

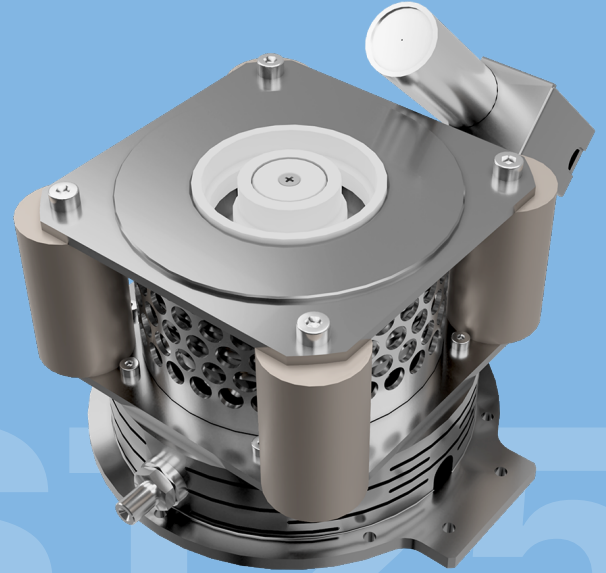
PROPULSION SYSTEM ST25



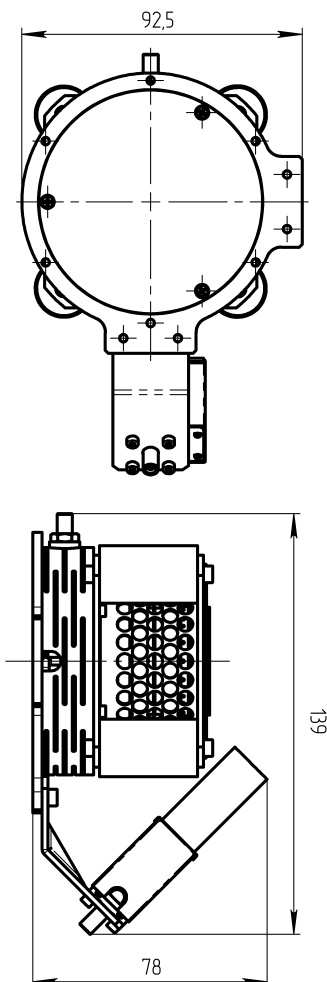
Basic

Hall-effect thruster ST25 is designed for use as part of the propulsion system for satellites with onboard power not large 250 W. The structure of ST25 includes a combination of solenoids and permanent magnets. It gives minimizing the electric power fore creation the magnet field in acceleration channel.

The propulsion system provides a thrust of up to 11 mN (one thruster) and up to 20 mN (two thrusters) at a maximum electric power consumption up to 250 W (one thruster) and up to 500 W (two thrusters). The propulsion system that contains ST25 can be used on satellites for various purposes.



Technical Information



Type of thruster	Hall Effect Thruster
Propellant	Xenon (Argon, Krypton)
Consumption power of propulsion system	90–250 W
Discharge Voltage	200 V
Thrust	4–11 mN
Specific impulse	Up to 1200 s
Total impulse	110 kN·s
Efficiency of PPU	Up to 31%
Mass of propulsion system	~ 750 g (includes one cathode)
Cathode	Heatless Hollow Cathode
Mechanical interfaces	No.6 M3 screwed (Possible to change on request of customer)
Life-time (estimated)	3500 hours

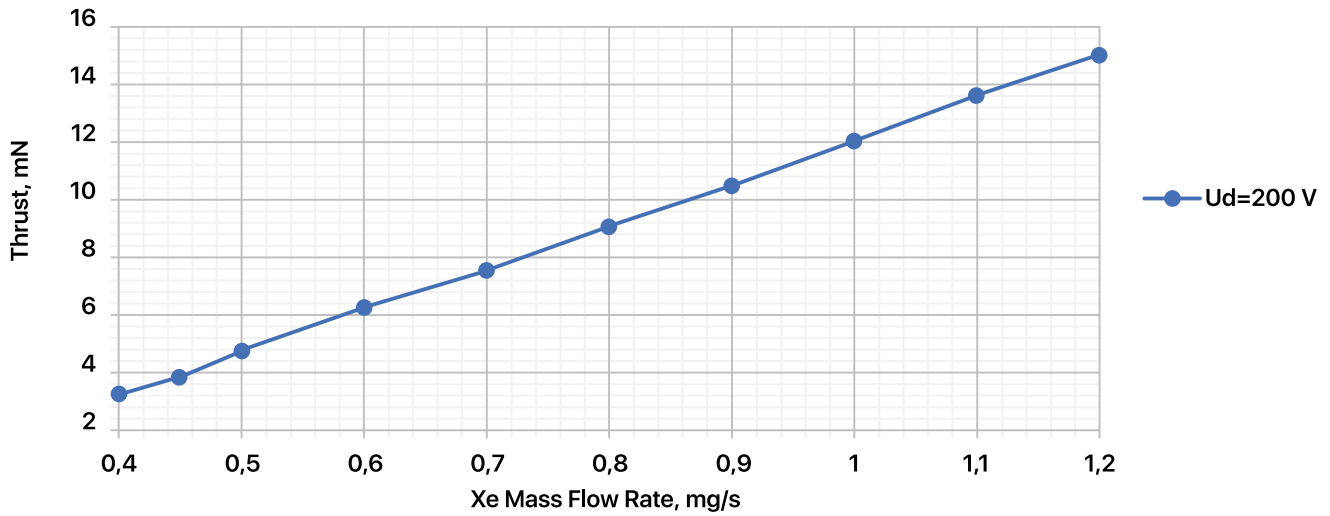


Fig. 1 Dependence of thrust on mass flow at a fixed voltage.

