

Busek's Electric Satellite Thrusters Boost the Bottom Line



Press Release

Natick, Massachusetts—November 24, 2014—

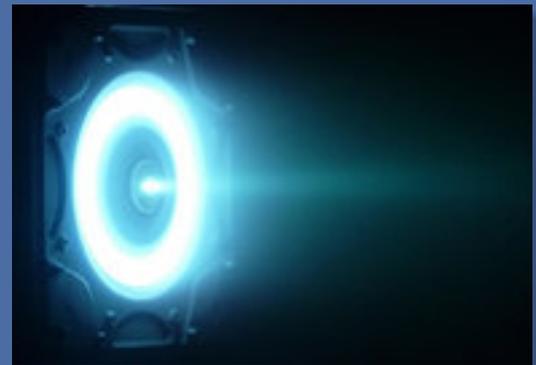
NATICK, MA., Nov. 24, 2014 – Today, Busek Co. Inc. received independent confirmation that the firm's BHT-1500 Hall Effect Thruster (HET) out-performs competitors in its power class. Tests by The Aerospace Corporation demonstrated that Busek's BHT-1500 design is largely unaffected by test facility pressure, a significant issue impacting the performance of competing thrusters. This design advantage, along with the high thrust and high specific impulse of the BHT-1500, can deliver millions of dollars in benefits to satellite operators.

The BHT-1500's unique design features enable it to operate better in the high-vacuum conditions of space versus competing thrusters (see performance graph), delivering higher efficiency and lower beam divergence. "This is the first time independent Hall thruster test results from the same low-pressure facilities have been compared publically, and we challenge our peers in the industry to publish similar independent test data. We owe it to our customers" said Vlad Hruby, President of Busek.

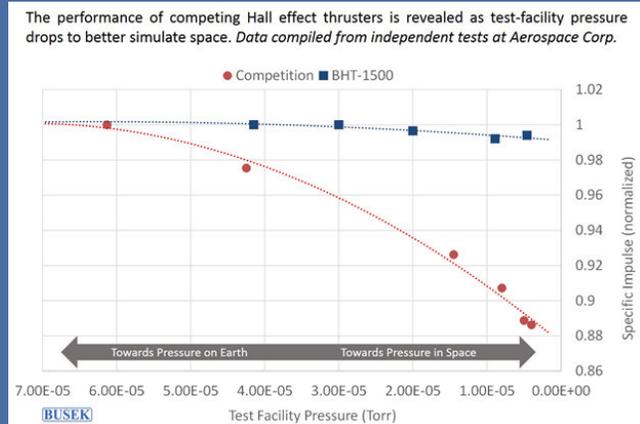
"The BHT-1500's superior performance translates to more than 10% in propellant savings versus other systems, without sacrificing high thrust and efficiency. For a geostationary all-electric satellite, that means we can eliminate more than a hundred kilograms of propellant from the spacecraft [...] mass savings which could be replaced with ten revenue generating transponders. Over the 15-year life of a single GEO satellite, those transponders might generate \$200 million in additional revenue," added Hruby.

The life of the thruster extends well beyond the typical needs of GEO satellites and Busek's design minimizes erosion via the use of a virtual magnetic field wall. The BHT-1500 thruster system operates in two modes; orbit-raising mode producing over 120 milliNewtons (mN) of thrust with 1,700 seconds total specific impulse (Isp) at 1,800 Watts (W) of power, and station-keeping mode producing more than 100 mN thrust and 1,900 seconds Isp.

About Busek: Busek Co. Inc. is an industry leader in high performance space propulsion. The firm's expertise and products span technologies such as Hall, electro-spray, radio frequency ion, and pulsed plasma thrusters, in addition to green monopropellant thrusters. Busek's family of space propulsion solutions span the needs of Cubesats to large GEO Communications Satellites to Space Tugs. Busek's BHT-200 HET was the first U.S.-designed and built Hall thruster in space, and its licensed technology flies aboard multiple Department of Defense spacecraft.



BHT-1500 Thruster
(credit: Aerospace Corporation)



BHT-1500 Performance versus Competition