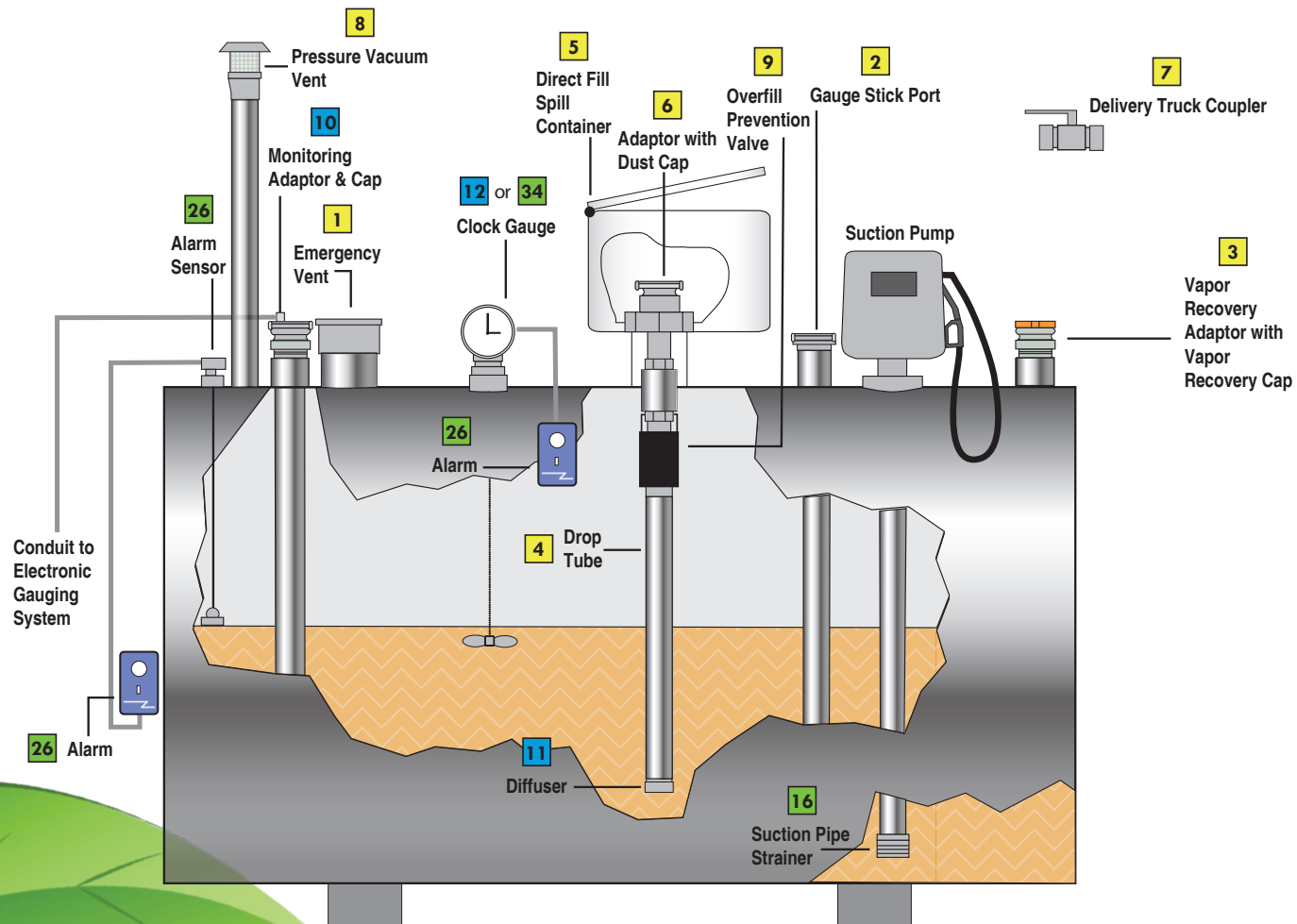




# CARB Phase I Enhanced Vapor Recovery AST Certified Products (VR-402-E)



Single Wall Tank with Top Fill



**LEGEND**

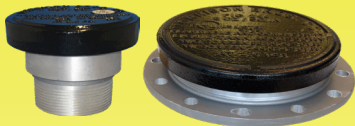
**CERTIFIED REQUIRED PRODUCTS**  
 These products are required on gasoline Phase 1 EVR aboveground storage tank systems.

**CERTIFIED OPTIONAL PRODUCTS**  
 These products are not required for EVR compliance; however, if a monitoring cap and adaptor, a drop tube diffuser, and/or a mechanical tank gauge are needed for a tank system, then these Morrison Bros. Co. CARB AST EVR products are required on the tank system.

