



CRYOGENICS

For New-Age Industrial Excellence



Aviation Refuellers & Equipment

About IndianOil

IndianOil is the market leader with nearly four decades of experience in Cryogenic and Vacuum engineering. Through specialised and custom-built product lines, we serve various industries such as refining, chemicals, aviation, animal husbandry, gas, livestock, LNG, etc.

An advanced manufacturing unit, located at Nashik, spread over an area of 36,000 sq. metres, is equipped with specialised sophisticated machines to manufacture large & heavy pressure vessels.

Our Brand Promise: *Expertise Meets Innovation*

To service the varied and specialised needs of our customers, our Cryogenics business team is equipped with a strong engineering background and sophisticated problem-solving skills, acquired over years of experience and training.

IndianOil's BG (Cryo) Nashik Plant has the unique distinction of being the only facility that's certified by PESO for manufacturing under SMPV rules as well as Petroleum rules.

Design Capabilities



Expertise



Software – Tools & Skills



Manufacturing Capabilities



Offerings for Aviation Industry A. Containerised Aviation Fuel Tanks

Aviation Fuel Tanks are double-walled containers with the outer tank made of carbon steel and inner tank made of stainless steel with a three-level alarm system and all ancillary components.

Our expertise in manufacturing

double-walled containers is leveraged to develop customised solutions for the Aviation industry.

A space-saving design for containerised aviation fuel tanks (of 35 KL capacity) has been developed and deployed, resulting in speedy set-up of

small sized Aviation Fuelling Stations.

All tanks are designed, hydro and pneumatically tested as per EN-12285-2 and PESO/OISD rules.



Containerized Fuel Tank Module

The approximate dimensions of module are 3000 mm (W) x 2200 mm (L) x 2500 mm (H) and is provided with -

- Three lockable Aluminum roller shutter doors on two sides of the cabinet to protect the internal devices from dust and rain.
- Internally painted white and fitted with CMRI/CCOE approved lighting.
- Vertical type micro filter (5 micron filter efficiency) & horizontal type filter water separator (1 micron filter

efficiency) both designed as per ASME section-VIII DIV 1 and EI 1596 latest edition.

- Both filters fitted with standard accessories like air eliminator, sho-flow indicator, pressure relief valve, check valve, DRDP gauge, sampling points, drain points, etc.
- Provided with two separate horizontal single stage centrifugal pumps for loading & unloading operations with minimum flow rate of 830 LPM @

4 kg/cm2 pressure.

- A closed circuit online sampler of 4 litres capacity is provided for visual inspection of inlet/outlet/drain/tank drain samples & with provision for fitting hydrometer, thermometer & internal shell water detector.
- Our standard models are of 15 KL & 35 KL capacity while tanks of other capacities can also be manufactured on demand.
- Pit cleaner tank, PBM blending unit and Aviation Refuellers are available on demand.

Capacity	Gross Capacity (Litres)	Net Capacity (Litres)	Inner MOC	Outer MOC	Tank Length (A) mm	Tank Dia (B) mm
15 KL	16660	15827	SA240TP304	SA516 GR 70/IS2062	6700	2100
35 KL	39560	35600	SA240TP304	SA516 GR 70/IS2062	11740	2400

B. Refuellers

- Refueller is a self-propelled vehicle mounted on a suitable chassis designed to carry aviation fuel Jet-A1 & capable of fueling and defueling the aircraft by means of an on-board pump. Designed and built using state-of-the-art technology; efficiency & safety are the hallmark of these refuellers.
- Conforming to Indian Standard IS 9290, Petroleum Rules 2002, Central Motor Vehicle Rules-1989, they are synonymous with quality

and reliability.

- Refuellers are the latest addition to our business offerings. The ability to manufacture aviation refuellers has proven to be a shot in the arm for IndianOil's aviation business. It offers a platform to develop next generation refuelling solutions and curtails dependence on external resources.
- We have already manufactured and delivered 6 KL aviation refuellers to various aviation fuelling stations and Army

locations.



