

# General Guide to Bulk Storage Tanks

## A Complete Line of Rotationally Molded Bulk Storage Tanks

Saint-Gobain Performance Plastics bulk storage tanks, designed for a variety of indoor and outdoor uses, are available in many sizes and shapes. They're rotationally molded of rugged cross-linked high-density polyethylene (XLPE) and high-density polyethylene (HDPE), which is a linear polyethylene. Rotomolding reduces molded-in stresses, making the tanks durable and resistant to stress-cracking chemicals. This process also assures seamless, lightweight, uniform construction.

### High Performance Resins

XLPE tanks are ideal for storing a wide range of corrosives, inorganic and organic chemicals and compounds, and boiler treatment chemicals. HDPE tanks can safely store foodstuffs (resin complies with 21 CFR Regulation 177.1520. Refer to footnote 4 on page 2), as well as many inorganic acids.

### Plastics are Tough to Beat

Saint-Gobain bulk storage tanks offer distinct advantages over steel/fiberglass products. They are lighter in weight, more corrosion-resistant, translucent and easier to maintain than steel tanks. Seamless construction eliminates leakage problems often associated with fabricated tanks. Unlike fiberglass, plastic tanks do not wick. Saint-Gobain tanks are usually less expensive than either stainless steel or fiberglass.

There's definitely a Saint-Gobain bulk storage tank to suit your requirements. Choose from vertical, conical-bottom or horizontal configurations. They come with a variety of accessories, too, including insulation, heat tracing, fill lines, and other items. A simple call to your Authorized Saint-Gobain Distributor is all it takes to order one of these tanks, known industry-wide for quality and reliability.



RESIN SELECTION GUIDE			
PROPERTIES	HIGH-DENSITY POLYETHYLENE (HDPE)		CROSS-LINKED HIGH-DENSITY POLYETHYLENE (XLPE)
Chemical Resistance (general)	Very Good		Very Good
Stress-Crack Resistance	Good		Excellent
Maximum Service Temperature	150°F / 65°C		150°F / 65°C
Brittleness Temperature	-94°F / -70°C		-180°F / -118°C
Impact Resistance	Good		Excellent
Abrasion Resistance	Good		Good
Rigidity	Good		Good
Cleanability	Very Good		Very Good
Weldability (hot gas)	Weldable		Not Weldable
Food-Grade Resin	Yes		No
Color	White (Natural)		Gray (Pigmented)
ADVANTAGES	<ul style="list-style-type: none"> <li>• Rigid</li> <li>• Hard, Smooth Finish</li> <li>• Easy-To-Clean</li> </ul>		<ul style="list-style-type: none"> <li>• Very Good Chemical Resistance</li> <li>• UV Stabilized for Outdoor Service</li> </ul>
			<ul style="list-style-type: none"> <li>• Excellent Impact Resistance</li> <li>• High Stress-Crack Resistance</li> <li>• Suitable for Many Corrosives Not Handled by FRP</li> </ul>
			<ul style="list-style-type: none"> <li>• UV Stabilized for Outdoor Service</li> <li>• Less Expensive Than Stainless Steel or Fiberglass</li> </ul>
APPLICATIONS	<ul style="list-style-type: none"> <li>• Storage of Organic and Inorganic Acids</li> <li>• Water Treatment</li> </ul>		<ul style="list-style-type: none"> <li>• Dispensing of Laboratory and Photographic Chemicals</li> <li>• Storage of Wide Range of Corrosives</li> </ul>
			<ul style="list-style-type: none"> <li>• Storage of Organic and Inorganic Chemicals and Compounds</li> <li>• Metal Finishing/Plating</li> <li>• Chemical Processing</li> </ul>
			<ul style="list-style-type: none"> <li>• Storage of Boiler Treatment Chemicals</li> <li>• Water and Sewage Treatment</li> <li>• Bulk Chemical Storage</li> <li>• Storage of Caustics</li> </ul>
NOT GENERALLY RECOMMENDED FOR	<ul style="list-style-type: none"> <li>• Strong Oxidizing Agents, Aromatic Hydrocarbons, Liquefied Petroleum Gas, Solvents</li> <li>• Halogenated-Aliphatic Hydrocarbons</li> </ul>		<ul style="list-style-type: none"> <li>• Strong Oxidizing Agents, Aromatic Hydrocarbons, Halogenated-Aliphatic Hydrocarbons, Liquefied Petroleum Gas, Solvents</li> </ul>

