

FITTINGS AND ACCESSORIES



POLYPROCESSING
SOLUTIONS, SIMPLIFIED.

FITTINGS



THE B.O.S.S.® FITTING

This one-piece sure-seal fitting prevents leaks and adds value to your tank installation. Available in PVC and CPVC back ring, its one-piece design reduces the seal point to a single gasket, and its polyethylene construction ensures chemical compatibility. Its back ring design reduces stress on the fitting and makes it three times stronger than similar plastic fittings.

Bolts: 316 stainless steel, titanium and C-276

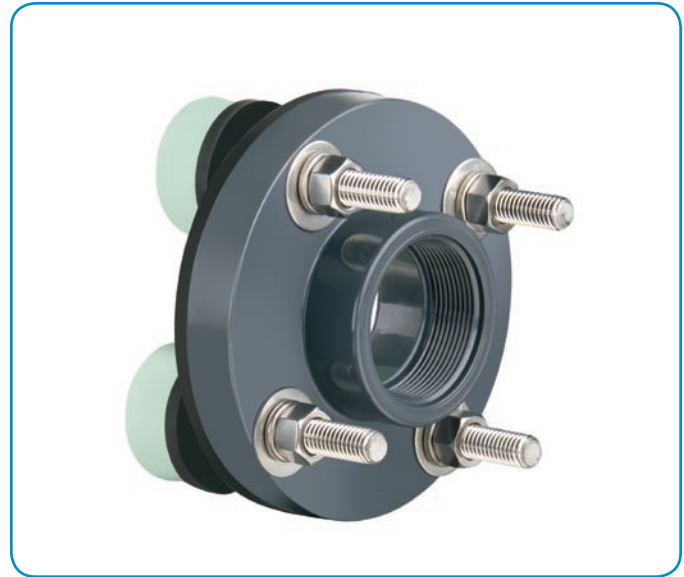
Body: Polyethylene

Connections: socketed

Size: 1", 2" and 3"

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter, siphon leg



BOLTED FLANGE FITTINGS

Available in PVC and CPVC. With these fittings, all aspects of fitting maintenance can be done externally, with no tank entry required. These can be installed on sidewall or dome. Bolt heads are encapsulated in polyethylene, providing chemical resistance.

Bolts: 316 stainless steel, titanium, C-276 and Alloy 400

Body: standard PVC and CPVC

Connections: socketed or threaded

Sizes: 1", 1½", 2", 3" and 4" threaded;
1", 1½", 2", 3", 4" and 6" socketed

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter, siphon leg

FITTINGS



BOLTED SPOOL FITTINGS

The Bolted Spool Fitting is fabricated per the customer's requirements and is typically used for larger dome and sidewall connections. Use a Van Stone flange to connect piping. Bolted Spool Fittings 8 inches or greater are manufactured with gussets.

Bolts: 316 stainless steel, titanium, C-276 and Alloy 400

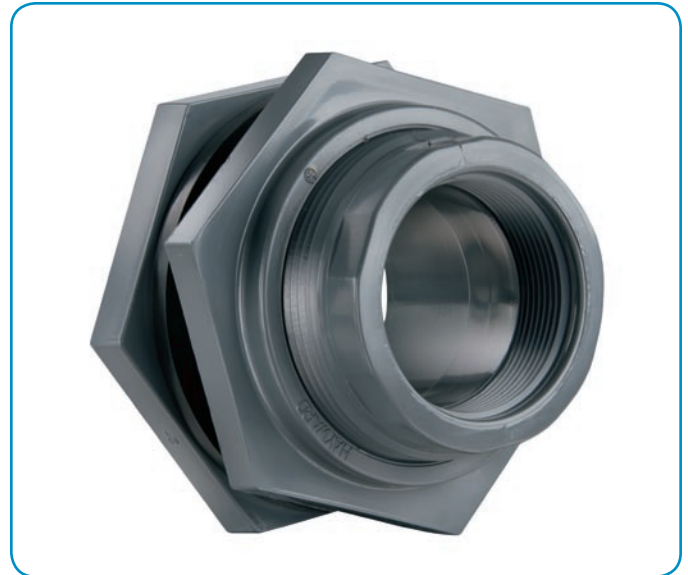
Body: standard PVC, CPVC and polypropylene

