hot isostatic pressing

for the improvement of mission critical parts

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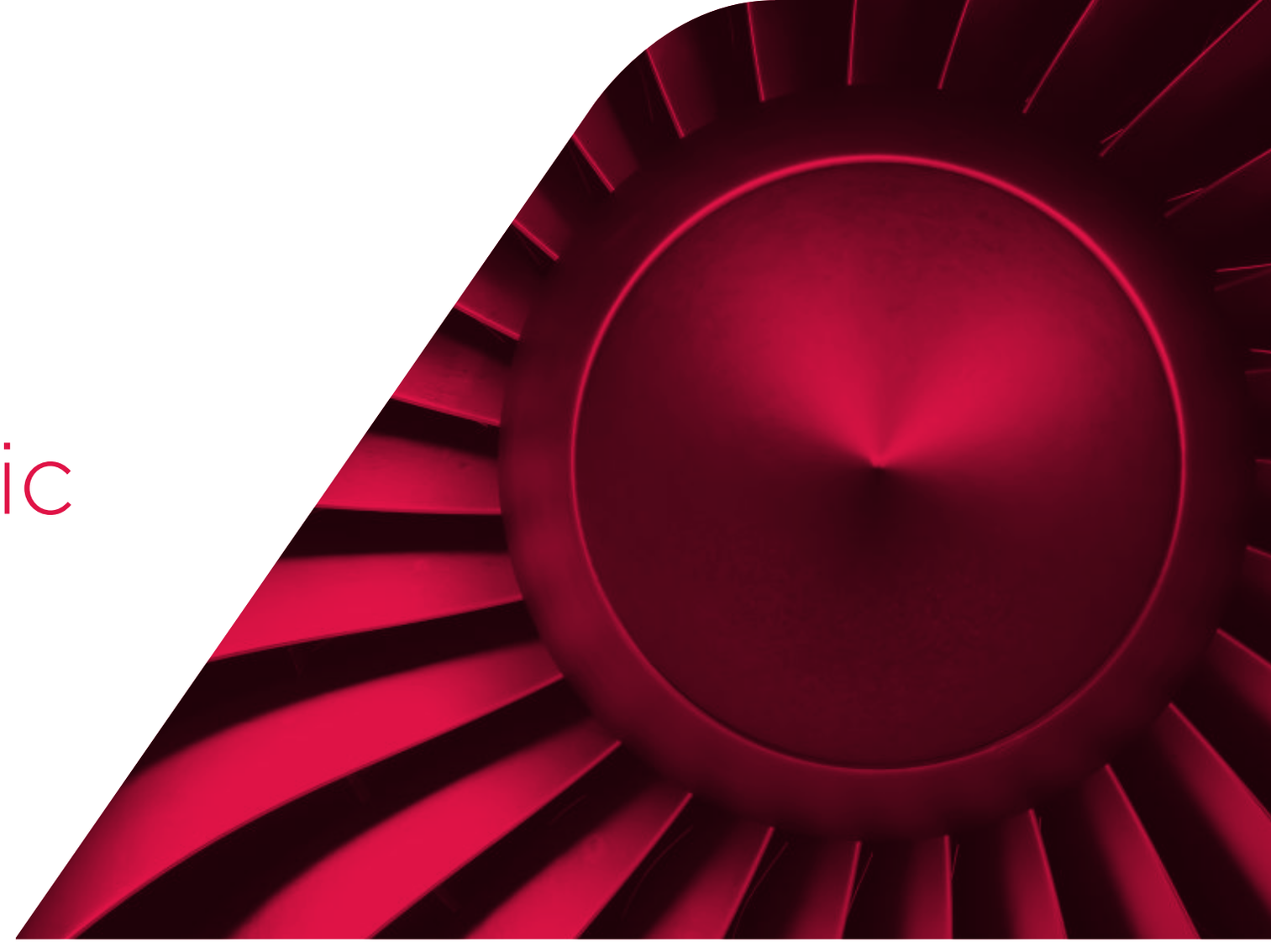

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your solution is here

Aalberts surface technologies is the world's leading provider of heat treatment technologies, services and solutions. Aalberts has been in business for more than 80 years and has over 200 facilities in 30 countries.

Aalberts delivers this core mission: unmatched solutions and services through skilled experience, innovations, shared learnings, and best practices.

At Aalberts, we have the resources for not just the right solutions, but the best ones.

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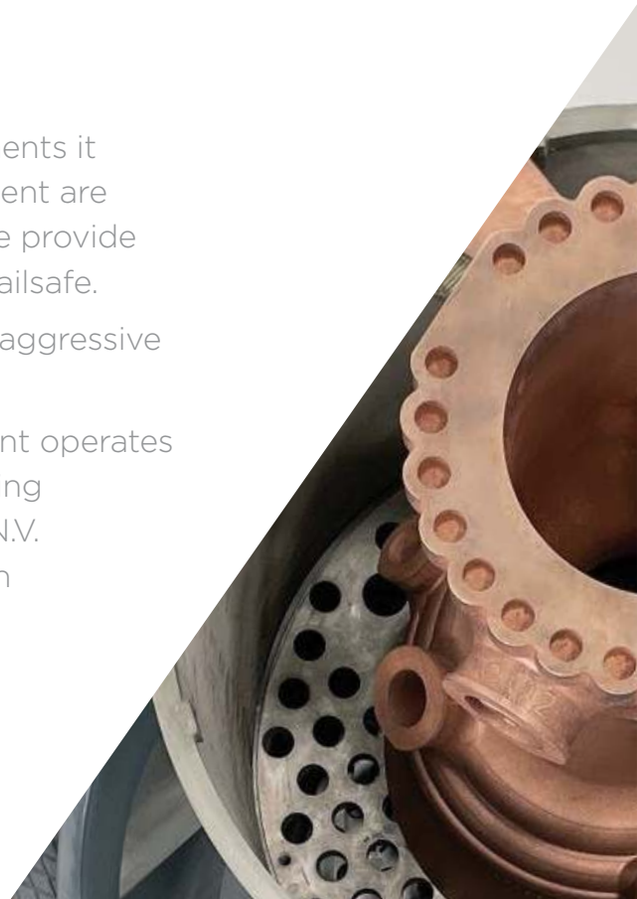
mission critical technologies. global reach. deep resources.

