



TANK TYPE Simple Pmd	MOUNT Bosses	LOCATION Polar	PMD DEVICE Vane, Note 6
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This tank is a 22-inch x 32-inch long annealed cylindrical pressure vessel constructed from light-weight 6Al-4V titanium. Mounting is accomplished on polar bosses. A vane type propellant management device (PMD) is provided to expel the fuel under low or zero gravity conditions.

ATK Part Number 80309-1

SIZE: 22.14-inch ID x 32-inch Long
SIZE: 562-MM ID x 813-MM Long

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	TANK CHARACTERISTICS	ACCEPTANCE TESTS
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Acceptance Test Procedure	50-000283
Engineering Analysis Report	54-000061
Material & Processes List	54-000062
Cleaning	CPP 3614

Operating Pressure, psig	318	Total Volume, ci	9.210
Proof Pressure, psig	477	Prop Volume, ci	Note 2
Cryo Proof, psig	NO	Max Design Wt, lbs	17.8
Burst Pressure, psig	636	Minimum Wall, inch	0.029

Preliminary Examination of Product
Pre-Proof Volume
Proof Pressure
Post-Proof Volume
Gas Leakage
Radiographic & Penetrant
Cleanliness
Random Vibration
Pre-Proof Volume
Proof Pressure
Post-Proof Volume
Gas Leakage
Radiographic & Penetrant
Final Examination of Product
Cleanliness

Notes:

- 1: Tooling owned by ATK
- 2: Propellant volume is between 10% & 99.5% of total volume
- 3: This tank is similar to 80281-1
- 4: This tank is annealed
- 5: The PMD is customer proprietary
- 6: Simple Vanes (Four Vanes)
- 7: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	21.92	Total Volume, l	153.44
Proof Pressure, bar	32.89	Prop Volume, l	N/A
Cryo Proof, bar	N/A	Max Design Wt, kg	8.07
Burst Pressure, bar	43.85	Minimum Wall, MM	0.737

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-212061-1 (2)		
RING FORGING		RING SIZE, (Rough Machined)
80-212063-1, Cylinder	22.75 +.09 OD x 21.87 -.09 ID x 8.75 +.25 Lg	

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-309001-1 (2)	.250 OD x .020 Wall

QUALIFICATION TESTS

Qual by similarity 80281-1.

