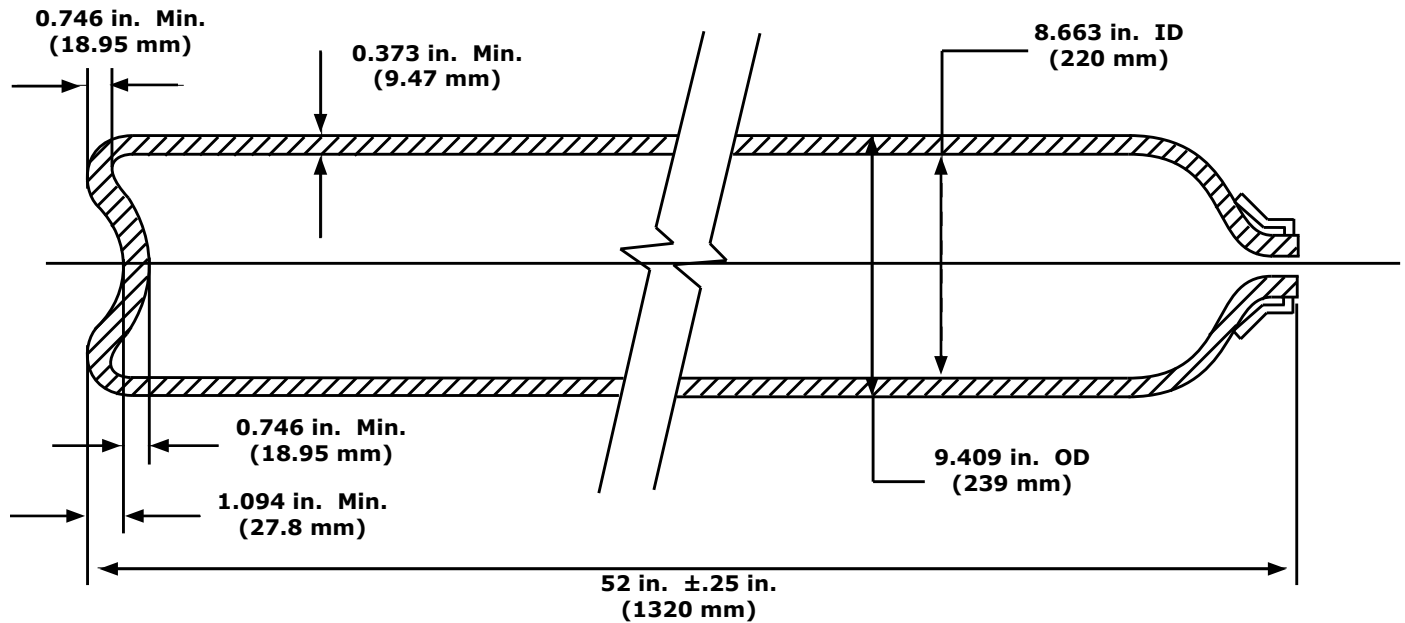


# UN/ISO-DOT Approved 6000 PSI (414 BAR) Steel Cylinder

Refillable Seamless Steel Cylinder for Gases Except CNG, Hydrogen, and Methane



Specifications: ISO 9809-2: 2000	
1. Service Condition:	
- Working Pressure:	6003 psi (414 bar)
- Hydraulic Test Pressure:	9005 psi (621 bar) (14.5 psi = 1 bar)
2. Material	
Cr-Mo-steel complying with the requirements of clause 6.2 of ISO 9809-2.	
3. Manufacture:	
Hot billet extrusion followed by hot drawing	
4. Heat Treatment: Quenched and Tempered	
- Austenitize:	~ 1650°F (889°C)
- Quenchant:	Water based polymer (temperature ≤ 140°F / 60°C)
- Temper:	~ 1050°F (565°C) (Min. 30 min. of temp)
5. Mechanical Properties: (at room temperature)	
- Tensile (R <sub>g</sub> ): 1100-1220 MPa (159.6-177 ksi)	
- Yield (R <sub>e</sub> ): ≥ 935 MPa (135.6 ksi)	
- Elong (A): ≥ 12% (on 5.65 √s°)	
- Hardness Test: Each end of every cylinder	
- Flattening test: Flatten to 10 x t <sub>m</sub> without cracks	
- Charpy Test (-50°C, Trans): ≥ 35 J/cm <sup>2</sup> (avg.)	
- UT Flaw Detection: Each cylinder per ISO 9809-2	
- Batch Burst Test: P <sub>b</sub> ≥ 14,413 psi (994 bar)	
6. Thickness Calculations : (ISO 9809-2:2000)	
$a = 0.5 \times D \left( 1 - \sqrt{\frac{(10FR_e - \sqrt{3} Ph)}{(10FR_e)}} \right)$	
Where:	
Ph = Test Pressure (bar) = 518 bar (7511 psi)	
D = External diameter of container = ø241.4 mm Max	
F = Lesser of 0.65/ (Re/R <sub>g</sub> ) or 0.77; Re/R <sub>g</sub> ≤ 0.9	
= Lesser of 0.65/ 0.85 or 0.77 = 0.765 (for Re/R <sub>g</sub> = 0.85)	
$a = 0.5 \times 241.4 \left( 1 - \sqrt{\frac{(10 \times 0.765 \times 935 - \sqrt{3} \times 621)}{(10 \times 0.765 \times 935)}} \right) = 9.45 \text{ mm (0.372")}$	
Note: the guaranteed min thickness = 9.47 mm (0.373") exceeds calculated min thickness.	

Model - AC40060A													
Approx. Length		Approx. Min. Water Capacity		Approx. Volume (Air)		Approx. Volume (Nitrogen)		Approx. Weight (Cyl - Collar)		Approx. Weight (w/ Cap - Valve)		Approx. Weight (w/ Crash Collar - Valve)	
in.	mm.	in <sup>3</sup>	lt.	cu. ft	cu. m.	cu. ft.	cu. m.	lbs.	kg.	lbs.	kg.	lbs.	kg.
52	1320	2641	43.3	510.5	14.46	493.1	13.96	200	90.7	202	91.6	204	92.5