

Corporate Fact Sheet

[Achates Power, Inc.](#) has developed radically improved internal combustion engines that increase fuel efficiency, reduce greenhouse gas emissions AND are lower cost. Founded in 2004 with the mission to build better, more efficient engines, the company has over 40 in-house engineers and scientists focused on applying their proven technical know-how and expertise, coupled with the industry's leading-edge testing, simulation and analysis tools.

Headquarters:

San Diego (U.S.A.)

Technology/Approach:

The Achates Power opposed-piston, two-stroke, compression-ignition engine is key for the future of clean, efficient and cost-effective passenger- and commercial-vehicle transportation.

- Clean
 - Can comply with the toughest emission standards in the world – EPA10 and Euro6
 - Reduces greenhouse gas emissions
- More efficient
 - Eliminates cylinder head, which reduces heat loss
 - Eliminates valve train, which reduces frictional loss
 - Has a breakthrough combustion system
 - Has an advantageous stroke/bore ratio
- Lower cost
 - Has fewer components
 - Uses less raw material
 - Uses conventional materials and manufacturing processes
- Lighter
 - Has a smaller displacement
 - Eliminates components like the valve train and cylinder head

Industries Served:

Within the \$300 billion global market for internal combustion engines, Achates Power primarily targets commercial- and passenger-vehicle engines.

Prototypes and Test Results:

- The company has fully functioning engine prototypes with more than 2,500 test hours.
- Demonstrated fuel efficiency improvement of more than 20 percent compared to the published performance data of one of the best clean diesel engines (approximately a 55 percent improvement relative to comparable gasoline engines)
- Demonstrated the ability to comply with EPA10 and Euro6
- The Achates Power fuel lab rivals those of OEM fuel injector manufacturers and includes laser Doppler anemometry and laser-induced fluorescence to characterize fuel spray, along with a state-of-the-art fuel bench for mapping fuel injectors.
- The company has two dynamometers with complete instrumentation to record all necessary engine parameters and test cell conditions.

Ownership:

Achates Power is privately held and backed by leading venture capital firms including Sequoia Capital Partners, RockPort Capital Partners, Madrone Capital Partners, InterWest Partners and Triangle Peak Partners, and was founded by Dr. James Lemke with investment from the late John Walton, son of Sam Walton, the founder of Wal-Mart.

Executive Leadership:

- President and CEO: David Johnson
- Chief Technical Officer: John Koszewnik
- Founder and Chief Scientist: Dr. James Lemke
- Vice Presidents:
 - Business and Strategy Development: Laurence Fromm
 - Programs, Planning and Strategy: Shauna McIntyre
 - Engineering and Chief Engineer: Dr. Michael Wahl
 - Mechanical Systems: Eric Dion
 - Performance and Emissions Development: Fabien Redon

Technical Advisory Board (TAB):

The Achates Power TAB comprises a panel of industry veterans with more than 200 years of combined industry experience. The Board includes three Society of Automotive Engineers (SAE) Fellows and three members of the National Academy of Engineering (NAE).

- **Dr. James Lemke** – (Ph.D., University of California, Santa Barbara) is Founder and Chief Scientist of Achates Power and TAB chairman. He holds nearly 100 patents.
- **Dr. David Foster** – (Ph.D., MIT) is a professor of Mechanical Engineering at the University of Wisconsin. He is an expert in the field of internal combustion and fluid dynamics.
- **David Merrion** – (MSME, MIT) is a retired executive vice president of engineering at Detroit Diesel Corporation and currently serves as a consultant to DDC, GM and other companies.
- **Wallace Wade** – (MSME, University of Michigan) is a retired Technical Fellow of Ford Motor Company, focusing on low-emissions engine technology.
- **Dr. Ward Winer** – (Ph.D., University of Michigan and Cambridge University) is the chair of the Woodruff School of Mechanical Engineering at Georgia Tech. He is an expert in tribology and fluid mechanics.

Recognition:

- AlwaysOn GoingGreen Winner (2009, 2010 and 2011)
- Top 30 Semi-finalist, Global Cleantech Cluster Association's Later Stage Awards (2011)
- San Diego Venture Group, 25 Cool Companies (2011)
- BusinessWeek 25 Green Tech Innovators (2009)
- Global Cleantech 100 (2009)
- Advanced Research Projects Agency – Energy (APRA-E) Finalist (2009)

Additional Information:

- Website: www.achatespower.com
- Blog: www.achatespower.com/diesel-engine-blog
- YouTube: www.youtube.com/achatespowerinc
- Twitter: www.twitter.com/achatespower
- LinkedIn: www.linkedin.com/company/achates-power

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