

Composite Vessels

Product Features

- 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 2500 gallons
- Factory-backed five-year warranty

Materials of Construction

- Polyethylene inner shell (PVDF available)

Operating Parameters

- Maximum operating pressure: 150 psi
- Maximum operating temperature:
150°F (flanged) 120°F (threaded)

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



Specifications

| | Part No. | Description | Height w/ base Inches / mm | Height w/o base Inches / mm | Capacity Gallons / Liters | Cubic Feet | Top Open | Bottom Open | Top Side | Bottom Side | Base | Ship Weight |
|----------|----------|--------------|-------------------------------|--------------------------------|------------------------------|---------------|-------------|----------------|-------------|----------------|-----------|----------------|
| 18" Dia. | 30948 | 18 x 65 | 67.1 / 1704 | 66.5 / 1689 | 62.4 / 236 | 8.3 | 4" - 8" UN | N/A | N/A | N/A | SMC | 67.7 |
| | 31343 | 18 x 65 | 79.8 / 2027 | 63.3 / 1608 | 62.4 / 236 | 8.3 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | tripod | 79.7 |
| | 31693 | 18 x 65 | 84.4 / 2144 | 70.0 / 1778 | 62.4 / 236 | 8.3 | 6" FLG | 6" FLG | N/A | N/A | tripod | 79.7 |
| 21" Dia. | 30949 | 21 x 36 | 41.7 / 1059 | 38.2 / 970 | 45.3 / 171 | 6.1 | 2.5" NPSM | N/A | N/A | N/A | SMC | 46 |
| | 30950 | 21 x 36 | 41.7 / 1059 | 38.2 / 970 | 45.3 / 171 | 6.1 | 4" - 8" UN | N/A | N/A | N/A | SMC | 46 |
| | 31573 | 21 x 36 | 54.5 / 1386 | 38.2 / 970 | 45.3 / 171 | 6.1 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | tripod | 46 |
| | 30953 | 21 x 62 | 66.9 / 1699 | 62.6 / 1590 | 82.4 / 312 | 11.0 | 4" - 8" UN | N/A | N/A | N/A | SMC | 90 |
| | 30954 | 21 x 62 | 79.0 / 2006 | 62.6 / 1590 | 82.4 / 312 | 11.0 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | *tripod | 90 |
| 24" Dia. | 31043 | 24 x 38 | 42.0 / 1059 | 38.5 / 978 | 61.0 / 231 | 8.2 | 4" - 8" UN | N/A | N/A | N/A | SMC | 46 |
| | 31053 | 24 x 50 | 55.6 / 1412 | 51.5 / 1308 | 83.5 / 316 | 11.2 | 4" - 8" UN | N/A | N/A | N/A | SMC | 83.5 |
| | 31611 | 24 x 50 | 68.4 / 1738 | 52.9 / 1344 | 83.5 / 316 | 11.2 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | *tripod | 83.5 |
| | 32049 | 24 x 65 | 64 / 1626 | 60.5 / 1537 | 100 / 378 | 13.4 | 4" - 8" UN | N/A | N/A | N/A | SMC | 100 |