Connections: flanged

Size: 1" to 12"

Gaskets: EPDM, Viton® and Viton® GF

Options: siphon leg



BULKHEAD FITTINGS

An economical fitting best used on small tanks in mild applications. Can be installed on sidewall, overflow or dome. May be used as a overflow fitting with all chemicals, since it's non-wetted. Bulkhead Fittings must be installed from the inside of the tank, requiring tank entry for repairs and maintenance. They should not be used on tanks greater than 3,000 gallons or tanks greater than 6 feet in height.

Body: standard PVC, CPVC and polypropylene

Connections: socketed or threaded

Size: 1/2" to 6"

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter, siphon leg

NOTE: Over time, this fitting "creeps," causing the nut to loosen. Regular monitoring for drips is critical.

FITTINGS



UNIVERSAL BALL DOME FLANGES

These flanges are “self-aligning,” which allows for vertical plumbing on the dome of the tank up to 22 degrees. The fitting can be repaired and maintained externally without tank entry. Available with Ryton® bolts, an economical alternative to titanium, C-276, and Alloy 400.

Bolts: 316 stainless steel, titanium, C-276, Alloy 400, Ryton®

Body: standard PVC or CPVC

Connections: threaded

Size: 1” to 4”

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter



UNIVERSAL BALL DOME BULKHEADS

Our Universal Ball Dome Bulkheads are also “self-aligning,” which allows for vertical plumbing on the dome of the tank. An economical alternative to UBD flange-style bulkheads, since no additional bolts are required.

Body: standard PVC or CPVC

Connections: threaded

Size: 1” to 3”

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter

NOTE: These fittings are for top-use only.

FITTINGS



MADE-VERTICAL FITTINGS

Made-Vertical Fittings are fabricated per the customer’s requirements. They are typically used for larger domes that require a fitting to be above 4 inches and in those few cases where our domes are extremely steep. They may need to be supported independently of the tank. For optimal support, install it on a tank runway or as close to the edge as possible.

Bolts: 316 stainless steel, titanium, C-276, Alloy 400, Ryton®

Body: standard PVC or CPVC

Size: 1” to 10”

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter socketed or threaded

NOTE: This fitting is for top-use only.



FLANGE ADAPTERS

Includes a nipple and flange for connection to plumbing system

Body: standard PVC and CPVC

Connections: socketed or threaded

Sizes: 1”, 1½”, 2”, 3” and 4” threaded; 1”, 1½”, 2”, 3”, 4”, and 6” socketed

FITTINGS



STAINLESS STEEL FITTINGS

Complete 316 stainless steel fittings. One-piece reduces seal point to a single surface like the B.O.S.S.® fitting. These can be installed on sidewall or dome.

Bolts: 316 stainless steel

Body: 316 stainless steel

Connections: threaded coupler, half nipple and full nipple

Sizes: 1/2", 3/4", 1", 1 1/2", 2", 3" and 4"

Gaskets: EPDM, Viton® and Viton® GF

Options: flange adapter, siphon leg

PLUMBING



BUTTERFLY VALVES

Being slim and light weight yet robust, makes this the ideal shutoff valve for IMFO® drain.

Bolts: 316 stainless steel, titanium, C-276, Alloy 400

Body: standard PVC, CPVC and polypropylene

Size: 2" to 6"

Seals: EPDM, Viton® and Viton® GF

Options: flange adapter

NOTE: Can also be used on mechanical fittings by using a flange adapter.