Currently, batches of 11 KL & 16 KL refuellers are in final stages of manufacturing.

Salient Aspects

- Maintenance free, corrosion resistant stainless steel tank for long life (No epicoating).
- Compact, ergonomic and user-friendly design for ease of operation.
- PTO-operated pump coupled with dynamically balanced propeller shaft to minimize vibration and noise.
- Horizontal filter monitor vessel conforming to ASME code, fitted with 1 micron filter elements ensures effective removal of particulate matter and water.
- Pneumatic operated air vent for tank protection against over pressurization and vacuum.
- Close circuit sampler for visual inspection of ATF.
- VDC monitor driven auto rewind hose drum for effortless and faster hose reel handling.
- Safety fittings: Timer controlled deadman system, Safety Brake interlock system, Emergency engine shut off, Emergency Fuelling shut off, Jet-Level sensor, Bonding reel, Fire extinguisher, Emergency shut-off valve, Fusible link, Pressure Vacuum Valve, Emergency Vent, Battery Cut-off switch, Spark Arrestor, etc.



Long Life



User-friendly



Noise



1 Micron



Air Vent



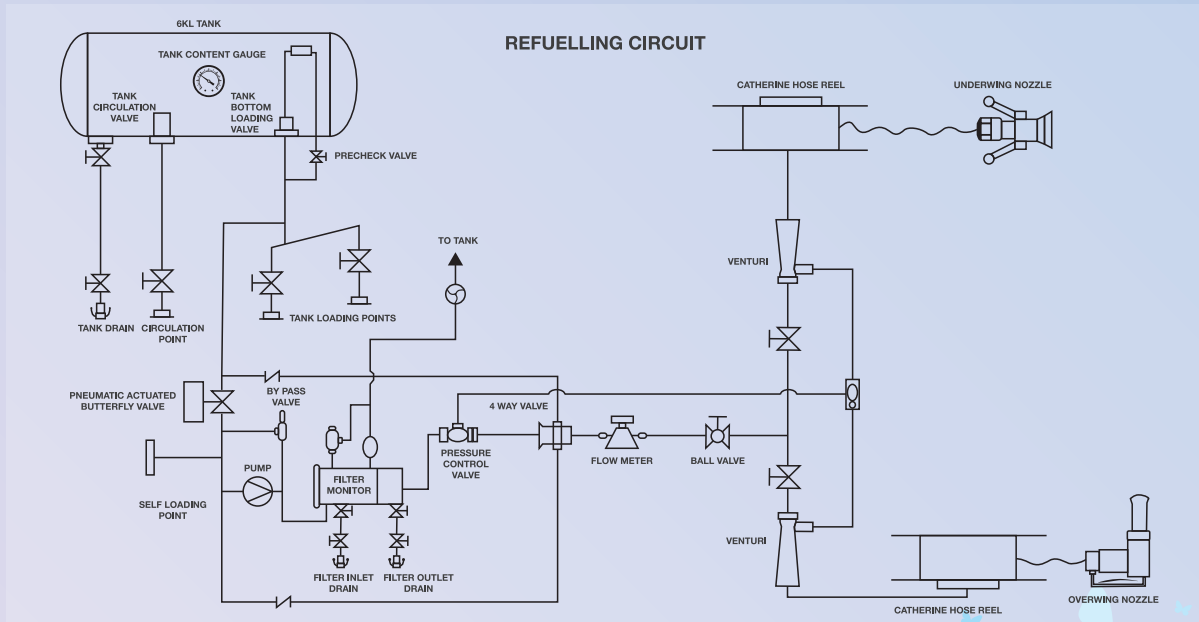
Visual Inspection



Hose Reel

Specifications of Refuellers

Capacity	Gross Capacity (Litres)	Net Capacity (Litres)	Flow Rate (LPM)	Length (mm)	Width (mm)
15 KL	6108	10.250	600	7140	2205
11 KL	11330	16.200	1500	7710	2440
16 KL	16480	25.000	1500	9310	2450



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