

<b>TANK TYPE</b> Complex PMD	<b>MOUNT</b> Bosses & lugs	<b>LOCATION</b> Polar & Girth	<b>PMD DEVICE</b> Note 8
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This is a spherical pressure vessel constructed of 6AL-4V titanium. Fuel expulsion is provided by a channel type propellant management device (PMD). Mounting is accomplished on polar bosses & lugs parallel with & adjacent to the mid-plane.

**Part Number 80324-1**

**SIZE: 32.84-inch ID Sphere**  
**SIZE: 834-MM ID Sphere**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS
Bubble Point Test Procedure	50-000310	Operating Pressure, psig	400	Inspection Pre-Proof Internal Volume Proof Pressure Post-Proof Internal Volume Drain Test Internal Vacuum Leak Test Radiographic Inspection Penetrant Inspection Final Inspection of Product Cleanliness Test
Acceptance Test Procedure	50-000311	Proof Pressure, psig	600	
Qualification Test Procedure	50-000312	Cryo Proof, psig	No	
Materials & Processes List	54-000075	Burst Pressure, psig	800	
Weight Analysis	54-000086			
Fracture Analysis Plan	54-000071			
Qualification Test Report	56-000115	<b>TANK CHARACTERISTICS (Metrics)</b>		
Partial Qual Test Report	56-000144	Operating Pressure, bar	27.58	
Cleaning Procedure, PMD	CPP 3546	Proof Pressure, bar	41.37	
Cleaning Procedure, Tank	CPP 3644	Cryo Proof, bar	No	
		Burst Pressure, bar	55.16	
		Total Volume, in <sup>3</sup>	18.390	
		Prop Volume, lb <sub>m</sub>	587	
		Max Design Wt, lb <sub>m</sub>	44.50	
		Minimum Wall, inch	0.043	
		Total Volume, l	301.36	
		Prop Volume, kg	266	
		Max Design Wt, kg	20.19	
		Minimum Wall, mm	1.092	

- Notes:**
- 1: Tooling (99 PCS) belongs to LMSC/Govt
  - 2: The PMD design is LMSC proprietary
  - 3: Inlet Tube Protector, SK-980
  - 4: Outlet Tube Protector, SK-978
  - 5: Perforated Sheet, .063 holes, SK-990
  - 6: Complex Gallery
  - 7: Stress & FM Analysis, PMD (Wada), 205A
  - 8: Stress & FM Analysis, Tank (Wada), 205B
  - 9: PMD Stress/Fracture Analysis, 54-000086
  - 10: Stress/Fracture Report, 54-000084
  - 11: Fracture Critical

FORGINGS P/N	SUPPLIER	Die No
80-324061-1 (2)		
ROLL RINGS		SIZE
Roll Ring, 80-324161-1	16.25 +.00-.12 ID x 20.5 +.12-.00 OD x 1.81 +.1-.00	
Roll Ring, 80-324160-1	18 +.00-.25 ID x 20.13 +.25-.00 OD x 1 +.25-.00	

TITANIUM	SIZE
80-324020-5, Inlet	.250 OD x .020 Wall (6.35 x .5 mm)
80-324050-5, Outlet	.375 OD x .020 Wall (9.525 x .5 mm)

QUALIFICATION TESTS
Inspection
Pre-Proof Internal Volume
Proof Pressure
Post-Proof Internal Volume
Internal Pressure Cycling
Drain Test
Internal Vacuum Cycling
Leak Test
Radiographic Inspection
Penetrant Inspection
Cleanliness Test
Resonant Frequency Search
Accerlation Test
Drain Test
Radiographic Inspection
Leak Test
Final Inspection of Product
Burst Pressure

