

TANK TYPE PMD	MOUNT Tabs	LOCATION Girth	PMD DEVICE Simple Vane
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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 zero gravity

Part Number 80375-1

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

ISO 9001 & AS 9100 REGISTERED

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

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	

TUBE TYPE AND SIZE

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

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

Notes:

- 1: Tooling owned by Northrop Grumman
- 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

