

<b>TANK TYPE</b>	<b>MOUNT</b>	<b>LOCATION</b>
COPV	POLAR	POLAR



This composite overwrapped pressure vessel (COPV) Helium tank is 16.7" ( 424 mm) in diameter and 29.6" (752 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.

**ATK Part Number 80465-1**

**SIZE: 16.7" DIA X 29.6" LONG**

**SIZE: 424 mm DIA X 752 mm LONG**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS	
Acceptance Test Procedure	50-000617
Qual Test Procedure	see 80436-1
Qualification Test Report	see 80436-1
Stress Analysis	see 80436-1
Stress and Dynamics Report	54-000220
Cleaning	3956

TANK CHARACTERISTICS			
Operating Pressure, psig	4,800	Total Volume, in <sup>3</sup>	4,967
Proof Pressure, psig	6,000	Max Design Wt, lbs	28.00
Cryo Proof, psig	N/A	Minimum Wall, inch	0.018
Burst Pressure, psig	7,200		
Actual Burst, psig	8,297		

QUALIFICATION TESTS
Qual was performed on 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

- Notes:**
1. Fracture Critical
  2. Derivative of 80436-1.

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, bar	330.94	Total Volume, l	81
Proof Pressure, bar	413.68	Max Design Wt, kg	12.70
Cryo Proof, bar	N/A	Minimum Wall, MM	0.457
Burst Pressure, bar	496.41		
Actual Burst, bar	572.05		

VACUUM RATED
YES

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

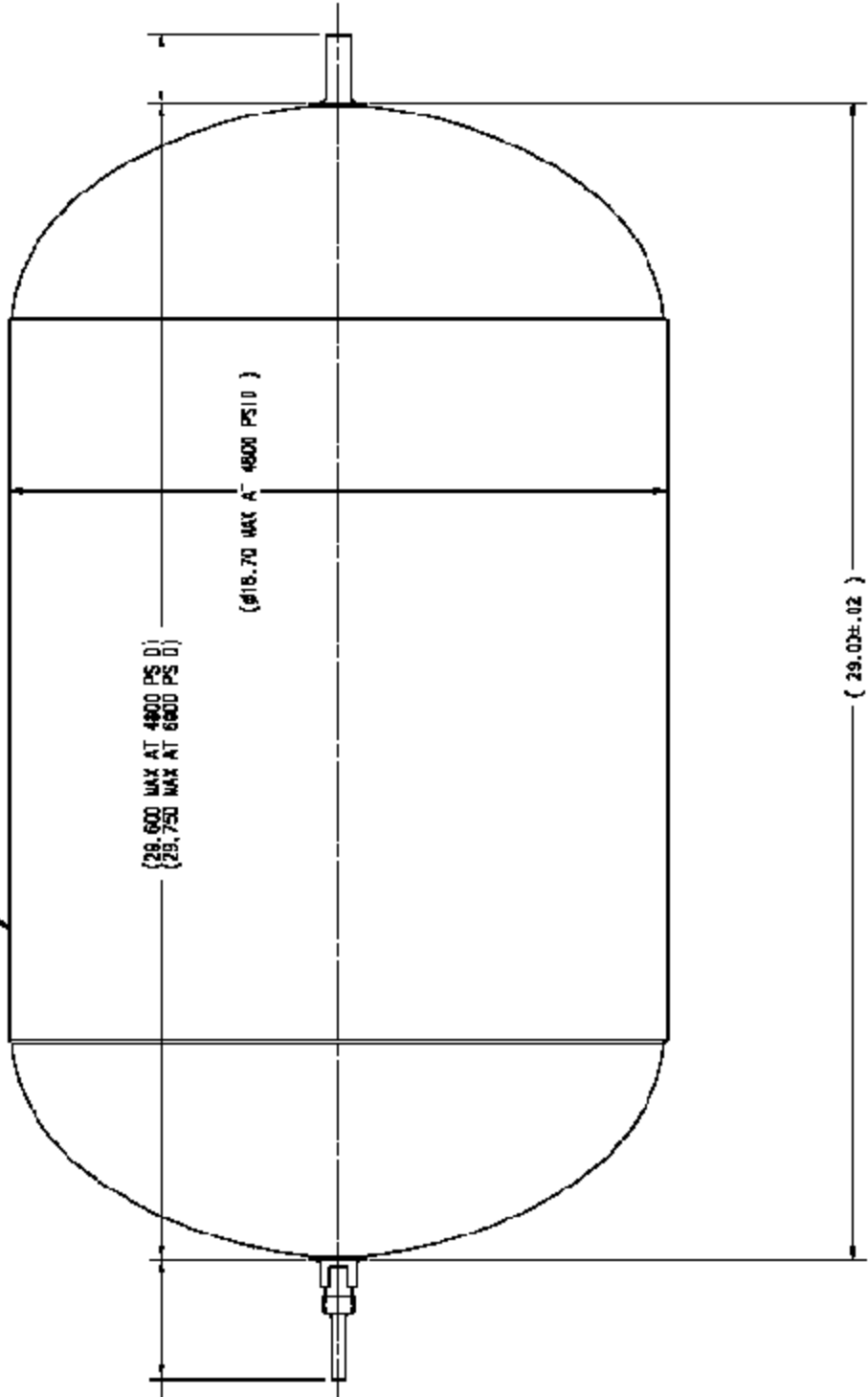
ROLLED AND SEAM WELDED CYLINDER		
P/N	QTY	SIZE
80-436100-1	1	15.87 in ID X 16.75 in LONG

TUBE TYPE AND SIZE (in.)	
Ti 3AL-2.5V	SIZE
80-400002-1	0.375 O.D. x 0.050 Wall

TUBE SIZE (mm)	
80-400002-1	9.525 O.D. x 1.270 Wall



80-438079- DETAIL ASST  
1 REQD FOR -11



( 1.73±.25 FOR -11 )

(28,600 MAX AT 4800 PS D)  
(29,750 MAX AT 6800 PS D)

(Ø18.70 MAX AT 4800 PS D)

3.01±.020 )

( 29.03±.02 )