

Liquid Oxygen Storage Tank & Dewar

CAPABILITY SHEET · AEROSPACE CRYOGENIC LOX/LN2 STORAGE · UNDER CONTRACT

THE SYSTEM

WHAT	Aerospace-grade cryogenic LOX/LN2 storage & supply: a 600 L vacuum-and-perlite super-insulated storage tank rated to 50 bar, a 250 L super-insulated cryogenic dewar, and braided-SS super-insulated transfer hoses - supplying LOX/LN2 to rocket-engine test stands.
STATUS	Under contract - designed to an Indian rocket-propulsion establishment's qualitative requirements; design approved; built to order; full certification and test-document set in scope. Not a delivered claim.
BASIS	Aerospace cryogenic engineering: vacuum super-insulation, pump-less self-pressurisation, redundant relief and ASME / EN 13458 / PESO pressure-vessel practice.

THE 600 L STORAGE TANK

VESSEL	Vertical double-walled, dished ends; SA-240 Gr 304 / SS304L inner and jacket; vacuum + perlite super-insulation; about 2.3 m tall, empty ~700 kg; storage/design pressure 50 bar; operating -196 degC; cold-stretched, inner impact-tested at -196 degC per EN 13458.
VACUUM	Jacket interspace leak rate $\leq 10^{-8}$ L/s, verified by helium mass-spectrometer (MSHLD); vacuum gauge and pump-down port; inner-vessel leak rate nil - the vacuum is the insulation, so the leak test is an insulation-life test.
SELF-PRESSURISATION	Heat-exchanger pressure-building coil plus pressure regulator (with economiser / filter / NRV) moves liquid with no cold pump; a 1/2 inch GN2 port allows external pressurisation for rapid transfer.
SAFETY & LINES	Two burst discs plus two safety relief valves (ASME redundancy); thermal relief valves; cryo-compatible manual valves; SS fill (top & bottom), withdrawal, vent and overflow lines rated 50 bar; pressure, dual-scale level and vacuum gauges.

DEWAR, HOSE & CERTIFICATION

DEWAR & HOSE	250 L super-insulated cryogenic dewar with matched valve head; braided SS304L transfer hose 1.5 inch, MWP 50 bar, 310 K to 70 K, 3.5 m, flexible to <0.5 m radius. All LOX-wetted parts austenitic stainless, degreased and oxygen-cleaned.
CODES & CERTS	ASME Sec VIII Div 1, EN 13458, SMPV(U) Rules, PESO. Certificates: material, radiographic/ultrasonic weld, dimension, proof-pressure, MSHLD helium leak, gauge calibration, valve data sheets. Warranty 1 year from commissioning.
MOUNTING	Welded rectangular base frame with concrete-fixing provision, crane-lifting hooks and forklift-entry channels.

VARIANTS & ENGAGEMENT

VARIANTS	Larger bulk storage tanks, higher run-tank design pressures, smaller portable dewars; liquid nitrogen and liquid argon on the same double-walled vacuum-insulated platform.
GAS & CRYO LINE	Sits alongside our mobile LOX tanker vehicles, static LOX dispensers, liquid-nitrogen dewars and nitrogen/oxygen generation - one supplier across the cryogenic and gas chain.
ENGAGEMENT	Send your specification to sales@neometrixgroup.com - clause-by-clause compliance matrix and budgetary quotation within two working days. Export subject to GoI authorisation.

DEFENCE PROGRAMMES DESK

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Reference configuration reflects the system under contract for an Indian rocket-propulsion establishment. Capacity, pressure and fittings are re-scoped against the customer's specification.