

Aboveground Storage Tank Equipment

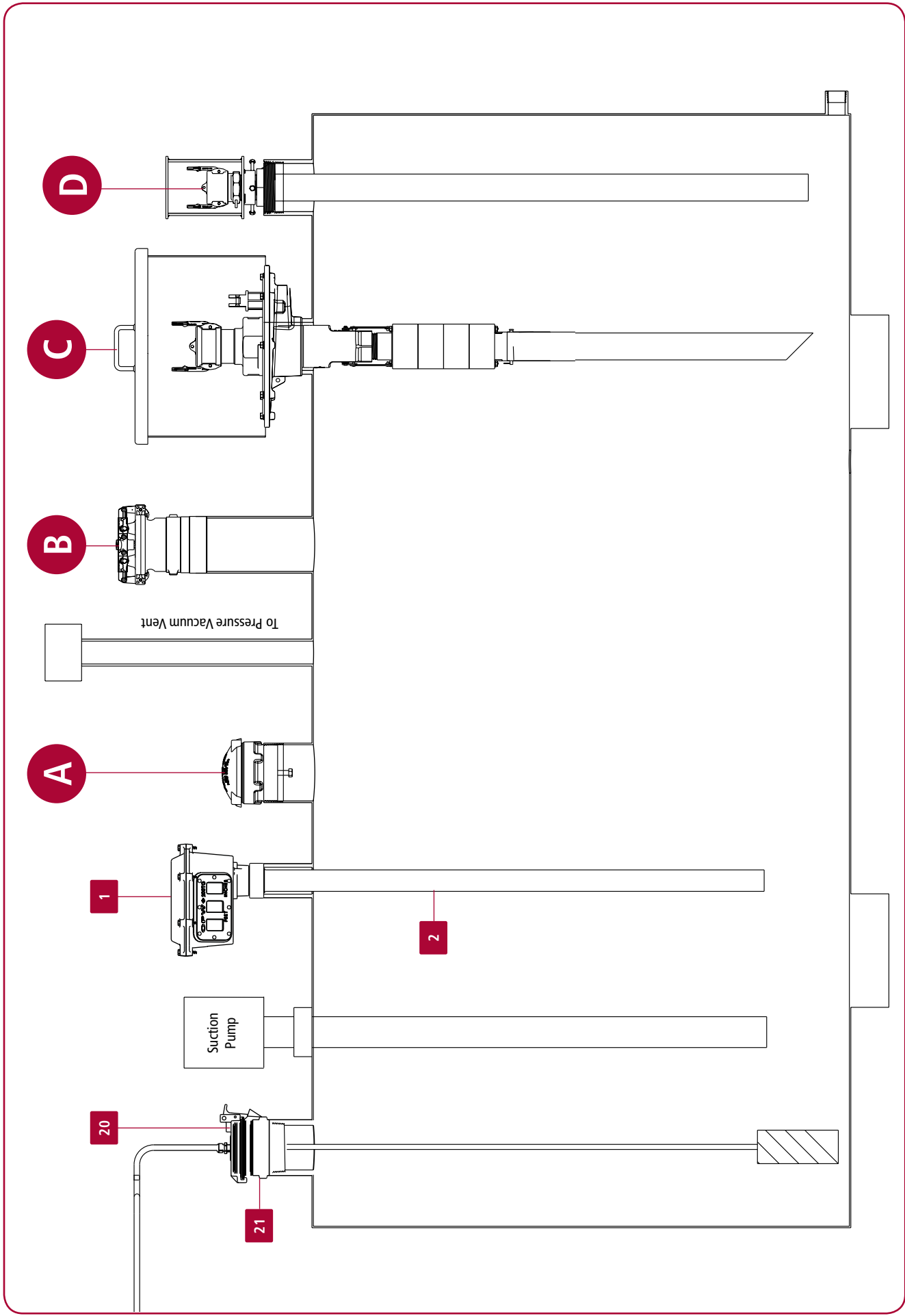


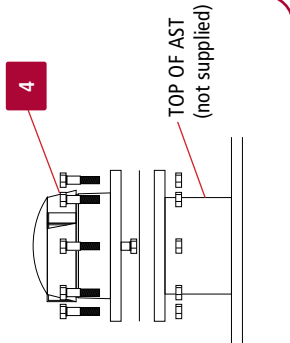
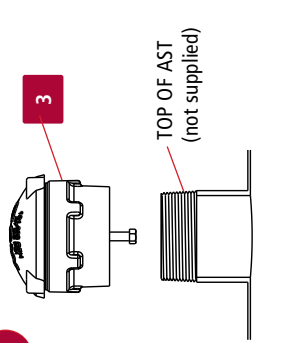
