

TANK TYPE	MOUNT	LOCATION
Propellant Composite	Bosses	Polar

The HS 601 Hp filament wound Xenon tank is a pressure vessel constructed of a conical liner with end domes, polar mounting bosses and overwrapped with an epoxy resin impregnated fiber. The liner has a nominal 0.032" membrane thickness. Mounting is provided by polar bosses located on the tank centerline axis.

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	
Weld Qualification	50-000470
Acceptance Test Procedure	50-000474
Qualification Test (Q1) Procedure	50-000475
Qualification Test (Q2) Procedure	50-000478
Qualification Test Report (Q2)	56-000163
Cleaning	CPP 3811

TANK CHARACTERISTICS			
Operating Pressure, psig	2,500	Total Volume, ci	1,960
Proof Pressure, psig	3,125	Prop Volume, lbm	116
Cryo Proof, psig	NA	Max Design Wt, lbs	14.0
Burst Pressure, psig, Note 2	3,750	Minimum Wall, inch	0.032

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, bar	172.37	Total Volume, l	32.12
Proof Pressure, bar	215.46	Prop Volume, l	1.90
Cryo Proof, bar	NA	Max Design Wt, kg	30.9
Burst Pressure, bar	258.55	Minimum Wall, MM	0.813

Notes:

- 1: Tooling belongs to ATK
- 2: Actual Burst Test of Q1 Tank was 5,370 psig
- 3: Tube protector is SK 1380
- 4: This is a leak-before-burst design per MIL-STD-1522A
- 5: Shell leakage (1×10^{-6} std cc/src He @MEOP)
- 6: Operating Temperature (19°F to 122°F)
- 7: Vibration loads of 15g's in the X & Z axes & 17g's in the Y axis at 70°F when fully loaded & pressurized to 1100 psi.
- 8: Stress Analysis Report, SAR-96-002
- 9: Fracture Critical



ATK Part Number 80386-101

SIZE: 13.24-inch Max Dia x 29.625-inch long
SIZE: 336.3-mm Max Dia x 752.4-mm long

ACCEPTANCE ENVIRONMENTAL TESTS
None

ACCEPTANCE TESTS
Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure Test
Post-Proof Volume Determination
Tank Capacity
External Leakage Test
Weight Measurement
Final Examination of Product
Cleanliness Verification

QUALIFICATION TESTS
Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure Test
Post-Proof Volume Determination
Tank Capacity
External Leakage Test
Final Examination of Product
Burst Pressure