**RECOMMENDED PRODUCTS**  
 These products are not considered part of the Phase 1 EVR AST system certified by CARB but may be needed to complete a tank system.

**CERTIFIED REQUIRED PRODUCTS**

**1** Fig. 244 Series Emergency Vent



**2** Fig. 305 Series Gauging Port Adaptor & Cap

*(Note: The mechanical gauge can be substituted for the gauge stick port.)*



**3** Fig. 323/323C Series Vapor Adaptor & Cap



**4** Fig. 419 Series Drop Tube



**5** Fig. 516 Series Spill Container



**6** Fig. 927/735DC Series Dry Disconnect Adaptor & Cap



**7** Fig. 928 Series Dry Disconnect Coupler



**8** Fig. 5885 Husky Series Pressure Vacuum Vent



**9** Fig. 9095 Series Overfill Prevention Valves



**CERTIFIED OPTIONAL PRODUCTS**

**10** Fig. 305 Series Monitoring Adaptor & Cap



**11** Fig. 539 Series Drop Tube Diffuser



**12** Fig. 818, 818C, 918, 918C, & 918DP Series Mechanical Tank Gauge

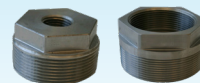
*(Note: The mechanical gauge can be substituted for the gauge stick port.)*



**13** Fig. 560, 561, 562, & 563 Series Extractors



**14** Fig. 184 & 184S Series Bushings



**RECOMMENDED PRODUCTS**

**15** Fig. 78 Expansion Relief Valve

**16** Fig. 157 Suction Pipe Strainer

**17** Fig. 158 Series Vertical Check Valve

**18** Fig. 246A Series Swing Check Valve

**19** Fig. 284 Series Line Strainer

**20** Fig. 346 Series External Emergency Valve

**21** Fig. 515 Series Remote Fill Spill Container

**22** Fig. 715 Series Remote Fill Box

**23** Fig. 691 Series Ball Valve

**24** Fig. 710 Series Solenoid Valve

**25** Fig. 910 or 912 Series Anti-Siphon Valve

**26** Fig. 918 Alarm & Sensor

**27** Fig. 958 Series Check Valve

**28** Fig. 434/434S or 435 Dispenser Pedestal

**29** Fig. 610 Hose Retriever & 611 Hose Hanger

**30** Fig. 934 Single Poppet Foot Valve

**31** Fig. 446 Emergency Shut-Off Valve

**32** Fig. 924LS Liquid Sensor

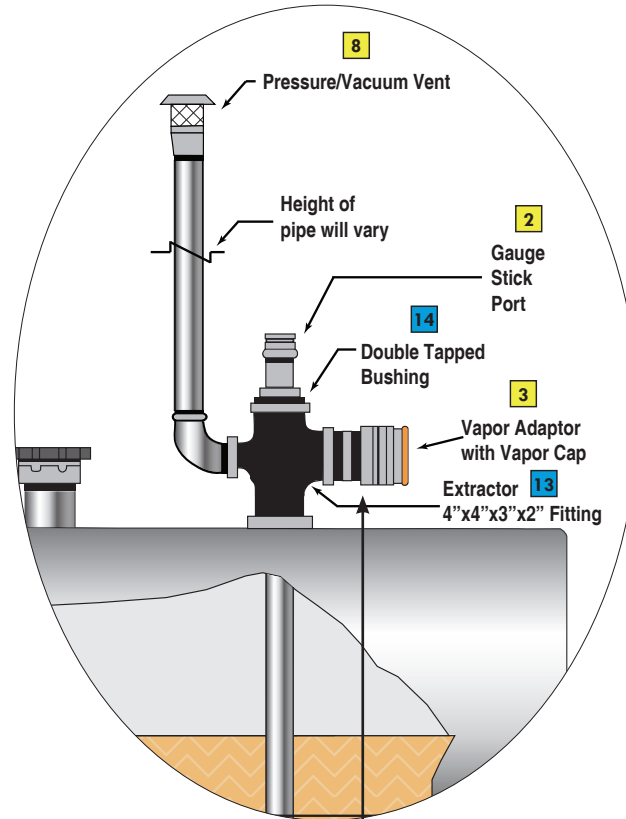
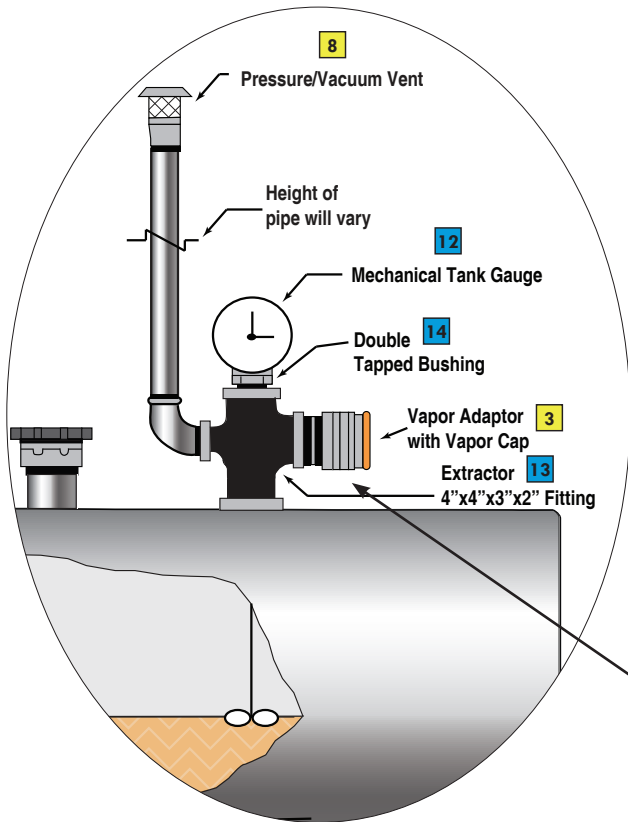
**33** Fig. 925 Multi-Level Sensor

