

Poly Glass™ Vessels

The ideal pressure vessel for residential and light commercial water softener / filtration applications.

Structural Poly Glass™ pressure vessels provide years of reliable service for water softener and water filtration applications. These slim-diameter tanks hold up to 49 gallons of water and offer unmatched strength and chemical resistance. All 6"-13" Poly Glass vessels are backed by an exclusive 10-year warranty. All 14"-16" Poly Glass vessels are backed by an exclusive 5-year warranty.



Material of construction

*Inner shell material:
Polyethylene*

*Available inlets:
See chart*

Operating parameters

*Maximum operating pressure:
150 psi*

*Maximum operating temperature:
120° F*

Design parameters – Pentair

*Safety factor:
4:1 (Minimum burst at 600 psi)*

*Cycle test:
250,000 cycles without leakage*

Design parameters – NSF

*Safety factor:
4:1 (Minimum burst at 600 psi)*

*Cycle test:
100,000 cycles without leakage*



Poly Glass Specifications

Part No.	Size (Inches)	System Connection	Height w/ Base Inches / mm	Height w/o Base Inches / mm	Capacity Gallons / Liters	Cubic Feet	Colors	Minimum Order Quantity
30109	06 x 13	2.5" Threaded	13.2 / 335	12.6 / 320	1.1 / 4.2	0.15	AL, BL, NA	See Factory
30127	06 x 18	2.5" Threaded	18.6 / 472	18.0 / 457	1.8 / 6.8	0.24	All	None
30151	06 x 35	2.5" Threaded	35.8 / 909	35.2 / 894	3.8 / 14.4	0.51	All	None
30190	07 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	5.2 / 19.7	0.7	AL, BL, NA	See Factory
30213	07 x 44	2.5" Threaded	43.7 / 1110	43.4 / 1102	6.7 / 25.4	0.9	AL, BL, NA	See Factory
31835	08 x 18	2.5" Threaded	18.8 / 478	18.5 / 470	3.28 / 12.0	-	AL, NA	See Factory
30264	08 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	6.6 / 25.0	0.88	All	None
30286	08 x 40	2.5" Threaded	40.2 / 1021	39.9 / 1013	7.8 / 29.5	1.04	All	None
30305	08 x 44	2.5" Threaded	44.4 / 1128	44.1 / 1120	8.7 / 32.9	1.16	All	None
30317	09 x 18	2.5" Threaded	18.6 / 472	18.0 / 457	3.9 / 14.8	0.52	AL, BL, NA	See Factory
30347	09 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	8.3 / 31.4	1.11	All	None
30360	09 x 40	2.5" Threaded	40.2 / 1021	39.9 / 1013	9.5 / 31.4	1.27	All	None
30383	09 x 48	2.5" Threaded	48.2 / 1224	47.9 / 1217	11.8 / 44.7	1.58	All	None
30460	10 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	10.2 / 38.6	1.36	All	None
30491	10 x 40	2.5" Threaded	40.3 / 1024	40.1 / 1018	11.5 / 43.5	1.54	All	None
30523	10 x 44	2.5" Threaded	44.6 / 1133	44.4 / 1128	13.1 / 49.6	1.75	All	None
30546	10 x 47	2.5" Threaded	47.4 / 1204	46.9 / 1191	15.1 / 57.0	2.02	All	None
30579	10 x 54	2.5" Threaded	54.8 / 1392	54.6 / 1387	16.4 / 62.0	2.19	All	None
32065	10 x 54	2.5" Threaded 1.25 TDH	54.8 / 1392	54.6 / 1387	16.4 / 62.0	2.19	All	None
30615	12 x 42	2.5" Threaded	42.8 / 1087	42.2 / 1072	19.1 / 72.0	2.55	AL, NA	See Factory
30617	12 x 42	4.5" Threaded (BTRS)	42.8 / 1087	42.2 / 1072	19.1 / 72.0	2.55	AL, NA	See Factory
30646	12 x 48	2.5" Threaded	48.8 / 1240	48.4 / 1229	20.6 / 78.0	2.75	All	None
30666	12 x 52	2.5" Threaded	52.9 / 1344	52.4 / 1331	22.2 / 84.0	2.97	All	None
30669	12 x 52	4.0" Threaded	52.9 / 1344	52.4 / 1331	22.2 / 84.0	2.97	AL, BL, NA	See Factory
32127	12 x 52	4.5" Threaded (BTRS)	52.9 / 1344	52.4 / 1331	22.2 / 84.0	2.97	AL, NA	See Factory
30721	13 x 54	2.5" Threaded	54.6 / 1387	53.9 / 1369	27.5 / 104.0	3.68	All	None
30724	13 x 54	4.0" Threaded	54.6 / 1387	53.9 / 1369	27.5 / 104.0	3.68	AL, BL, NA	See Factory
31389	14 x 47	2.5" Threaded	46.5 / 1181	46.0 / 1168	27.5 / 104.0	3.68	AL, NA	See Factory
30745	14 x 47	4.0" Threaded	46.5 / 1181	46.0 / 1168	27.5 / 104.0	3.68	AL, NA	See Factory
32006	14 x 47	4.5" Threaded (BTRS)	46.5 / 1181	46.0 / 1168	27.5 / 104.0	3.68	AL, NA	See Factory
30783	14 x 65	2.5" Threaded	64.6 / 1641	64.3 / 1633	40.6 / 154.0	5.43	AL, BL, NA	See Factory
30785	14 x 65	4.0" Threaded	64.6 / 1641	64.3 / 1633	40.6 / 154.0	5.43	All	None
31627	16 x 65	2.5" Threaded	64.6 / 1641	64.3 / 1633	49.0 / 185.0	6.55	AL, BL, NA	See Factory
30912	16 x 65	4.0" Threaded	64.6 / 1641	64.3 / 1633	49.0 / 185.0	6.55	All	None

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



Composite Vessels

The non-corrosive, cost-effective solution for commercial / industrial water treatment and storage.

Structural Composite pressure vessels offer composite fiberglass construction for outstanding performance and durability in harsh chemical environments.

With capacities up to 1600 gallons and a variety of options, we can tailor a vessel to meet your needs.

All Structural Composite vessels are warranted for 5 years.

**LIMITED
5 YEAR
WARRANTY**

All Composite tanks are warranted to be free from defects in materials and workmanship for a period of 5 years from the date of manufacture if the vessel is operated within the prescribed pressure and temperature ratings stated on the tank label.

Not covered by this warranty is damage resulting from freezing, external impact, chemical attack from liquid and gasses, exposure to vacuum, natural disasters, or other applications of the product beyond residential water softeners and filters.

