

## COMPOSITE PRESSURE VESSELS

DESIGNED FOR COMMERCIAL SOFTENING AND FILTRATION APPLICATIONS



**Pentair Structural<sup>®</sup> Composite Pressure Vessels offer reinforced fiberglass construction for outstanding performance and durability. Available in capacities up to 1,600 gallons, composite vessels are available with a variety of different configurations. ASME code available.**

### FEATURES/BENEFITS

For commercial and industrial water treatment and storage

100% composite fiberglass construction

Outstanding performance and durability in harsh chemical environments

Absolutely will not – and cannot – rust

Requires little or no maintenance

Capacities up to 1,600 gallons

Factory-backed five-year warranty

Commercial softening and filtration

### MATERIAL OF CONSTRUCTION

Polyethylene inner shell

### INSTALLATION TIPS

Bolt base to floor

Calculate height for valve and base combined

### COLOR OPTIONS

AL – Almond  
BL – Blue  
BK – Black

GR – Gray  
NA – Natural

### OPERATING PARAMETERS

Maximum operating pressure – 150 psi

Maximum operating temperature – 120° F (threaded); 150°F (flanged)

### PENTAIR DESIGN PARAMETERS

Safety factor: 4:1

Minimum burst at 600 psi

Tested to 250,000 cycles without leakage

### NSF DESIGN PARAMETERS

Safety factor: 4:1

Minimum burst at 600 psi

Tested to 100,000 cycles without leakage

### ASME DESIGN PARAMETERS

#### Top/Bottom Flange

- Safety factor – 5:1

- Minimum burst at 750 psi

- Tested to 33,000 cycles without leakage

#### Side Flange

- Safety factor – 6:1

- Minimum burst at 900 psi

- Tested to 100,000 cycles without leakage



Vessels Tested and Certified by NSF International to NSF/ANSI Standard 61 for material and structural integrity requirements.