# Vertical Bulk Storage Tanks

## Vertical Bulk Storage Tank Features

Saint-Gobain Performance Plastics vertical bulk storage tanks have a number of unique features.

The entire line offers:

- Sizes ranging from 550 gallons to 12,000 gallons
- Choice of two resins (XLPE, HDPE) and two specific gravities (1.5, 1.9) at 73°F
- Circular top head flat for fittings (excluding 550-gallon size)
- Several cover options
- FOB, Garrett, Indiana 46738
- Seamless construction
- Mounting flats on the bottom portion of the tank (up to 4,000 gallons)

- Tie-down lugs
- Translucent\*; observable liquid level
- Molded-in graduations up to 4,000 gallons (90 inch diameter excluded)
- ASTM D 1998-96 (available at an additional cost)
- XLPE Tanks are gray, HDPE tanks are natural

Saint-Gobain Performance Plastics vertical storage tanks have flat bottoms for easy installation. Smaller tanks (550-1550 gallons) incorporate narrow-diameter design for space-saving bulk storage. This makes them economical for in-plant use.

Tanks are engineered for tough applications. They provide excellent low-temperature impact resistance and are UV stabilized for outdoor use.

On request, Saint-Gobain Performance Plastics will hydrostatically test your bulk storage tanks. Contact Saint-Gobain Performance Plastics for details.

**Fittings and other accessories can be added as specified to meet your requirements. Options are found on pages 34 and 35.**

**NOTE:** All dimensions noted on tank drawings are nominal. Vertical tanks do not include fittings, which must be ordered separately. Covers are included.

Tank Size (gallons)	Graduations (gallons)	D & H (in.)	Specific Gravity	MATERIAL		Wall Thickness (in.)	Approx. Weight (lbs.)	Standard Cover (in.)
				XLPE	HDPE			
				Cat. No. and Size Code	Cat. No. and Size Code			
550	50	48 x 84	1.5	N/A	N/A	N/A	N/A	N/A
			1.9	51309-0550	51109-0550	0.25	140	16
850	100	64 x 74	1.5	51305-0850	51105-0850	0.25	150	16
			1.9	51309-0850	51109-0850	0.28	170	16
1100	100	64 x 93	1.5	51305-1100	51105-1100	0.31	190	16
			1.9	51309-1100	51109-1100	0.37	220	16
1550	100	64 x 127	1.5	51305-1550	51105-1550	0.34	280	16
			1.9	51309-1550	51109-1550	0.41	415	16
2000	250	96 x 83	1.5	51305-2000	51105-2000	0.31	320	16
			1.9	51309-2000	51109-2000	0.44	445	16
2500	250	96 x 99	1.5	51305-2500	51105-2500	0.38	430	16
			1.9	51309-2500	51109-2500	0.50	625	16
3000	250	96 x 116	1.5	51305-3000	51105-3000	0.44	620	21
			1.9	51309-3000	51109-3000	0.56	800	21
3000 90-INCH DIAMETER	N/A	90 x 126	1.5	51305-3090	51105-3090	0.44	620	21
			1.9	51309-3090	51109-3090	0.56	800	21
4000	250	96 x 145	1.5	51305-4000	51105-4000	0.56	850	21
			1.9	51309-4000	51109-4000	0.81	1100	21
4000 90-INCH DIAMETER	N/A	90 x 162	1.5	51305-4090	51105-4090	0.56	850	21
			1.9	51309-4090	51109-4090	0.81	1100	21
5500	N/A	120 x 134	1.5	51305-5500	51105-5500	0.58	1100	21
			1.9	51309-5500	51109-5500	0.73	1600	21
6500	N/A	120 x 155	1.5	51305-6500	51105-6500	0.69	1400	21
			1.9	51309-6500	51109-6500	0.87	1900	21
8000	N/A	143 x 138	1.5	51305-8000	51105-8000	0.70	2200	21
			1.9	51309-8000	51109-8000	0.89	2800	21
10000	N/A	143 x 168	1.5	51305-9100	51105-9100	0.89	3000	21
			1.9	51309-9100	51109-9100	1.13	3400	21
12000	N/A	143 x 198	1.5	51305-9200	51105-9200	1.07	3800	21
			1.9	51309-9200	51109-9200	1.36	4400	21

