

Busek Delivers First Miniature Electro spray Thrusters to NASA



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Space Propulsion
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NATICK, MA, JUNE 1, 2015 Today satellite propulsion firm Busek Co. Inc. confirmed the shipment of its first miniature electro spray small satellite thrusters to NASA. The modular, 100 micronewton-class thrusters enable new, highly efficient CubeSat maneuvers as well as fine position control for larger spacecraft. The units were designed and manufactured by Busek for NASA's Game Changing Development Program in the Space Technology Mission Directorate, which is responsible for developing the crosscutting, pioneering, new technologies and capabilities needed by the agency to achieve its current and future missions.

At a mere 320 grams, and drawing only five Watts of power, the Busek miniature electro spray propulsion thrusters are a form of solar electric propulsion which accelerate tiny amounts of ionic liquid (molten salts) to produce thrust. The system is comprised of the thruster head, electronics, and an unpressurized vessel of inert propellant, all fitting within a 10 cm x 10 cm x 0.33 cm volume. The thruster units on delivery to NASA's Glenn Research Center in Cleveland, Ohio, will undergo independent characterization while flight missions are being planned.

"All of Busek's electro spray thrusters draw upon the flight-qualified designs we developed for the European Space Agency's LISA Pathfinder Mission (NASA ST-7)." said Nathan Demmons, Director of Busek's Electro spray Propulsion Team. "In addition to the 100 micronewton-class thrusters being delivered to NASA today, the team here is nearing completion of a millinewton-class thruster system, and even larger systems are in development. These electro spray thruster systems are poised to revolutionize how small spacecraft maneuver and de-orbit" said Demmons.

About Busek: Busek Co. Inc. is an industry leader in the development and manufacture of high performance space propulsion systems. The firm's spacecraft products span solar electric propulsion technologies such as Hall, electro spray, radio frequency ion, and pulsed plasma thrusters, in addition to green monopropellant thrusters. The firm's expertise across multiple space propulsion technologies enables it to provide unbiased solutions to best fit customers' needs.



Busek's 100µN Electro spray
Thruster System