



| TANK TYPE | MOUNT | LOCATION | PMD DEVICE |
|------------|-------|----------|------------|
| Propellant | Polar | Apex | None |

The Brasilsat Propellant Tank is a 29 inch inside diameter, polar boss mounted spherical pressure vessel constructed of 6Al-4V Titanium. The tank has three interface ports, all constructed of 3Al-2.5V Titanium tubing. The pressurant port is 1/4 inch OD,

ATK Part Number 80381-1

SIZE: 29-inch ID Sphere
SIZE: 736-MM

ISO 9001 & AS 9100 REGISTERED

| APPLICABLE DOCUMENTS | TANK CHARACTERISTICS | ACCEPTANCE TESTS |
|----------------------|----------------------|------------------|
|----------------------|----------------------|------------------|

| | |
|------------------------------|-----------|
| Qualification Test Procedure | 50-000493 |
| Acceptance Test Procedure | 50-000494 |
| Cleaning | CPP 3823 |

| | | | |
|--------------------------|-----|--------------------|--------|
| Operating Pressure, psig | 270 | Total Volume, ci | 12,770 |
| Proof Pressure, psig | 315 | Prop Volume, ci | |
| Cryo Proof, psig | 441 | Max Design Wt, lbs | 12.0 |
| Burst Pressure, psig | | Minimum Wall, inch | |

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|---|
| Examination of Product (Preliminary) |
| Pre-Proof Volume Determination |
| Proof Pressure Test |
| Post-Proof Volume Determination |
| Cryogenic Proof Pressure Test |
| External Leakage Test |
| Radiographic and Penetrant Inspection |
| Examination of Product (Final) & Weight determination |
| Cleanliness Verification |

Notes:

- 1: Tooling belongs to
- 2: Tubing material (3AL-2.5V)
Furnished by HAC & is per SCGMS 10031
- 3: Tube protectors are SK 1429 & SK 1430
- 4: Fracture Critical

| TANK CHARACTERISTICS (Metrics) | | | |
|--------------------------------|-------|-------------------|--------|
| Operating Pressure, psig | 18.62 | Total Volume, l | 209.27 |
| Proof Pressure, psig | 21.72 | Prop Volume, l | |
| Cryo Proof, psig | 30.41 | Max Design Wt, Kg | 5.44 |
| Burst Pressure, psig | | Minimum Wall, MM | |

FORGINGS

| Forging P/N | SUPPLIER | Die No |
|-------------|----------|--------|
| 80-381061-1 | | |

TUBE TYPE AND SIZE

| TITANIUM | SIZE |
|---------------------|---|
| 80-381003-1, Inlet | 250 OD x .020 Wall x 4.12 Long (6.35 x .5 x 104.6 MM) |
| 80-381003-3, Outlet | .375 OD x .020 Wall x 3.75 Long (9.52 x .5 x 95.2 MM) |