\*Observation of liquid level depends on favorable light conditions, liquid color and a clean tank wall. Natural resin must be used, however, Saint-Gobain can not guarantee translucency. If liquid level observation is critical a sight gauge is recommended.

\*\*Wall thickness based on bottom side wall. N/A = Not Available

### Insulation, Heat Tracing and Fill Lines Available

**Insulation** — Permanent factory-applied insulation is 2 inches thick and consists of 1.8 lbs-per-cubic-foot-density, non-

CFC containing urethane foam with a mastic coating.

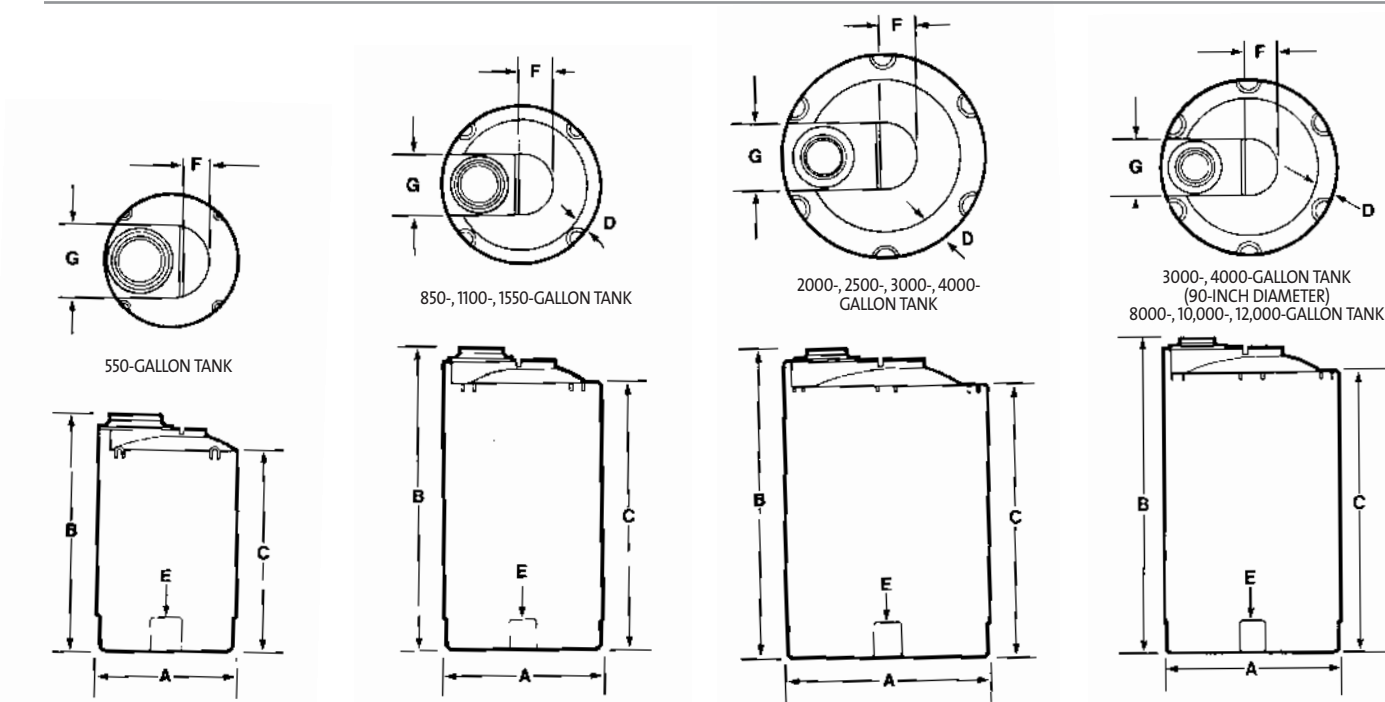
**Heat Tracing** — Heater package consists of 115 Volt, dual-controlled thermostats enclosed in a fiberglass housing.