**34** Fig. 1218 Electronic Tank Gauge

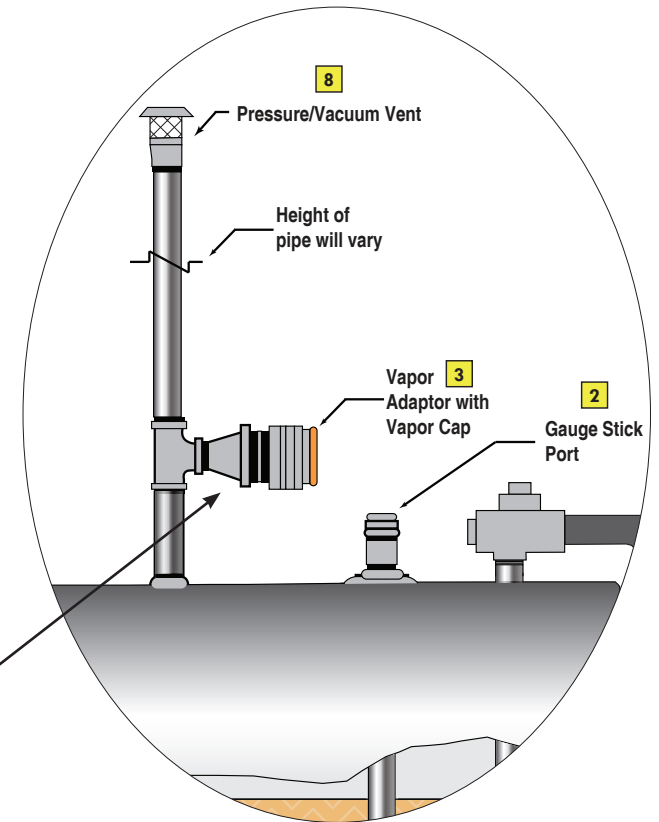
# Alternate Phase I Installation Configurations for Existing Aboveground Storage Tanks