Material of construction

Inner shell material:
Polyethylene

Operating parameters

Maximum operating pressure: 150 psi

Maximum operating temperature: 150° F

Design parameters – Pentair

Safety factor:
4:1 (Minimum burst at 600 psi)

Cycle test:
250,000 cycles without leakage

Design parameters – NSF

Safety factor:
4:1 (Minimum burst at 600 psi)

Cycle test:
100,000 cycles without leakage

Design parameters – ASME

Safety factor:
5:1 Top/bottom flange
(Minimum burst at 750 psi)
6:1 Side flange (Minimum burst at 900 psi)

Cycle test:
33,000 cycles without leakage
(Top/bottom flange)
100,000 cycles without leakage
(Side flange)

ASME



Composite 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" Diameter	30948	18 x 65	67.1 / 1704	66.5 / 1689	62.4 / 236	8.3	4"- 8" UN	N/A	N/A	N/A	standard	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" Diameter	30949	21 x 36	41.7 / 1059	38.2 / 970	45.3 / 171	6.1	2.5" NPSM	N/A	N/A	N/A	standard	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	standard	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	standard	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" Diameter	31043	24 x 38	42.0 / 1059	38.5 / 978	61.0 / 231	8.2	4"- 8" UN	N/A	N/A	N/A	standard	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	standard	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	standard	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
	32129	24 x 65	66.5 / 1689	62.6 / 1590	100 / 378	13.4	6" FLG	N/A	N/A	N/A	standard	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
	31153	24 x 72	74.1 / 1882	70.6 / 1793	119 / 450	15.9	4"- 8" UN	N/A	N/A	N/A	standard	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	standard	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" Diameter	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	standard	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" Diameter	31417	36 x 57	70.5 / 1791	60.0 / 1524	205 / 776	27.4	6" FLG	N/A	N/A	N/A	standard	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
	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
	31214	36 x 72	83.0 / 2108	73.5 / 1867	264 / 999	35.3	6" FLG	N/A	N/A	N/A	standard	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
	31712	36 x 72	89.0 / 2261	75.0 / 1905	264 / 999	35.3	6" FLG	6" FLG	4" FLG	4" FLG	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
	31276	42 x 72	94.6 / 2404	73.0 / 1854	345 / 1306	46.1	6" FLG	6" FLG	N/A	N/A	tripod	678
	See Factory	42 x 72	72.0 / 1828	71.0 / 1803	345 / 1306	46.1	6" FLG	N/A	N/A	N/A	short SMC	xxx

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

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



Composite Vessels

	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
48" Diameter	31281	48 x 72	91.8 / 2332	76.0 / 1930	463 / 1753	61.9	6" FLG	N/A	N/A	N/A	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
	31647	48 x 72	93.8 / 2383	78.0 / 1981	463 / 1753	61.9	16" MWY	6" FLG	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
	31432	48 x 72	97.5 / 2477	81.7 / 2075	463 / 1753	61.9	16" MWY	6" FLG	4" FLG	4" FLG	tripod	780
63" Diameter	31390	63 x 67	79.5 / 2324	67.0 / 1702	600 / 2271	80.2	6" FLG	6" FLG	N/A	N/A	tripod	900
	Call Factory	63 x 67	79.5 / 2324	67.0 / 1702	600 / 2271	80.2	10" FLG	6" FLG	N/A	N/A	tripod	*
	31290	63 x 67	80.3 / 2344	67.8 / 1722	600 / 2271	80.2	16" MWY	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
	31326	63 x 86	96.6 / 2758	84.1 / 2136	850 / 3218	114	6" FLG	6" 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
	32253	63 x 86	96.6 / 2758	84.1 / 2136	850 / 3218	114	10" FLG	6" FLG	N/A	N/A	tripod	1200
	31327	63 x 86	97.0 / 2769	84.5 / 2146	850 / 3218	114	16" MWY	6" FLG	N/A	N/A	tripod	1200
	31292	63 x 86	97.0 / 2769	84.5 / 2146	850 / 3218	114	16" MWY	6" FLG	4" FLG	4" FLG	tripod	1425
	32356	63 x 86	97.0 / 2769	84.5 / 2146	850 / 3218	114	16" MWY	10" FLG	N/A	N/A	tripod	1425
	32500	63 x 116	128.5 / 3264	116.0 / 2946	1250 / 4732	167	16" MWY	6" FLG	N/A	N/A	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
	Call Factory	63 x 116	128.5 / 3264	116.0 / 2946	1250 / 4732	167	16" MWY	10" FLG	N/A	N/A	tripod	*
	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	

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

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



NOTE: See flex connection and vacuum breaker information on page 13.



Installation Tips:

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

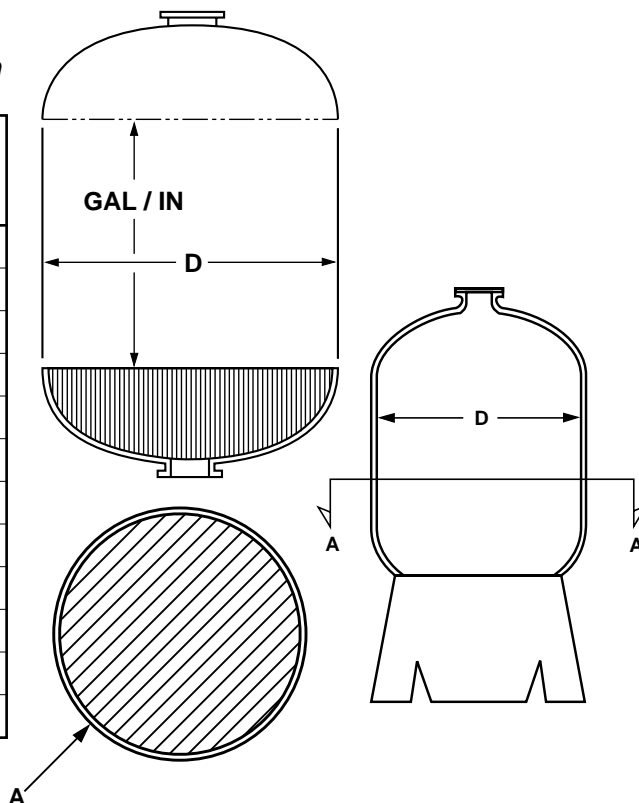
Fleck Valve	Tank Dia. Inches / mm	Adder Ht. (X) Inches / mm
2750	18 / 457	6.5 / 165
2850	21 / 533	6.5 / 165
2900	24, 30 / 610, 762	12 / 305
2930	36 / 914	13 / 330
3150	42 / 1067	10 / 254
3900	48-63 / 1219-1600	15 / 381

