

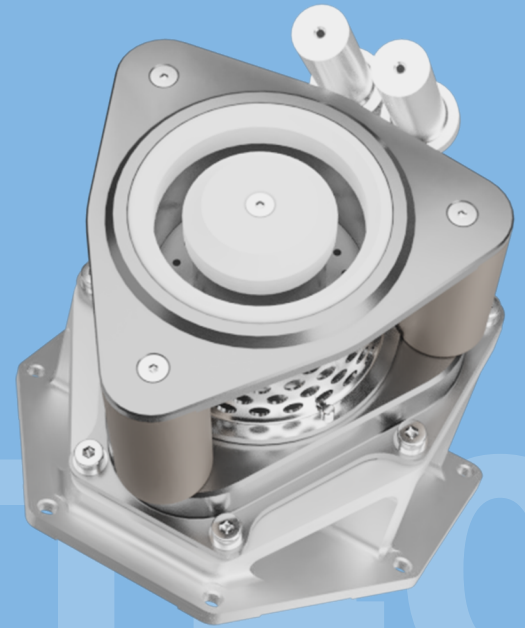
# PROPULSION SYSTEM ST40



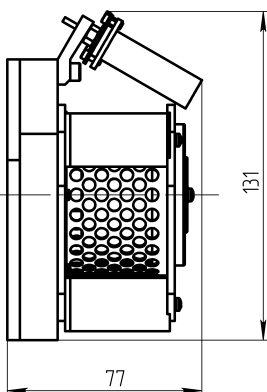
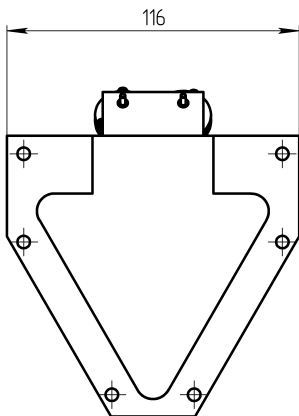
## Basic

Hall-effect thruster ST40 is designed for use as part of the propulsion system for satellites mass up to 1T. It is aimed at solving the tasks of orientation and stabilization of the spacecraft in different orbits.

The propulsion system with ST40 thruster(s) provides a thrust up to 28 mN (one thruster) and up to 55 mN (two thrusters) at a maximum electric power consumption up to 550 W (one thruster) and up to 1100 W (two thrusters). Each thruster in the propulsion system is equipped by two heatless hollow cathodes.



## Technical Information



Type of thruster	Hall Effect Thruster
Propellant	Xenon (Argon, Krypton)
Consumption power of	250–550 W
Discharge Voltage	200–300 V
Thrust	14–28 mN
Specific impulse	Up to 1800 s
Total impulse	500 kN·s
Efficiency of PPU	Up to 49%
Mass of thruster	~ 1.1 kg (includes two cathodes)
Cathode	Heatless Hollow Cathode
Mechanical interfaces	No.6 M3 screwed (Possible on request of customer)
Life-time (estimated)	5000 hours

