

TANK TYPE	MOUNT	LOCATION
COPV	BOSS	POLAR

This composite overwrapped pressure vessel (COPV) Helium tank is 16.6" ( 422 mm) in diameter and 26.1" (663 mm) in length. The tank is constructed of a CP Titanium center cylinder welded to two CP Titanium end domes and overwrapped with T1000 carbon fiber. Mounting is provided by two polar bosses located on the tank centerline axis.

**Part Number 80459-1**

**SIZE: 16.6" DIA X 26.1" LONG**  
**SIZE: 422 mm DIA X 663 mm**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS			
Acceptance Test Procedure	50-000612	Operating Pressure, psig	4,500	Total Volume, in <sup>3</sup>	4,105
Qual Test Procedure	see 80446-1	Proof Pressure, psig	5,625	Prop Mass, lbm	N/A
Qualification Test Report	see 80446-1	Cryo Proof, psig	N/A	Max Design Wt, lbs	23.50
Stress Report	see 80446-1	Burst Pressure, psig	6,750	Minimum Wall, inch	0.032
Cleaning	3955	Actual Burst, psig	7,919		

QUALIFICATION TESTS
Qual was performed on 80446-1

ACCEPTANCE Test
Examination of Product
Volume Determination and Proof & MEOP Pressure Test
External Leakage
Examination of Product
Cleanliness Verification
Data Review

Notes:  
 1: This tank is a derivative of 80446-1.

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, bar	310.26	Total Volume, l	67
Proof Pressure, bar	387.82	Prop Volume, kg	N/A
Cryo Proof, bar	N/A	Max Design Wt, kg	10.66
Burst Pressure, bar	465.39	Minimum Wall, MM	0.813
Actual Burst, bar	545.99		

VACUUM RATED
YES

FORGINGS			
HEMI P/N	QTY	SUPPLIER	Die No
80-436061-1	2		

ROLLED AND SEAM WELDED CYLINDER		
P/N	QTY	SIZE
80-374100-1	1	15.42 in ID X 15.0 in LONG

TUBE TYPE AND SIZE (in.)	
Ti 3AL-2.5V	SIZE
80-400002-1	0.375 O.D. x 0.05 Wall
Note: 1 port only	

TUBE SIZE (mm)	
80-400002-1	9.525 x 1.27 mm
Note: 1 port only	



