

TANK TYPE PRESSURANT	MOUNT POLAR BOSSES	LOCATION CENTERLINE AXIS
--------------------------------	------------------------------	------------------------------------

The DS2000 Pressurant Tank is a composite overwrapped pressure vessel (COPV) with a liner constructed of a center cylinder welded to end domes and overwrapped with T1000 carbon fiber. The commercially pure titanium liner has a nominal .020" membrane thickness. Mounting is provided by polar bosses located on the tank centerline axis.

Part Number 80536-1

Size: 16.60" DIA x 26.25" LONG
Size: 421.64mm DIA x 666.75mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000769
Qual Test Procedure	QBS
Qualification Test Report	QBS
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 3992

TANK CHARACTERISTICS

Operating Pressure, psig	4,000	Total Volume, in ³	4,105
Proof Pressure, psig	5,000	Max Design Wt, lbs	23.5
Cryo Proof, psig	N/A	Minimum Wall, inch	0.017
Burst Pressure, psig	6,000	Qual Tank Mass	25.73
Actual Burst, psig	8,297	80436-1	

ACCEPTANCE TESTS

Examination of Product, Preliminary
 Volumetric Measurement @ Ambient
 Proof Pressure Test @ Ambient
 Volumetric Measurement @ Ambient
 Volumetric Capacity @ MEOP
 External Leak Test
 Weld Quality Inspection
 Examination of Product, Final
 Final Clean

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	276	Total Volume, l	67
Proof Pressure, bar	345	Max Design Wt, kg	10.66
Cryo Proof, bar	N/A	Minimum Wall, MM	
Burst Pressure, bar	414	Qual Tank Mass	653.54
Actual Burst, bar	572		

Qualification Tests 80436-1

Examination of Product
 Volume Determination and Proof & MEOP Pressure Test
 MEOP Pressure Cycle Life Test
 Proof Pressure Cycle Life Test
 External Leak Test
 Pressurized Pyrotechnic Shock Test
 External Leak Test
 Vibration Test Sine Random
 External Leak Test
 Weld Quality Inspection
 Examination of Product
 Burst Pressure & Rupture Test

HEMISPHERE FORGINGS

HEMI P/N	QTY
80-436061-1	2

ROLLED AND SEAM WELDED CYLINDER

P/N	QTY	SIZE
80-374100-1	1	.020" X 15.420" OD X 15.00" LONG
		0.508mm X 391.668mm ID X 381mm LONG

TUBE TYPE AND SIZE

Transition Ti to SS	QTY	SIZE
80-496002-1	1	0.250" OD X 0.035" Wall X 4.25" LONG 6.35OD mm x 0.889mm Wall X 107.95mm