PLUMBING



BALL VALVES

Complete line of high-performance Ball Valves to meet varying needs

Body: standard PVC, CPVC and polypropylene

Connections: socketed, threaded or true union

Size: 1/2" to 6"

Seals: EPDM, Viton® and Teflon®

Options: flange adapter



FLEXIJOINT® EXPANSION JOINT

These flexible PTFE connectors and tremor barriers are designed to compensate for misalignment, absorb expansion and contraction, and isolate the vibration and shock that could damage a tank. Their low spring rate protects stress-sensitive connections. Can be installed directly to the dome of the tank to overcome piping misalignment

- Made of pure 100% virgin PTFE resin
- Ethylene's exclusive Fluorforming™ process guarantees multiple convolution walls of consistently uniform thickness for any size.
- Features T-Band™ root and sidewall support and protection from over-compression
- LimitLinks™ stainless steel cables protect from over-expansion.

Bolts: 316 stainless steel, titanium, C-276, Alloy 400

Gaskets: EPDM, Viton® and Viton® GF

Flange Type: threaded or socketed

Flange Material: PVC or CPVC

Performance specifications:

- » Axial Compression $\geq 1.5"$
- » Axial Extension $\geq 0.625"$
- » Lateral Deflection $\geq 0.750"$
- » Angular Deflection $\geq 14^\circ$
- » Torsional Rotation $\geq 4^\circ$

PLUMBING



FLEXIBLE HOSE CONNECTIONS

Flexible Hose Connections isolate the tank from the stresses and forces associated with pumps and piping. This connection is manufactured from ultra high molecular weight hose, which offers tremendous chemical resistance; two King nipples (barbed); and mechanically attached stainless steel bands securing the hose to the nipple. These connections are also a great solution for transitioning through secondary containment.

Connections: threaded

Nipples Option: PVC or SS

Sizes: 1" to 4"



PVC LIQUID LEVEL GAUGES

PVC Liquid Level Gauges are made from $\frac{3}{4}$ inches clear PVC tubing for a level indicator with up to three optional valves. Please note that one pipe support should be used for every 6 feet of sidewall height to maintain alignment.

PLUMBING



REVERSE FLOAT LEVEL GAUGES

The Reverse Float Level Gauges offer a safe and reliable means of determining the chemical level in your tank and especially in the SAFE-Tank®. Available in PVC as standard.

Advantages:

- No sidewall tank penetrations or chemical exposure
- All joints are dry fit for easier part replacement.
- Internal float now weighted to chemical specific gravity
- Polypropylene rope used for indicator
- Calibration tape can be added for tank capacity.
- Standard or freestanding pipe supports available

NOTE: These gauges are NOT intended to be used for metering purposes.



COMBINATION INTERNAL & EXTERNAL FILL/DISCHARGE DROP PIPES

Fill Line assemblies are available in PVC and CPVC with sizes ranging from 1 to 3 inches and include a true union for quick assembly. When choosing a fitting, be sure to consider if the fill will be placed on the flat of the dome; otherwise it will require a self-leveling fitting.

For dome fittings installed +/- 12 inches from the sidewall, standard pipe supports can be used. If the dome fitting is more than 12 inches from the sidewall or if the fitting size is greater than 4 inches, you must use a non-invasive internal pipe support (our "promo tank") to support the internal piping. Customer installation of the internal drop pipe assembly is required. Use a universal ball dome fitting for easier installation. Pipe supports should be used one for every 6 feet of sidewall height.

Optional fittings: ball valve, quick adapter and cap and 45° elbow as shown

PLUMBING



FILL EXTERNAL DROP PIPES

Fill Line assemblies are available in PVC and CPVC with sizes ranging from 1 to 3 inches and include a true union connection for easy assembly. When choosing a fitting, be sure to consider if the fill will be placed on the flat of the dome; otherwise it will require a self-leveling fitting.

Optional fittings: ball valve, quick adapter and cap (as shown). 45° elbow also available



FILL/DISCHARGE INTERNAL DROP PIPES

Fill Line assemblies are available in PVC and CPVC with sizes ranging from 1 to 3 inches and include a true union for quick assembly. For dome fittings installed +/- 12 inches from the sidewall, standard pipe supports can be used. If the dome fitting is more than 12 inches from the sidewall or if the fitting size is greater than 4 inches, you must use a non-invasive internal pipe support (our "promo tank") to support the internal piping. Customer installation of the internal drop pipe assembly is required. Use a universal ball dome fitting for easier installation. Pipe supports should be used one for every 6 feet of sidewall height.