Securely mounted to tanks, heaters provide a 50°F Delta T or a 75°F Delta T.

**Fill Lines** — This pipe, fitting and bracket assembly allows you to fill storage tanks from an exterior inlet location.

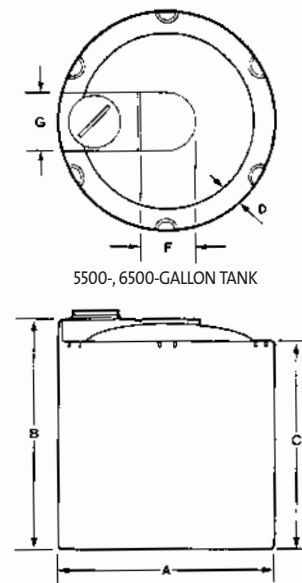
# Vertical Bulk Storage Tanks

## Vertical Bulk Storage Tank Features



### VERTICAL TANKS

Tank Size (gallons)	A	B	C	INCHES			
				D	E	F	G
550	48	84	72	N/A	11 x 12	9	26
850	64	74	62	6	11 x 12	16	26
1100	64	93	79	6	11 x 12	16	26
1550	64	127	113	6	11 x 12	16	26
2000	96	83	66	12	13 x 16	18	32
2500	96	99	82	12	13 x 16	18	32
3000	96	116	99	12	13 x 16	18	32
3000	90	126	109	9	7 x 9*	15	30
4000	96	145	128	12	13 x 16	18	32
4000	90	162	145	9	7 x 9*	15	30
5500	120	134	123	14	N/A	30-1/2	32
6500	120	155	144	14	N/A	30-1/2	32
8000	143	138	120	14	N/A	42	32
10000	143	168	150	14	N/A	42	32
12000	143	198	180	14	N/A	42	32



**NOTE:** When factory-installed fittings are required, you must provide us with the catalog number for each fitting, catalog number for each tank and drawings (freehand is acceptable) of each tank with its fitting(s).

