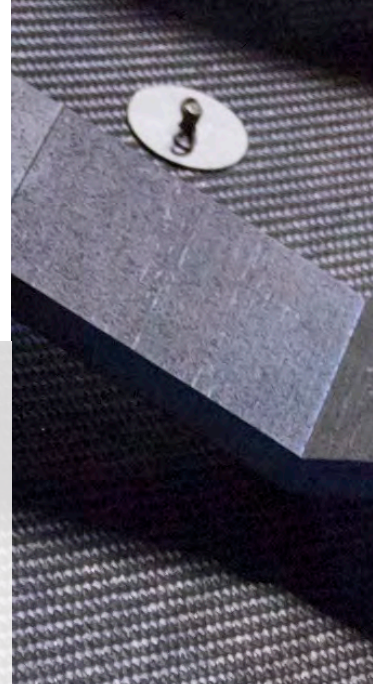




TITAN[®]

Solutions that Deliver



Achieve powerful performance, experience cutting-edge technology and utilize predictive maintenance capabilities in a single, compact vacuum furnace: the TITAN®.

The TITAN system comes complete with Ipsen's PdMetrics® software platform for predictive maintenance and incorporates years of customer feedback to deliver improved, user-friendly features, all while maintaining a global platform, small footprint and short delivery times.

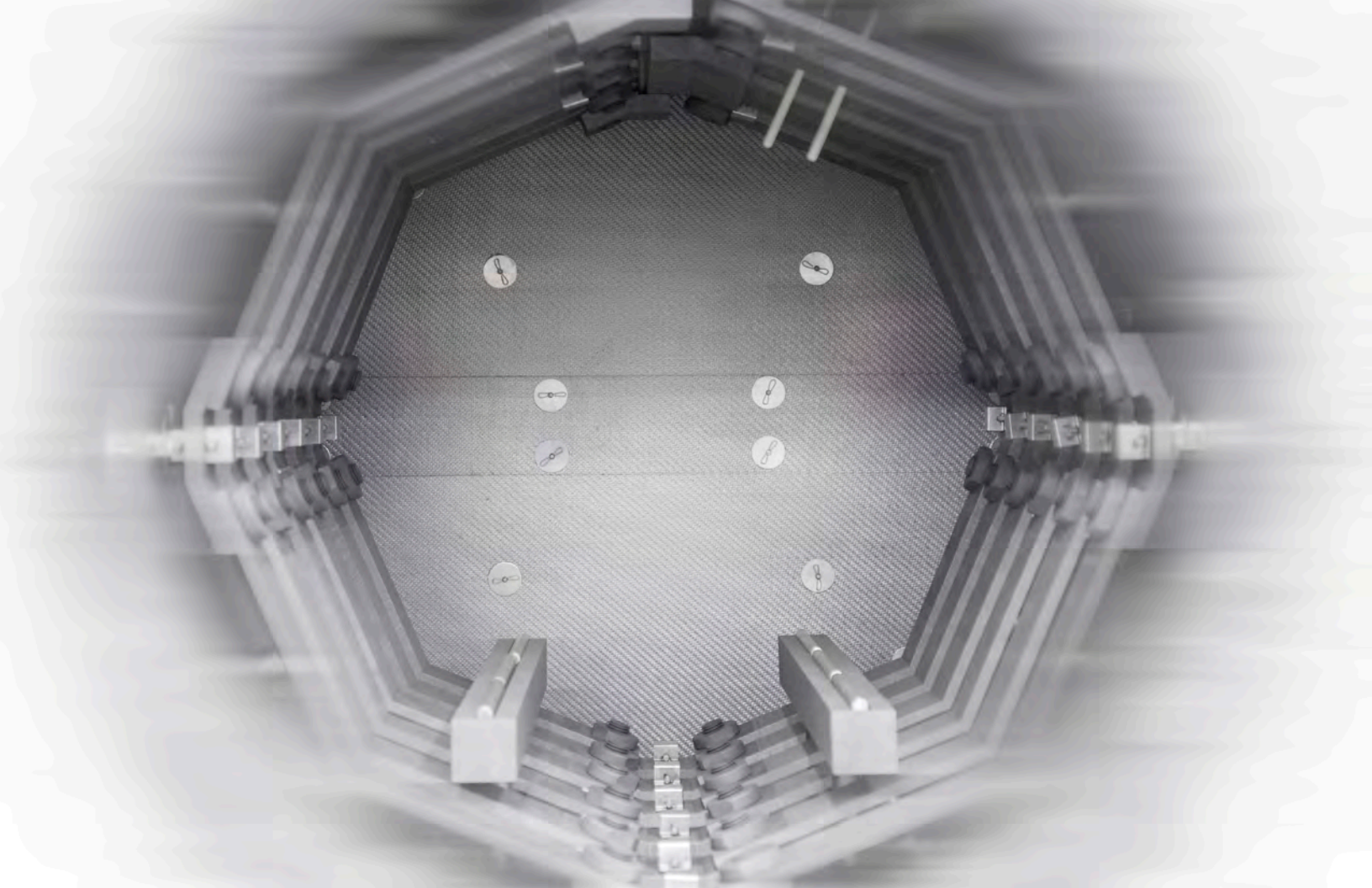
The TITAN heat-treating system introduced the market to a standardized vacuum furnace that is equipped with versatility of processes, speed and uniformity; fits in a standard truck or shipping container; and is easy to install and operate anywhere in the world. Continuing Ipsen's legacy of innovation, this vacuum furnace's breakthrough design is made possible with our unique, flow-production process. This allows us to integrate premium components on a platform that provides enhanced features and integrated technology at every level.