Composite Specifications

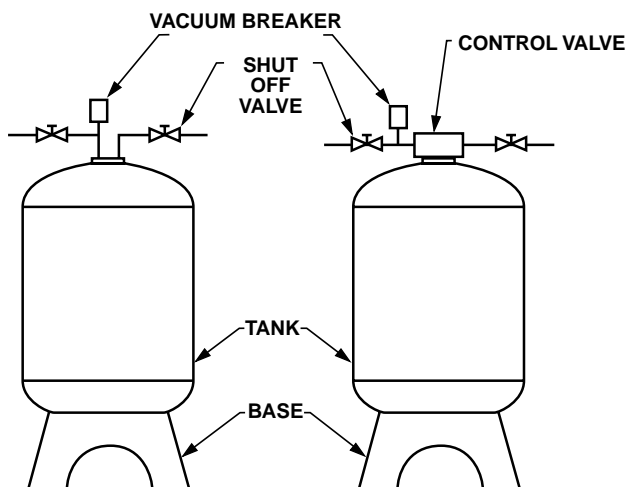
Dome Volume (gallons) and Straight Wall Gallon per Inch

D (inches)	Nominal Diameter		A (Sq. Feet)
	Gallons* (One Dome)	Gallon / Inch (Approx.)	
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

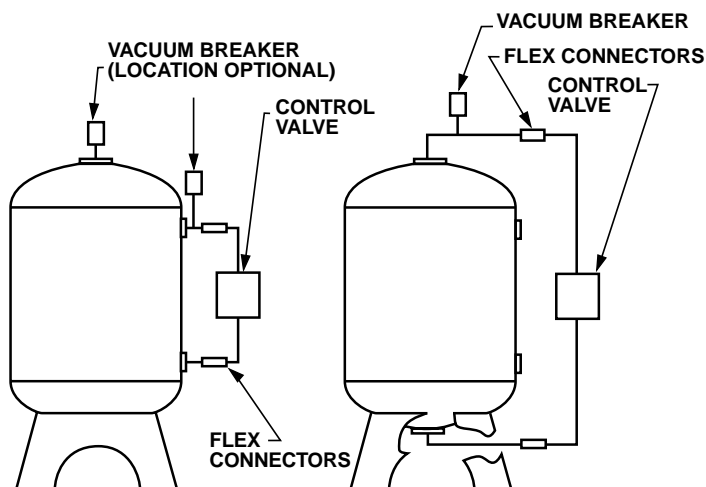
*Cubic Ft. = 0.1337 x Gallons



Vacuum Breaker Installation



Flex Connectors Installation

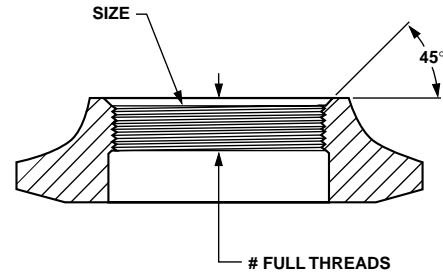


NOTE: Flexible connectors must be installed between hard piping and tank openings. These pressure vessels are rated for an internal negative pressure of 5" HG (17 Pa) vacuum below atmospheric. If negative pressure could ever exceed 5" Hg (17 Pa), an adequate vacuum breaker must also be properly installed.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

Composite Vessels

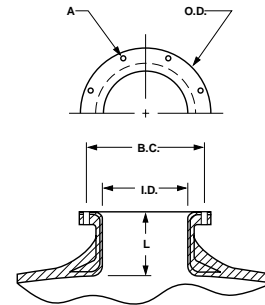
Top and Bottom Opening Threads

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



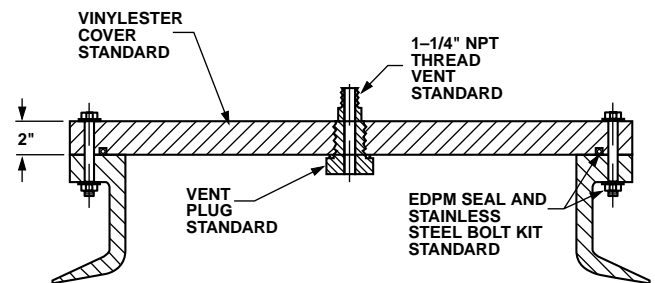
Top and Bottom Opening Flanges/Manway

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



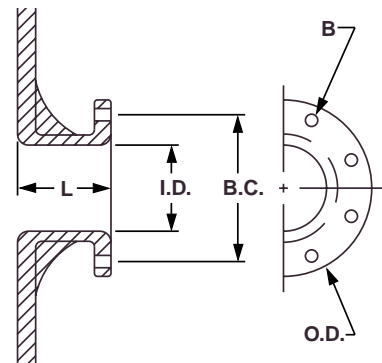
Manway Cover

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



Chemical Resistance

A unique feature of a Structural pressure vessel is its construction and use of a leak-proof pressure vessel liner. The liner is made from FDA-approved, highly stress- and crack-resistant, UV-inhibited polyethylene.