## Vent, Vapor & Manual Gauge

### Vent, Vapor & Gauge

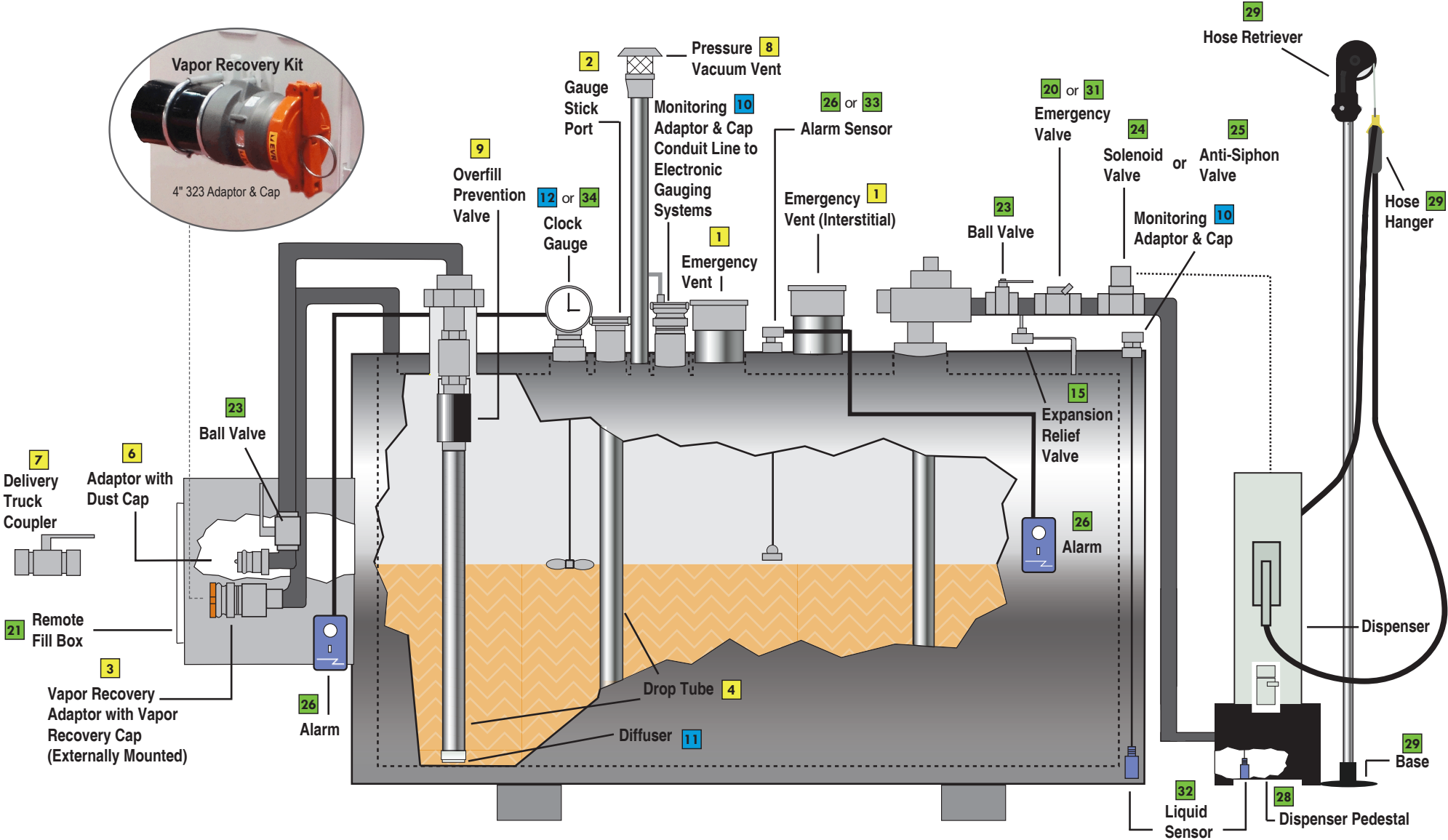


### Vent & Vapor



The diameter of the return vapor piping shall be greater than or equal to the diameter of the product drop tube.

# Protected Double Wall Tank with Tank-Mounted Remote Fill



# EVR Product Listing

## CERTIFIED REQUIRED PRODUCTS

1 244 Emergency Vents		
2440--0170AVEVR	4" 16oz./sq.in.; Female NPT	
2440--0900AVEVR	5" 16 oz./sq.in.; Female NPT	
2440--0200AVEVR	6" 8oz./sq.in.; Female NPT	
2440--0400AVEVR	6" 16oz./sq.in.; Female NPT	
2440--0600AVEVR	8" 8oz./sq.in.; Female NPT	
2440--0700AVEVR	8" 16oz./sq.in.; Female NPT	
<hr/>		
2440MA0030AVEVR	2" 16oz./sq.in.; Male NPT	
2440M-0060AVEVR	3" 16oz./sq.in.; Male NPT	
2440M-0170AVEVR	4" 16oz./sq.in.; Male NPT	
2440M-0900AVEVR	5" 16oz./sq.in.; Male NPT	
2440M-0200AVEVR	6" 8oz./sq.in.; Male NPT	
2440M-0400AVEVR	6" 16oz./sq.in.; Male NPT	
2440M-0600AVEVR	8" 8oz./sq.in.; Male NPT	
2440M-0700AVEVR	8" 16oz./sq.in.; Male NPT	
<hr/>		
2440F-0170AVEVR	4" 16oz./sq.in.; Flanged	
2440F-0050AVEVR	6" 8oz./sq.in.; Flanged	
2440F-0075AVEVR	6" 16oz./sq.in.; Flanged	
2440F-0100AVEVR	8" 8oz./sq.in.; Flanged	
2440F-0200AVEVR	8" 16oz./sq.in.; Flanged	
2440F-0400AVEVR	10" 8oz./sq.in.; Flanged	
2440F-0500AVEVR	10" 16oz./sq.in.; Flanged	
<i>All the above available with stainless steel screens except for the 8" and 10".</i>		

2 305 Gauge Stick Port Adaptor & Cap		
305---0000AAEVR	2" Tight Fill Adaptor	
305C--2000ACEVR	2" Top Seal Cap	
305GSP2000AKEVR	2" Gauge Stick Cap/Adaptor	
<i>This requires a 419 drop tube.</i>		

