



| TANK TYPE       | MOUNT                          | LOCATION |
|-----------------|--------------------------------|----------|
| COPV PRESSURANT | Polar - threated boss/slip end | POLAR    |

The small GEO Gas 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 CP-70 titanium liner has a nominal .020" membrane thickness. Mounting is provided by polar bosses located on the tank centerline axis.

**ATK Part Number 80548-1**

**SIZE: 17.12" DIA x 21.75" LONG**  
**Size: 434.8 mm Dia x 552.5 mm Long**

**ISO 9001 & AS 9100 REGISTERED**

**APPLICABLE DOCUMENTS**

|                               |           |
|-------------------------------|-----------|
| Acceptance Test Procedure     | 50-000755 |
| Qual Test Procedure-QBS       | 56-000259 |
| Qualification Test Report-QBS | 56-000189 |
| Stress and Dynamics Report    |           |
| FMECA                         |           |
| Cleaning                      |           |

**TANK CHARACTERISTICS**

|                          |       |                               |       |
|--------------------------|-------|-------------------------------|-------|
| Operating Pressure, psig | 4,496 | Total Volume, in <sup>3</sup> | 3,137 |
| Proof Pressure, psig     | 5,621 | Max Design Wt, lbs            | 20.2  |
| Cryo Proof, psig         | N/A   | Minimum Wall, inch            | 0.017 |
| Burst Pressure, psig     | 6,751 | Qual Tank Mass                | N/A   |
| Actual Burst, psig       | 7,919 | <i>on P/N 80446</i>           |       |

**Acceptance Tests**

Examination of Product, Preliminary  
 Volumetric Measurement @ Ambient  
 Proof Pressure Test  
 Volumetric Capacity @ Ambient  
 Volumetric Capacity @ MEOP  
 Non-Destructive Examination  
 External Leakage Test  
 Random Vibration  
 External Leakage Test  
 Weld Quality Inspection  
 Examination of Product, Final  
 Cleanliness Verification

**TANK CHARACTERISTICS (Metrics)**

|                         |     |                     |       |
|-------------------------|-----|---------------------|-------|
| Operating Pressure, bar | 310 | Total Volume, l     | 51    |
| Proof Pressure, bar     | 388 | Max Design Wt, kg   | 9.18  |
| Cryo Proof, bar         | N/A | Minimum Wall, MM    | 0.432 |
| Burst Pressure, bar     | 465 | Qual Tank Mass      | N/A   |
| Actual Burst, bar       | 546 | <i>on P/N 80446</i> |       |

**HEMISPHERE FORGINGS**

| HEMI P/N    | QTY |
|-------------|-----|
| 80-436061-1 | 2   |

**80446-1 Qualification Tests**

Examination of Product, Preliminary  
 Proof Pressure Cycle Life Test  
 MEOP Pressure Cycle Life Test  
 External Leakage Test  
 Vibration Test  
 Shock Test  
 External Leakage Test  
 Random Vibration Test  
 External Leakage Test  
 Weld Quality Inspection  
 Examination of Product, Final  
 Burst Test

**ROLLED AND SEAM WELDED CYLINDER**

| P/N | QTY | SIZE |
|-----|-----|------|
|     |     |      |
|     |     |      |
|     |     |      |
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