



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
PMD	Tabs	Girth	Simple Vane

This tank assembly is a pressure vessel with hemispherical ends & a cylindrical section of all welded construction. The cylindrical section is formed from an extension of the tank ends. It's mounted by 3 equally spaced circumferential tabs with threaded holes located on 1 of the hemispheres near the girth weld joint. The tank contains an internally-mounted propellant management device, with a single vane & perforated sheet fabricated to maintain separation of liquid propellant & gaseous pressurant & to provide predictable gas-free liquid propellant expulsion from the tank under low or

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80375-1

SIZE: 24.6-inch ID x 29-inch Long
SIZE: 625 x 736-mm

APPLICABLE DOCUMENTS	
Qualification Test Procedure	50-000443
Acceptance Test Procedure	50-000444
Bubble Point Test Procedure	50-000448
Fracture Analysis Plan	54-000132
Stress Fracture	240 & 240A
Qualification Test Report	56-000158
Cleaning	CPP 3738

TANK CHARACTERISTICS			
Operating Pressure, psig	420	Total Volume, ci	9.850
Proof Pressure, psig	630	Prop Volume, lbs	253
Cryo Proof, psig	NA	Max Design Wt, lbs	19.0
Burst Pressure, psig	840	Minimum Wall, inch	0.033

ACCEPTANCE TESTS
Preliminary Inspection of Product
Pre-Proof Volumetric Capacity
Ambient Proof
Visual Inspection
Post-Proof Volumetric Capacity
External Leakage Test
Radiographic Inspection
Dye Penetrant Inspection
Visual Inspection
Mass Measurement
Cleanliness Check
Data Review

Notes:

- 1: Tooling owned by ATK.
- 2: The PMD is a PMD Technology Design
- 3: Tube protector are SK 1345 & SK 1346
- 4: Weld Qual Ring is SK 1335
- 5: Fracture Critical

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	28.96	Total Volume, l	161.41
Proof Pressure, Bar	43.44	Prop Volume, Kg	114.8
Cryo Proof, Bar	NA	Max Design Wt, Kg	8.62
Burst Pressure, Bar	57.92	Minimum Wall, MM	0.838

FORGINGS		
Forgings P/N	SUPPLIER	Die
80-375061-1, (2)		
Roll Ring Forging	Ring Size (Rough Machined)	
80-375063-1, Tab	26.50+ .13, -.00 ODx24.62+ .00, -.13IDx2.25+ .13, -.00	

QUALIFICATION TESTS
Proof Pressure Cycles Test
DMOP Cycle Test
Fill and Drain Cycling Test
Resonant Frequency Test
Sustained Acceleration Test
Radiographic Inspection
Dye Penetrant Inspection
Visual Inspection
External Leakage Test
Bubble Point Test
Burst Test

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-375001-1 (2)	.250 OD x .020 Wall
Inertia Welded	6.35 x .5 mm