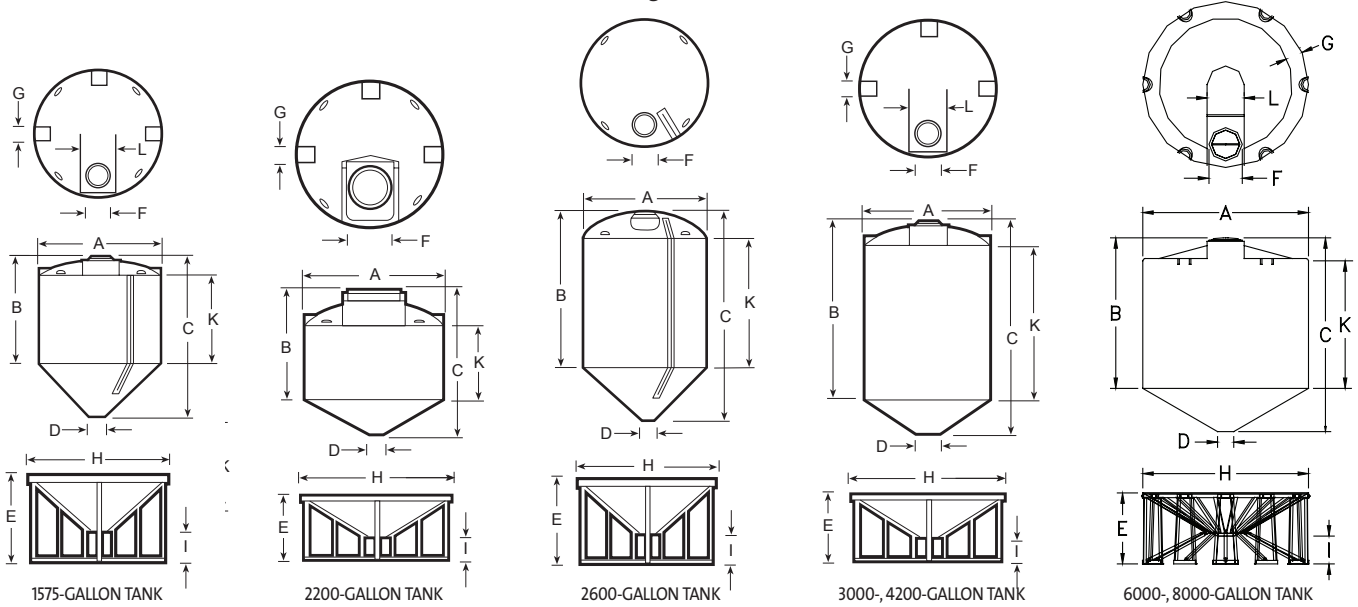
\*The minimum elevation for bottom outlet fittings is 9 inches (6 inches for 90-inch diameter tanks) up to 3 inch diameter fitting.

# Conical-Bottom Bulk Storage Tanks

## Conical-Bottom Bulk Storage Tank Features

Available in sizes from 1575 gallons to 8000 gallons, these tanks are durable, chemical-resistant and ideal for applications requiring complete drainage. All sizes are available in XLPE and HDPE. Tank features include:

- Seamless, one-piece construction — 1.9 specific gravity
- UV inhibitor for sunlight protection
- Observable liquid level (translucent)\*
- Molded-in tie-down lugs (1575- and 2600-gallon sizes)
- Rugged steel stand with epoxy coating
- Molded-in graduations on 1575- and 2600-gallon only
- FOB, Garrett, Indiana 46738



### CONICAL-BOTTOM TANKS

Tank Size (gallons)	D&H (in.)	MATERIAL		Wall (in.)	Approx. Wt. (lbs.)	Grad. (gallons)	Stand Code	Approx. Wt. (lbs.)
		XLPE	HDPE					
1575	86 x 117	53309-1575	53109-1575	0.50	450	50	53009-1575	440
2200	96 x 119	53309-2200	53109-2200	0.56	600	N/A	53009-2200	440
2600	86 x 159	53309-2600	53109-2600	0.57	700	50	53009-2600	440
3000	90 x 154	53309-3000	53109-3000	0.56	825	N/A	53009-3000	450
4200	96 x 177	53309-4000	53109-4000	0.88	1100	N/A	53009-4000	550
6000	143 x 137	53309-6000	53109-6000	1.02	1900	N/A	53009-6000	3200
8000	143 x 167	53309-8000	53109-8000	1.29	2600	N/A	53009-8000	3200

**NOTES:** "H" dimension is total height of tank and stand. Tanks and stands must be ordered individually.

\*Storage tanks with up to 0.75 inch wall thickness are translucent; however, observation of liquid level depends on favorable light conditions, liquid color and clean tank wall.  
\*\*Wall thickness based on bottom side wall.