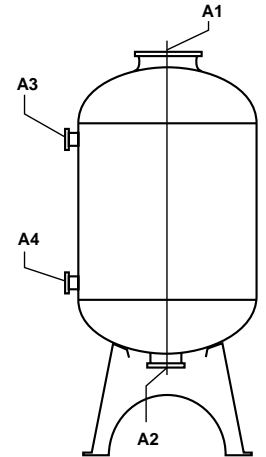
Chemical Description	Inner Shell Material			
	Polyethylene	Polypropylene	PVDF	ECTFE
Air	Excellent	Excellent	Excellent	Excellent
Aluminum Chloride 20° C	Excellent	Excellent	Excellent	Excellent
Ammonia 20° C	Excellent	Excellent	(Gas) Very Good	Very Good
Arsenic 20° C	Excellent	Excellent	No Data	No Data
Arsenic Acid 20° C	Excellent	No Data	Excellent	Excellent
Benzene 20° C	Poor	Fair	(38° C) Very Good	Excellent
Bleach 20° C	Very Good	No Data	No Data	Excellent
Bleach Warm	Fair	No Data	Fair	Excellent
Bromine Water 20° C	Very Good → Excellent	Poor → Fair	Excellent	Excellent
Calcium Carbonate	Excellent	Excellent	Excellent	Excellent
Carbonic Acid 20° C	Excellent	Excellent	Excellent	Excellent
Caustic Soda 20° C	Excellent	Excellent	Excellent	No Data
Chlorine (Liquid)	Fair	Fair	Excellent	Excellent
Chromic Acid 20° C	Excellent	Very Good	Excellent	Excellent
Copper Sulfate	Excellent	Excellent	Excellent	Excellent
Ferric Chloride 20° C	Excellent	Excellent	Excellent	Excellent
Fluorine 20° C	Fair	Poor	Very Good → Excellent	Excellent
Freon 11 20° C	No Data	No Data	Excellent	Excellent
Hydrochloric Acid 20° C	Very Good → Excellent	Very Good → Excellent	Very Good → Excellent	Excellent
Hydrofluoric Acid 20° C	Excellent	Excellent	Very Good	Excellent
Hydrogen Peroxide 20° C	Excellent	Excellent	Excellent	Excellent
Lime Chloride	Excellent	No Data	No Data	No Data
Magnesium Salts 20° C	Excellent	Excellent	Excellent	No Data
Methyl Chloride 20° C	Good	Fair	Very Good → Excellent	Excellent
Nitric Acid 20° C	Poor	Fair	Very Good → Excellent	Very Good → Excellent
Ozone (4 ppm) 20° C	Good	Fair	Very Good → Excellent	Excellent
Photographic Solutions	Excellent	Excellent	No Data	Excellent
Plating Solutions	Good → Very Good	Excellent	Excellent	Excellent
Potassium Carbonate 20° C	Excellent	Excellent	Excellent	Excellent
Potassium Sulfate 20° C	Excellent	Excellent	Excellent	Excellent
Sodium Bicarbonate 20° C	Excellent	Excellent	Excellent	Excellent
Sodium Carbonate 20° C	Excellent	Excellent	Excellent	Excellent
Sodium Chloride	Excellent	Excellent	Excellent	Excellent
Sodium Fluoride 20° C	Excellent	Excellent	Excellent	Excellent
Sodium Sulfate 20° C	Excellent	Excellent	No Data	Excellent
Sodium Sulfide 20° C	Excellent	Excellent	No Data	Excellent
Sodium Sulfite 20° C	Excellent	Excellent	No Data	Excellent
Sea Water	Excellent	Excellent	Very Good	Excellent
Steam	Excellent	No Data	No Data	No Data
Sulfuric Acid 10%, 20° C	Good → Very Good	Excellent	Good → Very Good	Good → Very Good
Sulfuric Acid 20%, 20° C	No Data	Excellent	No Data	Excellent
Sulfuric Acid 50%, 20° C	Excellent	Excellent	Excellent	Excellent
Sulfuric Acid 76-97%, 20° C	Good	Good	Excellent	Excellent
Toluene 20° C	Poor	Poor	Very Good	Excellent
Trichlorobenzene 20° C	Fair	No Data	Excellent	Good
Zinc Chloride 20° C	No Data	No Data	Excellent	Excellent
Zinc Oxide 20° C	Excellent	Excellent	No Data	No Data
Zinc Sulfate 20° C	Excellent	Excellent	Excellent	Excellent

* This is a general indicator of the polymer's resistance to certain chemicals. When there is doubt or in critical applications, we recommend ASTM Test D-543.

Composite Vessels

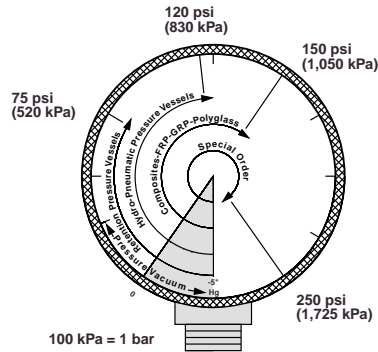
Instructions: Circle or fill in appropriate data. Fax sheet to Pentair Water Treatment (440-286-9673 or 1-800-942-7659) for a quote.

Units	English or Metric	Circle or fill in appropriate data					
Pressure	PSI or kPa	min.					max.
Temperature	° F or ° C	min.					max.
Liner Material		PE					
Volume	Gallons or Liters						
Height Constraint (H)	Inches or mm						
Width Constraint (W)	Inches or mm						
Pressure Vessel Diameter	Inches	12"	13"	14"	16"	18"	21"
		24"	30"	36"	42"	48"	63"
Pressure Vessel Length	Inches or mm	For standard lengths, refer to Specification pages.					
Top Opening	A1	2.5" NPSM	4"- 8" UN	4.5"- 8" Buttress	6" SNA Flange	10" ANSI Flange	16" SNA Manway
Bottom Opening	A2	2.5" NPSM	4"- 8" UN	4.5"- 8" Buttress	6" SNA Flange	10" ANSI Flange	16" SNA Manway
Side Top Opening	A3	36" 48" 63" Diameter Only			4"		
Side Bottom Opening	A4	36" 48" 63" Diameter Only			4"		
Distributor - Top		Diffuser		High Flow			
Distributor - Side Top		Diffuser		High Flow			
Distributor - Side Btm.		Hub & Lateral		Fishbone		High Flow	
Distributor - Bottom		Hub & Lateral		Fishbone		High Flow	
Pressure Vessel Base		None	Standard	Extended	Tripod		
Flange Covers		VE	CPVC	Noryl	Other :		
O-Ring Material		EPDM	VITON	Other :			
Vessel Contents		Please list.					
Pressure Vessel Color		Natural	Almond	Blue	Black	Gray	
Vessel Quantity		Number of Units :					
ASME Code		Yes	No				

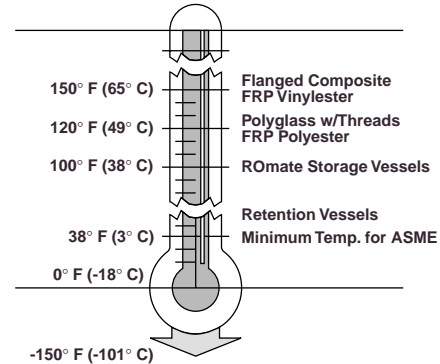


Pressure Vessel Requirement Form and Engineering Guide Specifications

PRESSURE LIMITS



TEMPERATURE LIMITS



SHORT FORM:

The contractor shall provide fiberglass / composite pressure-rated vessels with a diameter of ____" and an overall length of ____" constructed of non-corrosive materials according to the features and dimensions as shown on the drawings. The total vessel capacity shall be ____ gallons / ____ liters.

The pressure vessels shall have an operating pressure of ____ psi and operating temperature of ____° Fahrenheit. The laminate outer shell shall be an epoxy and fiberglass matrix as manufactured by Pentair Water Treatment.

The pressure vessel shall be approved by an international third-party agency such as NSF or ASME (if required).

LONG FORM:

Part I. Quality Standards

- 1.01 Acceptable manufacturers - Pentair Water Treatment.
- 1.02 International third-party approvals by one or more of the following agencies is required: NSF or ASME.

Part II. Performance Standards

- 2.01 The maximum operating pressure of the pressure vessel shall be 150 psi and designed with a safety factor of 4 to 1 (6 to 1 for ASME) for minimum burst pressure.
- 2.02 The maximum operating temperature of the pressure vessel shall be rated at 120° F or 150° F (49° C or 65° C).
- 2.03 The pressure vessel shall be designed to pass a 0-to-rated operating pressure cycle test of 250,000 cycles without failure.
- 2.04 The pressure vessel shall be capable of withstanding negative pressure up to 5" Hg.