VENTS



MUSHROOM VENT

For day tanks, an economical alternative to traditional U-vents or fittings. Made of polypropylene, in sizes 1 to 3 inches



U-VENT

Standard venting for outdoor tanks or for storing chemicals that create fumes. In PVC, in sizes 2 to 6 inches

VENTING REQUIREMENTS FOR POLYETHYLENE TANKS									
Mechanical Pump Fill	Pneumatic Fill								
IF ≤ 1,000 gallons	IF – Vent length ≤ 3'			IF – Vent length > 3' and ≤ 30'			IF – Scrubber application		
Vent size should equal size of largest fill or discharge fitting	AND – Vent screen mesh size ≥ ¼" or no screen used			AND – 3 or less 90° elbows with no other restrictions or reduction in pipe size			Vent pipe size throughout scrubber system CANNOT be reduced!		
							Centerline of dispersion pipe not to be submersed > 6"		
IF > 1,000 gallons	Emergency Pressure Relief Cover Required			Emergency Pressure Relief Cover Required			Perforated dispersion pipe must be same diameter as vent or larger. Sum of perforations ≥ cross-sectional area of pipe		
Vent size should exceed the largest fill or discharge fitting by 1"	Tanker Discharge	Inlet/Fitting Size	Minimum Vent Size	Tanker Discharge	Inlet/Fitting Size	Minimum Vent Size	Tanker Discharge	Inlet/Fitting Size	Minimum Vent Size
	2"	2"	4"	2"	2"	6"	2"	2"	6"
	3"	2"	6"	3"	2"	6"	3"	2"	8"
	3"	3"	6"	3"	3"	8"	3"	3"	10"

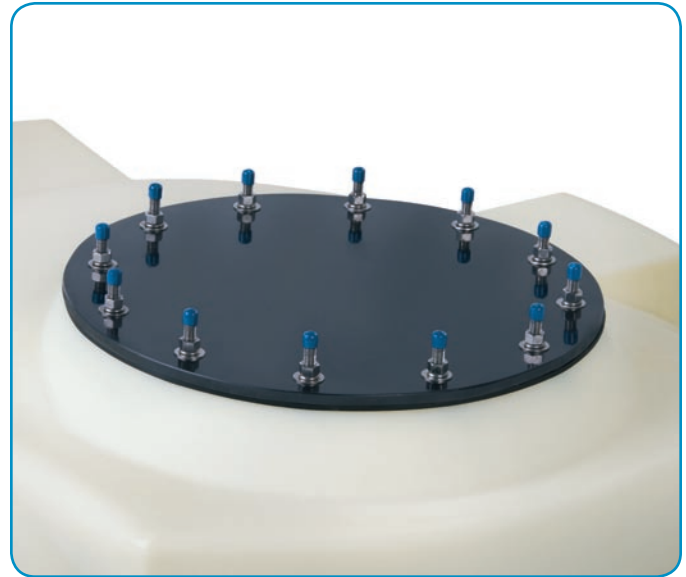
» See our website for Detailed Venting Guidelines.

MANWAYS/LIDS



BOLTED (8/16) MANWAY COVER

These are the most popular covers we provide. They are available in 24 inches. Please note that if you plan on visually inspecting the interior of the tank with some frequency, our SAFE-Surge® manway cover may be a better alternative.



FUME-TIGHT MANWAY COVER

Available in two sizes, 17 and 24 inches, with bolts of stainless steel, Alloy C-276 and titanium. Gasket materials available include EPDM, Viton®, Viton® GF, XLPE or Buna. The 17-inch model is often used on 19-inch manways as well. Fume-tight manway cover is required for HCL applications.