## SPECIFICATIONS

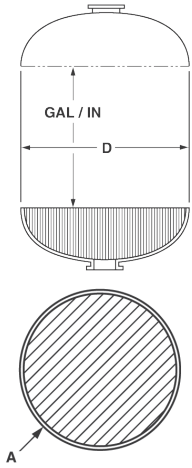
| VESSEL                       | DESCRIPTION                    | HEIGHT W/BASE<br>INCHES / MM | HEIGHT W/O BASE<br>INCHES / MM | CAPACITY<br>GALLONS / LITERS | CUBIC<br>FEET | BASE      | SHIP WEIGHT<br>LBS. |
|------------------------------|--------------------------------|------------------------------|--------------------------------|------------------------------|---------------|-----------|---------------------|
| 18" DIA.                     | 18X65 COMP 4"T                 | 67 / 1702                    | 65.7 / 1669                    | 64 / 242                     | 8.56          | SMC       | 67                  |
|                              | 18X65 COMP 4"T 4"B             | 73.13 / 1858                 | 65.6 / 1666                    | 64 / 242                     | 8.56          | SMC EXT   | 74                  |
|                              | 18X65 COMP 6"TF 6"BF           | 84.12 / 2137                 | 70.5 / 1791                    | 62 / 235                     | 8.29          | TRIPOD    | 92                  |
| 21" DIA.                     | 21X36 COMP 4"T                 | 41.7 / 1059                  | 38.2 / 970                     | 46 / 174                     | 6.15          | SMC       | 49                  |
|                              | 21X36 COMP 4"T 4"B             | 47.5 / 1207                  | 38.2 / 970                     | 45 / 170                     | 6.02          | SMC EXT   | 53                  |
|                              | 21X62 COMP 4"T                 | 67 / 1702                    | 63.4 / 1610                    | 84 / 318                     | 11.23         | SMC       | 95                  |
|                              | 21X62 COMP 4"T 4"B             | 72.8 / 1849                  | 63.5 / 1613                    | 84 / 318                     | 11.23         | SMC EXT   | 102                 |
| 24" DIA.                     | 24X38 COMP 4"T                 | 42.6 / 1082                  | 38.5 / 978                     | 61 / 231                     | 8.15          | SMC       | 65                  |
|                              | 24X50 COMP 4"T                 | 55.6 / 1412                  | 51.5 / 1308                    | 84 / 318                     | 11.23         | SMC       | 90                  |
|                              | 24X50 COMP 4"T 4"B             | 63 / 1600                    | 52.9 / 1344                    | 84 / 318                     | 11.23         | SMC EXT   | 97                  |
|                              | 24X65 COMP 4"T                 | 65.2 / 1656                  | 61.1 / 1552                    | 100 / 379                    | 13.37         | SMC       | 109                 |
|                              | 24X65 COMP 4"T 4"B             | 70.1 / 1781                  | 60 / 1524                      | 100 / 379                    | 13.37         | SMC EXT   | 115                 |
|                              | 24X65 COMP 6"TF                | 65 / 1651                    | 61.2 / 1554                    | 100 / 379                    | 13.37         | SMC       | 114                 |
|                              | 24X65 COMP 6"TF 6"BF           | 79 / 2007                    | 65 / 1651                      | 100 / 379                    | 13.37         | TRIPOD    | 124                 |
|                              | 24X72 COMP 4"T                 | 74.19 / 1884                 | 70.12 / 1781                   | 118 / 447                    | 15.77         | SMC       | 109                 |
|                              | 24X72 COMP 4"T 4"B             | 80.4 / 2042                  | 70.3 / 1786                    | 119 / 450                    | 15.91         | SMC EXT   | 124                 |
|                              | 24X72 COMP 6"TF                | 77 / 1956                    | 73.4 / 1864                    | 119 / 450                    | 15.91         | SMC       | 137                 |
| 24X72 COMP 6"TF 6"BF         | 88.5 / 2248                    | 74.5 / 1892                  | 119 / 450                      | 15.91                        | TRIPOD        | 147       |                     |
| 30" DIA.                     | 30X60 COMP 6"TF                | 71.6 / 1819                  | 64.3 / 1633                    | 151 / 572                    | 20.19         | SMC EXT   | 195                 |
|                              | 30X60 COMP 6"TF 6"BF           | 82.5 / 2096                  | 68.5 / 1740                    | 151 / 572                    | 20.19         | TRIPOD    | 205                 |
|                              | 30X72 COMP 4"T                 | 78.9 / 2004                  | 69.8 / 1773                    | 187 / 708                    | 25.00         | SMC EXT   | 198                 |
|                              | 30X72 COMP 4"T 4"B             | 77.2 / 1961                  | 69.8 / 1773                    | 187 / 708                    | 25.00         | SMC EXT   | 205                 |
|                              | 30X72 COMP 6"TF                | 79.73 / 2025                 | 70 / 1778                      | 187 / 708                    | 25.00         | SMC EXT   | 195                 |
|                              | 30X72 COMP 6"TF 6"BF           | 88.24 / 2241                 | 74.67 / 1897                   | 187 / 708                    | 25.00         | TRIPOD    | 211                 |
| 36" DIA.                     | 36X36 COMP 6"TF 6"BF           | 55.3 / 1405                  | 41 / 1041                      | 118 / 447                    | 15.77         | TRIPOD    | 148                 |
|                              | 36X57 COMP 6"TF                | 68 / 1727                    | 59.3 / 1506                    | 205 / 776                    | 27.40         | SMC EXT   | 195                 |
|                              | 36X57 COMP 6"TF 6"BF           | 77.3 / 1963                  | 63 / 1600                      | 205 / 776                    | 27.40         | TRIPOD    | 225                 |
|                              | 36X72 COMP 4"T                 | 80.4 / 2042                  | 71.8 / 1824                    | 264 / 999                    | 35.29         | SMC EXT   | 264                 |
|                              | 36X72 COMP 4"T 4"B             | 80.4 / 2042                  | 70.5 / 1791                    | 264 / 999                    | 35.29         | SMC EXT   | 285                 |
|                              | 36X72 COMP 6"TF                | 82.29 / 2090                 | 73.54 / 1868                   | 264 / 999                    | 35.29         | SMC EXT   | 295                 |
|                              | 36X72 COMP 6"TF 6"BF           | 90.1 / 2289                  | 76.2 / 1935                    | 264 / 999                    | 35.29         | TRIPOD    | 305                 |
| 36X72 COMP 6"TF 6"BF 4"TBSF  | 89.6 / 2276                    | 75.3 / 1913                  | 264 / 999                      | 35.29                        | TRIPOD        | 315       |                     |
| 42" DIA.                     | 42X72 COMP 6"TF                | 72.5 / 1842                  | 71.1 / 1806                    | 345 / 1306                   | 46.12         | SMC SHORT | 370                 |
|                              | 42X72 COMP 6"TF 6"BF           | 90.1 / 2289                  | 73 / 1854                      | 345 / 1306                   | 46.12         | TRIPOD    | 400                 |
|                              | 42X72 COMP 6"TF 6"BF 4"TBSF    | 94.6 / 2403                  | 77.5 / 1969                    | 345 / 1306                   | 46.12         | TRIPOD    | 415                 |
| 48" DIA.                     | 48X72 COMP 6"TF                | 81.5 / 2070                  | 75.2 / 1910                    | 463 / 1753                   | 61.89         | SMC SHORT | 494                 |
|                              | 48X72 COMP 6"TF 6"BF           | 91.91 / 2335                 | 76 / 1930                      | 463 / 1753                   | 61.89         | TRIPOD    | 500                 |
|                              | 48X72 COMP 6"TF 6"BF 4"TBSF    | 96.75 / 2457                 | 80.75 / 2051                   | 463 / 1753                   | 61.89         | TRIPOD    | 504                 |
| 63" DIA.                     | 63X67 COMP 6"TF 6"BF           | 81.5 / 2070                  | 67.1 / 1704                    | 600 / 2271                   | 80.21         | TRIPOD    | 680                 |
|                              | 63X86 COMP 6"TF 6"BF           | 98.88 / 2512                 | 84.5 / 2146                    | 900 / 3407                   | 120.31        | TRIPOD    | 950                 |
|                              | 63X86 COMP 16"TMWY 6"BF        | 99 / 2515                    | 84.5 / 2146                    | 900 / 3407                   | 120.31        | TRIPOD    | 950                 |
|                              | 63X86 COMP 16"TMWY 6"BF 4"TBSF | 99 / 2515                    | 85 / 2159                      | 900 / 3407                   | 120.31        | TRIPOD    | 960                 |
|                              | 63X116 16"TMWY 6" BF 4" TBSF   | 130 / 3302                   | 116 / 2946                     | 1250 / 4732                  | 167.10        | TRIPOD    | 1190                |
| 63X144 16"TMWY 6" BF 4" TBSF | 158 / 4013                     | 144 / 3658                   | 1600 / 6057                    | 213.89                       | TRIPOD        | 1398      |                     |

