AML™

FACT SHEET

Advanced Magnet Lab, Inc. (AML)

Reimagining the magnet technology that drives the world.

AML designs and manufactures permanent magnets for electric motors, generators and other magnet-based applications, with a focus on providing added benefits for customers with a variety of supply chain, design, and manufacturing solutions.

At a glance

- **Founded:** 1995
- **Headquarters:** Melbourne, Florida (Space Coast)
- **Ownership:** Privately held; funded through strategic government engagements and private capital
- **Leadership:** Wade Senti, President and CEO; Philippe Masson, CTO
- **Intellectual property:** 8 granted patents and 8 pending applications
- **Markets:** defense, aerospace, industrial motors and generators, advanced mobility, consumer applications, and more

Technology

- **Application design:** AML's proprietary software and tools, known as MOEM™, enables magnet application design optimization for customers – concept to prototype to a manufacturing roadmap.
- **Material science:** AML's analysis tools and team have the ability to converge material science with magnet design and manufacturing for all magnet materials.
- **Manufacturing:** PM-Wire™ magnet manufacturing process: continuous, automated, high-yield production close to final shape, with flexible magnetization that puts the field where it matters.

Products

- **PM-Uniform™:** straight, curved, ring or helical magnets with transverse or radial magnetization
- **PM-360™:** straight, ring or helical magnets with continuously changing magnetization direction
- **PM-Axial™:** curved magnets with axial magnetization for new rotor designs
- **PM-X™:** confidential new magnet configuration

Magnet Types

- **Sintered:** neodymium iron boron (NdFeB), including a variety of performance grades, (Mischmetal-Nd)FeB, and magnets designed to reduce the need for heavy rare earths.
- **Non-sintered:** samarium iron nitride (SmFeN), manganese bismuth (MnBi) and rare earth lean magnets from new and innovative material classes.

Facilities

- **Corporate Headquarters and R&D, Melbourne, Florida:** corporate offices, engineering and operations, with shop space for research and development, prototyping and in-house equipment builds. About 4,750 sq ft.
- **Manufacturing Facility, West Melbourne, Florida:** magnet production, about three miles from headquarters, including the PM-Wire™ manufacturing line and metal alloy development. About 5,200 sq ft.

Strategic Programs

AML has engaged in collaboration with industry, the Department of War, and Department of Energy for technology and capabilities development. Prior programs led by AML include contracts with the Defense Innovation Unit (DIU), Advanced Research Projects Agency-Energy (ARPA-E), and the Defense Logistics Agency (DLA).

In the news

Op-eds in Newsweek, RealClearDefense and Mining.com; quoted in national rare earth coverage.

History

	1995	2007	2015	2020	2026+
Business	Particle beam accelerator research	Superconducting technologies	Permanent magnet technologies	PM product development	Pilot PM manufacturing scale-up
Products	Research and development	Superconducting magnets and systems	PM-Wire™ patent filings and IP development	PM-Wire™ proof of concept	PM-Wire™ permanent magnets
Markets	Government grants and research	Energy, medical and scientific research	General industry and applications	Motors and generators	Motors, generators, transportation and more

Contact AML

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