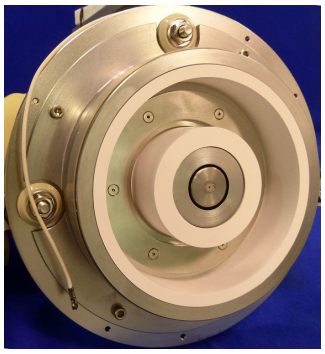

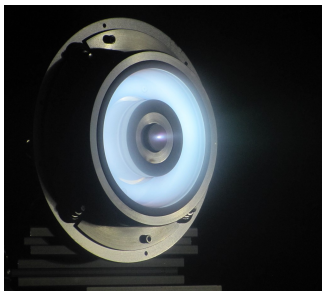

R-800 Thruster

The R-800 is a low power Hall thruster designed to operate in the 450-900 W discharge power range suitable for low to medium mass satellite platforms (<1,000 kg). The thruster produces thrust levels of 23-53 mN at specific impulse of 1,300-1,550 sec. The R-800 has low mass and low volume footprint, thanks to its center-mounted cathode and permanent magnet configuration.

The thruster has a conventional Hall thruster configuration with the gas distributer serving also as the anode. It also benefits from a unique set of materials and structure design that make it relatively light weight. Additionally, the R-800 Hall thruster consists of permanent magnets and a center-mounted cathode, making it energy efficient with a low volume footprint.

The thruster makes use of a low current heaterless hollow cathode; therefore, increasing the thruster's lifetime, readiness time and reliability while eliminating the need for a power-consuming heater power supply, in comparison with traditional Hall thrusters.

Rafael provides fully integrated propulsion systems that include the thruster unit, the power processing unit, system operation controller and the propellant management assembly.

R-800 Main Characteristics (with Xenon propellant)

Characteristics	Parameter
Power	450-900 W
Thrust (Xe)	23-53 mN
Specific impulse (Xe)	1,300-1,550 sec
Total Impulse	> 600 kN
Mass	1.5 kg
Propellant	Xe, Kr