

<b>TANK TYPE</b> DIAPHRAGM	<b>MOUNT</b> Tabs	<b>LOCATION</b>
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The propellant tank is a spherical pressure vessel constructed of 6AL-4V Titanium. Positive Propellant expulsion is provided by a reversing AF-E-332 rubber diaphragm retained at the sphere mid-plane. Mounting is accomplished by four (4) equally spaced tabs. Connection is made to the propellant and pressurant compartments through tube stubs.

**Part Number 80562-1**

**SIZE: 23.70" DIA x 26.730" LONG**  
**SIZE: 601.98mm DIA x 669.798mm LONG**

**ISO 9001 & AS 9100 REGISTERED**

**APPLICABLE DOCUMENTS**

Acceptance Test Procedure	50-000795
Qual Test Procedure-QBS	50-000315
Qualification Test Report	
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 4065

**TANK CHARACTERISTICS**

Operating Pressure, psig	385	Total Volume, in <sup>3</sup>	7.261
Proof Pressure, psig	605.2 @ 68 °F	Max Design Wt, lbs	30.9
Cryo Proof, psig	N/A	Minimum Wall, inch	0.040
Burst Pressure, psig		Qual Tank Mass	
Actual Burst, psig			

**ACCEPTANCE TESTS**

Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure
Post-Proof Volume Determination
Expulsion Efficiency
Internal Leakage
External Leakage
Radiographic Inspection
Penetrant Inspection
Vibration Testing
Internal leakage
External Leakage
Radiographic Inspection
Penetrant Inspection
Determination of Weight and Final Inspection
Cleanliness Verification
Final Examination

**TANK CHARACTERISTICS (Metrics)**

Operating Pressure, bar	27	Total Volume, l	119
Proof Pressure, bar	41.73 @ 20 °C	Max Design Wt, kg	14.02
Cryo Proof, bar	N/A	Minimum Wall, MM	1.016
Burst Pressure, bar		Qual Tank Mass	
Actual Burst, bar			

**HEMISPHERE FORGINGS**

HEMI P/N	QTY
80-323061-1	2

**RING FORGINGS**

P/N	QTY	SIZE
80-323065-1	1	22.25" ID x 23.87" OD x 4.00" LONG 565.15mm ID x 606.298mm OD x 101.6mm LONG
80-323063-1	1	22.00" ID x 23.44" OD x 1.75" LONG 558.8mm ID x 595.376mm OD x 44.45mm LONG
80-323063-3	1	22.44" ID x 24.00" OD x 3.56" LONG 569.976mm ID x 609.6mm OD x 90.424mm LONG

**TUBE TYPE AND SIZE**

Transition Ti to SS	QTY	SIZE
80-562002-1	2	0.375" OD x 0.035" Wall x 3.50" LONG 9.525 OD mm x 0.889mm Wall x 88.9mm LONG

**80323-1 QUALIFICATION TESTS**

Acceptance Test
Vibration
Internal Leakage
External Leakage
Differential Pressure Test
Internal Leakage
Life Cycling
Penetrant Inspection
Radiographic Inspection
Internal Leakage
External leakage
Burst Pressure
Penetrant Inspection
Radiographic Inspection
Final Examination of Product
Preparation for Delivery