Part III. Inner Shell

- 3.01 The pressure vessel inner shell shall be constructed of virgin PE material.
- 3.02 The pressure vessel inner shell will isolate the fluid contents of the pressure vessel to eliminate corrosion, intrusion, or reaction.
- 3.03 The pressure vessel inner shell material shall be the only material in contact with the contents.
- 3.04 The holding capacity of the pressure vessel inner shell shall be ____ gallons or ____ liters.

Part IV. Outer Fiberglass Shell

- 4.01 The outer pressure vessel shell shall be constructed of continuous fiberglass roving.

Pressure Vessel drawings are available from Pentair Water Treatment.

Part V. Pressure Vessel Openings

- 5.01 Flanged pressure vessel openings shall be either integrally molded or thermo-welded to the pressure vessel body without the use of chemical bonding or adhesives.
- 5.02 Flange supports shall be coated to protect the alloy from external corrosion.
- 5.03 Threaded pressure vessel openings shall all be an NPSM or UN thread specification with a positive O-ring seal.
- 5.04 The pressure vessel shall have a ____" (flanged or threaded) opening located at the center of the top dome and a ____" (flanged or threaded) opening located at the center of the bottom dome.
- 5.05 Side openings shall be located according to the drawings with a ____" flanged top sidewall opening and a ____" flanged lower sidewall opening.
- 5.06 A flanged Manway of ____" shall be located on the ____ (top dome and / or bottom dome) of the pressure vessel for accessibility and servicing.
- 5.07 Connections to pressure vessel openings shall accommodate vertical expansion between side, top, and bottom openings and between openings and hard piping.

Part VI. Pressure Vessel Support Base

- 6.01 The pressure vessel support base shall be a Tripod or Skirt design as shown in the drawings provided. Accessibility to the bottom of the pressure vessel is (not) required for servicing and maintenance.
- 6.02 Minimum pressure vessel clearance at the bottom of the pressure vessel shall be ____" as shown in the drawings provided.

Part VII.

The pressure vessel shall be equipped with an adequate vacuum breaker installed between the pressure vessel inlet and any valve.

Diameter (Inches)	Top Open	Part No. Composite	Part No. FRP	System Connection	Flow Rate (GPM)
13	4"-8"	5665	5688	1.5" Slip	29
14	4"-8"	5665	5688	1.5" Slip	29
16	4"-8"	5665	5688	1.5" Slip	29
18	4"-8"	5666	N/A	1.5" Slip	29
21	4"-8"	5667	5666	1.5" Slip	29
24	4"-8"	5667	5667	1.5" Slip	29



Riser tube not included

Top Mount – 3" Riser Tube, 8 Laterals

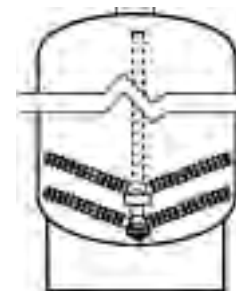
Diameter (Inches)	Top Open	Part No. Composite	Part No. FRP	System Connection	Flow Rate (GPM)
24	4"-8"	12201	N/A	3" Slip	104
30	4" or 6"-8"	10848	5673	3" Slip	104
30	6" FLG	5672	N/A	3" Slip	104
36	4" or 6"-8"	10849	5674	3" Slip	104
36	6" FLG	5673	N/A	3" Slip	104
42	6" FLG	5674	N/A	3" Slip	104
48	6" FLG	5675	N/A	3" Slip	104
63	6" FLG	13492	N/A	3" Slip	104



Riser tube not included

Top Mount High Flow – 3" Riser Tube, 16 Laterals

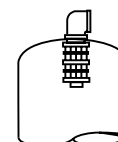
Diameter (Inches)	Top Open	Part No. Composite	System Connection	Flow Rate (GPM)
30	6" FLG	11776	3" Slip	173
36	6" FLG	11778	3" Slip	173
42	6" FLG	5676	3" Slip	173
48	6" FLG	5677	3" Slip	173
63	6" FLG	13569	3" Slip	174



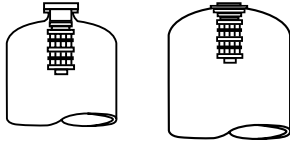
Riser tube not included

Threaded Top/Bottom Mount Diffuser

Diameter (Inches)	Top Open	Part No. Composite	Part No. FRP	System Connection	Flow Rate (GPM)
12-36	4"-8"	5671	5671	2" Slip	88

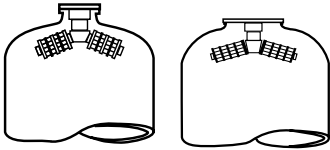


Top Mount Diffuser



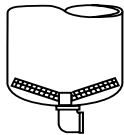
Diameter (Inches)	Top Open	Part No. Composite	Part No. FRP	System Connection	Flow Rate (GPM)
18 - 36	6" FLG	5679	N/A	3" FNPT	88
21 - 36	6"-8"	N/A	5700	3" FNPT	88

Top Mount High Flow Hub and Lateral



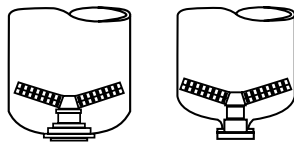
Diameter (Inches)	Top Open	Part No. Composite	System Connection	Flow Rate (GPM)
21 - 48	6" FLG	5680	3" FNPT	200
42 - 63	16" MWY	10877	3" FNPT	200

Bottom Mount Hub and Lateral



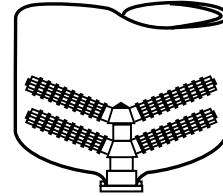
Diameter (Inches)	Bottom Open	Part No. Composite	Part No. FRP	System Connection	Flow Rate (GPM)
18	4"-8"	5669	N/A	2" Slip	100
21	4"-8"	5669	5668	2" Slip	100
24	4"-8"	5670	5669	2" Slip	100
30	4"-8"	11039	N/A	2" Slip	100
36	4"-8"	11040	N/A	2" Slip	100

Bottom Mount Hub and Lateral



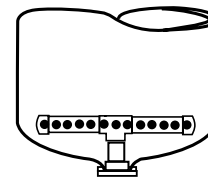
Diameter (Inches)	Bottom Open	Part No. Composite	Part No. FRP	System Connection	Flow Rate (GPM)
18	6" FLG	11790	N/A	3" FNPT	122
21	6"-8	N/A	5696	3" FNPT	122
21	6" FLG	5678	N/A	3" FNPT	122
24	6"-8	N/A	5697	3" FNPT	122
24	6" FLG	5678	N/A	3" FNPT	122
30	6"-8	N/A	5698	3" FNPT	122
30	6" FLG	5683	N/A	3" FNPT	122
36	6"-8	N/A	5699	3" FNPT	122
36	6" FLG	5684	N/A	3" FNPT	122
42	6" FLG	5686	N/A	3" FNPT	122
48	6" FLG	5666	N/A	3" FNPT	122

