versatility
The Turbo Treater furnace’s versatile nature makes it the perfect heat-treating choice for a range of components, including:

- Long and thin parts
- Multi-layer loads
- Tools and small dies
- Gears, drills and saw blades

<table>
<thead>
<tr>
<th>Type</th>
<th>Max. Load Width</th>
<th>Max. Load Depth</th>
<th>Max. Load Height</th>
<th>Max. Load Weight</th>
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<tbody>
<tr>
<td>S-Size</td>
<td>18” (450 mm)</td>
<td>24” (610 mm)</td>
<td>18” (450 mm)</td>
<td>800 lbs. (400 kg)</td>
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<tr>
<td>M-Size</td>
<td>24” (610 mm)</td>
<td>36” (910 mm)</td>
<td>24” (610 mm)</td>
<td>1,600 lbs. (800 kg)</td>
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<td>XL-Size</td>
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<td>48” (1,220 mm)</td>
<td>36” (910 mm)</td>
<td>3,300 lbs. (1,500 kg)</td>
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About Ipsen.
At Ipsen, we believe that innovation drives excellence. With more than 65 years of thermal processing experience, no company can make your ideas a reality better than Ipsen.

Since 1948, Ipsen has been innovating and evolving new technologies and heat treatment processes, as well as designing and manufacturing industrial atmosphere furnaces, vacuum furnaces and supervisory control systems. With one of the largest install bases of atmosphere furnaces in the United States, as well as proven vacuum heat-treating equipment that offers maximum flexibility and meets strict industry demands, our experience allows us to provide customers with optimum equipment they can trust and rely on for full-scale solutions.

This focus on innovation allows us to deliver energy-efficient Ipsen furnaces and plant systems, as well as unrivaled products that are in demand all over the world and used by leading companies. As a result, customers continue to benefit from the advantages offered by the latest heat treatment technologies and technical solutions.

Ipsen’s advanced industrial furnaces and equipment are designed for a wide variety of thermal processing markets, including: Aerospace, Automotive, Commercial Heat Treating, Energy and Medical. With production locations in Europe, America and Asia, along with representation in 34 countries, choosing Ipsen means choosing a partner in success.