

TANK TYPE	MOUNT	LOCATION
Diaphragm	Flange	Girth

This is a 40-inch oblate spheroid pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by fully reversible ethylene-propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) at the mid-plane. Mounting is accomplished on a continuous flange parallel with and adjacent to the mid-plane.

Part Number 80318-1

SIZE: 40.2" ID x 31.8" LONG
SIZE: 1021 mm ID x 808 mm LONG
Oblate Spheroid

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS
Acceptance Test Procedure	50-000291	Operating Pressure, psig	338	Examination of Product Pre-Proof Volumetric Capacity Test Proof Pressure Test Post-Proof Volumetric Capacity Test Acoustic Test Internal (Diaphragm) Leakage Test External Leakage Test Penetrant Inspection Radiographic Inspection Weight Test Cleanliness Test
Qualification Test Procedure	50-000292	Proof Pressure, psig	545	
Qualification Test Report	56-000114	Cryo Proof, psig	NA	
Cleaning	CPP 9107	Burst Pressure, psig	721	
		Total Volume, ci	28,144	
		Prop Volume, ci	0	
		Max Design Wt, lbs	76.0	
		Minimum Wall, inch	0.050	

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-263007-1
Diaphragm Mold P/N	T-1868
Diaphragm Gross Wt	7.6
Diaphragm Matl Type	AF-E-332
Diaphragm, Material, Note 2	90-000075
Diaphragm Processing, Note 2	90-000110
N-Ray Procedure	1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	23.30	Total Volume, l	461.20
Proof Pressure, Bar	37.58	Prop Volume, Kg	0.0
Cryo Proof, Bar	NA	Max Design Wt, Kg	34.47
Burst Pressure, Bar	49.71	Minimum Wall, MM	1.270

FORGINGS P/N	SUPPLIER	Die
80-260061-1 (2)		
RING SIZE. (Rough Machined)		
80-263063-1, Cylinder	42.57 +.09 ODx39.56 -.09 IDx3.81 +.25 Lg	
80-263065-1, Retainer	40.46 +.09 ODx39.12 -.09 IDx1.68 +.09 Lg	

- Notes:**
- 1: Tooling belongs to TRW
 - 2: Proprietary Documents
 - 3: Performed at Rockwell, Downey
 - 4: Rockwell International (Seal Beach)
 - 5: Fracture Critical

QUALIFICATION TESTS
Acceptance Test
Acceleration
Internal Leakage
Negative Pressure
External Leakage Test
Diaphragm Integrity
Internal Leakage
Acoustic Test
Life Test
Internal Leakage
Proof Pressure Cycle
Acceleration Supplemental
Design Burst Test

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-318001-1, Outlet	.503 OD x .035 Wall
80-318003-1, Inlet	.253 OD x .020 Wall

