



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
Complex PMD	Bosses	Polar	Vane, Trap & Sponge

This tank is a 23-inch x 40-inch long cylindrical pressure vessel constructed from light-weight 6Al-4V titanium. Mounting is accomplished on polar bosses. A vane, trap & sponge type propellant management device (PMD) is provided to expel the fuel under low or zero gravity conditions.

**ATK Part Number 80310-6**

**SIZE: 23-inch ID x 40-inch Long**  
**SIZE: 584-MM ID x 1016-MM Long**

**ISO 9001 & AS 9100 REGISTERED**

**APPLICABLE DOCUMENTS**

Bubble Point Test Procedure	50-000278
Acceptance Test Procedure	50-000279
Qualification Test Procedure	50-000280
Re-Qualification Test Procedure	50-000337
Materials & Processes List	54-000060
Vibration Fixture Evaluation	56-000118
Qualification Test Report	56-000121
Cleaning Procedure, Tank	CPP 3611
Cleaning Procedure, PMD	CPP 3546

**TANK CHARACTERISTICS**

Operating Pressure, psig	255	Total Volume, ci	13.743
Proof Pressure, psig	400	Prop Volume, lbs	682
Cryo Proof, psig	NA	Max Design Wt, lbs	33.95
Burst Pressure, psig	520	Minimum Wall, inch	0.027

**QUALIFICATION TESTS**

Inspection  
 Proof Pressure  
 Pressure Cycling  
 Radiographic Inspection  
 Sustained Acceleration  
 Sine Vibration  
 Random Vibration  
 Bubble Point Test  
 Radiographic Inspection  
 Burst Pressure  
 External Leakage  
 Visual Inspection  
 Cleanliness and Visual Inspection  
 Preparation for Ddate Review

**TANK CHARACTERISTICS (Metrics)**

Operating Pressure, bar	17.58	Total Volume, l	228.96
Proof Pressure, bar	27.58	Prop Volume, l	N/A
Cryo Proof, bar	N/A	Max Design Wt, kg	15.40
Burst Pressure, bar	35.85	Minimum Wall, MM	0.686

**FORGINGS**

FORGINGS P/N	SUPPLIER	Die No
80-310061-1 (2)		
RING FORGING		RING SIZE, (Rough Machined)
80-310063-1, Cylinder	24.19 +.5 OD x 23.09 -.5 ID x 19.87 +.18 Lg	

**Notes:**

- 1: Tooling belongs to ATK
- 2: 30 percent of tooling was sold to LMSC
- 3: QTR for -3 Tank is 56-000121
- 4: QTR for -1 Tank is 56-000102
- 5: Fracture Critical
- 6: This tank was designed by LMMS

**TUBE TYPE AND SIZE**

TITANIUM	SIZE
80-310001-5, Outlet	.377 OD x .016 Wall
80-310002-3, Inlet	.252 OD x .016 Wall

