

TANK TRAILER PRODUCT OFFERING

Components developed for the transfer of corrosive chemicals and abrasive materials.



Providing **Solutions** to Your Transportation **Needs**

The Hazarsolve product line within Salco Products, Inc. specializes in designing, constructing, and supplying innovative products and services to the Chlor-Alkali Chemical industries as well as commodities requiring superior abrasion resistance. We are well known throughout the chemical and energy sectors; our customers come to us to upgrade and design new systems that utilize superior, cost-effective, and innovative products.

Together we have over 60 years experience working with corrosives, acids and accompanying fluid transfer support equipment throughout all modes of transportation and storage.



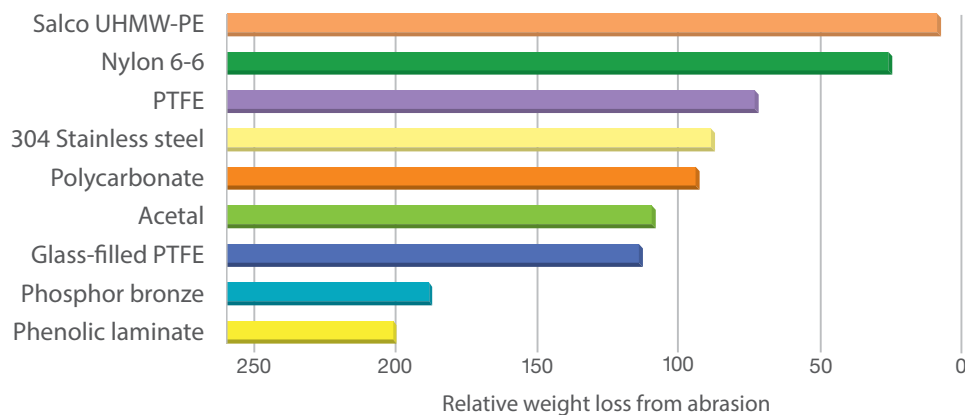
Hazarsolve Offers Total **Solutions**

A comprehensive product line that offers an array of corrosion resistant hose fittings to fit your specific application. From tees, elbows, spools, crosses, cam connections, blind flanges and a wide variety of hose fittings, Hazarsolve is your total solutions partner in the Chlor-Alkali liquid and vapor transfer abrasive chemicals market.



Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	ASTM D2240
Tensile Strength, Ultimate	40 MPa	5800 psi	ASTM D638
Elongation at Break	300%	300%	ASTM D638
Tensile Modulus	0.689 GPa	100 ksi	ASTM D638
Flexural Modulus	0.758 GPa	110 ksi	ASTM D790
Flexural Yield Strength	24.1 MPa	3500 psi	ASTM D790
Compressive Strength	20.7 MPa	3000 psi	10% Def. 73F; ASTM D695
Compressive Modulus	0.552 GPa	80 ksi	ASTM D965
Shear Strength	33.1 MPa	4800 psi	ASTM D732
Coefficient of Friction	0.12	0.12	Dry vs. Steel; QTM55007
Limiting Pressure Velocity	0.0701 MPa-m/sec	2000 psi-ft/min	4 : 1 safety factor; QTM 55007
Izod Impact, Notched	NB	NB	ASTM D256 Type A

Wear Properties Sand slurry abrasion test results



Compatibility Chart Salco Polyethylene

	70° F	122° F	170° F
Caustic Soda	1	1	1
Ferric Nitrate	1	*	*
Ferric Sulfate	1	*	*
Ferrous Chloride	1	*	*
Ferrous Sulfate	1	*	*
Hydrochloric Acid (>20%)	1	1	Boiling NR
Hydrochloric Acid (50%)	1	1	Boiling NR
Hydrochloric Acid (>40%)	1	2	*
Hydrofluosilicic Acid	1	*	*
Hydrofluorisilicic Acid	1	*	*
Hypochlorous Acid	*	*	*
Sulfuric Acid (10%)	1	1	*
Sulfuric Acid (30%)	1	1	*
Sulfuric Acid (60%)	1	1	*
Sulfuric Acid (80%)	1	3	*
Sulfuric Acid (100%)	1	NR	*

