Turbines, Inc. Assists with NASA Morpheus Lander

Cryogenic turbines enable NASA to effectively test new systems

Altus, OK, USA, November 7, 2012 – Turbines, Inc., the leader in the design and manufacturer of reliable and accurate turbine flow metering solutions, is working with NASA to assist with the Morpheus Lander project. Project Morpheus is a vertical test bed designed to demonstrate new autonomous landing and hazard detection technology, as well as innovative “green propellant” propulsion systems. The primary focus of the test bed is to demonstrate an integrated propulsion and guidance, navigation, and control system that can fly a lunar descent profile to exercise the Autonomous Landing and Hazard Avoidance Technology (ALHAT) safe landing sensors and closed-loop flight control.

Turbines, Inc. provided specialized cryogenic turbine meters; the TMC 0075-SAN, TMC 0150-SAN and the TMC 0200-SAN, which were specifically engineered to include sanitary process connections. The meters were incorporated into NASA test stands, to monitor the Morpheus Lander’s engine performance and fuel intake. Turbines, Inc.’s cryogenic turbine meters operate at very low temperatures, making them suitable for the extreme conditions of NASA’s projects.

“We are very pleased to be a part of NASA’s Morpheus Lander project,” said Karen Downing, Executive Director of Turbines, Inc. “This is just one example of how Turbines, Inc. works directly with our customers to design turbines to meet their precise needs, even ones as exacting as demanded by this critical application.”

Turbines, Inc. serves a range of industries and applications, from oil and gas, to cryogenic
liquids, to custody transfer. Turbines, Inc.’s high-quality products, fast and reliable order fulfillment, and commitment to customer and technical support, have made them an industry leader in reliable flow metering.

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**About Turbines, Inc.**

Turbines, Inc. is a leading designer and manufacturer of a wide range of competitively priced, accurate and reliable liquid and cryogenic turbine flow meters, electronic monitors, accessories and replacement parts, many of which are available for immediate shipment. For more information, please visit: [www.turbinesincorporated.com](http://www.turbinesincorporated.com).

**About Morpheus Lander**

Morpheus is a vertical test bed vehicle demonstrating new green propellant propulsion systems and autonomous landing and hazard detection technology. Designed, developed, manufactured, and operated in-house by engineers at NASA’s Johnson Space Center, the Morpheus Project represents not only a vehicle to advance technologies, but also an opportunity to try out “lean development” engineering practices. For more information please visit: [http://morpheuslander.jsc.nasa.gov/](http://morpheuslander.jsc.nasa.gov/).