| | 32129 | 24 x 65 | 66.5 / 1689 | 62.6 / 1590 | 100 / 378 | 13.4 | 6" FLG | N/A | N/A | N/A | SMC | 100 |
| | 32139 | 24 x 65 | 79.0 / 2008 | 65.0 / 1651 | 100 / 378 | 13.4 | 6" FLG | 6" FLG | N/A | N/A | tripod | 100 |
| | 32481 | 24 x 65 | 75.7 / 1924 | 60.0 / 1524 | 100 / 378 | 13.4 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | *tripod | 100 |
| | 31153 | 24 x 72 | 74.1 / 1882 | 70.6 / 1793 | 119 / 450 | 15.9 | 4" - 8" UN | N/A | N/A | N/A | SMC | 139 |
| | 31154 | 24 x 72 | 84.5 / 2147 | 69.0 / 1753 | 119 / 450 | 15.9 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | *tripod | 139 |
| | 31155 | 24 x 72 | 76.8 / 1951 | 73.3 / 1862 | 119 / 450 | 15.9 | 6" FLG | N/A | N/A | N/A | SMC | 149 |
| | 31157 | 24 x 72 | 87.9 / 2232 | 74.5 / 1892 | 119 / 450 | 15.9 | 6" FLG | 6" FLG | N/A | N/A | tripod | 149 |
| 30" Dia. | 31161 | 30 x 72 | 85.9 / 2182 | 70.2 / 1783 | 187 / 708 | 25.0 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | *tripod | 234 |
| | 31162 | 30 x 72 | 80.8 / 2052 | 73.0 / 1854 | 187 / 708 | 25.0 | 6" FLG | N/A | N/A | N/A | SMC | 240 |
| | 31163 | 30 x 72 | 88.3 / 2242 | 74.7 / 1897 | 187 / 708 | 25.0 | 6" FLG | 6" FLG | N/A | N/A | tripod | 240 |
| 36" Dia. | 31417 | 36 x 57 | 70.5 / 1791 | 60.0 / 1524 | 205 / 776 | 27.4 | 6" FLG | N/A | N/A | N/A | SMC | 160 |
| | 31418 | 36 x 57 | 77.0 / 1956 | 63.0 / 1600 | 205 / 776 | 27.4 | 6" FLG | 6" FLG | N/A | N/A | tripod | 160 |
| | 31712 | 36 x 72 | 89.0 / 2261 | 75.0 / 1905 | 264 / 999 | 35.3 | 6" FLG | 6" FLG | 4" FLG | 4" FLG | tripod | 292 |
| | 31214 | 36 x 72 | 83.0 / 2108 | 73.5 / 1867 | 264 / 999 | 35.3 | 6" FLG | N/A | N/A | N/A | SMC | 292 |
| | 31217 | 36 x 72 | 89.0 / 2261 | 75.0 / 1905 | 264 / 999 | 35.3 | 6" FLG | 6" FLG | N/A | N/A | tripod | 292 |
| | 31523 | 36 x 72 | 86.2 / 2190 | 70.5 / 1791 | 264 / 999 | 35.3 | 4" - 8" UN | 4" - 8" UN | N/A | N/A | *tripod | 292 |
| 42" Dia. | 31272 | 42 x 72 | 94.5 / 2401 | 71.0 / 1803 | 345 / 1306 | 46.1 | 6" FLG | N/A | N/A | N/A | tripod | 678 |
| | 31272 | 42 x 72 | 72.0 / 1828 | 71.0 / 1803 | 345 / 1306 | 46.1 | 6" FLG | N/A | N/A | N/A | short SMC | xxx |
| | 31276 | 42 x 72 | 94.6 / 2404 | 73.0 / 1854 | 345 / 1306 | 46.1 | 6" FLG | 6" FLG | N/A | N/A | tripod | 678 |
