



TANK TYPE	MOUNT	LOCATION
Dipahragm	Pedestal	Apex

This is a 15" 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 a pedestal mount located on the apex of the propellant hemisphere.

**ATK Part Number 80468-1**

**SIZE: 15.38-inch ID Sphere**

**SIZE: 390.6-mm**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS	
Acceptance Test Procedure	50-000629	Operating Pressure, psig	320	Total Volume, ci	1.865
Qual Test Procedure, Note 5	50-000184	Proof Pressure, psig	510	Prop Volume, ci	1.375
Qualification Test Report, Note 5	56-000068	Cryo Proof, psig	NA	Max Design Wt, lbs	8.20
Fracture Analysis plan	54-000150	Burst Pressure, psig		Minimum Wall, inch	0.019
Cleaning	CPP 3964	Actual Burst Pressure			

DIAPHRAGM INFORMATION		TANK CHARACTERISTICS (Metrics)		ACCEPTANCE TESTS	
Diaphragm P/N	80-225017-1	Operating Pressure, Bar	22.06	Total Volume, l	30.56
Diaphragm Mold Tool No	T-1647	Proof Pressure, Bar	35.16	Prop Volume, l	22.53
Diaphragm Gross Wt	1.19 (.539 Kg)	Cryo Proof, Bar	NA	Max Design Wt, Kg	3.72
Diaphragm Material Type	AF-E-332	Burst Pressure, Bar		Minimum Wall, MM	0.483
Diaphragm Material Note 2	90-000075				
Diaphragm Processing Note 2	90-000087				
N-Ray Inspection Procedure	1002				

**Notes:**

- 1: Tooling owned by ATK
- 2: Proprietary Document
- 3: This tank is a redesign 80225-1
- 4: Tube protectors are SK 1388 & SK 1389
- 5: QTP & QTR are for P/N 80225-1
- 6: Fracture Critical

FORGINGS			
HEMI P/N	QTY	SUPPLIER	Die No
80-225061-2	2	ARCTURUS	2105A
RING FORGING		RING SIZE, (Rough Machined)	
80-225063-1, Retainer	15.63 +.12 OD x 14.37 -.12 ID x 1.28 +.12 Lg		
80-225065-1, Base	9.5 +.09 OD x 7.12 -.09 ID x 2.2 +.09 Lg		

TUBE TYPE AND SIZE (inch)	
3AL-2.5V	SIZE
80-468070-3	.250 x .025
80-468015-3	.250 x .025

TUBE TYPE AND SIZE (mm)	
3AL-2.5V	SIZE
80-468070-3	6.35 x 0.635
80-468015-3	6.35 x 0.635

QUALIFICATION TESTS
Qual performed on 80225-1.

