



**We provide the most sustainable, affordable yet
high performance propulsion unit
for CubeSats and SmallSats**

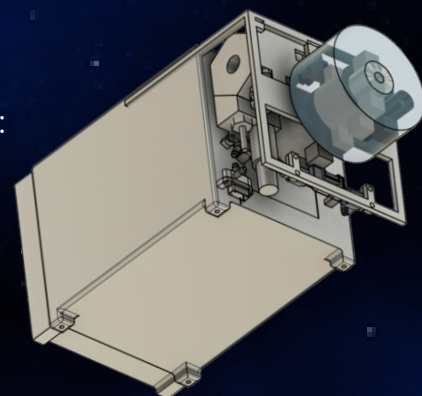
WATERCUBE+

Technology

WaterCube+ is a **WATER-BASED** hybrid propulsion unit (chemical + resistojet) engineered for the New Space market. Its benefits are:

- Unpressurized, non-toxic water-based architecture
- customized 3D printed tank
- Best in market lead time (< 4 months) and cost
- Miniaturized and low power consumption
- Able to perform any maneuver with <5 minutes warm-up
- Plug and play system with embedded avionics

CAD Model WTC+



Supported by

Takeoff
L'acceleratore Aerospace e Advanced
Hardware della Rete Nazionale CDP

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WaterCube+ Datasheet

	VALUE	UNIT OF MEASUREMENT
SPECIFIC IMPULSE	95 - resistojet mode 140 - chemical mode	[s]
TOTAL IMPULSE	> 1500 (*)	[Ns] (*) depending on amount of propellant
THRUST	up to 4 (resistojet) up to 1E3 (chemical)	[mN]
POWER DURING FIRING	24 peak (3 minutes) 21 maximum 6 - 17 if used pulsed (**)	[W] (**) pulsed operations yield lower average thrust maximum power can be increased to improve performance
UNIT VOLUME & MASS	2U - 10U (***) 2.2 kg - 10.9 kg (***)	[U] (1U = 10x10x10 cm ³) (***) depending on amount of propellant
ELECTRICAL INTERFACES	1 power connector micro D-sub; 12 V or 28 V unregulated power interface 1 signal connector micro D-sub; CAN or RS-422 signal interface	
MECHANICAL INTERFACES	M3 screws	



Use Cases

SATELLITE FORM FACTOR	12U	16U	SMALLSAT	SMALLSAT
PROPULSION UNIT VOLUME	2U	3U	5U	10U
PROPELLANT MASS	1.10 Kg	2.10 Kg	4.00 Kg	9.00 Kg
ASSUMED SPACECRAFT WET MASS	21.6 kg	28.8 Kg	100.0 Kg	200.0 Kg
TOTAL IMPULSE	1500 Ns	2800 Ns	5300 Ns	12400 Ns
TOTAL Δv @ 125 s Isp 3 mNs MIB resistojet 50 mNs MIB chemical	64.0 m/s	92.8 m/s	50 m/s	56.4 m/s
ADDED LIFETIME / BENEFITS (*CAM = COLLISION AVOIDANCE MANEUVRE)	2.5 years + 30 CAM	3 years + 30 CAM	2 years + 30 CAM	2.5 years + 30 CAM
COST SAVINGS TO FINAL OPERATOR [EURO]	185k	215k	485k	560k

LinkedIn



Website

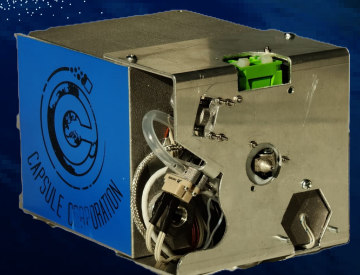
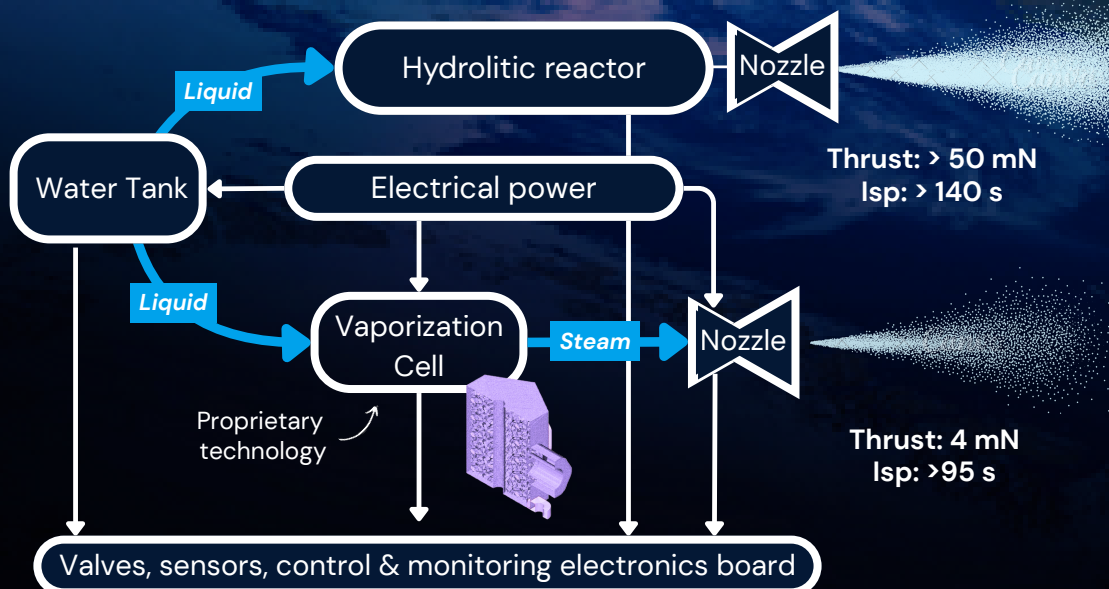


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Resistojet
Prototype

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