# LIQUID NITROGEN TANK

The Petrotesting Cryogenic tanks are insulated, vacuum-jacketed pressure vessels. They come equipped with safety relief valves and rupture discs to protect the cylinders from pressure buildup.

Container is cleaned for liquid nitrogen service. Tank pressurized with clean, dry, oil-free nitrogen gas. The annular space between the inner and outer tanks has been evacuated to the desired vacuum.



**NITROGEN TANK**

## Specifications

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|---|---|---|
| **Model no** | : | CVA – 2.2k – 45 – os |
| **Serial no** | : | 20104 |
| **Year of manufacture** | : | 2005 |
| **Pressure vessel code** | : | ASME sect viii div.1 |
| **MAWP** | : | 45psi, 3.10 BARG |
| **Test pressure** | : | 83 psi, 5.72 barG |
| **Design temperature range** | : | -320$^{o}$f to +100$^{o}$f |
| | : | - 196$^{o}$c to + 38$^{o}$c |
| **Insulation system** | : | vacuum and multi – layer insulation |
| **Inner vessel malerial** | : | SA – 240 – 304 stainless steel |
| **Outer vessel material** | : | heads – SA – 36 carbon steel. |
| | : | shell – A10111, HSLAS GR50 CL1 carbon steel |
| **Equivalent thickness ref steel :** | | 4.50 mm. |
| **Water capacity at 20$^{0}$C** | : | 8,404 litres , 2220 gal |
| **Max.permissible gross mass (MPGM) :** | | 11,940 kg , 25000lb |
| **Unladen (tare) mass** | : | 4,282 kg , 9440 lb. |

Hold times per IMD G/49 CFR 178.277 -5 psi to 45 psi,( 1.34 to 3.10 bar ) @30$^{o}$C
Nitrogen, refrigerated liquid – UN 1977; 13,285 lbs (6. 026 kg), 22 days

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|---|---|---|
| **Heat influx rate** | : | 73.3 watts for nitrogen, refrigerated liquid |