MANWAYS/LIDS



SAFE-Surge® MANWAY COVER

Designed specifically for pneumatic-filled tanks. Releases at a 6-inch water column to prevent over-pressurization, ensuring that the tank maintains proper ACFM at all times - even in the event of air surges that cannot be handled by primary venting. Available in 19 and 24 inches. For detailed venting requirements, please refer to the chart on page 63.



THREADED LID

Available in two sizes, 7 and 17 inches, coarse threaded. Gasket materials available include EPDM, Viton®, Viton® GF, XLPE or Buna.

ACCESSORIES



LADDER ASSEMBLIES

Poly Processing's tank ladders are available in heights from 6 to 20 feet, depending on the tank application. To determine height, ladder height equals height to top of manway rounded to the nearest foot. If height of ladder exceeds the height of the manway, subtract 1 foot.

- Ladders are available in mild steel as well as FRP construction.
- All ladders meet OSHA requirements.
- Ladders are not offered on all tanks due to safety requirements. Approved systems are noted with the appropriate ladder height in the distributor price list.
- Cages range from 7 to 8 feet and extend 4 feet above the top rung of the ladder.

Tanks with a center manway will have the additional cost of a platform to reach the ladder.



HEAT PADS AND INSULATION

Poly Processing's tank heating systems are specifically designed for temperature maintenance of polyethylene tanks. SilcoPad® tank heating systems maintain a desired product temperature, not to exceed 100 degrees F.

- Each heating system consists of tank heating pad(s) and a temperature controller. The quantity and type of SilcoPad® tank heating pads required is determined by the size of the tank, the desired temperature maintenance and environmental conditions.
- Tanks are available with standard heating systems with a Delta T of 30, 60 and 100 degrees F.
- Tanks are typically supplied with the heating panels and a controller installed by Poly Processing. The only field connection required is a power supply to the heating system.

Please contact our customer support staff if HT & I is required on a 14-foot-diameter tank.

ACCESSORIES



OPTIC LEAK DETECTION SWITCH

This switch is an excellent choice for leak detection in secondary containment tanks. The submersible sensor is mounted in the interstitial space of the tank. The internal 1A relay provides a reliable switch interface with indicators, PLCs, SCADAs and alarms.

- Fail-safe leak sensor inverts wet to alert user for maintenance.
- Rugged PP or PFA Teflon® probe and cable rated NEMA 6
- 1A relay selectable NO or NC via power supply wiring polarity
- Compatible with MicroPoint™ multi-channel indicator



ULTRASONIC LEVEL SWITCH

This CSA-approved switch is intrinsically safe for use in hazardous-area locations. The Ultrasonic Level Switch is broadly used in chemical liquids. Its 1A relay provides a reliable switch interface with remote devices such as a PLC, SCADA or alarm. This submersible sensor is universally mounted through the wall inside the tank.

- CSA-approved intrinsically safe for use in hazardous-area locations
- Rugged PP or PFA Teflon® probe and cable rated NEMA 6
- 1A relay selectable NO or NC via power supply wiring polarity
- Compatible with MicroPoint™ multi-channel indicator

RESTRAINTS



SEISMIC RESTRAINTS

Used to protect against seismic events, these clip systems are available for location- and site-specific information areas.

- PE wet stamps will be provided by request for a fee. Contact Poly Processing's customer support staff.
- If the tank will be placed on a concrete pad, it is critical to allow at least 8 inches of space between the tanks and the edge of the pad to accommodate the proper anchoring of the clips.

For all other design considerations, please contact our customer support team and ask to talk to our engineering department. For Monroe, LA, call 866.590.6845; for French Camp, CA, call 877.325.3142.



WIND RESTRAINTS

Poly Processing offers cable systems to help stabilize tank systems that are challenged by wind.

- Standard systems are designed for wind speeds of 130 mph.
- PE wet stamps will be provided by request for a fee.

For all other design considerations, please contact our customer support team and ask to talk to our engineering department. For Monroe, LA, call 866.590.6845; for French Camp, CA, call 877.325.3142.

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