\*Measurements are subject to change without notice and are for reference only.

NOTE: Flexible connections must be installed between hard piping and tank openings. Failure to install flex connection properly with the vessel will void the warranty.

NOTE: Different base options can be selected on different tank diameters. The bases selected above illustrate most common base selection.

## DOME VOLUME (GALLONS) AND STRAIGHT WALL GALLON PER INCH

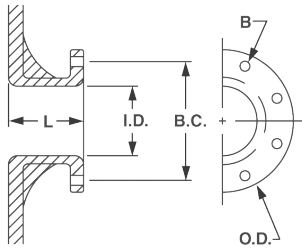


| NOMINAL DIAMETER |                     |                        |              |
|------------------|---------------------|------------------------|--------------|
| D (INCHES)       | GALLONS* (ONE DOME) | GALLON/ INCH (APPROX.) | A (SQ. FEET) |
| 12               | 1.0                 | 0.5                    | 0.7          |
| 13               | 1.4                 | 0.5                    | 0.9          |
| 14               | 1.7                 | 0.6                    | 1.1          |
| 16               | 2.7                 | 0.8                    | 1.3          |
| 18               | 3.7                 | 1.0                    | 1.8          |
| 21               | 6.2                 | 1.4                    | 2.4          |
| 24               | 9.3                 | 1.9                    | 3.0          |
| 30               | 18                  | 2.9                    | 4.6          |
| 36               | 33                  | 4.2                    | 6.7          |
| 42               | 52                  | 5.7                    | 9.0          |
| 48               | 74                  | 7.5                    | 12.0         |
| 63               | 168                 | 13.0                   | 20.0         |

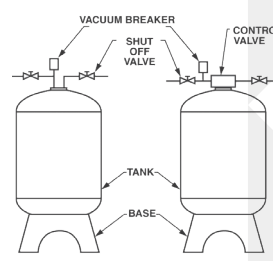
\*Cubic Ft. = 0.1337 x Gallons

## SIDE FLANGE

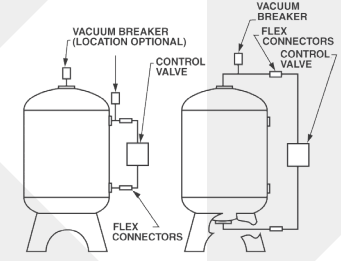
| DIMENSIONS |      |      |      |      |             |                 |               |
|------------|------|------|------|------|-------------|-----------------|---------------|
| SIZE       | L    | I.D. | B.C. | O.D. | A BOLT DIA. | NUMBER OF HOLES | WEIGHT (LBS.) |
| 4" ANSI    | 4.1" | 4.0" | 7.5" | 9.0" | 0.63"       | 8               | 6.4           |



