

EDB Fakel

# Stationary plasma thrusters

Propellant is Xenon

EDB Fakel has been manufacturing propulsion for almost half a century, and masters unique technologies known to few. The production capabilities of EDB Fakel include: treatment of high-temperature alloys and ceramics, welding (diffused, spot, argon-arc, laser-beam, electron-beam), soldering and brazing (steel, titanium, and high-melting-point metal brazing alloys), plasma-spraying, magnetic-pulse stamping, and clean room assembly (100 000 cleanliness level). The end-to-end production cycle allows to turn out about one hundred of thrusters a year.



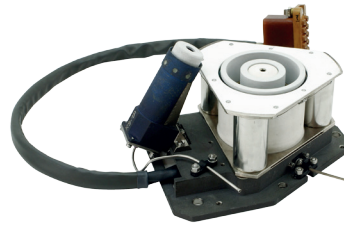
At Fakel's disposal, there are 20 vacuum chambers of 0.5 to 120 cubic meters in volume and up to  $10^{-6}$  Torr in pressure with cryogenic and other pumping systems. This state-of-art equipment allows to perform environmental test, thermal cycling test, mechanical test (i.e. sine vibration test, random vibration and shock tests), thermal vacuum and firing tests.

Kaliningrad  
181, Moskovsky prospect  
+7( 4012) 55-67-00  
fakel-russia.com



## PlaS-34

Development level	LM
Power	70–375 W
Discharge voltage	100–300 V
Specific impulse	up to 1350 s
Thrust	up to 3.3 g
Efficiency	up to 32%
Mass	1 kg
Dimensions	100×92×85 mm



## SPT-50

Development level	FM
Power	220 W
Discharge voltage	180 V
Specific impulse	860 s
Thrust	14 g
Lifetime	≥2500 h
Efficiency	26%
Macca	1.23 kg
Dimensions	100×120×91 mm



## PlaS-40

Development level	EM
Power	100–650 W
Discharge voltage	100–500 V
Specific impulse	up to 1750 s
Thrust	up to 43 mN
Efficiency	up to 50%
Mass	1.2 kg
Dimensions	167×100×87 mm

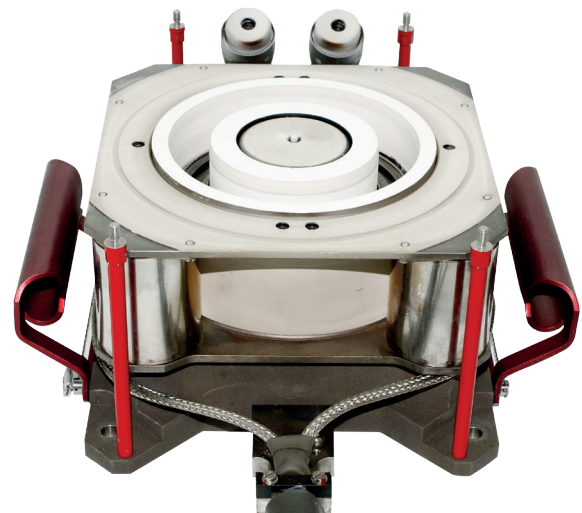


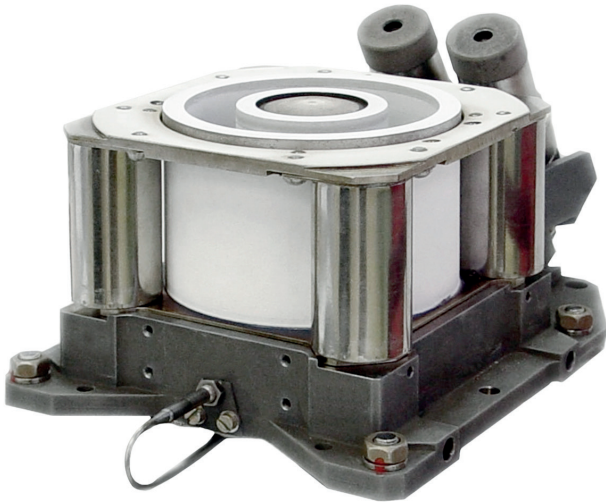
## SPT-100B

Development level	FM
Power	1350 W
Discharge voltage	300 V
Thrust	83 mN
Specific impulse	1600 s
Efficiency	45%
Lifetime	>9000 h
Mass	3.5 kg
Dimensions	225×150×125 mm

## SPT-100D

Development level	QM
Power	1500 W
Discharge voltage	350 V
Thrust	9 g
Specific impulse	1740 s
Efficiency	43%
Lifetime	7255 h
Mass	3 kg
Dimensions	215×150×110 mm





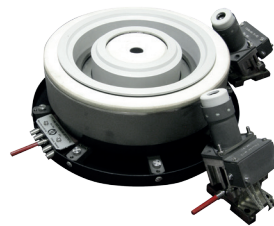
## SPT-70

Development level	FM
Power	660 W
Discharge voltage	300 V
Thrust	40 mN
Specific impulse	1470 s
Efficiency	43%
Lifetime	3100 h
Mass	2 kg
Dimensions	167×100×87 mm



## SPT-140

Development level	QM
Power	3000 / 4500 W
Discharge voltage	300 V
Thrust	193 / 290 mN
Specific impulse	1680 / 1770 s
Efficiency	50 / 55%
Lifetime	>9000 h
Mass	8.4 kg
Dimensions	317×270×109 mm



## SPT-140D

Development level	QM
Power	4500 W
Discharge voltage	300 V
Thrust	290 mN
Specific impulse	1770 s
Efficiency	55%
Lifetime	4500 h
Mass	8.5 kg
Dimensions	305×249×109 mm

## SPT-230

Development level	LM
Power	up to 15 kW
Thrust	up to 80 g
Specific impulse	up to 2700 s
Efficiency	up to 60%
Mass	25 kg