3 323 Vapor Recovery Adaptor & Cap		
323---0300AAEVR	4" x 3" Vapor Recovery Adaptor	
323---0400AAEVR	4" x 4" Vapor Recovery Adaptor	
323C--0100ACEVR	4" Vapor Recovery Cap	
<b>Vapor Recovery Kits for 715 Remote Fill Box Contain EVR components:</b>		
715---VR30 AK	3" Cap, Adaptor, & 2 Clamps	
715---VR40 AK	4" Cap, Adaptor, & 2 Clamps	

4 419 Drop Tube		
419---02061TEVR	2" x 6' Aluminum Drop Tube	
419---03081TEVR	3" x 7'9" Aluminum Drop Tube	

5 516 Direct Fill Spill Container		
516MO-0400ACEVR	4" Male, Offset	
516O--0400ACEVR	4" Female, Offset	

6 927/735 Dry Disconnect Adaptor & Cap		
927---0200AAEVR	2" Adaptor	
927---0300AAEVR	3" Adaptor	
927---0400AAEVR	4" Adaptor	
9095A-5201AAEVR	4" Female NPT x 2" Dry Disconnect, Top Only (See 9095 series for complete valve assembly.)	
735DC-2000ACEVR	2" Dust Cap	
735DC-2500ACEVR	2½" Dust Cap for 2" 927 Adaptors	
735DC-3000ACEVR	3" Dust Cap	
735DC-4000ACEVR	4" Dust Cap for 3" & 4" 927 Adaptors	
<i>All the above available in an anodized version.</i>		

7 928 Dry Disconnect Coupler		
928---0150ACEVR	1½" Coupler	
928---0200ACEVR	2" Coupler	
928---0300ACEVR	3" Coupler	

8 5885 Husky Pressure Vacuum Vent		
5885--0100 1V	2" P/V Vent 2.5" WC	

9 9095 Overfill Prevention Valves		
9095AA3200AVEVR	2" Passivated with Female Thd. Adaptor	
9095AA3300AVEVR	3" Passivated with 3"x6" Female Thd. Bushing	
9095AA4200AVEVR	3" Passivated with Female Thd. Adaptor	
9095AA5200AVEVR	2" Passivated with Male Dry Disconnect	
9095AA9200AVEVR	2" Passivated Less Top	
9095AA9300AVEVR	3" Passivated Less Top	
9095C-9100AVEVR	2" Less Top (Low Profile)	
9095C-9200AVEVR	2" Less Top	
9095C-5200AVEVR	2"x 4" Dry disconnect x Female NPT	
9095CA3200AVEVR	2"x 4" Aviation Model	
9095CA5200AVEVR	2"x 4" Aviation Model with Dry Disconnect	
9095CA9200AVEVR	2"x 4" Aviation Model Less Top	
9095C-3200AVEVR	2" w/ 2"x4" Female thd. Bushing	
9095X-6200AVEVR	2" Low Profile	
9095X-6800AVEVR	2" General Purpose & Aviation	
<i>Nickel plated options available (aviation series.)</i>		

## CERTIFIED OPTIONAL PRODUCTS

10 305 Tank Monitor Adaptor & Cap		
305---0000AAEVR	2" Monitoring Adaptor	
305---0200AAEVR	4" Top Seal Adaptor	
305XP-1200ACEVR	4" Monitoring Cap	
305XP-2200ACEVR	2" Monitoring Cap	
305XP-2400ACEVR	2" Monitoring Cap	
305XP-0200ACEVR	4" Monitoring Cap	
305XP-0100ACEVR	4" Monitoring Cap	
305XP-1100ACEVR	4" Monitoring Cap	
305XPA1200AKEVR	4" Monitoring Cap & Adaptor	
305XPA2200AKEVR	2" Monitoring Cap & Adaptor	
305XPA2400AKEVR	2" Monitoring Cap & Adaptor	
305XPA0100AKEVR	4" Monitoring Cap & Adaptor	
305XPA1100AKEVR	4" Monitoring Cap & Adaptor	
305XPA0200AKEVR	4" Monitoring Cap & Adaptor	

11 539 Drop Tube Diffuser		
539AS-0200ADEVR	2" Aluminum, Slip-on	
539AS-0300ADEVR	3" Aluminum, Slip-on	
539AT-0200ADEVR	2" Aluminum Thd.	
539AT-0300ADEVR	3" Aluminum Thd.	
<i>All the above available in an anodized version.</i>		

