

REV.	ECN - DESCRIPT.	DATE	DRWN.	CHKD.	APP.
01	1099 TC	3/4/93	MB	RS	BA
02	1247	3/27/95	MB	RS	BA
03	1641	3/30/98	TC	RS	BA
04	2449	12/10/04	RS		

DRAWING FOR REFERENCE ONLY

SPECIFICATION: DOT 3AA 1800 /TC3AAM138

MODEL: 10BC100


1. Principal Elements: - Min. water capacity: 147.1 lbs (66.7 kg) - Min. water volume: 4079 in ³ (66.7 liter) - Approx. tareweight: 180 lbs (81.6 kg) - DOT Service pressure: 1800psi (124 bar) - TC Service pressure: 138 bar - Test pressure: 3000psi (207 bar)	3. Manufacture: Hot billet pierce followed by hot drawing.
	4. Heat Treatment: Q & T
2. Material: Chrome-Moly steel, (A.I.S.I. 4130X)	5. Norris Standard Mechanical Properties: - Tensile: ≥ 105,000 psi (724 MPa) - Elong: ≥ 20% (on 2" gauge) - Flattening: to 6xt without cracks

D.O.T. Wall Stress Calculations: $S = P(1.3D^2 + 0.4d^2)/(D^2 - d^2)$

$$S = \frac{3000 [1.3 (10.442)^2 + 0.4 (10.06)^2]}{(10.442)^2 - (10.06)^2}$$

$$S = 69,803 \text{ psi (481.3 MPa)}$$

$$\text{Required Minimum tensile: } = \frac{69,803}{0.67} = 104,184 \text{ psi (718.4 MPa)}$$

 NORRIS CYLINDER COMPANY P.O. BOX 7486 LONGVIEW, TEXAS 75607			
SEAMLESS STEEL CARBON DIOXIDE CYLINDER, MODEL 10BC100/TC			
SCALE	NOT TO SCALE	DRAWING NO.	REV.
DWN. BY	S. JOHNSON	11/8/91	901A-B-9117 04
CHK'D BY	R.SHAFFKEY	11/15/91	
APP'D BY	B. ARNOLD	11/25/91	SHEET NO. 1 OF 1 SHEETS