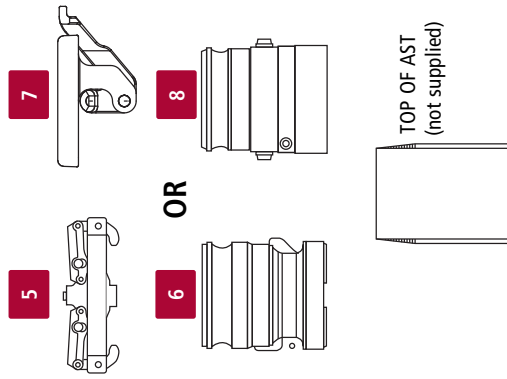
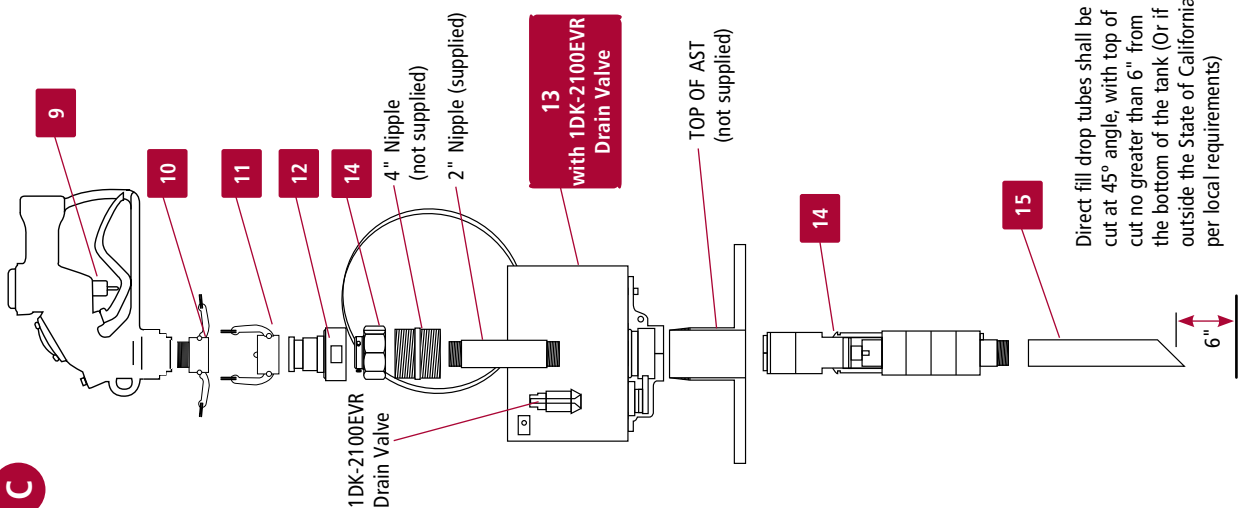
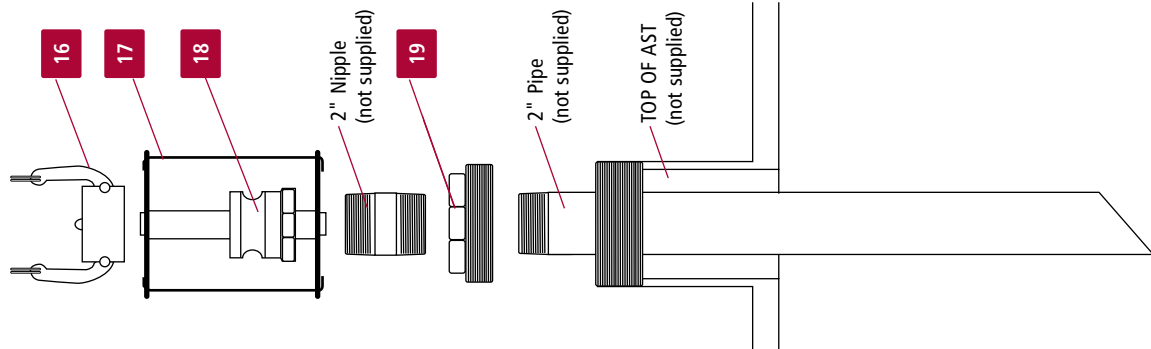
Above Ground Tank Diagrams