12 818 Mechanical Tank Gauge		
818---0100AGEVR	2", Standard Float	
818---0400AGEVR	2", Drop Tube Float	
818C--0100AGEVR	2" Less Face, Standard Float	
818C--0400AGEVR	2" Less Face, Drop Tube Float	
818CF-0100AGEVR	2" Less Face, Fem. Thd., Std Float	
818CF-0400AGEVR	2" Less Face, Fem. Thd., DT Float	
818F--0100AGEVR	2" Female Thd., Standard Float	
818F--0400AGEVR	2" Female Thd., Drop Tube Float	
<i>Metric readout and custom face options available.</i>		

12	918 Clock Gauge Less Alarm	
918---0000AGEVR	2" Male Thd., Standard Float	
918---2000AGEVR	2" Male Thd., Drop Tube Float	
918C---0000AGEVR	2" Less Face, Male, Std Float	
918C---2000AGEVR	2" Less Face, Male, DT Float	
918CF-0000AGEVR	2" Less Face, Female, Std Float	
918CF-2000AGEVR	2" Less Face, Female, DT Float	
918F---0000AGEVR	2" Female Thd., Standard Float	
918F---2000AGEVR	2" Female Thd., Drop Tube Float	
918DP-0000AGEVR	Two Set Points, Male Thd., Standard Float, Less Alarm Box	
918DP-2000AGEVR	Two Set Points, Male Thd., Drop Tube Float, Less Alarm Box	
918DPF0000AGEVR	Two Set Points, Female Thd., Standard Float, Less Alarm Box	
918DPF2000AGEVR	Two Set Points, Female Thd., Drop Tube Float, Less Alarm Box	
<i>Metric readout and custom face options available.</i>		
<i>These gauges connect to alarm box assemblies 918S/D/Q or 918SB/DB/QB.</i>		

13	560, 561, 562, & 563 Series Extractors	
560---0101 MBE	4" x 4" x 2" x 2"	
561---0101 MBE	4" x 4" x 2"	
562---0101 MBE	4" x 4" x 3" x 2"	
563---0101 MBE	4" x 4" x 3"	

14	184 & 184S Series Double Tapped Bushings	
184---0000 1B	1½" x ¾" x ¾"	
184---0110 1B	1½" x ½" x ½"	
184---0120 1B	1¼" x 1" x 1"	
184---0130 1B	1½" x 1" x 1"	
184---0100 1B	2" x ¾" x ¾"	
184---0200 1B	2" x ½" x ½"	
184---0300 1B	2" x ¾" x ¾"	
184---0400 1B	2" x 1" x 1"	
184---0500 1B	2" x 1¼" x 1¼"	

184---0600 1B	2" x 1½" x 1½"
184---0800 1B	2½" x 1¼" x 1¼"
184---0900 1B	2½" x 1½" x 1½"
184---1000 1B	2½" x 2" x 2"
184---1100 1B	3" x 1" x 1"
184---1200 1B	3" x 1¼" x 1¼"
184---1300 1B	3" x 1½" x 1½"
184---1400 MB	3" x 2" x 2"
184---1500 1B	3" x 2½" x 2½"
184---2200 MB	4" x 1" x 1"
184---2300 MB	4" x 1¼" x 1¼"
184---2400 MB	4" x 1½" x 1½"
184---2500 MB	4" x 2" x 2"
184---2600 1B	4" x 2½" x 2½"
184---2700 MB	4" x 3" x 3"
<i>Stainless steel options available.</i>	

## RECOMMENDED PRODUCTS

15	078DI Expansion Relief Valve	
078DI-0100 AV	½"	25 PSI Expansion Relief
078DI-0200 AV	½"	40 PSI Expansion Relief
078DI-0300 AV	½"	100 PSI Expansion Relief

16	157 Suction Pipe Strainer	
157---0100 AS	1½"	Suction Strainer
157---0200 AS	2"	Suction Strainer

17	158A Vertical Check Valve	
158A-2100 AV	¾"	Vertical Check Valve (Viton)
158A-2200 AV	1"	Vertical Check Valve (Viton)
158A-2400 AV	2"	Vertical Check Valve (Viton)
158A-2600 AV	3"	Vertical Check Valve (Viton)
<i>Expansion relief available.</i>		

18	246A Swing Check Valve	
246A--0100 AV	1½"	Brass, Threaded
246A--0200 AV	2"	Brass, Threaded
246A--0400 AV	3"	Brass, Threaded
246ADI0500 AV	2"	Ductile Iron, Threaded
246ADI0600 AV	3"	Ductile Iron, Threaded
246DRF0100 AV	3"	Ductile Iron, Flanged
246DRF0400 AV	4"	Ductile Iron, Flanged
<i>25 or 50 PSI expansion relief available.</i>		