| 48" Dia. | 31281 | 48 x 72 | 91.8 / 2332 | 76.0 / 1930 | 463 / 1753 | 61.9 | 6" FLG | N/A | N/A | N/A | tripod | 780 |
| | 31283 | 48 x 72 | 96.6 / 2454 | 80.8 / 2052 | 463 / 1753 | 61.9 | 6" FLG | 6" FLG | 4" FLG | 4" FLG | tripod | 780 |
| | 31285 | 48 x 72 | 92.8 / 2357 | 77.0 / 1955 | 463 / 1753 | 61.9 | 6" FLG | 6" FLG | N/A | N/A | tripod | 780 |
| | 31432 | 48 x 72 | 97.5 / 2477 | 81.7 / 2075 | 463 / 1753 | 61.9 | 16" MWY | 6" FLG | 4" FLG | 4" FLG | tripod | 780 |
| | 31647 | 48 x 72 | 93.8 / 2383 | 78.0 / 1981 | 463 / 1753 | 61.9 | 16" MWY | 6" FLG | N/A | N/A | tripod | 780 |
| 63" Dia. | 31290 | 63 x 67 | 80.3 / 2344 | 67.8 / 1722 | 600 / 2271 | 80.2 | 16" MWY | 6" FLG | N/A | N/A | tripod | 900 |
| | 31390 | 63 x 67 | 79.5 / 2324 | 67.0 / 1702 | 600 / 2271 | 80.2 | 6" FLG | 6" FLG | N/A | N/A | tripod | 900 |
| | 32008 | 63 x 67 | 80.3 / 2344 | 67.8 / 1722 | 600 / 2271 | 80.2 | 16" MWY | 10" FLG | N/A | N/A | tripod | 900 |
| | 31292 | 63 x 86 | 97.0 / 2769 | 84.5 / 2146 | 850 / 3218 | 114 | 16" MWY | 6" FLG | 4" FLG | 4" FLG | tripod | 1425 |
| | 31326 | 63 x 86 | 96.6 / 2758 | 84.1 / 2136 | 850 / 3218 | 114 | 6" FLG | 6" FLG | N/A | N/A | tripod | 1425 |
| | 31327 | 63 x 86 | 97.0 / 2769 | 84.5 / 2146 | 850 / 3218 | 114 | 16" MWY | 6" FLG | N/A | N/A | tripod | 1200 |
| | 32253 | 63 x 86 | 96.6 / 2758 | 84.1 / 2136 | 850 / 3218 | 114 | 10" FLG | 6" FLG | N/A | N/A | tripod | 1200 |
| | 32356 | 63 x 86 | 97.0 / 2769 | 84.5 / 2146 | 850 / 3218 | 114 | 16" MWY | 10" FLG | N/A | N/A | tripod | 1425 |
| | 32678 | 63 x 86 | 96.6 / 2758 | 84.1 / 2136 | 850 / 3218 | 114 | 6" FLG | 6" FLG | 4" FLG | 4" FLG | tripod | 1425 |
| | 31325 | 63 x 116 | 128.5 / 3264 | 116.0 / 2946 | 1250 / 4732 | 167 | 16" MWY | 6" FLG | 4" FLG | 4" FLG | tripod | 1775 |
| | 32500 | 63 x 116 | 128.5 / 3264 | 116.0 / 2946 | 1250 / 4732 | 167 | 16" MWY | 6" FLG | N/A | N/A | tripod | 1425 |
| 31456 | 63 x 144 | 158.5 / 4026 | 146.0 / 3708 | 1600 / 6057 | 214 | 16" MWY | 6" FLG | N/A | N/A | tripod | 2025 | |
| 31607 | 63 x 144 | 158.5 / 4026 | 146.0 / 3708 | 1600 / 6057 | 214 | 16" MWY | 6" FLG | 4" FLG | 4" FLG | tripod | 2025 | |
| 31664 | 63 x 144 | 158.5 / 4026 | 146.0 / 3708 | 1600 / 6057 | 214 | 16" MWY | 10" FLG | N/A | N/A | tripod | 2025 | |