Diameter (Inches)	Bottom Open	Part No. Composite	System Connection	Flow Rate (GPM)
36	6" FLG	11892	3" FNPT	167
42	6" FLG	11663	3" FNPT	167
48	6" FLG	11665	3" FNPT	167
63	6" FLG	14248	3" FNPT	175



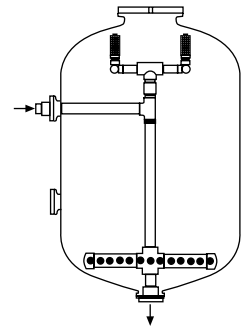
Bottom Mount Fishbone

Diameter (Inches)	Bottom Open	Part No. Composite	System Connection	Flow Rate (GPM)
63	6" FLG	5687	3" FNPT	170



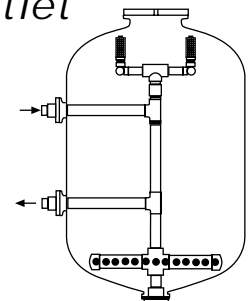
Combination Kit 63" Top Side Inlet/Bottom Outlet

Size (Inches)	Bottom Opening	Top Opening	Top Side	Part No.	Side System Connection	Bottom System Connection
63 x 86	6" FLG	16" MWY	4" FLG	11190	3" MNPT	3" FNPT
63 x 116	6" FLG	16" MWY	4" FLG	11192	3" MNPT	3" FNPT
63 x 144	6" FLG	16" MWY	4" FLG	11194	3" MNPT	3" FNPT



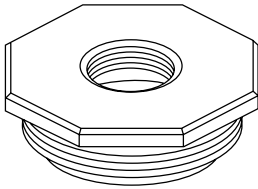
Combination Kit 63" Top Side Inlet/Bottom Side Outlet

Size (Inches)	Bottom Opening	Top Opening	Top Side	Bottom Side	Part No.	Side System Connection	Bottom System Connection
63 x 86	6" FLG	16" MWY	4" FLG	4" FLG	11191	3" MNPT	3" FNPT
63 x 116	6" FLG	16" MWY	4" FLG	4" FLG	11193	3" MNPT	3" FNPT
63 x 144	6" FLG	16" MWY	4" FLG	4" FLG	11195	3" MNPT	3" FNPT



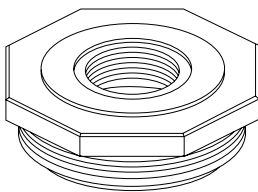
Note: Flow rates calculated with a 5 psi pressure drop.

Threaded Adapters – 2.5" - 8 NPSM



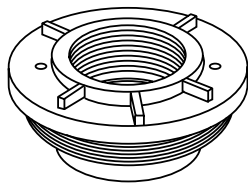
Part No.	Reduced to	Material	Max. Temp.	Max. Pressure
2751-3	0.75" NPT	PVC	120° F	150 PSI
2751-5	1" NPT	PVC	120° F	150 PSI
2751-8	1.25" NPT	PVC	120° F	150 PSI
2751-4	1.5" NPT	PVC	120° F	150 PSI
2751-6	2.25" - 16	PVC	120° F	150 PSI

Threaded Adapters – 4" - 8 UN



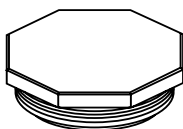
Part No.	Reduced to	Material	Max. Temp.	Max. Pressure
4821-6	1" NPT	CPVC	150° F	150 PSI
4821-12	1.25" NPT	CPVC	150° F	150 PSI
4821-7	1.5" NPT	CPVC	150° F	150 PSI
4821-8	2" NPT	CPVC	150° F	150 PSI
4821-17	2" - 11.5 NPSM	CPVC	150° F	150 PSI
4821-2	2.5" - 8 NPSM	CPVC	150° F	150 PSI
4821-4	3" - 8 UN	CPVC	150° F	150 PSI
4821-11	2.375" Bored	CPVC	150° F	150 PSI

Threaded Adapters – 6" - 8 UN



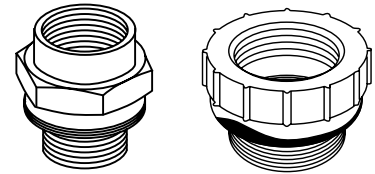
Part No.	Reduced to	Material	Max. Temp.	Max. Pressure
4125-003	3" FPT	NORYL	150° F	150 PSI

Threaded Closures



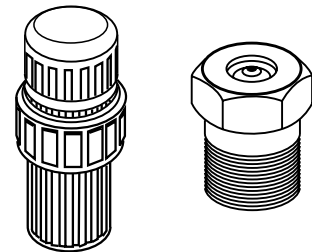
Part No.	Opening	Material	Max. Temp.	Max. Pressure
2751-1	2.5" - 8 NPSM	PVC	120° F	150 PSI
4821-1	4" - 8 UN	CPVC	150° F	150 PSI
2695-1	6" - 8 UN	CPVC	150° F	150 PSI

Part No.	Reduced to	Max. Temp.	Max. Pressure
1661	0.75" NPT to 0.75" FNPT	150° F	150 PSI
2829	1.5" NPT to 1.5" FNPT	150° F	150 PSI



Vacuum Breakers

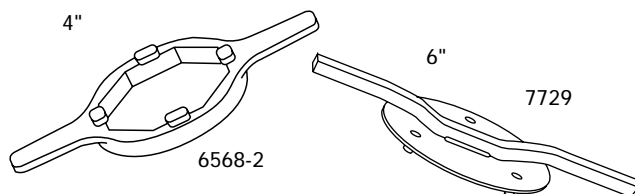
Part No.	Max. Temp.	Max. Pressure	Connection
10725	150° F	150 PSI	1" FNPT
10724	120° F	125 PSI	1.5" MNPT



Replacement O-rings

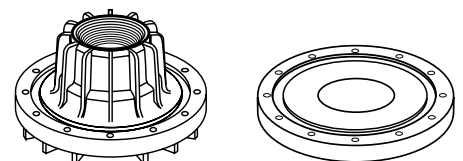
Opening	Standard (EPDM)	Chemical (Viton)
2" Elbow	2694-120	2694-36
2.5" Thread	2694-112	2694-20
4" Thread	2694-114	2694-21
4" ANSI Flange	2694-136	2694-139
6" Thread	2694-68	2694-148
6" SNA Flange	2694-69	2694-45
10" ANSI Flange	2694-132	2694-133
16" MWY Flange	2694-131	2694-130

