

T4i chemical propulsion systems are based on highly stabilized hydrogen peroxide and are targeted to low cost platforms.

Highly Stabilized Hydrogen Peroxide allows the reduction of safety issues and costs during handling and operations. Thanks to our transportable concentration unit, it can be also concentrated in situ, eliminating any transportation issues related with propulsive grade hydrogen peroxide (>85% concentration).

Depending on customer needs T4i offers two types of propulsion options:

Mono-propellant propulsion systems

Bi-propellant propulsion systems

Common features are:

- **Low cost:** main target are small low-cost satellite platforms and nanosatellite deployers.
- **Highly customizable:** being internally developed at T4i, the motor can be fully reconfigured depending on specific needs of the platform.
- **Green:** all the combinations are green, non-toxic and non-carcinogenic, providing minimum environmental impact.
- **Restartable / throttleable:** all the systems provide these options to perfectly match with mission requirements.
- **All-in-one:** sharing the same oxidizer, the monoprops can be combined with the other propulsion units to provide a comprehensive propulsion package.

MOTORS MAIN FEATURES

Toxicity	No
Storability	> 5 years
Safety	High
Concentration	90-95%. Tailored to customer requirements
Transportation	The motor can be filled in situ. In-situ concentration option available to avoid transportation issues of highly concentrated hydrogen peroxide
Handling	Standard chemical protection suits, no SCAPE suits
Throttleability	1:5
Restartability	Yes
Cost	Low
Customization	Yes

HYDROGEN PEROXIDE MONOPROPELLANT MOTORS

SPECIFICATIONS

Thrust	Different systems from 1 N to 500 N
Burning time	> 100 s
Specific Impulse	> 150 s
Propellant	90-95% Hydrogen Peroxide
Multiple restarts	Yes
Throttleability	1:5
TRL	5
Time to market	1 year (for a complete propulsion module under customer's specs)
Applications	orbit raising, re-positioning, station-keeping, de-orbiting, reaction control



HYDROGEN PEROXIDE LIQUID MOTORS

SPECIFICATIONS

Thrust	Different systems from 1 N to 500 N
Burning time	> 100 s
Specific Impulse	> 270 s at smaller scale > 280 s at larger scale
Propellant combinations	90-95% Hydrogen Peroxide – Hydrocarbons (kerosene, diesel fuel or propane)
Multiple restarts	yes
Throttleability	1:5
TRL	4
Time to market	2 years (for a complete propulsion module under customer's specs)
Applications	orbit raising, re-positioning, station-keeping, de-orbiting



Contacts:

Ph.: +39.0499271547

Email: info@t4innovation.com