

**LOT  
A3**

**Overstock Surplus Inventory  
FOR SALE**

**PRICE  
\$3,000 USD**

9/26/2019

greg@infinitysupercritical.com

Each

**10L High Pressure 1288 psi 316 Stainless Steel Vessel CO2**

316 Stainless steel electropolished (food grade) CO2 holding vessel (engineer peer reviewed, certified, ASME welded, with paperwork. Pipe pressure 2,122.9 psi and end caps 1,288.4 psi. Fittings are optional.

4 inch diameter by 4 feet in length. New, never used. Price each.  
Engineer data on page 2. Very heavy item.



**Option: Pick-up**

No Charge | M-Thur 8am-3pm | By Appointment

Ferndale, Washington

**Option: Shipping**

( Crate | Freight | Insurance anywhere lower 48 )

**\$250**

Sold "As-is" "Where-is" | All Sales Final | No Returns

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# Overstock Surplus Inventory FOR SALE PAGE 2

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## 10L High Pressure 1288 psi 316 Stainless Steel Vessel CO2



Essential Process Engineering

### RESERVOIR VESSEL

#### UG-27 PRESSURE RATING BASED ON SHELL THICKNESS

**MATERIAL:** 316 Stainless Steel

t = 0.34 in  
Actual wall thickness of vessel  
E = 0.7 - Welded Joints  
Joint Efficiency (UW-12, ASME BPVC VIII Division I)  
R = 1.92 in  
Inside radius of shell  
S = 18900 PSI  
Maximum allowable stress value

#### (1) Circumferential Stress:

$P = (S \times E \times t) / (R + 0.6 \times t)$  - UG-27, Equation 1  
Maximum Allowable Pressure

**P = 2122.8 PSI**

#### (2) Longitudinal Stress:

$P = (2 \times S \times E \times t) / (R - 0.4 \times t)$  - UG-27, Equation 2  
Maximum Allowable Pressure

**P = 5057.0 PSI**



### Result

The Maximum Allowable Pressure for the RESERVOIR VESSEL with a wall thickness of 0.34 inches is 2122.8 psi, based on the ASME BPVC VIII Division I UG-27 Shell Thickness Calculation.

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