N/A = Not Available

### CONICAL-BOTTOM TANKS AND EPOXY COATED STANDS

Tank Size (gallons)	INCHES											Cone Angle (degrees)
	A	B	C	D	E	F	G	H	I	K	L	
1575	86	60	103	9	57	16	10	86	14	45	28	45
2200	96	79	105	9	40	24	10	97	14	59	N/A	30
2600	86	102	145	9	57	16	N/A	86	14	84	N/A	45
3000	90	117	140	9	37	21	10	90	14	102	28	30
4200	96	137	163	9	39	21	10	96	14	122	28	30
6000	143	137	100	14	62	28	14	143	24	82	32	30
8000	143	167	130	14	62	28	14	143	24	112	32	30

**NOTE:** Maximum bottom outlet fittings is 3 inches.

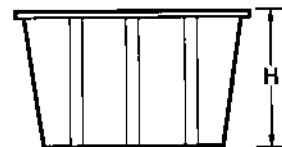
# Secondary Containment and Horizontal Leg Tanks

## HDPE Secondary Containment Basins

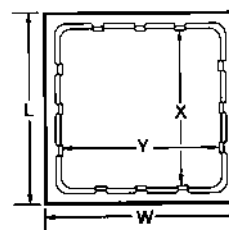
Designed as durable barriers between storage tanks and the environment, these secondary containment basins feature:

- UV-stabilized black HDPE for outdoor use

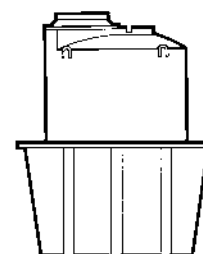
- Tapered walls for easy nesting
- Rib and steel spreader bar divides 218 inch length into two equal sections (1750- and 3500-gallon basins only)



SIDE VIEW (SQUARE BASIN)



TOP VIEW (SQUARE BASIN)



TYPICAL CONTAINMENT BASIN WITH TANK IN PLACE

### HDPE SECONDARY CONTAINER BASINS

Capacity (gallons)	L x W x H (in.)	X Dimension (in.)	Y Dimension (in.)	Cat. No.	Size Code	Wall Thickness (in.)	Weight (lbs.)
375	66 x 66 x 24	59	59	59040	-0375	.220	100
495	69 x 69 x 28-1/2	62	62	59040	-0495	.250	125
950	83 x 83 x 45	69	69	59040	-0950	.375	320
1650	99 x 99 x 53	85	85	59040	-1650	.375	400
1750	218 x 108 x 21	94	203	59040	-1750	.500	580
3500	218 x 108 x 40	94	203	59040	-3500	.500	1020

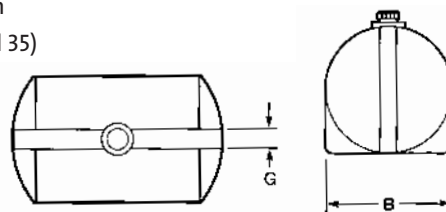
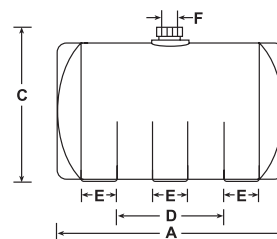
**NOTE:** Basin walls are tapered; be sure to reference outside tank dimensions. Contact your local regulatory body for approval before selecting secondary containment basins because of varying requirements.

## Saint-Gobain Performance Plastics Horizontal Leg Tanks

**Cost-efficient design simplifies installation and saves money!**

Saint-Gobain Performance Plastics horizontal tanks with molded legs conveniently mount on flat surfaces without any additional support. Eliminating FRP saddles and steel cradles allows easy installation and provides significant cost reduction. Most fittings are factory installed before shipping\*.