Color Options: AL - Almond  BL - Blue  BK - Black  GR - Gray  NA - Natural 

*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.

Composite Vessels – Specifications



| Fleck Valve | Tank Dia. Inches / mm | Adder Ht. (X) Inches / mm |
|-------------|--------------------------|------------------------------|
| 2750 | 18 / 457 | 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 |

Installation Tips:

- Bolt base to floor
- Calculate height for valve and base combined (see photo)

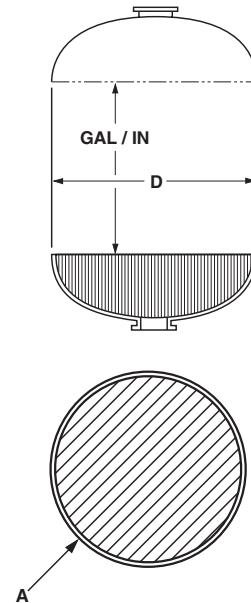
Color Options: AL - Almond  BL - Blue  BK - Black  GR - Gray  NA - Natural 

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

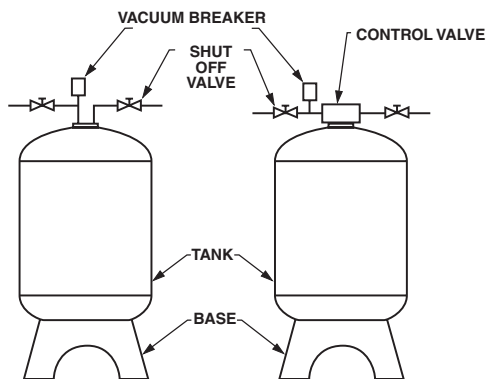
Dome Volume (gallons) and Straight Wall Gallon per Inch

| 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 |

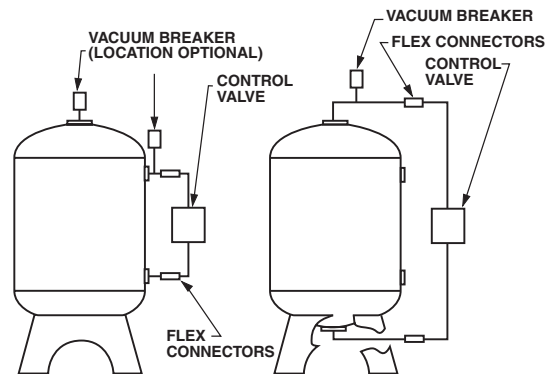
*Cubic Ft. = 0.1337 x Gallons



Vacuum Breaker Installation



Flex Connectors Installation

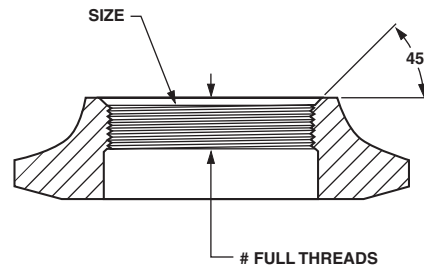


NOTE: Flexible connectors must be installed between hard piping and tank openings. These pressure vessels are rated for an internal negative pressure of 5” HG (17 Pa) vacuum below atmospheric. If negative pressure could ever exceed 5” Hg (17 Pa), an adequate vacuum breaker must also be properly installed.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

Composite Vessels – Specifications

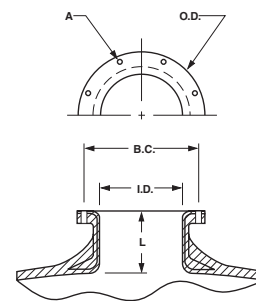
Top and Bottom Opening Threads

| Size | Composite/ Polyglass | 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 |



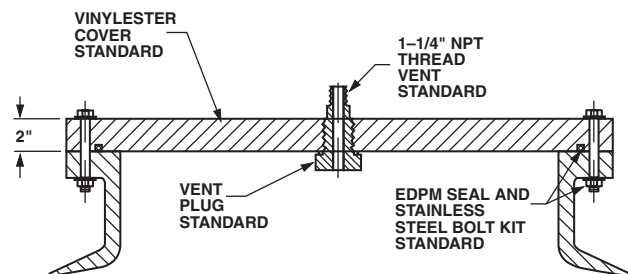
Top and Bottom Opening Flanges/Manway

| 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 |



Manway Cover

| Material | Pressure Rating | Tapping |
|----------|--------------------|---------------|
| CPVC | 100 psi | As requested |
| VE | 150 psi | As shown only |



Side Flange

| Size | L | I.D. | B.C. | O.D. | B Bolt Dia. | Number of Holes | Weight (lbs.) |
|---------|------|------|------|------|----------------|--------------------|------------------|
| 4" ANSI | 4.1" | 4.0" | 7.5" | 9.0" | 0.63" | 8 | 6.4 |