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Above Ground Storage Tank - Direct Fill

Typical Non-EVR Direct Fill AST Application



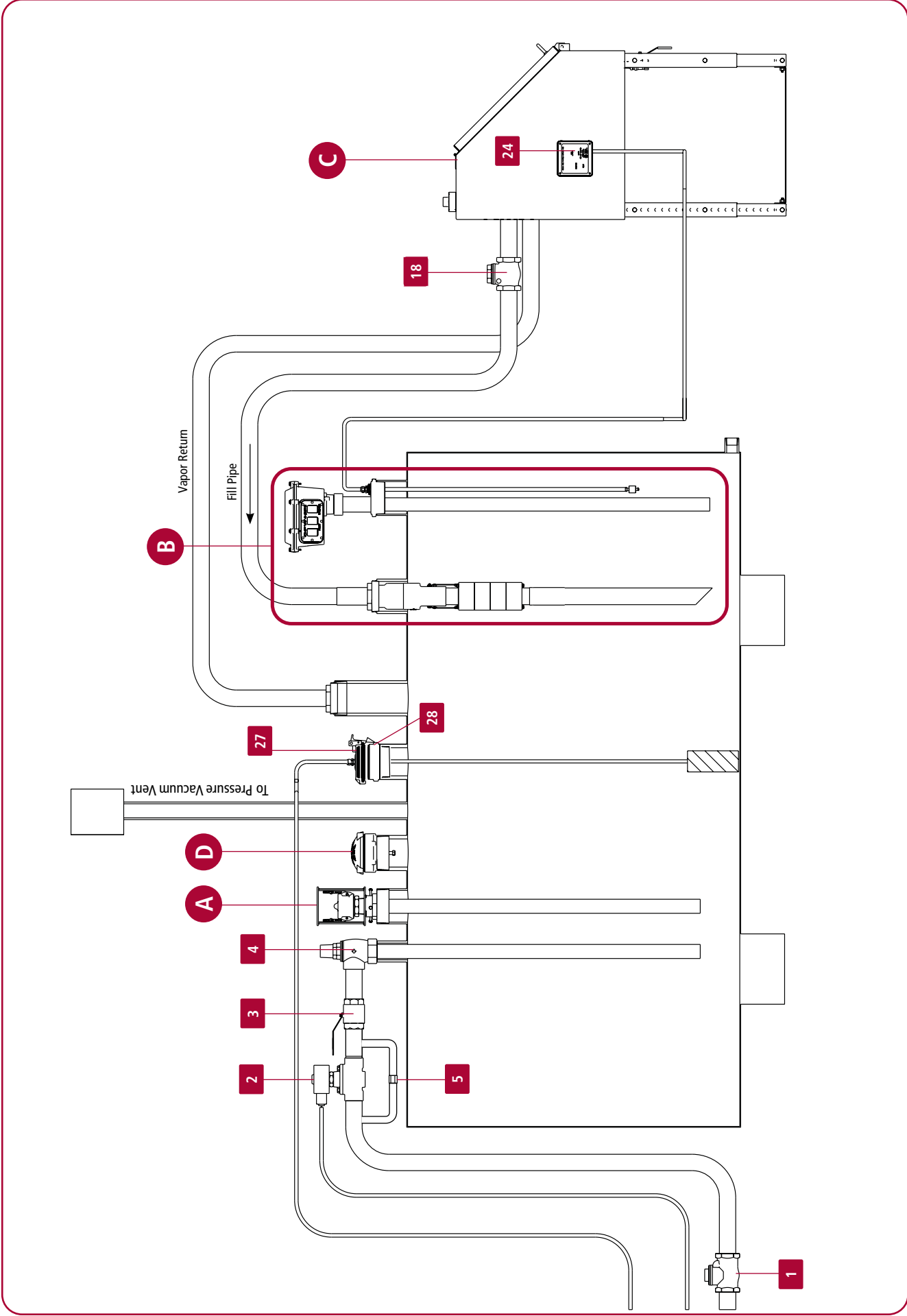
A**B****C****D**

PRODUCT KEY		OPW PART / DESCRIPTION	PAGE
1	200TG-ENG Series Tank Gauge (optional / see Note below)		210
2	61T Series Drop Tube		210
3	301 Series Emergency Vent - NPT Mount		212
4	301 Series Emergency Vent - Flanged Mount		212
5	1711T-7085-EVR Cap		106
6	1611AV Series Vapor Recovery Adaptor		220
7	1711LPC-0300 Low Profile Cap		220
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10	633BD Kamlok™ Coupler		208
11	A) 634B-0150 Dust Cap or 634BK-0090 Lockable Dust Cap fits 633AST-2061 Spout Adaptor B) 634B-0170 Dust Cap or 634BK-0100 Lockable Dust Cap fits 633AST-3061 Spout Adaptor		208