TITAN At-A-Glance

- Available in horizontal, 2-bar models
- Includes PdMetrics software platform for predictive maintenance and diagnostics
- Capable of operating in 20-plus languages
- Features intelligent SCRs (silicon-controlled rectifiers) for efficient heating control with enhanced communication and diagnostic features
- Utilizes an integrated framework with a rigid, all-metal design that protects equipment from the surrounding work environment and provides a versatile platform for mounting accessories
- Incorporates a high-definition display with a touch screen
- Supports a variety of standard processes, including hardening, annealing, tempering and brazing
- Provides a range of standard options and additional features for improved functionality



Furnace Model:	Maximum Load Dimensions: (W x L x H)	Maximum Load Weight Capacity:	Operating Temperature:	Quench Pressure: (absolute)
H2	18" x 24" x 18" (455 mm x 610 mm x 455 mm)	1,000 lbs. (450 kg)	1,000 °F – 2,400 °F (540 °C – 1,320 °C)	2 bar
H4	24" x 48" x 28" (610 mm x 1,220 mm x 710 mm)	2,000 lbs. (900 kg)	1,000 °F – 2,400 °F (540 °C – 1,320 °C)	2 bar
H6	36" x 48" x 36" (915 mm x 1,220 mm x 915 mm)	3,000 lbs. (1,350 kg)	1,000 °F – 2,400 °F (540 °C – 1,320 °C)	2 bar



Benefits:

- Capable of meeting applicable AMS 2750, Nadcap and MedAccred requirements
- Maintains tight temperature uniformity of ± 10 °F (± 5 °C) from 1,000 °F to 2,400 °F (540 °C to 1,320 °C)
- Uses approximately 40% less floor space¹, and its compact design allows for ease of installation
- Delivers lower costs per part by featuring high-efficiency components and using 20% less quench gas¹
- Provides ease of access for maintenance via a reconfigured design

¹ Compared to conventional vacuum furnaces

PdMetrics® – Powerful but Simple Diagnostics

Ipsen's PdMetrics® software platform for predictive maintenance securely connects to a network of integrated sensors on your furnace to gather data, analyze it and provide real-time diagnostics and notifications. When the software determines an action is necessary, an automatic alert is sent to both the customer and Ipsen.² This notifies the customer in advance, as well as allows for the delivery of necessary parts and/or the dispatch of service personnel.

By monitoring critical data and key parameters via the PdMetrics software platform, users are able to improve the health and integrity of several systems: the hot zone, pumping system, cooling system and vacuum integrity.

Other key features include:

- Stand-alone interface screen capable of integrating with multiple heat-treating systems
- Furnace fleet analytics show the health of all furnaces at all facilities for smart factory integration
- Smart connectivity allows users to receive urgent alerts by text message or email, as well as view dashboards at the furnace, office PC, smartphone or tablet
- Technical support via Ipsen's secure server²

² When used in combination with a standard network connectivity package and according to Ipsen-recommended guidelines.



Our Story

Backed by nearly 70 years of experience, it is our mission to strengthen heat treatment through expert-driven solutions. We are committed to delivering proven technology for a range of applications that enable you to transform space exploration, improve titanium medical implants and develop more efficient cars and jet engines.

Innovation

Harold Ipsen founded Ipsen in 1948 with a vision of creating products and technologies that continuously push the boundaries of innovation to create a future of thermal processing excellence. His commitment to advancing technology is the inspiration behind our vision for the future; a future where we continue to strengthen and accelerate innovations in almost every industry. Whether it is our versatile heat treatment systems or advanced process technology, we aspire to provide cutting-edge solutions that continuously improve and refine your operations.

Technology

At the core of our solutions are atmosphere and vacuum heat-treating systems and supervisory controls systems, which are used in many mission-critical applications. This advanced equipment is developed for Aerospace, Automotive, Energy, Medical, Tool & Die and various industries across the globe. Leading our industry with more than 10,000 systems installed worldwide, we have the experience necessary to provide optimum technology that allows you to achieve maximum flexibility and meet strict industry demands. We offer global modular platforms, as well as custom designs for specialized processes and requirements.

Services

We also provide comprehensive service and support every step of the way, including assistance with developing your process, factory layout planning and integration with current production processes and factory operating systems. You can also count on our responsive ICS (Ipsen Customer Service) Team to help keep your equipment running at peak performance and minimize costly downtime through upgrades, retrofits, parts, maintenance, service and training.

With an extensive network of global locations and partnerships in America, Europe and Asia, along with representation in 34 countries, we continue to provide expert-driven solutions that strengthen heat treatment throughout the world.

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