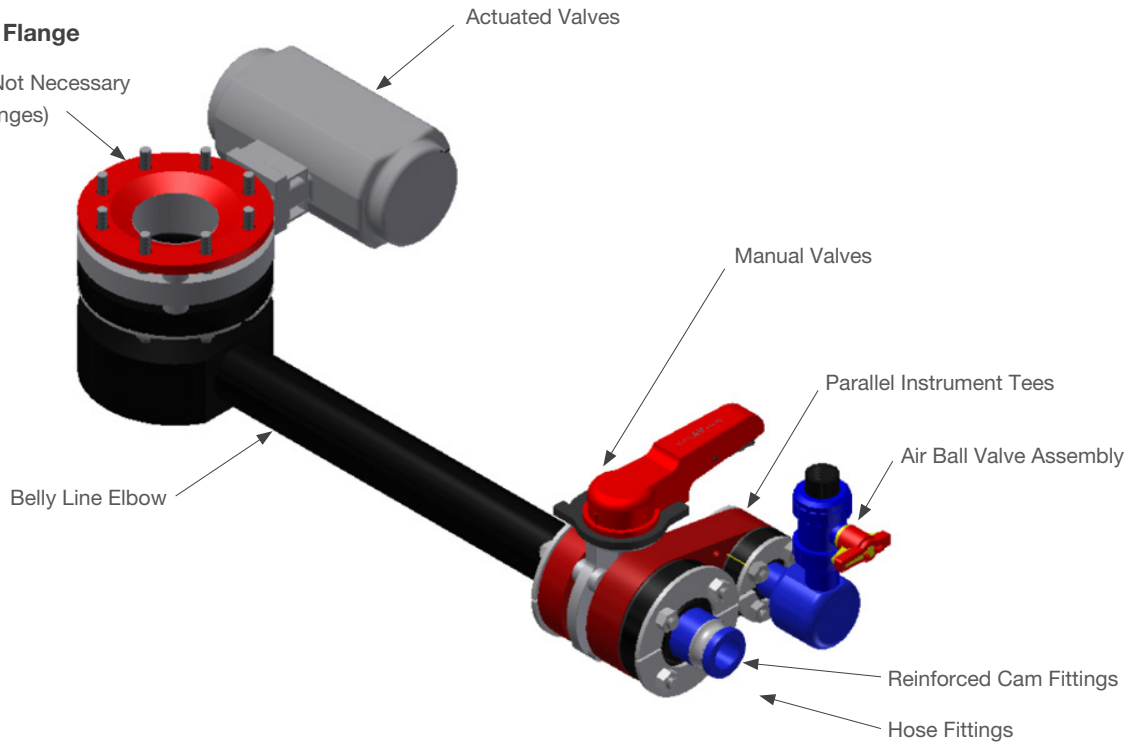
- 1** <15% loss in property values. Little or no chemical attack.
- 2** 15-30% loss in property values. Minor chemical attack.
- 3** 30-50% loss in property values. Moderate chemical attack.
- NR** Not recommended. > 50% loss in property values.
- *** No data available.



Full Unloading Elbow Assembly

TTMA Adapter Flange

(Sold if Needed; Not Necessary on ANSI Style Flanges)



Elbows

Elbows are available in various heights, lengths and up to 6" in diameter. Can match TTMA or ANSI style sump flanges.

[More info on page 3.](#)



Parallel Instrument Tee

Salco's Parallel Instrument Tees can be used in place of a standard tee, and reduce overall length to allow for sample parts and air purge lines to be applied.

[More info on page 4.](#)



Cam Connection

Salco's patented reinforced Stainless Steel or Titanium cam fittings provide the greatest chemical compatibility and durability out of any cam fittings in the market.