Wrenches



SNA Flanged Adapters

Part No.	Flange Size	Material	Adapt to	Drain
10659	6" SNA	CPVC	1" NPT	No
10660	6" SNA	CPVC	1.5" NPT	No
10661	6" SNA	CPVC	2" NPT	No
10662	6" SNA	CPVC	3" NPT	No
10663	6" SNA	CPVC	4" NPT	No
5292	6" SNA	NORYL	3" NPT to 3" NPT	Yes
5267	6" SNA	NORYL	3" NPT to 3" NPT	No
5295	6" SNA	NORYL	3" NPT to 4"- 8 UN	No
10566	6" SNA	NORYL	4"- 8 UN	No

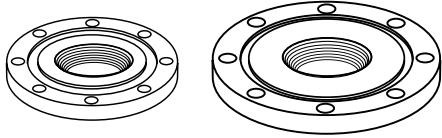


150 PSI / 150° F

Kits come complete with standard o-ring and hardware.

Replacement hardware:
CPVC – 5310
Noryl – 4750

ANSI Flanged Adapters

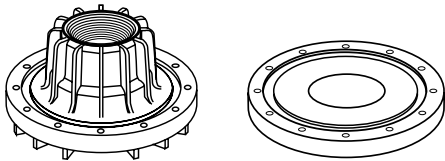


Kits come complete with standard o-ring and hardware.

Replacement hardware:
4" - 5257 10" - 5754

Part No.	Flange Size	Material	Adapt to
5276	4" ANSI	CPVC	3" NPSM
10673	4" ANSI	CPVC	2" NPT
10674	4" ANSI	CPVC	3" NPT
11929	10" ANSI	CPVC	4" NPT
11930	10" ANSI	CPVC	6" NPT

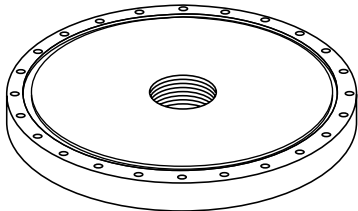
Closures



Kits come complete with standard o-ring and hardware.

Part No.	Flange Size	Material
5296	6" SNA	NORYL
10658	6" SNA	CPVC
5259	4" ANSI	CPVC
10472	4" ANSI	Acrylic
10139	10" ANSI	CPVC

Manway Closures/Adapters

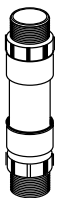


Kits come complete with standard o-ring and hardware.

Replacement hardware: 10107

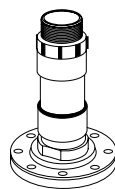
Part No.	Opening	Reduced to	Material	Max. Temp.	Max. Pressure
10108	16" MWY	1-1/4" NPT	Vinylester	150° F	150 PSI
14644	16" MWY	3" NPT to 3" NPT	Vinylester	150° F	150 PSI
10582	16" MWY	2" NPT	CPVC	150° F	100 PSI
10583	16" MWY	3" NPT	CPVC	150° F	100 PSI
10584	16" MWY	4" NPT	CPVC	150° F	100 PSI
11294	16" MWY	3" NPT to 3" NPT	CPVC	150° F	100 PSI
11295	16" MWY	4" NPT to 4" NPT	CPVC	150° F	100 PSI
5294	16" MWY	2" NPT	Stainless	150° F	150 PSI

Connector Accessories



Flexible Assembly (NPT - NPT)

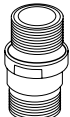
5285	2" NPT x 2" NPT
5286	3" NPT x 3" NPT



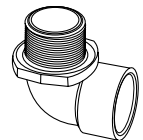
Flexible Assembly (Flanged)

5239	4" Flanged to 3" NPT (CPVC) 150 psi/150° F
------	--

Connector	
5045	3" NPSM x 3" NPT (CPVC)

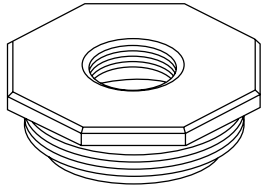


Elbow	
5201	2" NPSM to 2" Slip (CPVC) 150 psi/150° F



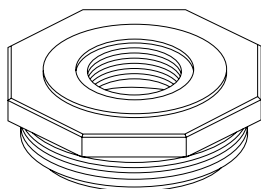
Kits come complete with standard o-ring and hardware (if required).

Threaded Adapters – 2.5" - 8 NPSM



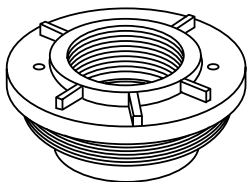
Part No.	Reduced to	Material	Max. Temp.	Max. Pressure
2751-3	0.75" NPT	PVC	120° F	150 PSI
2751-5	1" NPT	PVC	120° F	150 PSI
2751-8	1.25" NPT	PVC	120° F	150 PSI
2751-4	1.5" NPT	PVC	120° F	150 PSI
2751-6	2.25" - 16	PVC	120° F	150 PSI

Threaded Adapters – 4" - 8 UN



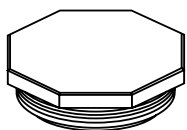
Part No.	Reduced to	Material	Max. Temp.	Max. Pressure
4821-6	1" NPT	CPVC	150° F	150 PSI
4821-12	1.25" NPT	CPVC	150° F	150 PSI
4821-7	1.5" NPT	CPVC	150° F	150 PSI
4821-8	2" NPT	CPVC	150° F	150 PSI
4821-17	2" - 11.5 NPSM	CPVC	150° F	150 PSI
4821-2	2.5" - 8 NPSM	CPVC	150° F	150 PSI
4821-4	3" - 8 UN	CPVC	150° F	150 PSI
4821-11	2.375" Bored	CPVC	150° F	150 PSI

Threaded Adapters – 6" - 8 UN



Part No.	Reduced to	Material	Max. Temp.	Max. Pressure
4125-003	3" FPT	NORYL	150° F	150 PSI

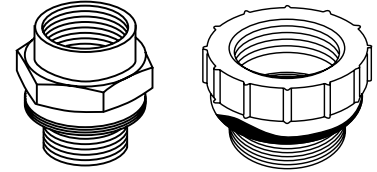
Threaded Closures



Part No.	Opening	Material	Max. Temp.	Max. Pressure
2751-1	2.5" - 8 NPSM	PVC	120° F	150 PSI
4821-1	4" - 8 UN	CPVC	150° F	150 PSI
2695-1	6" - 8 UN	CPVC	150° F	150 PSI

