



Simple Pmd Bosses Polar Vane, Note 6

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 80420-1

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

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000548
Cleaning	CPP 3882

TANK CHARACTERISTICS

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

ACCEPTANCE TESTS

Preliminary Inspection of Product
Volumetric Capacity Measurement
Proof Pressure Test
Volumetric Capacity Measurement
Vibration Test
PMD Bubble Point Test
External Leak Test
Weld Quality Inspection
Mass Measurement
Final Inspection of Product
Cleanliness and Dry

- Notes:**
- 1: Tooling owned by ATK
 - 2: This tank is similar to 80281-1
 - 3: This tank is annealed
 - 4: The PMD is PSI proprietary
 - 5: Simple Vanes (Four Vanes)
 - 6: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	21.92	Total Volume, l	150.93
Proof Pressure, bar	32.89	Prop Volume, l	
Cryo Proof, bar	NO	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 (6.35 x .508 MM)