19	284S Stainless Steel Bottom Clean-Out Line Strainer	
284S--1000 1S	½"	SS, w/20 Mesh Line Strainer
284S--1100 1S	¾"	SS, w/20 Mesh Line Strainer
284S--1200 1S	1"	SS, w/20 Mesh Line Strainer
284S--3000 1S	1½"	SS, w/20 Mesh Line Strainer
284S--3100 1S	2"	SS, w/20 Mesh Line Strainer
284S--3200 1S	3"	SS, w/20 Mesh Line Strainer
<i>40 &amp; 100 mesh screens are available.</i>		
284B Brass Bottom Clean-Out Line Strainer		
284B--1000 1S	½"	Brass, w/20 Mesh Line Strainer
284B--1100 1S	¾"	Brass, w/20 Mesh Line Strainer
284B--1200 1S	1"	Brass, w/20 Mesh Line Strainer
<i>40 &amp; 100 mesh screens are available.</i>		

20	346 External Emergency Valve	
346DI-0400 AV	1½"	Ductile Iron, Female Thd.
346DI-0500 AV	2"	Ductile Iron, Female Thd.
346DI-0600 AV	3"	Ductile Iron, Female Thd.
346FDI0200 AV	2"	Ductile Iron, Flanged
346FDI0300 AV	3"	Ductile Iron, Flanged
346FDI0400 AV	4"	Ductile Iron, Flanged
346SS-0100 AV	1½"	SS, Female Thd.
346SS-0200 AV	2"	SS, Female Thd.

21	515 15-Gallon Remote Fill Spill Container	
515---0200 AC	2"	Pedestal, Female Thd.
515---0300 AC	3"	Pedestal, Female Thd.
515---0400 AC	4"	Pedestal, Female Thd.
515---2200 AC	2" & 2"	Pedestal, Female Thd.
515---2300 AC	3" & 3"	Pedestal, Female Thd.
515---3200 AC	3" & 2"	Pedestal, Female Thd.
5150EM0200 AC	2"	Top Mount, Female Thd.
5150EM0300 AC	3"	Top Mount, Female Thd.
5150EM2200 AC	2" & 2"	Top Mount, Female Thd.
5150EM2300 AC	3" & 3"	Top Mount, Female Thd.
515SD-0200 AC	2"	SS, Pedestal, Female Thd.
515SD-0300 AC	3"	SS, Pedestal, Female Thd.
515SD-0400 AC	4"	SS, Pedestal, Female Thd.
515SD-2200 AC	2" & 2"	SS, Pedestal, Fem. Thd.
515SD-2300 AC	3" & 3"	SS, Pedestal, Fem. Thd.

22	715 Remote Fill Box	
715--TT3-XXXX-0	3"	Fill box only (top connection)
715--TK3-XXXX-0	3"	Fill box only (back connection)
715F-TK2-XXXX-0	2"	Fill box only (in-wall with back connection)
715--TB2-XXXX0	2"	Fill box only (bottom connection)
715--TB3-XXXX-0	3"	Fill box only (bottom connection)
715---VR30 AK	3"	Vapor recovery kit
715---VR40 AK	4"	Vapor recovery kit
<i>X = Consult 715 specification sheets for component options.</i>		
<i>Stainless steel fill box options available.</i>		

23	691 Locking & Non-locking Full Port Ball Brass Valve	
691B--0100 1V	¼" Brass, Locking	
691B--0200 1V	¾" Brass, Locking	
691B--0300 1V	½" Brass, Locking	
691B--0400 1V	¾" Brass, Locking	
691B--0500 1V	1" Brass, Locking	
691B--0600 1V	1¼" Brass, Locking	
691B--0700 1V	1½" Brass, Locking	
691B--0800 1V	2" Brass, Locking	
691B--0900 1V	2½" Brass, Locking	
691B--1000 1V	3" Brass, Locking	
691B--1100 1V	4" Brass, Locking	
Stainless steel and non-locking available.		

24	710 Normally Closed Solenoid Valve with 120/60 Volt	
710---0150 1V	1½" Brass (Viton) AC Coil	
710---0200 1V	2" Brass (Viton) AC Coil	
710---0300 1V	3" Brass (Viton) AC Coil	
710MO-0150 1V	1½" Brass (Viton) AC Coil & Mech. Override	
710MO-0200 1V	2" Brass (Viton) AC Coil & Mech. Override	
710F--0200 1V	2" Flanged Brass (Viton) AC Coil	
710F--0300 1V	3" Flanged Brass (Viton) AC Coil	
710FMO0200 1V	2" Flanged Brass (Viton) AC Coil & Mech. Override	
710SS-2150 1V	1½" SS (Teflon), AC Coil	
710SS-2200 1V	2" SS (Teflon), AC Coil	
710SS-0300 1V	3" SS (Alum.Piston) (Viton Seat), AC Coil	
710SS-3300 1V	3" SS (Teflon Piston & Seat), AC Coil	
710FSS2200 1V	2" Flanged SS (Teflon), AC Coil	
710FSS3300 1V	3" Flanged SS (Teflon Piston & Seat), AC Coil	
710FSM2200 1V	2" Flanged SS (Teflon), AC Coil, Mech. Override	
Other coil voltage options available.		