- Economical (no saddles or cradles)
- Molded of translucent natural high-density polyethylene (HDPE) for applications with food-grade resin requirements (i.e. potable water)
- Molded of translucent gray UV-stabilized XLPE for outdoor chemical storage
- Sturdy, self-supporting construction
- Fittings available (See pages 34 and 35)
- Up to 1.5 specific gravity service
- Maximum operating temperature to 150°F/65°C
- FOB Garrett, Indiana 46738



### HORIZONTAL LEG TANKS

Tank Size (gallons)	Cat. No. HDPE	Cat. No. XLPE	Size Code	Specific Gravity	Wall Thickness (in.)	A	B	C	INCHES D	E	(TANK OPENING) F†	G	Approx. Wt. (lbs.)
55	25100	25300	-0055	1.5	5/16	33	25-1/4	29-3/4	20-1/2	4-1/2	6	7	40
110	25100	25300	-0110	1.5	5/16	46	29	33-1/2	21	7	6	7	60
200	25100	25300	-0200	1.5	5/16	57-1/2	35	39-1/2	30	9	6	7	80
300	25100	25300	-0300	1.5	5/16	67-1/2	40-3/4	45	35-1/2	10-1/2	6	7	110
500	25100	25300	-0500	1.5	5/16	76	46-1/2	49-1/2	39	12	6	7	150

\*Saint-Gobain recommends all fittings be factory installed.  
†Six-inch threaded closure.

# Bulk Tank Fittings and Accessories

## Tank Fittings

Fittings can be factory-installed or shipped loose for on-site installation. Fitting prices and installation charges, where required, must be added to the cost of the tank. When ordering, always supply drawings, and specify the type

of fitting required and exactly where it is to be installed. For open-top tank fittings and accessories, see pages 11-13.

## Gaskets for Bulkhead Fittings

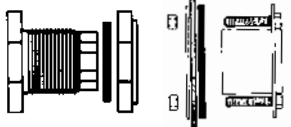
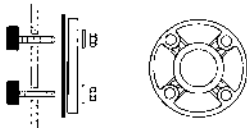

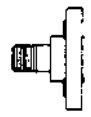

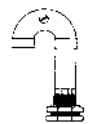
Fitting Resin	Gasket Material	No. of Gaskets
PP (Natural)	EPDM	1
PVC	EPDM	1
316 SS	EPDM	1
PVDF	VITON®	1

These two-part fittings screw or bolt together over a hole cut in the tank. Other gasket materials are available at added cost.

## For Bulk Tanks

### INSTALLED FITTINGS, MECHANICAL

Size Code and Availability (X)

Fitting	Material	Cat. No.	-0025 (1/4")	-0050 (1/2")	-0075 (3/4")	-0100 (1")	-0150 (1-1/2")	-0200 (2")	-0300 (3")	-0400 (4")	-0600 (6")
 <p>Bulkhead Fittings (Plastic) (316 Stainless Steel)</p>	PVC	<b>86301</b>	—	X	X	X	X	X	X	X	—
	PP	<b>86501</b>	—	X	X	X	X	X	X	X	—
	316 SS	<b>86650</b>	—	—	—	X	X	X	X	X	—
<p>PVC, SS and PP bulkhead fittings are supplied with one EPDM gasket. PVC and PP two-part fittings screw together over a hole cut in the tank. Other gasket materials are available at added cost. Fittings provide female pipe thread.</p>											
 <p>Flanged Fittings* with Free Bolts (Encapsulated Heads)</p>	PVC threaded with EPDM Gasket and Encapsulated Bolt Heads with 316 SS Bolts	<b>86200</b>	—	X	X	X	X	X	X	X	X
	PVDF threaded with Viton®* Gasket and Bolt Heads with Hastelloy Bolts	<b>86400</b>	—	X	X	X	X	X	—	—	—
<p>Optional titanium or Hastelloy bolts with Viton®* encapsulated heads available. *4-inch and 6-inch fittings are available only for tanks with 96-inch diameter or larger.</p>											
 <p>Self-Aligning Bulkhead Fitting Install on Top-Dome Only</p>	PVC Body with Teflon®* Sealing Ring	<b>86302</b>	—	—	—	X	—	X	X	—	—
 <p>Flange Adapter with Nipple</p>	PVC	<b>86320</b>	—	—	—	—	X	X	X	X	—
 <p>Siphon Tube without Bulkhead Fitting</p>	PVC	<b>86900</b>	—	—	—	—	—	X	X	—	—
	316 SS	<b>86651</b>	—	—	—	—	—	X	X	—	—
	PP	<b>86626</b>	—	—	—	—	—	X	X	—	—
 <p>U-Vent with Bulkhead Fitting</p>	PVC	<b>86304</b>	—	—	—	—	—	X	X	X	—

