



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
PMD NTO & N ₂ H ₄	Bosses	Polar	Note 4

This tank assembly is a hemispherical pressure vessel with a cylindrical section & is of all welded construction. It is mounted by a six threaded hole pattern machined into the polar boss end of each hemisphere. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet & woven screen, fabricated to maintain separation of liquid propellant & gaseous pressurant, & to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

ATK Part Number 80398-1

SIZE: 28.5-inch ID x 54.9-inch Long
SIZE: 597 ID x 1394-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000523
Qualification Test Procedure	50-000524
Bubble Point Test Procedure	50-000512
Qualification Test Report	56-000177
Cleaning	CPP 3854

TANK CHARACTERISTICS

Operating Pressure, psig	350	Total Volume, ci	26,750
Proof Pressure, psig	468	Prop Volume, ci	13,375
Cryo Proof, psig	NA	Max Design Wt, lbs	50.0
Burst Pressure, psig	525	Minimum Wall, inch	0.024

ACCEPTANCE TEST

Preliminary Examination of Product
Volume, Proof, Volume
External Leak Test
Bubble Point Test
Radiographic Inspection
Penetrant Inspection
Mass Measurement
Final Inspection
Cleanliness Check

Notes:

- 1: Tooling owned by Customer/Govt
- 2: PMD design is proprietary to ATK.
- 3: Tube protector is SK -1224
- 4: Complex Channel
- 5: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	24.13	Total Volume, l	438.36
Proof Pressure, Bar	32.27	Prop Volume, l	219.18
Cryo Proof, Bar	NA	Max Design Wt, Kg	22.68
Burst Pressure, Bar	36.20	Minimum Wall, MM	0.610

QUALIFICATION TESTS

Preliminary Examination of Product
Volumetric Capacity
Proof Pressure
Post Proof Volumetric Capacity
External Leakage
In Tank Bubble Point Test
Final Inspection of Product

FORGINGS

FORGINGS P/N	SUPPLIER	Die
80-287061-1 (2)		
RING FGG	RING SIZE, (Rough Machined)	
80-356063-1	28.87 +/- .03 OD x 27.87 +/- .03 ID x 29.81 +.12, -.06 Long	

TUBE TYPE AND SIZE

TITANIUM	SIZE
Tube Pressurant, 80-398002-1	1/4" OD (6.35 MM)
Tube Propellant, 80-398002-3	1/4" OD (6.35 MM)