12	633AST-2061 (2" x 2") or 633AST-3061 (3" x 3") - Tank Inlet Spout Adaptor		208
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15	61FT Series Drop Tube		208
16	634B-0150 or 634BK-0090 Cap		208-209
17	204247 Fill Prevention Cage		208
18	633AST Series Adaptor		208
19	53-00XX Series Double Tapped Bushing		133
20	62M Series Monitoring Probe Cap & Adaptor		107
21	FSA-400 Face Seal Adaptor		80

NOTE: The OPW 200TG and 144TA/44TA are not required for EVR compliance, but if a tank gauge or tank alarm is used on your tank that these two OPW products are the only CARB AST EVR certified tank gauge and alarm.

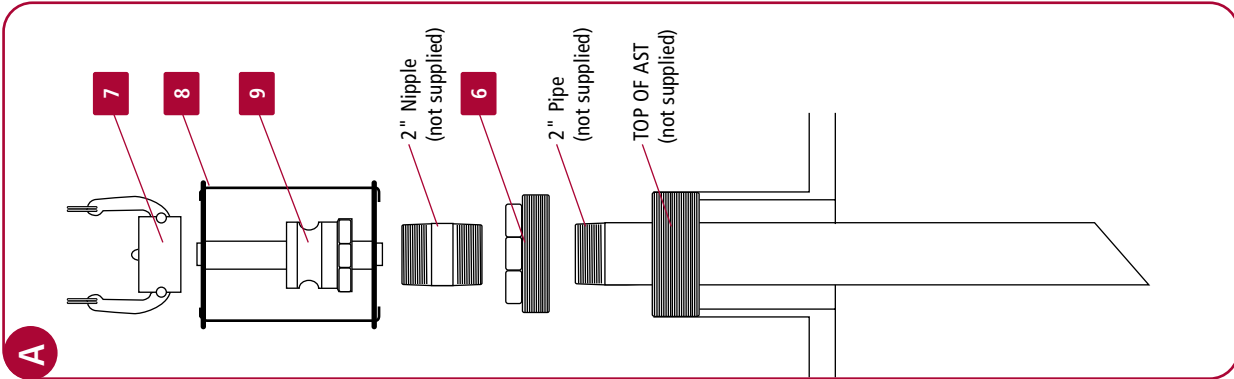
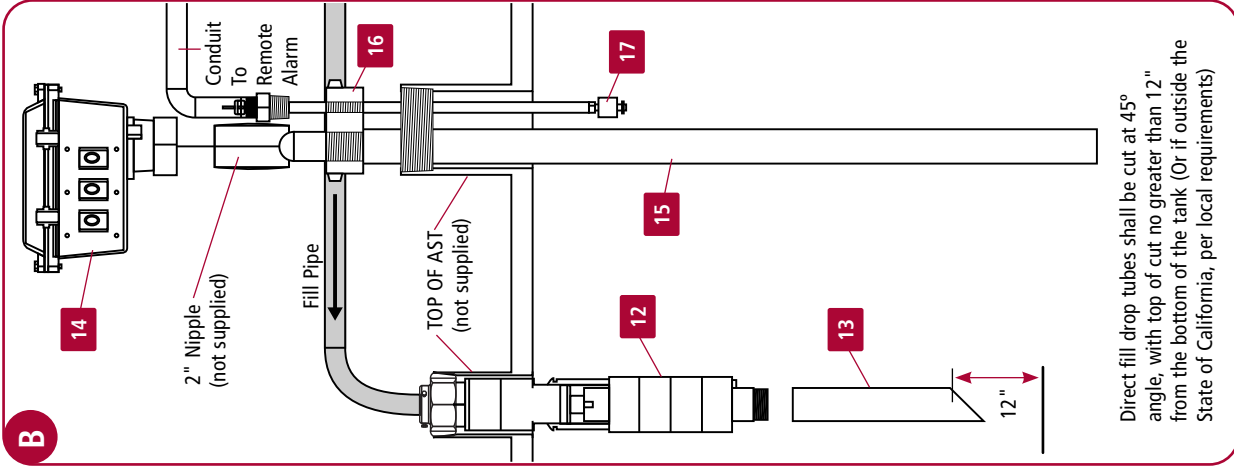
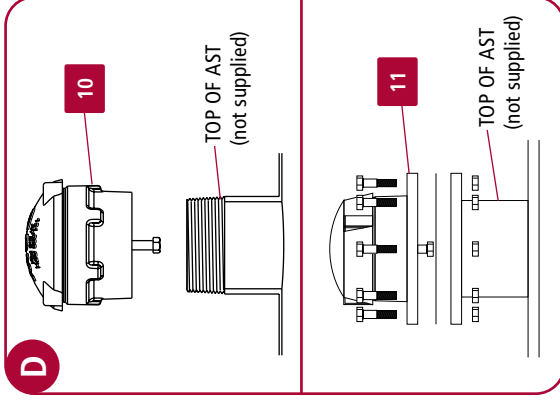
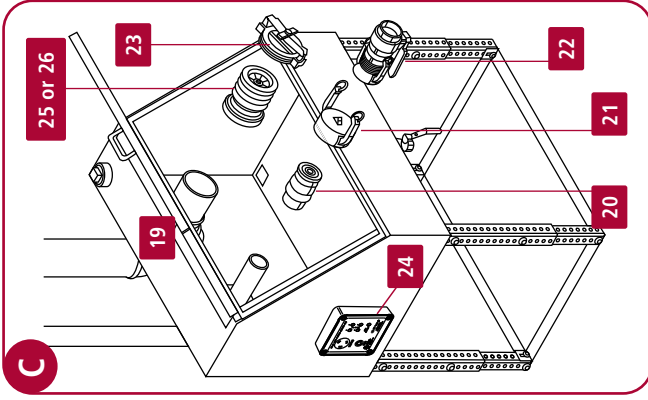
Above Ground Storage Tank - Remote Fill - Remote Dispensing