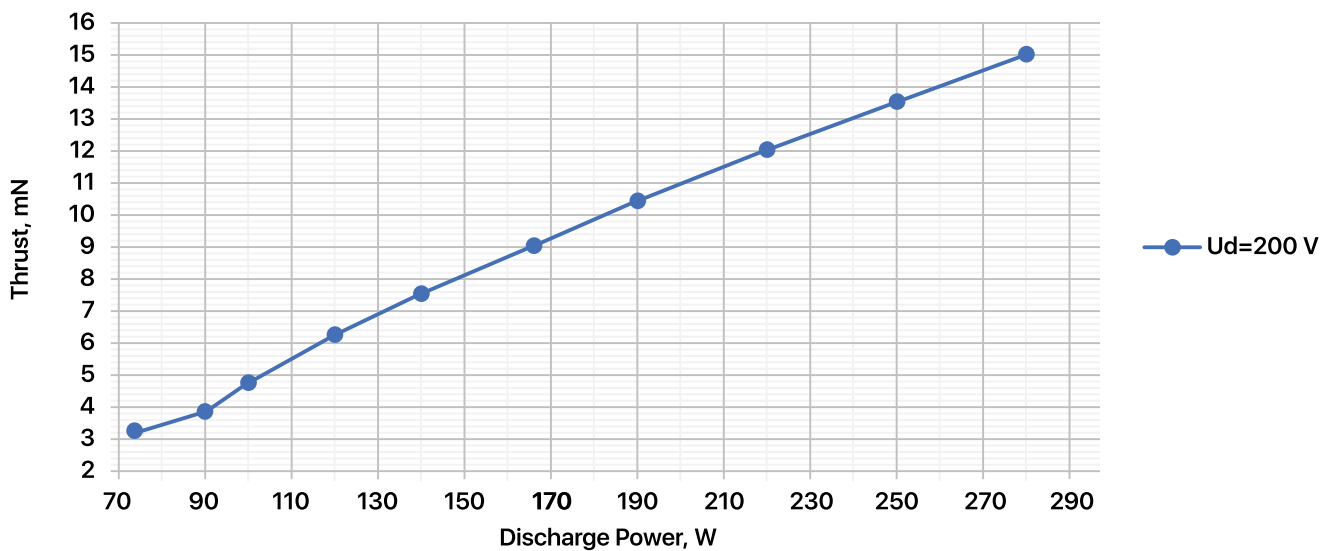


Fig. 2 Dependence of thrust on power at a fixed voltage.

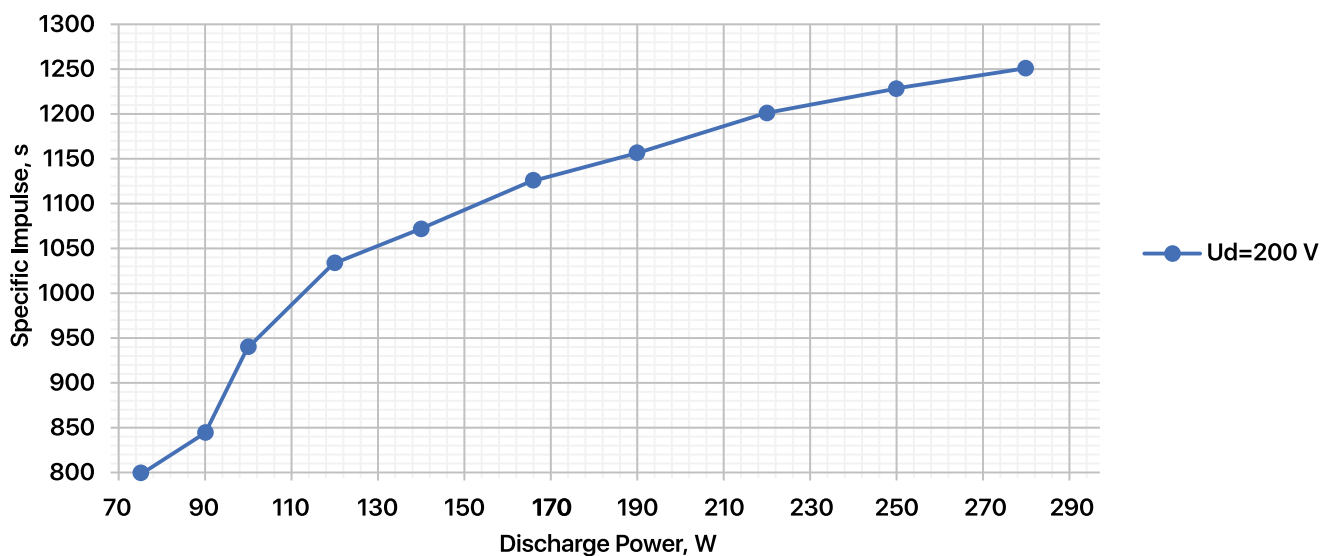


Fig. 3 Dependence of the specific impulse on power at a fixed voltage.