

30kN Hybrid Engine

- Green Propulsion based on Hydrogen Peroxide Technologies



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The **Nammo Raufoss AS** 30 kN hybrid engine is the primary power unit for of the Nucleus Sounding Rocket.

This unique clean, green powered engine has been

used on the maiden flight for Nucleus, and is in the process of being optimised under an ESA FLPP contract.

The Unitary Motor can be supplied with or without the accompanying components

for the full propulsion system.

Nammo Raufoss has the expertise to engineer the system to meet your flight requirements.

Thrust	30,000 N in vacuum
Thrust Duration	40 seconds
Engine Type	Pressure regulated or Blowdown modes are possible
Engine Mass	165 kg including fuel cartridge
Propellant Combination	87.5% H ₂ O ₂ [dedicated tank], and HTPB
Demonstrated Specific Impulse	270 seconds, in vacuum [$\epsilon = 8.5$]
Total Impulse	>1000 kNs
Envelope	356mm [14 inch] Diameter, 1.7m Length
Restarts	Possible
Materials	Stainless Steel construction
Structural Interfaces	Radax joint, mechanical flange
Fluidic Interface	2 inch Tubing for Oxidiser feed
Safety	Inert engine, no igniter or pyrotechnic components required
Additional Components	Tanks, Valves, Airframe, Fins
Combustion Products	Water, CO ₂
Sensors	Engines can be instrumented for pressure, temperature, acceleration
Applications	Sounding rocket, Defense Missile targeting, Launcher stages
Technology Readiness Level	TRL8, flown on Nucleus Sounding Rocket

Additional information is available on request. Nammo is ready to work with your specific needs for the success of your mission.