[More info on page 5.](#)

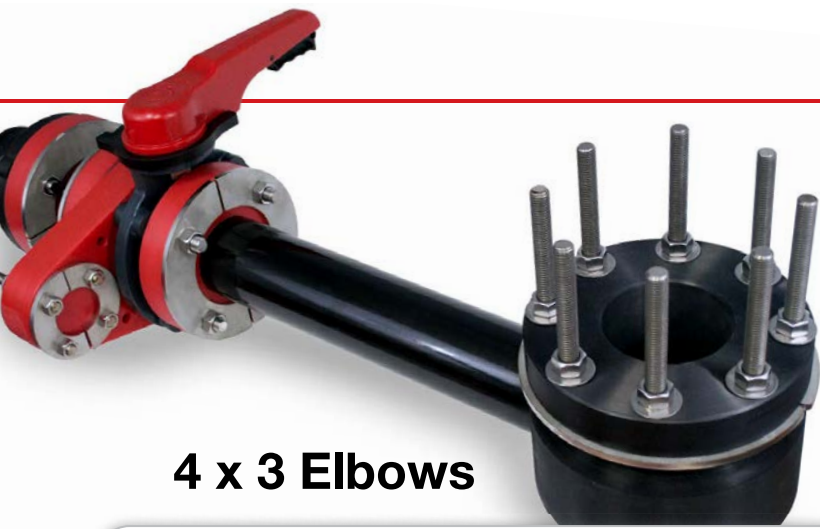


Air Connection

Salco's UHMWPE accompanies Asahii Air Pro valves to offer the most chemically compatible valve assembly.

[More info on page 5.](#)





Unloading Elbows

4 x 3 Elbows

Complete assembly shown,
Only elbow portion listed below

Part Number	Flange Size	Total Height	Elbow Length	Total Length *
HS4X3X90PE7	4" ANSI Flange x 3" ANSI Flange	7"	23"	~36"
HS4X3X90PE4SG	4" ANSI Flange x 3" ANSI Flange	7"	22 1/2"	35 1/2"
HS4X3X90PE14	4" ANSI Flange x 3" ANSI Flange	7"	24 5/8"	37 5/8"
HS4X3X90PE10	4" TTMA Flange x 3" ANSI Flange	7"	16 7/8"	27 7/8"
HS4X3X90PE13	4" TTMA Flange x 3" ANSI Flange	7"	10 11/16"	23 11/16"

4 x 2 Elbows

Part Number	Flange Size	Total Height	Elbow Length	Total Length *
HS4X2X90PE3	4" ANSI Flange x 2" ANSI Flange	8 3/8"	20"	33"
HS4X2X90PE4SG	4" ANSI Flange x 2" ANSI Flange	6 1/4"	10"	23"
HS4X2X90PE6SG	4" ANSI Flange x 2" ANSI Flange	6 1/4"	20"	33"
HS4X2X90PE9SG	4" ANSI Flange x 2" ANSI Flange	6 1/4"	22 1/2"	35 1/2"
HS4X2X90PE11	4" ANSI Flange x 2" ANSI Flange	8"	5 3/16"	18 3/16"

3 x 2 Elbows

Part Number	Flange Size	Total Height	Elbow Length	Total Length *
HS3X2X90PE1	3" ANSI Flange x 2" ANSI Flange	9 1/2"	6"	19"
HS3X2X90PE4	3" ANSI Flange x 2" ANSI Flange	7"	5 1/4"	18 1/4"
HS3X2X90PE5	3" ANSI Flange x 2" ANSI Flange	9 1/2"	6"	19"
HS3X2X90PE7	3" ANSI Flange x 2" ANSI Flange	9 1/2"	6"	19"
HS3X2X90PE8	3" ANSI Flange x 2" ANSI Flange	9 1/8"	7"	20"

If you don't see an unloading assembly size above that will work with your trailer, please call your technical sales rep.

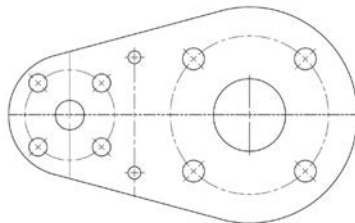
* Total length assumes the assembly includes a 2" thick manual valve, a 3"x1" parallel instrument tee, an air valve assembly, and either flange x cam fitting.