25	912 Anti-Siphon Valve With Expansion Relief	
912---070500 AV	¾" SS, 0 to 5' of W.C.	
912---071000 AV	¾" SS, 5 to 10' of W.C.	
912---071500 AV	¾" SS, 10 to 15' of W.C.	
912---072000 AV	¾" SS, 15 to 20' of W.C.	
912--100500 AV	1" SS, 0 to 5' of W.C.	
912--101000 AV	1" SS, 5 to 10' of W.C.	
912--101500 AV	1" SS, 10 to 15' of W.C.	
912--102000 AV	1" SS, 15 to 20' of W.C.	

26	918 Alarms & Sensors	
918TCP0400 AA	2" Overflow Alarm Box With 5' Sensor	
918TCP0500 AA	2" Overflow Alarm Box With 9½' Sensor	
918S--1000 AA	Single Channel Tank Alarm Box	
918D--1000 AA	Dual Channel Tank Alarm Box	
918Q--1000 AA	Quad Channel Tank Alarm Box	
918SB-1000 AA	Single Channel Tank Alarm Box w/ Rotating Beacon	
918DB-1100 AA	Dual Channel Tank Alarm Box w/ Rotating Beacon	
918QB-1100 AA	Quad Channel Tank Alarm Box w/ Rotating Beacon	
918AC-0000 AI	System Interface Console with 0 Inputs & 0 Outputs (AC Powered)	
924---0600 AS	6" Brass Adjustable Sensor	
924---1200 AS	12" Brass Adjustable Sensor	
924---2000 AS	20" Brass Adjustable Sensor	
924---3000 AS	30" Brass Adjustable Sensor	
918TCP0400 AS	2" x 5' Sensor Assembly	
918TCP0500 AS	2" x 9½' Sensor Assembly	
Consult website for stainless steel 924 adjustable sensor options and for additional 918AC input/output options.		

27	958 Check Valve	
958---0700 AV	¾" SS	
958---1000 AV	1" SS	
958---10700 AV	¾" SS, Expansion Relief	
958---11000 AV	1" SS, Expansion Relief	

28	434 Dispenser Pedestal	
434--14001 AK	AST pedestal base, platform, and 1 stabilizer bar	
434--14002 AK	AST pedestal base, platform, and 2 stabilizer bars	
434--17001 AK	AST pedestal base, platform, and 1 stabilizer bar	
434--17002 AK	AST pedestal base, platform, and 2 stabilizer bars	
434S-14001 AK	SS AST pedestal base, platform, and 1 stabilizer bar	
434S-14002 AK	SS AST pedestal base, platform, and 2 stabilizer bars	
434S-17001 AK	SS AST pedestal base, platform, and 1 stabilizer bar	
434S-17002 AK	SS AST pedestal base, platform, and 2 stabilizer bars	
Consult website for dispenser compatibility.		

29	610 Hose Retriever & 611 Hose Hanger	
610---0000 AR	Hose Ret. Assembly, Less Wts	
610---0100 AR	Hose Ret. Assembly, with Wt Kit	
610---0103 AK	Single Weight Kit	
610---0203 AK	Two Weight Kit	
610B--0000 AR	Hose Ret. Assembly, with Wt Kit & Base	
610B--0100 WAPB	Standard Base	
610B--0200 AB	Hinged Base	
611---0100 AH	Hose Hanger	
611---0150 AH	Hose Hanger	
611---0200 AH	Hose Hanger	
Hosebuns also available.		

30	934 Single Poppet Foot Valve	
934--10500 AV	½", SS, 25 PSI Expansion Relief	
934--10700 AV	¾", SS, 25 PSI Expansion Relief	
934--11000 AV	1", SS, 25 PSI Expansion Relief	

31	446 Emergency Shut-Off Valve	
446---0050 AV	½" Valve	
446---0075 AV	¾" Valve	
446---0010 AV	1" Valve	

32	924LS Liquid Sensor	
924LS-0150 AS	Level sensor with 15' lead wire	
924LS-0250 AS	Level sensor with 25' lead wire	
924LS-0600 AS	Level sensor with 60' lead wire	

33	925 Multi-Level Sensor	
Consult website for our entire offering of multi-level sensors.		

34	1218 Electronic Tank Gauge	
1218C-0200 AC	System Console monitors up to two tanks	
1218C-0400 AC	System Console monitors up to four tanks	
1218S-2500 AS	25' Tank Sensor	
1218S-5000 AS	50' Tank Sensor	

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