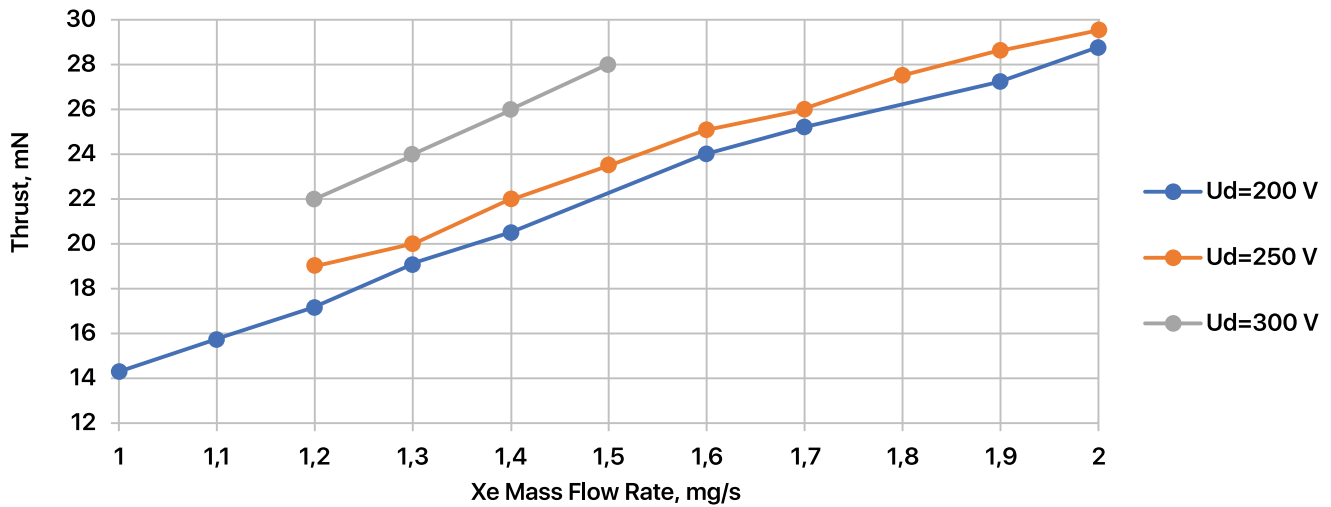


Fig.1. Dependence of the thrust on mass flow rate

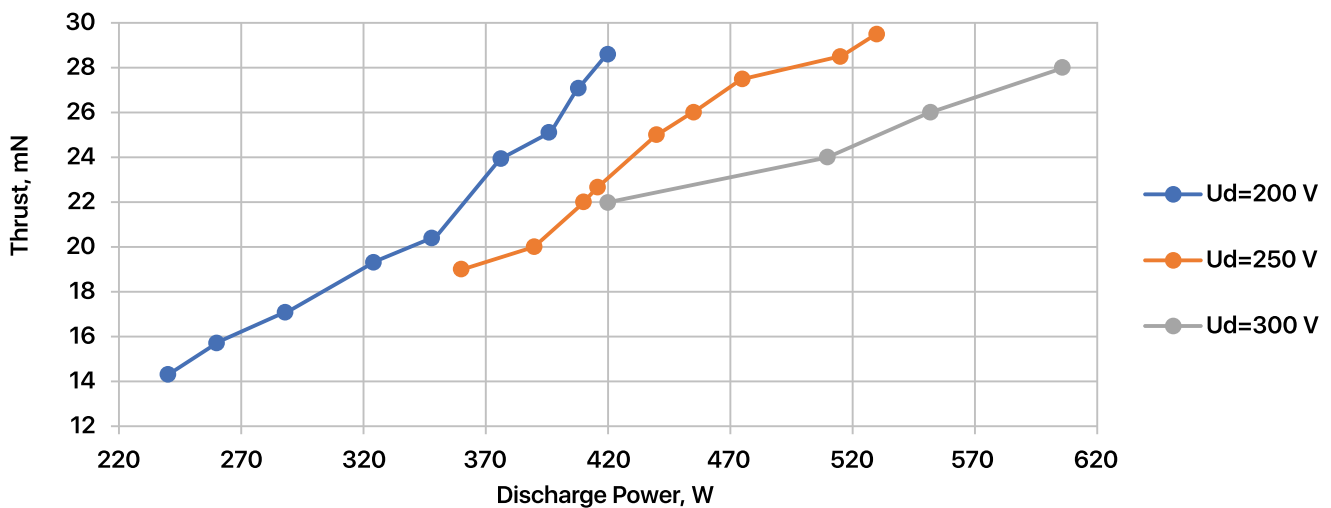


Fig. 2 Dependence of the thrust on electric power

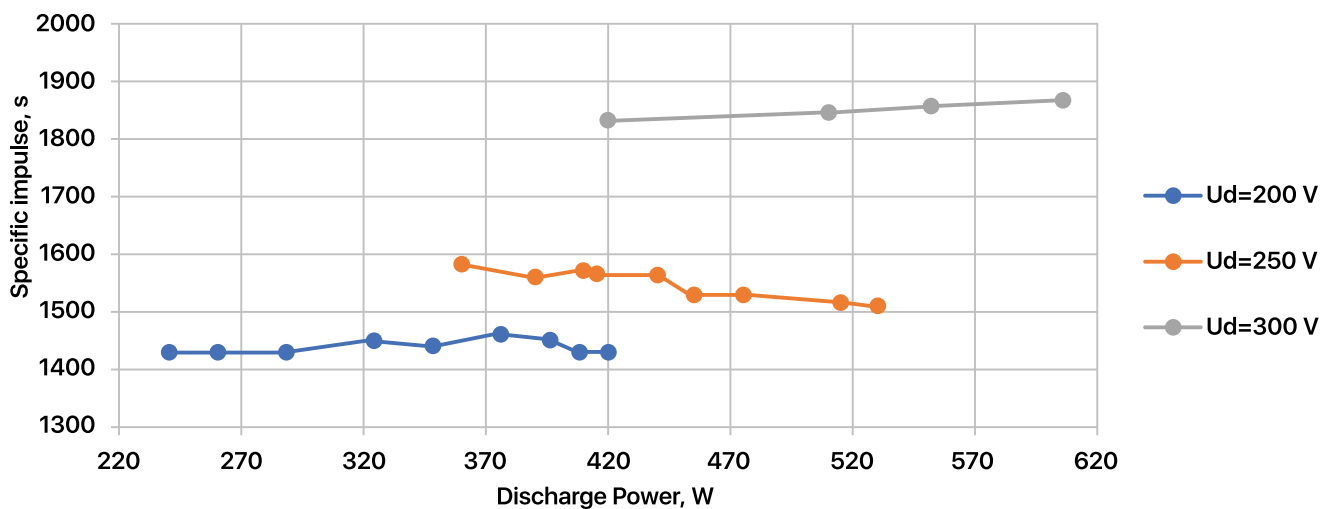


Fig. 3 Dependence of the specific impulse on electric power at a fixed voltage.