Parallel Instrument Tees

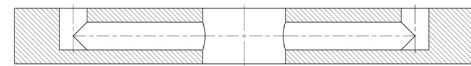
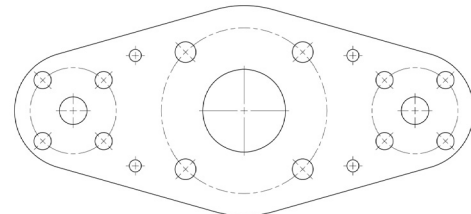
Salco's parallel instrument tees can be used in place of a standard tee, which reduces overall length to allow for sample ports and pressure gauges to be applied.



Single Port



Multi-Port



Part Number	Tee Size	Bolt Circle
HSPIT4X2	4" x 2"	7.50" x 3.75"
HSPIT4X1	4" x 1"	7.50" x 3.125"
HSPIT3X3	3" x 3"	6.00" x 6.00"
HSPIT3X2	3" x 2"	6.00" x 4.75"
HSPIT3X1	3" x 1"	6.00" x 3.125"
HSPIT2X2	2" x 2"	4.75" x 4.75"
HSPIT2X1	2" x 1"	4.75" x 3.125"

Part Number	Tee Size	Bolt Circle
HSPIT3X1X2	3" x 1" x 2"	6.00" x 3.125" x 4.75"
HSPIT3X1X1	3" x 1" x 1"	6.00" x 3.125" x 3.125"
HSPIT2X1X1	2" x 1" x 1"	4.75" x 3.125" x 3.88"

If you don't see a Parallel Instrument Tee size above that will work with your trailer, please call your technical sales rep.

Cam Fittings

Salco's reinforced cam fittings allow for high chemical resistance while holding higher pressures with the Steel or Titanium reinforcement. **Cam Fittings meet A-A-59326 specifications**



Flange x Cam

Part Number	Size	Reducer	Reinforcement	Service
HS3FTKRPY	3"	No	Stainless Steel	Chlor-Alkali Chemicals
HS3FTKRPY01	3"	No	Titanium	Sodium hypochlorite, Chlor-Alkali, abrasion

* Also available in 2" and other sizes as requested



Reducing Flange x Cam

Part Number	Size	Reducer	Reinforcement	Service
HS23FTKRPY	3" Flange x 2" Cam	Yes	Stainless Steel	Chlor-Alkali Chemicals
HS23FTKRPY01	3" Flange x 2" Cam	Yes	Titanium	Sodium hypochlorite, Chlor-Alkali, abrasion

* Also available in 2" and other sizes as requested

Air Valves

Straight Option



90° Option



180° Option



Part Number	Part Number	Part Number
HSAVAPE0104	HSAVAPE44412	HSAVAPE37058

End Connections

Caps



UHMWPE Cap
Available in 2"

Sight Glass Flanges



Sight Glass Flange
Available in 2" and 3"

Flanges



Blind Flange
Available in 2" and 3"



Reinforced Blind Flange
Available in 2" and 3"

Air Manifold

Used in the loading and unloading of corrosive products from tank trucks, an Air Manifold serves as a multiple ported entry point into a main product pipeline. In addition, it is also used for venting and scrubbing vapors during the unloading process.

Air Manifolds are also used on truck tank air supply lines.



Hose Fittings



Flanged Hose Barb

Part Number	Size	Connection	Reinforcement
HS2FTBPY	2"	Flange by Hose Barb	No
HS3FTBPY	3"	Flange by Hose Barb	No
HS3X2FTBPY	3" Flange x 2" Hose Barb	Flange by Hose Barb	No



Male / Female Cam

Part Number	Size	Connection	Reinforcement	Arms / Pin Material
HS2KREP	2"	Male Cam by Hose Barb	Stainless Steel	NA
HS2KREP01	2"	Male Cam by Hose Barb	Titanium	Stainless Steel
HS2KRFP03A	2"	Female Quick Connect Hose Barb	Encapsulated Steel	Stainless Steel
HS2KRFP06A	2"	Female Quick Connect Hose Barb	Encapsulated Steel	Titanium
HS2KRFP06A	2"	Female Quick Connect Hose Barb	Encapsulated Steel	Stainless Steel



Female x Female Cam

Part Number	Size	Connection	Reinforcement	Arms / Pin Material
HSDC2X2S603A	2"	Female Cam x Female Cam	Stainless Steel	Stainless Steel

Truck Manway Plate

Approved for DOT 407 and 412 trailer applications

The 18" and 20" ANSI flange manway covers are designed to extend the lifespan of the manway.

