



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
Simple Pmd	Bosses	Polar	Vane

This is a 28-inch x 48-inch cylindrical pressure vessel with (ellipsoidal heads) and is constructed of 6AL-4V titanium. Fuel expulsion is provided by a vane type propellant management device (PMD) fabricated to provide expulsion capability during low or zero gravity conditions.

ATK Part Number 80356-1

SIZE: 28-inch ID x 48.5-inch Long
SIZE: 711 x 1232 mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000365
Qualification Test Procedure	50-000366
Bubble Point Test Procedure	50-000367
PMD Performance Analysis	54-000105
Fracture Analysis Plan	54-000099
Qualification Test Report	56-000138
Performance Analysis, Tank	217
Cleaning	CPP 3693

TANK CHARACTERISTICS

Operating Pressure, psig	325	Total Volume, ci	26,750
Proof Pressure, psig	439	Prop Volume, ci	26,700
Cryo Proof, psig	No	Max Design Wt, lbs	60.0
Burst Pressure, psig	488	Minimum Wall, inch	0.037

ACCEPTANCE TESTS

Preliminary Inspection of Product
 Radiographic & Penetrant Inspection
 Volumetric Capacity Test
 Proof Pressure Test
 Post Proof Volumetric Capacity Test
 External Leakage
 Radiographic & Penetrant Inspection
 Weight Measurement
 Final Examination of Product
 Cleanliness Test
 Preparation for Delivery

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	22.41	Total Volume, l	445.66
Proof Pressure, bar	30.27	Prop Volume, l	444.83
Cryo Proof, bar	No	Max Design Wt, kg	27.22
Burst Pressure, bar	33.65	Minimum Wall, MM	0.940

QUALIFICATION TESTS

Preliminary Examination of Product
 Volumetric Capacity
 Proof Pressure
 Post Proof Volumetric Capacity
 External Leakage
 Final Inspection of Product
 Flow Rate and Pressure Drop
 Cycle Pressurization
 Static Acceleration Test
 Natural Frequency Test
 External Leakage
 Final Inspection of Product
 Burst Pressure Test

Notes:

- 1: Tooling owned by Customer/Govt
- 2: PMD design is proprietary to TRW
- 3: Tube protector is SK 1224
- 4: Fracture Critical

FORGINGS

FORGINGS P/N	SUPPLIER	Die
80-343061-1 (2)		
RING FGG	RING SIZE, (Rough Machined)	
80-356063-1, Cyl	28.87 +/- .03 OD x 27.87 +.03 -.09 ID x 29.81 +.12 -.06 Lg	

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-356001-1 (2)	.250 OD x .016 Wall (6.35 X .406)