Our HIP presses, model QIH 122 M URC®, are equipped with proprietary Uniform Rapid Cooling (URC®), a feature that improves material properties of parts designed for mission critical applications.

Regardless of the scope of your project or which treatments it requires, you can rest assured our expertise and equipment are second to none. From knee implants to turbine parts, we provide critical attention to detail to ensure the final product is failsafe.

If your company requires the highest quality, often with aggressive lead times, contact us today for a free quote.

Aalberts surface technologies HIP | braze | heat treatment operates 17 locations in the US and is part of the world-wide leading and globally positioned technology company Aalberts N.V. Aalberts is committed to adaptation and innovation with a clear focus on customers.



capacity, quality and quick-turns with unrivaled accuracy

Hot Isostatic Pressing (HIP) is a proven process for heat treatment, consolidation of powder, and densification of products (e.g., castings, sintered materials, or ceramic parts). While HIP has been used for decades, its application in the development of high-performance parts is growing — and Aalberts offers the latest in High Pressure Heat Treat (HPHT) HIP technologies.

The HIP process is the simultaneous application of heat and high pressure to materials. This process is ideal for improving the reliability and performance of products by eliminating porosity and achieving 100-percent theoretical density.

benefits include:

- Effective with almost all materials – including metals and ceramics – and can be applied to a large range of alloys including titanium, steels, aluminum, copper, and magnesium
- Improves material properties such as fatigue resistance, creep, ductility, and workability of parts designed for mission-critical applications
- Densifies, repairs, and creates a uniform microstructure
- In Powder Metallurgy, can produce materials from metallic compositions that are difficult or impossible to forge or cast

Aalberts has decades of technical experience and the state-of-the art resources needed for advanced HIP-process applications. We have two QIH 122 M URC presses side-by-side on our shop floor in Greenville, SC.

products benefit from HPHT HIP and URC® saves you valuable time

industry applications

- Additive manufacturing
- Aerospace & defense
- Automotive
- Oil & gas
- Firearms
- Industrial gas turbine
- Investment casting
- Medical
- Nuclear
- Solid-state battery
- Sputtering targets
- PM HIP

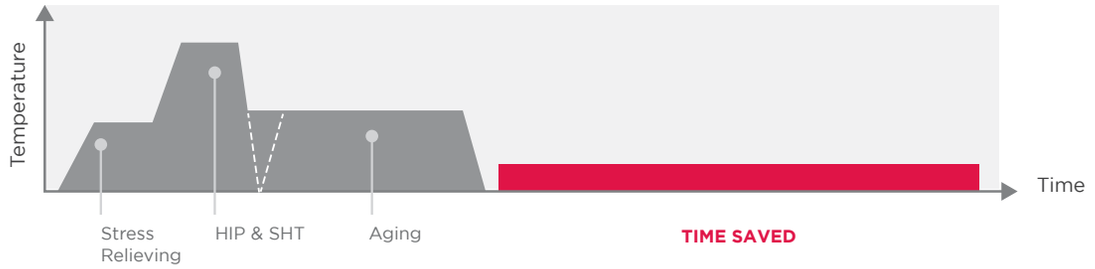
treatment capabilities

- **Max Pressure:** 30,000 psi
- **Max Temperature:** 2,282 F
- **Max Cooling Rate:** 390 F
- **Load Capacity:** 24.5 dia x 69” h
- Gas Chromatograph
- Uniform rapid cooling

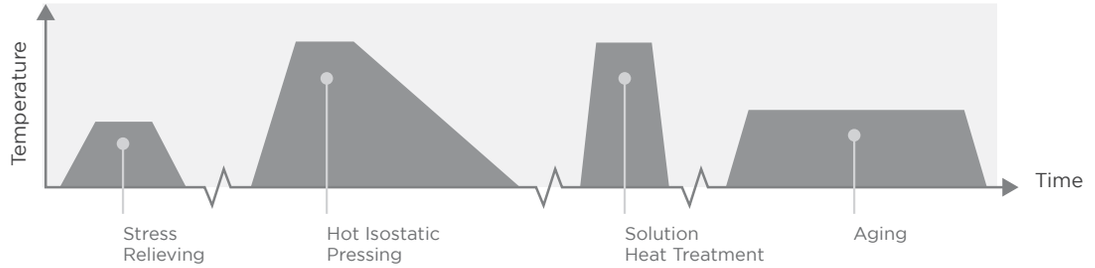
proven benefits

- Superior material properties
- Reduced property scatter
- Improved machined and polished surface
- Low weight design
- No internal defects
- Lower production cost

HIP with URC®



HIP without URC®



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The one-stop shop for HIP, braze, and heat treatment

Nadcap AS9100D/ISO 9001:2015 ITAR FFL

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