## VACUUM BREAKER INSTALLATION



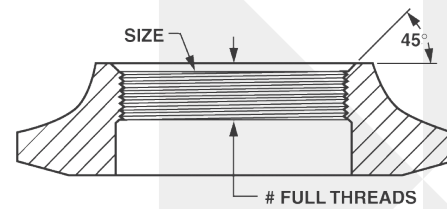
## FLEX CONNECTORS INSTALLATION



NOTE: Flexible connectors must be installed between hard piping and tank openings. These pressure vessels are treated for an internal negative pressure of 5y HG (17 Pa) vacuum below atmospheric. If negative pressure could ever exceed 5y Hg (17 Pa), an adequate vacuum breaker must also be properly installed. Failure to install flex connection properly, or improper installation of a vacuum breaker when required, may void the warranty.

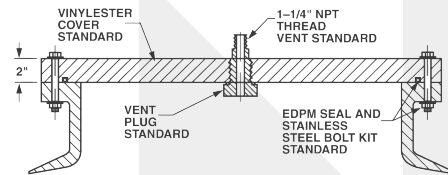
## TOP AND BOTTOM OPENING THREADS

| SPECIFICATIONS     |                      |                        |           |
|--------------------|----------------------|------------------------|-----------|
| SIZE               | COMPOSITE/POLY GLASS | NUMBER OF FULL THREADS | COMPOSITE |
| 2.5" - 8" NPSM     | 6                    | 3 min                  | 6         |
| 4" - 8" UN         | 7                    | 3 min                  | 7         |
| 4.5" - 8" Buttress | 7                    | 3 min                  | 7         |



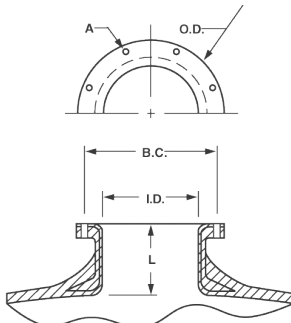
## MANWAY COVER

| SPECIFICATIONS |                 |               |
|----------------|-----------------|---------------|
| MATERIAL       | PRESSURE RATING | TAPPING       |
| CPVC           | 100 psi         | As requested  |
| VE             | 150 psi         | As shown only |



## TOP AND BOTTOM OPENING FLANGES/MANWAY

| DIMENSIONS     |      |       |       |       |             |                 |               |
|----------------|------|-------|-------|-------|-------------|-----------------|---------------|
| SIZE           | L    | I.D.  | B.C.  | O.D.  | A BOLT DIA. | NUMBER OF HOLES | WEIGHT (LBS.) |
| 6" SNA         | 3.6" | 5.9"  | 8.5"  | 9.4"  | 0.31"       | 12              | 5.8           |
| 10" ANSI       | 3.7" | 10.0" | 14.3" | 16.0" | 0.88"       | 12              | 17.8          |
| 16" Manway SNA | 4.3" | 16.0" | 20.4" | 21.3" | 0.50"       | 24              | 34.0          |



## ADDER DIMENSIONS



| DIMENSIONS  |                       |                           |
|-------------|-----------------------|---------------------------|
| FLECK VALVE | TANK DIA. (INCHES/MM) | ADDER HT. (X) (INCHES/MM) |
| 2750        | 18/475                | 6.5/165                   |
| 2850        | 21/533                | 6.5/165                   |
| 2900        | 24, 30/610, 762       | 12/305                    |
| 3150        | 42/1067               | 10/254                    |
| 3900        | 48-63/1219-1600       | 15/381                    |

\*Measurements are subject to change without notice and are for reference only.



13845 BISHOPS DR., SUITE 200, BROOKFIELD, WI 53005 USA  
P: 262.238.4400 | WATERPURIFICATION.PENTAIR.COM | CUSTOMER CARE: 800.279.9404 | tech-support@pentair.com  
© 2018 Pentair Residential Filtration, LLC. All rights reserved.

§For a detailed list of where Pentair trademarks are registered, please visit [waterpurification.pentair.com/brands](http://waterpurification.pentair.com/brands). Pentair trademarks and logos are owned by Pentair plc or its affiliates. Third party registered and unregistered trademarks and logos are the property of their respective owners.

40846 Rev G AP18