# **Fuel Delivery/Vapor Recovery**

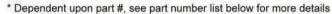
# **Dual Point - Vapor Recovery Elbows**

Application:	In many areas fuel stations are equipped with dual point tank connections, one connection is for the fuel delivery, and the other connection is for the vapor recovery connection. The vapor elbow bottom connection is connected to the fuel station on a ground tank vapor adapter and the top connection to the vapor hose, which returns the fuel vapors back to the tanker.
Standards:	Manufactured to connect to in ground fuel station vapor adapters and cam and groove vapor hose connections.
Materials:	Aluminum body and handle, bronze locking arms *, stainless steel hardware, Baylast™ and Buna seals, and acetal bushings.
Features & Benefits:	<ul> <li>Rugged modular cast aluminum construction</li> <li>Many parts are common throughout the Bayco elbow line, making any necessary maintenance a breeze</li> <li>Grease nipple enables the greasing of the lever stem, and acetal bushings help keep everything moving smoothly, even in the harshest of conditions.</li> </ul>

Inlet probes are standard, and are available with or without outlet poppet valves

- Bolt on outlets allow the outlet to be changed without having to worry about galling of threads. See below for replacement outlets.
- VR6100 Series features a simple to connect push on style connection
- VR6200 and VR6500 series features an ergonomic ball handle lever, which on the 6500 series can be mounted either on the left or right side.
- VR6500 series features heavy duty bolt on arm attachment plate increases the strength of the lever pivot. There
  are no impact susceptible pivot bolts, or casting bosses to break.
- VR6500 series features, arm hinge points use a double yoke design which increases the arm strength
- Biofuel vapor compatible, up to E85 (85% Ethanol) and B20 (20% bio diesel). For detailed fuel compatibility, please refer to the chart shown on page 4.



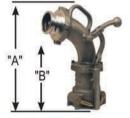




VR6000NP



VR6100



VR6200



VR6500

Part #	Description	Outlet Poppet Valve	"A" Overall Height	"B" Ground Clearance	Vapor Compatibility
VR6000NP	D-handle, 3" adapter outlet	No	171/4"	103/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6100NP	Push-on style, 3" adapter outlet	No	183/4"	121/2"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200NPBU	Ball lever handle, without adapter outlet	No	171/4"	103/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200	Ball lever handle, 3" adapter outlet	Yes	171/4"	103/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200NP	Ball lever handle, 3" adapter outlet	No	171/4"	103/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200PNP	Ball lever handle, 3" adapter outlet with height extension, see page 13 for more info.	No	201/4"	13¾"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200ANP	Ball lever handle, 4" adapter outlet	No	171/4"	103/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200NPB	Ball lever handle, 3" coupler outlet	No	171/4"	103/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200NPBP	Ball lever handle, 3" coupler outlet with height extension, see page 13 for more info	No	201⁄4"	13¾"	Gasoline and diesel, up to E85 & B20 biofuels
VR6200NPDP	Ball lever handle, 4" coupler outlet with height extension, see page 13 for more info	No	201/4"	13¾"	Gasoline and diesel, up to E85 & B20 biofuels
VR6500	Heavy duty ball lever handle, 3" adapter outlet	Yes	171/4"	111/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6500NP	Heavy duty ball lever handle, 3" adapter outlet	No	171/4"	111/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6500LPNP	Heavy duty ball lever locking handle, 3" adapter outlet	No	201/4"	133/4"	Gasoline and diesel, up to E85 & B20 biofuels
VR6000-6	Replacement 3" adapter outlet, for elbows with or without poppets	-	(4.1		Gasoline and diesel, up to E100 & B20 biofuels
6000-17	Replacement 4" adapter outlet, for elbows without poppets. Requires liquid sealant to seal to elbow body.	Şī	•		Gasoline and diesel, up to E100 & B20 biofuels
6000-15	Replacement 3" coupler outlet, for elbows without poppets. Requires liquid sealant to seal to elbow body.	:=1:		•1	Gasoline and diesel, up to E100 & B20 biofuels
6000-14	Replacement 4" coupler outlet, for elbows without poppets. Requires liquid sealant to seal to elbow body.	7	13-6	8	Gasoline and diesel, up to E100 & B20 biofuels

Biofuel Compatible, see fuel compatibility chart on page 4 for more information.

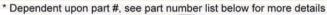
800.355.1991



# **Fuel Vapor Recovery**

# **Vapor Return Valves**

Standards:	Manufactured to connect to vapor hose couplings
Materials:	Aluminum body and buna seals, nylon * or acrylic * sight glass if equipped
Features & Benefits:	<ul> <li>Rugged cast aluminum construction</li> <li>Variety of tank connections to suit any application, including 4" TTMA flange, 3" and 4" Female NPT and 4" Female NPS</li> <li>Air interlock mounting pad. (VR4000 requires 5000AIV, other models can use the 5000AI, 5000AIS or 5000AIST Interlock valves)</li> <li>VR4000 is a bulb design which allows for maximum vapor flow, also features 2 large acrylic sight glasses and a drain plug.</li> <li>Available with or without poppets. Poppeted versions prevent vapor from escaping from the tanker.</li> <li>Easy seal replacement while still on the tanker</li> <li>Biofuel vapor compatible, up to E100 (100% Ethanol) and B20 (20% bio diesel). For detailed fuel compatibility, please refer to the chart shown on page 4.</li> </ul>