Typical Non-EVR Remote Fill / Remote Dispensing AST Application



PRODUCT KEY

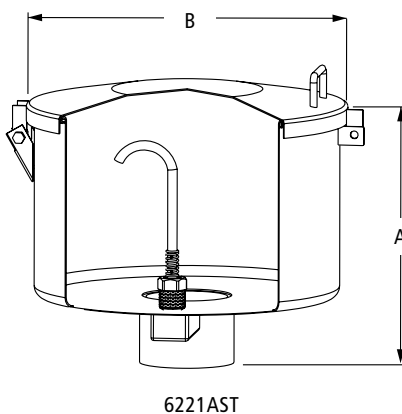
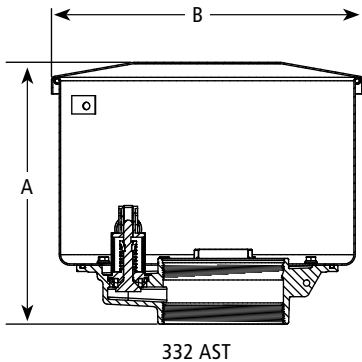
KEY	OPW PART / DESCRIPTION	PAGE
1	178S Series Emergency Valve	219
2	821 Series Solenoid Valve	217
3	21BV Series Ball Valve	218
4	199ASV Series Anti-Siphon Valve	216
5	82RV Series Pressure Relief Valve	217
6	53-00XX Series Double Tapped Bushing	133
7	634B-0150 or 634BK-0090 Cap	208-209
8	204247 Fill Prevention Cage	208
9	633AST-2190 Adaptor	208
10	301 Series Emergency Vent - Threaded Mount	212
11	301 Series Emergency Vent - Flanged Mount	212
12	61FSTOP-XXXX Series Overfill Prevention Valve	206-207
13	61FT Series Drop Tube	207
14	200TG-ENG Series Tank Gauge (optional / see Note below)	210
15	61T Series Drop Tube	210
16	TGTA-0400 4" Gauge/Alarm Combo Fitting (optional)	211
17	44TA-LLFS Liquid Level Float Switch	211
18	175 Series Swing Check Valve	220
19	6211R Series Remote Spill Container	205
20	1611AN-0200 or 1612AN-0200 - 2" Remote Fill or 1611AN-0300 or 1612AN-0300 - 3" Remote Fill Kamvalok Adaptor	209
21	A) 634B-0140 Dust Cap fits 633AST-0150 Adaptor B) 634B-0150 Dust Cap fits 633AST-2061 or 633AST-0200 Adaptor C) 634B-0160 Dust Cap fits 1611AN-0200 or 633ST-0250 or 1611AN-2040 or 1612AN-2040 Adaptors D) 634B-0170 Dust Cap fits 1611AN-3060 or 1612AN-3060 Adaptors	208
22	1711D / 1712D Series Kamvalok Coupler	209
23	1711T-7085-EVR Cap or 1711LPC-0300 Low Profile Cap	106
24	144TA/444TA Series Tank Alarm (optional / see Note below)	211
25	1611AV Vapor Recovery Adaptor	105
26	61VSA Series Vapor Recovery Adaptor	104
27	62M Series Monitoring Probe Cap & Adaptor	107
28	FSA-400 Face Seal Adaptor	80



