

Info Sheet VaPore™

Vapore™ is Palmer Foundry's proprietary process of producing vacuum tight aluminum castings of exceptional quality. Thousands of our aluminum castings are in service worldwide for critical high vacuum applications with a spotless record of no field failures due to casting defects or vacuum leaks.

With 9 Torr pump down capabilities, Vapore™ castings are high performance, exceptional quality castings expertly finished by skilled craftsmen and high precision CNC machines.

Casting is often a better and less expensive process of producing parts than machined aluminum billets or stainless steel weldments — and VaPore™ produces the best of the best — due to the many ways we've invented to control casting variables. With VaPore™, you get:

- **Casting Design Assistance:** We ensure that the casting design is optimized for vacuum integrity and cost effectiveness.
- **Pattern Design:** Our extensive experience in this specialized field means all necessary tooling is designed and constructed for long life and efficient casting production.
- **VAPore™6:** Our specially developed aluminum alloy is optimized for vacuum tightness and highly managed porosity while maintaining excellent machining and polishing characteristics.
- **VAPore™ Metal Processing:** Our sophisticated metal processing and handling technology delivers high quality metal that is free of impurities.
- **High Quality Mold Production:** Exclusive molding and coremaking practices perfected over decades are an integral part of our VaPore™ process.
- **Complete Finishing:** VaPore™ castings are finished by highly skilled craftsmen. Heat treating, straightening, and gauging of critical dimensions are closely controlled to meet and exceed your quality standards.
- **Quality & Process Control:** Advanced serialization, sampling and our state-of-the-art inspection technology that digitizes the surface of the casting comprise our industry leading quality assurance system.
- **Machining & Final Finishing for Clean Room Assembly:** We can recommend several highly qualified machining partners who complement the VaPore™ aluminum casting process. This makes it easy to purchase complete components consisting of VaPore™ aluminum casting that have been machined, polished, helium leak tested, cleaned, and packaged for clean room assembly.