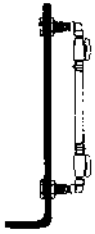
\*Viton and TEFLON are registered trademarks of E.I. DuPont de Nemours and Company Inc.

# Bulk Tank Fittings and Accessories



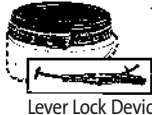

## For Bulk Tanks

### INSTALLED FITTINGS, MECHANICAL (continued)

Size Code and Availability (X)

Fitting	Material	Cat. No.	-0025 (1/4")	-0050 (1/2")	-0075 (3/4")	-0100 (1")	-0150 (1-1/2")	-0200 (2")	-0300 (3")	-0400 (4")	-0600 (6")
 <p>Sight-Gauge Assembly for Bulk Storage Tanks Only</p>	PVC	<b>76000-0002</b>	—	—	X	—	—	—	—	—	—
	<p>Consists of two PVC ball valves, fittings and clear PVC tubing (1-inch I.D.) installed close to top and bottom of tank unless otherwise specified. Contact Saint-Gobain Performance Plastics for single or triple valve design.</p>										

### INSTALLED FITTINGS, MECHANICAL

 <p>Gaskets for PP and PVC Bulkhead Fittings*</p> <p>For Stainless Steel Bulkhead Fittings*</p>	EPDM	<b>86780</b>	—	X	X	X	X	X	X	X	—
	VITON®	<b>86890</b>	—	X	X	X	X	X	X	X	—
	EPDM	<b>86781</b>	—	X	—	X	X	X	X	X	—
	VITON®	<b>86891</b>	—	X	—	X	X	X	X	X	—
<p>Consists of PVC valves, fittings and translucent PE tubing (5/8 inch I.D. x 3/4 inch O.D.). Specify tubing length.</p>											
 <p>True Union Ball Valves, Threaded with One Nipple</p>	PVC	<b>86303</b>	—	X	X	X	X	X	—	—	—
<p>Female pipe threads with nipple on one end. These valves must be supported.</p>											
 <p>16-inch Cover Lever Lock Device</p>	HDPE	<b>59000-0016</b>	<p>For 550-, 850-, 1100-, 1550-, 2000- and 2500-gallon verticals and 1575- and 2600-gallon conical-bottom tanks.</p>								
 <p>21-inch Threaded with Cover</p>	HDPE	<b>59000-0021</b>	<p>Optional For 550-, 850-, 1100-, 1550-, 2000- and 2500-gallon verticals. Replacement for 3000- to 6,500-gallon vertical and 3000- and 4200-gallon conical-bottom tanks.</p> <p><b>Bolted and gasketed manway cover available — contact Saint-Gobain Performance Plastics</b></p>								

**NOTE:** Installation instructions for bulkhead fittings are available by contacting Saint-Gobain Performance Plastics.

### Bulkhead Fitting Installation

#### Tank Diameter Minimums

Bulkhead Size (inches)	Min. Tank I.D. (inches)
1/2	7.25
3/4	10.00
1	11.75
1-1/4	16.25
1-1/2	16.25
2	25.75
3	42.50
4	90.00

For information on open-top tank fittings and accessories, see pages 11-13.