NOTE: The OPW 200TG and 144TA/444TA are not required for EVR compliance, but if a tank gauge or tank alarm is used on your tank that these two OPW products are the only CARB AST EVR certified tank gauge and alarm.

POMECO/OPW 332AST & 6221AST Direct-Fill Above Ground Storage Tank Spill Containers

POMECO/OPW Direct-Fill AST Spill Containers are designed to prevent spilled product from entering soil near the fill and vapor return riser connections on an above ground storage tank during normal tank filling operation. The spill containers catch spillage to help prevent soil contamination and groundwater pollution. POMECO/OPW Direct-Fill AST Spill Containers thread on the top of an above ground tank and allow for drainage of spilled product back into the tank.



Dimensions


Model #	Capacity		A		B	
	gal.	liter	in.	cm	in.	cm
6221	7	26.5	14½	37	17	43
	3.5	13.2	9¼	24	17	43
332	7	26.5	14	35	17	43

Features

- ◆ **Easy Installation** – 4" NPT threaded base screws directly to the tank riser pipe. No further adjustments are needed
- ◆ **Integral Drain Valve** – allows high-speed drainage of spilled product back into the tank
- ◆ **Capacity** – available in 7-gallon (26.5 liter) container capacity. Larger 7-gallon capacity spill containers provide additional clearance for 61 fSTOP Overfill Prevention Valves (3.5 gallon-221 only)
- ◆ **Rain-Shedding Cover Design** – hooded cover design helps prevent water or snow entry by extending the lip of the cover over the body of the spill container
- ◆ **Welded-Hinge, Lockable Hatch** – the cover includes a provision for a padlock and a welded-hinge assembly for added security
- ◆ **12 Gauge Epoxy-Powder Coated Construction** – heavy-duty materials, compatible with hydrocarbons, for long service life and added security
- ◆ **332AST and 6221AST Spun Steel Design** – spun steel construction provides a lightweight, one-piece design for easy installation and a clean, sleek appearance on above ground tanks.



- ◆ **6211AST Heavyweight, Welded Base Design** – Thick, welded stainless steel base and walls provide solid strength for heavy-duty applications
- ◆ **All Models Are ULC Listed** – clearly labeled to identify the listing
- ◆ **CARB EVR Certified**

 Model 06221 Series only.

332AST Spill Containers
Instruction Sheet Order Number: 203168

6211-AST Spill Containers
Instruction Sheet Order Number: 202207

Ordering Specifications:

CARB APPROVED AST EQUIPMENT

Product #	Description	Liters	lbs.	kg
332-ASTW74	7 gallon, 4.0" NPT EVR Approved	26.4 liter, 4.0" NPT	38	17.23
6221-ASTW32	3.5 gallon, 2.0" NPT White - No Drain Valve	13.2 liter, 4.0" NPT	18	8.16
6221-ASTW34	3.5 gallon, 4.0" NPT White - No Drain Valve	13.2 liter, 4.0" NPT	19	8.61
6221-ASTW72	7 gallon, 2.0" NPT White	26.4 liter, 2.0" NPT	20	9.07
6221-ASTW74	7 gallon, 4.0" NPT White	26.4 liter, 4.0" NPT	25	11.33
6211SS-AST74	7 gallon, AST Stainless Steel Spill Container	26.4 liter, 4.0" NPT	25	11.33

