SteamJet

*The New Age of Steam in Space*

# *The Steam TunaCan Thruster*

**Water-Powered Propulsion Technologies**

For Small Satellites and CubeSats

The Steam TunaCan Thruster is a safe, high-performance, electrothermal propulsion system specifically designed for CubeSats. Its unique shape factor allows its installation in the tunacan volume available in many CubeSats deployers, located outside the main CubeSat structure. Using only low-pressure water as the main propellant, the Steam TunaCan Thruster is the best option for 3U platforms.

Optimization & Manoeuvres

Collision Avoidance

Constellation Management

Life Extension

De-Orbit

*Thruster Head*

*Heat Exchanger*

*Electronics*

*Control Systems*

*Water Tank*




**High Thrust**
50x More Than Electric Propulsion

**Low Power Consumption**

**Safe**
Low Pressure Water as The Main Propellant

**Easy to Integrate and Operate**

**No RF interference**

**ITAR-Free, No Import Hurdles**

**Short Lead Time**

## For more Info and Orders

team@steamjet.space

https://steamjet.space

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| Specifications | Value |
|---|---|
| Nominal Thrust (mN) | 5 - 20 |
| Specific Impulse (s) | Up to 172 |
| Total Impulse (Ns) | Up to 219 |
| Minimum Impulse Bit [mNs] | 10 |
| Power consumption Thrusting / Idle [W] | <19.9 / 0.12 |
| Wet Mass [g] | 540 |
| Propellant Mass [g] | 130 |
| Propellant | Water* |
| Voltage [VDC] | 9 - 14 |
| Communication Protocol | RS 422, TTL UART |
| Dimensions [mm] | Ø 80 x 80 |

*Water-Alcohol mixture possible to reduce the freezing point up to -30 °C

# Dimensions

## TunaCan

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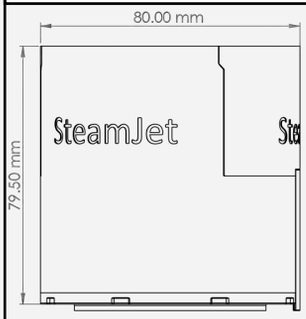
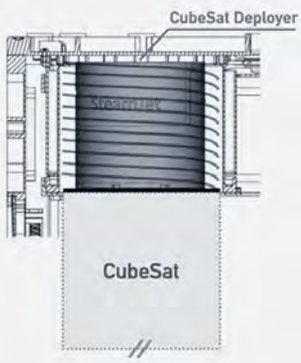
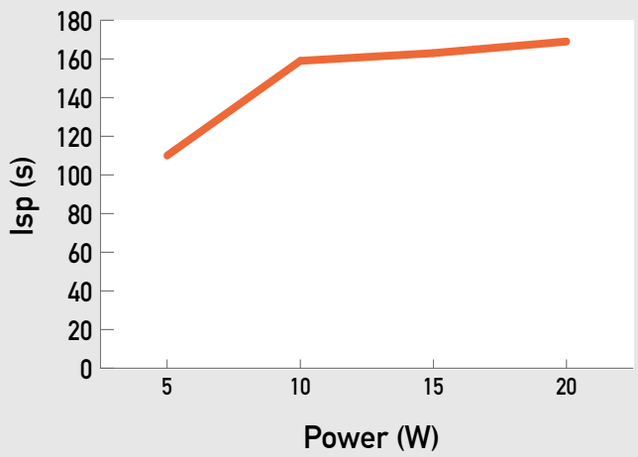



# Power vs Isp




Space qualified according to ESA ECSS-E-ST-10-03C and NASA GSFC-STD-7000A

The Steam TunaCan Thruster can be operated with a power between 5W to 20W depending on the CubeSat availability

# Typical Applications

3U (5KG) SATELLITE @ 400KM INITIAL ORBIT

| Product | Total Impulse (Ns) | Life-time (Years) | Orbital Change (Km) | Orbit Phasing | Collision avoidance |
|---|---|---|---|---|---|
| No Propulsion | 0 | 1.6 | No | No | No |
| *TunaCan* | *219* | *4.3* | *± 70* | *0° to 360°* | *Yes* |

6U (10KG) SATELLITE @ 400KM INITIAL ORBIT

| Product | Total Impulse (Ns) | Life-time (Years) | Orbital Change (Km) | Orbit Phasing | Collision avoidance |
|---|---|---|---|---|---|
| No Propulsion | 0 | 1.6 | No | No | No |
| *TunaCan* | *219* | *3* | *± 35* | *0° to 360°* | *Yes* |