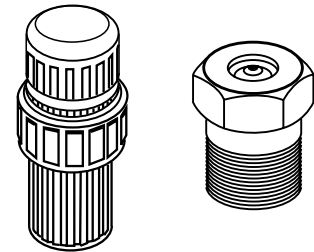
Brass Side Adapters

Part No.	Reduced to	Max. Temp.	Max. Pressure
1661	0.75" NPT to 0.75" FNPT	150° F	150 PSI
2829	1.5" NPT to 1.5" FNPT	150° F	150 PSI

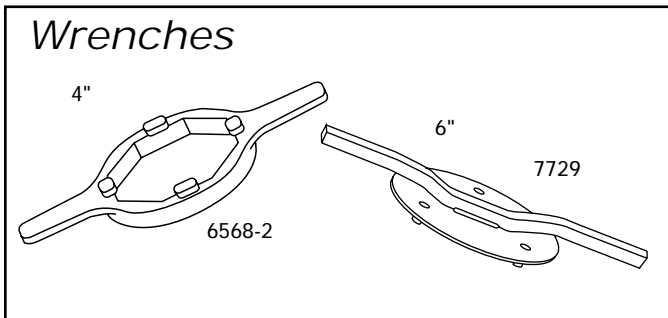


Vacuum Breakers

Part No.	Max. Temp.	Max. Pressure	Connection
10725	150° F	150 PSI	1" FNPT
10724	120° F	125 PSI	1.5" MNPT



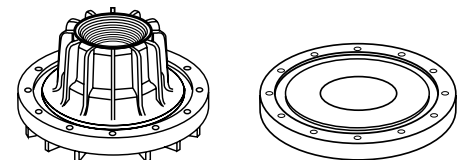
Replacement O-rings



Opening	Standard (EPDM)	Chemical (Viton)
2" Elbow	2694-120	2694-36
2.5" Thread	2694-112	2694-20
4" Thread	2694-114	2694-21
4" ANSI Flange	2694-136	2694-139
6" Thread	2694-68	2694-148
6" SNA Flange	2694-69	2694-45
10" ANSI Flange	2694-132	2694-133
16" MWY Flange	2694-131	2694-130

SNA Flanged Adapters

Part No.	Flange Size	Material	Adapt to	Drain
10659	6" SNA	CPVC	1" NPT	No
10660	6" SNA	CPVC	1.5" NPT	No
10661	6" SNA	CPVC	2" NPT	No
10662	6" SNA	CPVC	3" NPT	No
10663	6" SNA	CPVC	4" NPT	No
5292	6" SNA	NORYL	3" NPT to 3" NPT	Yes
5267	6" SNA	NORYL	3" NPT to 3" NPT	No
5295	6" SNA	NORYL	3" NPT to 4"- 8 UN	No
10566	6" SNA	NORYL	4"- 8 UN	No

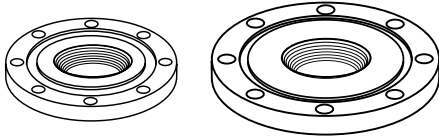


150 PSI / 150° F

Kits come complete with standard o-ring and hardware.

Replacement hardware:
CPVC – 5310
Noryl – 4750

ANSI Flanged Adapters

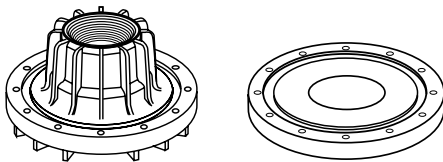


Kits come complete with standard o-ring and hardware.

Replacement hardware:
4" - 5257 10" - 5754

Part No.	Flange Size	Material	Adapt to
5276	4" ANSI	CPVC	3" NPSM
10673	4" ANSI	CPVC	2" NPT
10674	4" ANSI	CPVC	3" NPT
11929	10" ANSI	CPVC	4" NPT
11930	10" ANSI	CPVC	6" NPT

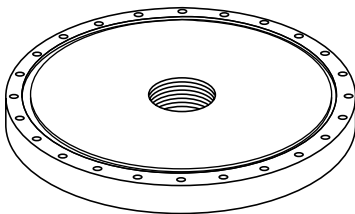
Closures



Kits come complete with standard o-ring and hardware.

Part No.	Flange Size	Material
5296	6" SNA	NORYL
10658	6" SNA	CPVC
5259	4" ANSI	CPVC
10472	4" ANSI	Acrylic
10139	10" ANSI	CPVC

Manway Closures/Adapters

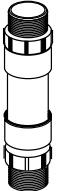
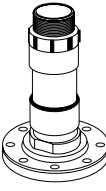

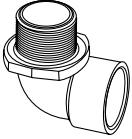


Kits come complete with standard o-ring and hardware.

Replacement hardware: 10107

Part No.	Opening	Reduced to	Material	Max. Temp.	Max. Pressure
10108	16" MWY	2" NPT	Vinylester	150° F	150 PSI
14644	16" MWY	3" NPT to 3" NPT	Vinylester	150° F	150 PSI
10582	16" MWY	2" NPT	CPVC	150° F	100 PSI
10583	16" MWY	3" NPT	CPVC	150° F	100 PSI
10584	16" MWY	4" NPT	CPVC	150° F	100 PSI
11294	16" MWY	3" NPT to 3" NPT	CPVC	150° F	100 PSI
11295	16" MWY	4" NPT to 4" NPT	CPVC	150° F	100 PSI
5294	16" MWY	2" NPT	Stainless	150° F	150 PSI

Connector Accessories

	<p>Flexible Assembly (NPT - NPT)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%;">5285</td> <td>2" NPT x 2" NPT</td> </tr> <tr> <td>5286</td> <td>3" NPT x 3" NPT</td> </tr> </tbody> </table>	5285	2" NPT x 2" NPT	5286	3" NPT x 3" NPT		<p>Flexible Assembly (Flanged)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%;">5239</td> <td>4" Flanged to 3" NPT (CPVC) 150 psi/150° F</td> </tr> </tbody> </table>	5239	4" Flanged to 3" NPT (CPVC) 150 psi/150° F
5285	2" NPT x 2" NPT								
5286	3" NPT x 3" NPT								
5239	4" Flanged to 3" NPT (CPVC) 150 psi/150° F								
	<p>Connector</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%;">5045</td> <td>3" NPSM x 3" NPT (CPVC)</td> </tr> </tbody> </table>	5045	3" NPSM x 3" NPT (CPVC)		<p>Elbow</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%;">5201</td> <td>2" NPSM to 2" Slip (CPVC) 150 psi/150° F</td> </tr> </tbody> </table>	5201	2" NPSM to 2" Slip (CPVC) 150 psi/150° F		
5045	3" NPSM x 3" NPT (CPVC)								
5201	2" NPSM to 2" Slip (CPVC) 150 psi/150° F								

Kits come complete with standard o-ring and hardware (if required).