

<b>TANK TYPE</b> Diaphragm	<b>MOUNT</b> Bosses	<b>LOCATION</b> Polar
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This is a 28-inch spherical pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by a reversible-ethylene propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) at the sphere mid-plane. Mounting is accomplished on polar bosses.

**Part Number 80348-1**

**SIZE: 28-inch ID Sphere**  
**SIZE: 711-mm**

**ISO 9001 & AS 9100 REGISTERED**

<b>APPLICABLE DOCUMENTS</b>		<b>TANK CHARACTERISTICS</b>		<b>ACCEPTANCE TESTS</b>
Acceptance Test Procedure	50-000356	Operating Pressure, psig	435	Preliminary Inspection of Product Pre-Proof Volume Proof Pressure Test Post-Proof Volume Pressure Drop and Expulsion Efficiency External Leakage Low Pressure Diaphragm Gas Leak Radiographic Inspection Final Inspection of Product Weight Cleanliness Preparation for Delivery
QBS	56-000128	Proof Pressure, psig	870	
Qualification Test Procedure	Note 3	Cryo Proof, psig	NA	
Qualification Test Report	Note 3	Design Burst Pressure, psig	1,088	
Cleaning	CPP 3670	Actual Burst Pressure, psig	1,321	
		Total Volume, ci	11,350	
		Prop Volume, ci	10,215	
		Max Design Wt, lbs	43.0	
		Minimum Wall, inch	0.047	

<b>DIAPHRAGM INFORMATION</b>	
Diaphragm P/N	80-228007-1
Diaphragm Mold P/N	T-1669
Diaphragm Gross Wt	4.16 (1.88 Kg)
Diaphragm Matl Type	AF-E-332
Diaphragm, Material, Note 2	90-000075
Diaphragm Processing, Note 2	90-000087
N-Ray Inspection	1002

<b>TANK CHARACTERISTICS (Metrics)</b>			
Operating Pressure, Bar	29.99	Total Volume, l	186.0
Proof Pressure, Bar	59.98	Prop Volume, l	167.4
Cryo Proof, Bar	NA	Max Design Wt, Kg	19.5
Design Burst Pressure, Bar	75.01	Minimum Wall, MM	1.194
Actual Burst Pressure, Bar	91.15		

- Notes:**
- 1: Tooling belongs to Northrop Grumman
  - 2: Proprietary Document
  - 3: Qualified under P/N 80228-1
  - 4: Martin Marietta (Denver)
  - 5: Fracture Critical

<b>FORGINGS</b>	
<b>FORGINGS P/N</b>	<b>SUPPLIER</b>
80-287061-1 (2)	Die
<b>RING FORGING</b>	
<b>RING SIZE, (Rough Machined)</b>	
80-228063-1, Retainer	28.35 +.12 OD x 26.81 -.12 ID x 1.59 +.09 Lg

<b>TUBE TYPE AND SIZE</b>	
<b>TITANIUM</b>	<b>SIZE</b>
80-348001-1, Outlet	.750 OD x .060 Wall (19.05 x 1.52 MM)
80-348003-1, Inlet	.172 ID (4.36 MM)

<b>QUALIFICATION TESTS</b>
Examination of Product, Preliminary
Pre-Proof Pressure
Proof Pressure
Post Proof Volume
Pressure Drop/Expulsion Efficiency
External Leakage
Diaphragm Leakage
Examination of Product, Final
Cleanliness Verification