	VR4000	VR3100	VR4100	VR4100F	VR4100F-SFI
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Part #	Adapter Size	Tanker Connection	Inlet Poppet Valve	Sight Glass	Description	Vapor Compatibility
VR3100	4"	3" female NPT	Yes	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR3100NP	4"	3" female NPT	No	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100	4"	4" female NPT	Yes	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100NP	4"	4" female NPT	No	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100S	4"	4" female NPS	Yes	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100NPS	4"	4" female NPS	No	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100F	4"	4" TTMA Flange	Yes	Yes	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100FNG	4"	4" TTMA Flange	Yes	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100F-SFI	4"	4" TTMA Flange	Yes	Yes	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4100F-NGNP	4"	4" TTMA Flange	No	No	Vapor valve, low profile design	Gasoline and diesel, up to E100 & B20 biofuels
VR4000	4"	4" TTMA Flange	Yes	Yes 2	Bulb design for maximum flow, (if required use 5000AIV Interlock valve)	Gasoline and diesel, up to E100 & B20 biofuels



# **Orange Vapor Caps**

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Part #	Description	Vapor Compatibility
VR4050AL	Aluminum vapor recovery adapter cap, colored vapor orange, push-pull T handle, buna gasket	Gasoline and diesel, up to E100 & B20 biofuels
VR4050PL	Nylon vapor recovery adapter cap, colored vapor orange, push-pull T handle, buna gasket	Gasoline and diesel, up to E100 & B20 biofuels
VR4050ALC	yasket, with chain	Gasoline and diesel, up to E100 & B20 biofuels
VR4050PLC	Miller was a service of a feet and colored value are as a service will T be added to a color	Gasoline and diesel, up to E100 & B20 biofuels

#### **Vapor Hose Couplings**

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Part #	Coupler Size	Connection Type & Size	Poppet Valve	Probe	Vapor Compatibility
VRC3000AL	3"	3" hose	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
VR4030CS-AL *	4"	3" hose	Yes	Yes	Gasoline and diesel, up to E100 and B20 biofuels
VR4040CS-AL	4"	4" hose	Yes	Yes	Gasoline and diesel, up to E100 and B20 biofuels
VR4040CS-MNPT	4"	4" male NPT	Yes	Yes	Gasoline and diesel, up to E100 and B20 biofuels
4030-CVR-AL	4"	3" hose	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
400-CVR-AL	4"	4" hose	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
4030-DVR-AL	4"	3" female NPT	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
400-DVR-AL	4"	4" female NPT	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
4030-DAVR-AL	4"	3" cam & groove adapter	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
400-DDVR-AL	4"	4" cam & groove coupler	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels
VR4030CS-NP	4"	3" hose	No	Yes	Gasoline and diesel, up to E100 and B20 biofuels



VR4030CS-AL



\* VR4030CS-AL will not work with Civacon 633LVH vapor valve.

# **Fuel Vapor Recovery**

### **Sequential Vapor Vents**

#### Features & Benefits:

- · Available for either 16" or 20" manholes
- · Can be installed to open in sequence with another pneumatically controlled device such as the emergency valve, or open independently by simply plugging the lower of the 2 ports. (use a 1/4" male NPT plug).
- Flange adapter available to adapt 3" TTMA (VR6035SQ) version to a Parker style vent
- · Rugged cast aluminum construction
- · Any necessary maintenance is easy to perform
- Biofuel vapor compatible up to E100 (100% Ethanol) and B100 (100% bio diesel). For detailed fuel compatibility, please refer to the chart shown on page 4.









VR6035SQ VR6030SQ 40193AL

Part #	Description	Vapor Compatibility
VR6030SQ	For 16" manhole, with threaded mounting ring	Gasoline and diesel, up to E100 and B100 biofuels
VR6035SQ	For 20" manhole, with 3" TTMA flange	Gasoline and diesel, up to E100 and B100 biofuels
40193AL	VR6035SQ adapter flange for Parker style vents	Gasoline and diesel, up to E100 and B100 biofuels

See page 10 for TTMA flange gaskets.

## **Inbreathing and Outbreathing Vents**



VRP3500 / VRP3600

VRV3501

Part #	Description	Vapor Compatibility
VRP3500	Outbreathing, opens at no greater than 1 PSI (MC306)	Gasoline and diesel, up to E100 and B100 biofuels
VRP3600	Outbreathing, opens at no less than 1 PSI (DOT406)	Gasoline and diesel, up to E100 and B100 biofuels
VRV3501	Inbreathing, opens at 1.5" Hg (vacuum)	Gasoline and diesel, up to E100 and B100 biofuels

#### Air Interlock Valves













5000AIR

5000AIV

5000AIVHD 5000AIRHD

Part #	Description
5000AI	1" button plunger pneumatic interlock, Baylast™ seals
5000AIST	1½" button plunger pneumatic interlock, Baylast™ seals
5000AIR	Roller ball plunger pneumatic interlock, ideal for use on cabinet doors, Baylast™ seals
5000AIS	1" button plunger pneumatic/electronic interlock, ideal for connecting to lights or the overfill detection system, Baylast™ seals
5000AIV	Paddle plunger pneumatic interlock, for use on VR4000 vapor valve, Baylast™ seals
5000AIHD	Heavy duty, high flow air ports, same foot print as 5000Al, Baylast™ seals
5000AIRHDNE	Roller end for various angles, large air ports, Baylast™ seals
5000AIVHD NE	√ Heavy duty air interlock with paddle plunger, Baylast™ seals