Kynar® coated carbon steel

reinforcement to protect against spills and vapor exposure.



Third-party laboratory tested

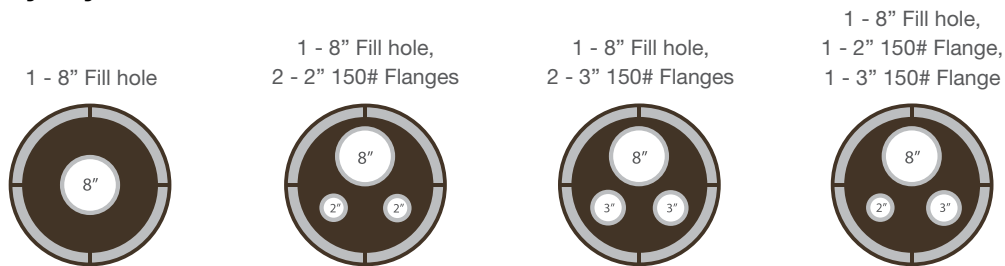
The Salco Products UHMWPE lined/Kynar® coated covers are proven to prevent premature failure in corrosive service.

Available Bolting Patterns:

- 22" Bolt circle, (16 - 3/4" Bolt holes)
- 22 3/4" Bolt circle, (16 - 3/4" Bolt holes)
- 25" Bolt circle, (20 - 1" Bolt holes)

- UHMWPE on all wetted surfaces for corrosion resistance.
- Can be used in an open or closed loop system.
- Exceeds DOT 178.345-5 pressure requirements.
- Kynar® coating can be repaired in the field for small areas.
- Coating can be spark tested up to 2000 volts.
- Serrated sealing surfaces for leak-free seal. UHMWPE allows for higher compression/torque vs rubber lining.
- Bolting patterns cover FRP trailer designs as well as the standard 18" ANSI flanged steel rubber lined trailers.
- Shorter lead times than traditional FRP or rubber lined steel designs.
- Over 600 of these plates in service on rail tank cars today.

Available Manway Layouts:



Gaskets, Valves and Hardware



Gaskets

Salco is a one-source supplier of specialty gaskets, cut to your specific size for your specific need. Some of our most common gasket materials are:

Peroxide Cured EPDM – For use in Hydrochloric Acid

Viton – For use in Hydrochloric Acid, Sodium Hypochlorite, etc.

Santoprene – For use in various chemicals, call for more details

*Other options available



Studs / Nuts

Studs and nuts are available in a variety of sizes and lengths to suit your need. Some of our most common materials are:

18-8 Stainless Steel

Teflon Coated Steel



Segmented Washers

Washers help prevent creep by distributing load across the entire flange face. Recommended for Salco PE flange faces.

Segmented washers are available in many sizes, and available in the following material:

304 Stainless Steel

Butterfly Valves



Asahii Valves

Asahi's thermoplastic fluid flow products are used for the control, transmission, and containment of corrosive fluids and high purity liquids, certain flammable gases, and compressed air.

Minimum rated operating temperature: 34°F

Manual and actuated Butterfly Valves are available in 2" - 6" sizes.



Chemline Valves

A fluoropolymer lined butterfly valves feature a composite thermoset fiberglass body and TFM seats. These durable valves are lightweight for ease of handling, and designed for zero leakage in the toughest of corrosive applications up to 130°C (265°F) at 150 psi.

Minimum rated operating temperature: ≥ -30°F



Xomox Valves

XOMOX high performance butterfly valves handle virtually any process application. Available to fit ASME (ANSI) or DIN piping systems in pressure classes 150, 300 and 600 (PN 10/16, PN 25/40, and PN63/100). Standard valves are offered with soft (PTFE) seats, Fire-tested, or high temperature metal seats.



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