Listings and Certifications

**CARB Certified
AST Phase I Enhanced Vapor Recovery (EVR) System**

Features

- ◆ **Easy Installation** – a 4" flexible boot on the back panel allows for a quick, simple connection to the remote fill or vapor lines. Optional reducer inserts are available to accommodate 3" and 2" piping connections
- ◆ **Models to Accommodate Various Fill Pipe Configurations** – available in 15, 20 and 30-gallon container capacity. Smaller 15-gallon models are designed for a single-fill or vapor return connection. Larger 20 and 30-gallon models accept both fill and vapor return piping in a dual-port configuration. The 30-gallon model will accommodate both fill and vapor return piping in a single-port configuration and allow the use of 3" Dry Disconnects (OPW 1611AN and 1711D) in a dual-port configuration
- ◆ **Rain-Shedding Cover Design** – hooded cover design helps prevent water or snow entry by extending the lip of the cover over the body of the spill container
- ◆ **12-Gauge Epoxy-Powder Coated Steel or Stainless Steel Containment Box** – heavy duty materials, compatible with hydrocarbons, for long service life and added security



See Pomeco Product Configurator

6211-R

- ◆ **Welded-Hinge, Lockable Hatch** – cover includes a provision for a padlock and a welded-hinge assembly for added security
- ◆ **Easy Product Drainage** – lockable ball valve drain provides for quick and easy product removal
- ◆ **Height Adjustable** – adjustable legs enable the spill container to be set at a variety of heights, from 16½" to 30". Each leg is independently adjustable to account for uneven ground conditions
- ◆ **CARB Certified**
- ◆ **Custom Sizes Available Upon Request**

Ordering Chart

6	R-					
211		15	0	B2	L	
211SS		20	1	B3	LD	
		30	2	B4	N	
				N	ND	

211 – 12 Gauge Powder-Coated Steel Construction
211SS – Stainless Steel Construction

15 – 15 Gallon Capacity
20 – 20 Gallon Capacity
30 – 30 Gallon Capacity

0 – No entry holes
1 – 1, 4" Entry hole
2 – 2, 4" Entry holes (30 Gallon Only)

B – Booted entry fittings in holes
N – No fittings in holes
2 – 2" Fitting
3 – 3" Fitting
4 – 4" Fitting

L – Adjustable legs and No base drain valve
LD – Adjustable legs with base drain valve
N – No legs and No base drain valve
ND – No legs with base drain valve

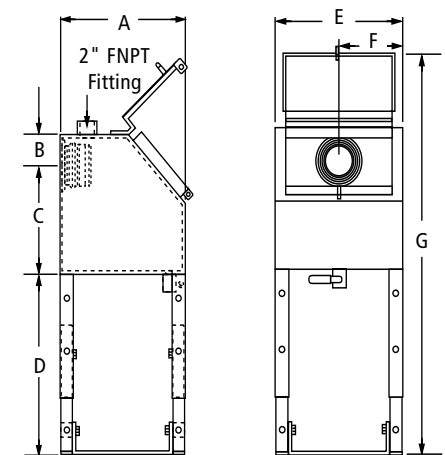
Note: an item must be selected for each column.

Dimensions

	15 Gallon		20 Gallon		30 Gallon	
	Weight 91 lbs. (41 kg)		Weight 135 lbs. (61 kg)		Weight 175 lbs. (79 kg)	
	in.	cm	in.	cm	in.	cm
A	18¼	46	24	61	21	53
B	7⅝	19	7½	19	10½	27
C	13⅝	35	16½	42	16½	42
D	16½ to 30	42 to 76	16½ to 30	42 to 76	16½ to 30	42 to 76
E	18¼	46	24	61	34	86
F	9⅞	23	12	30½	9½	24
G	47 to 60½	119 to 154	56½ to 80	144 to 203	56½ to 80	144 to 203

POMECO/OPW 211-Remote-Fill Above Ground Storage Tank Spill Containers

POMECO/OPW Remote-Fill AST Spill Containers are designed to prevent spilled product from entering soil near the remote, horizontal-fill and vapor return connections on an above ground storage tank during normal tank filling operation. The spill containers catch spillage to help prevent soil contamination and groundwater pollution. POMECO/OPW Remote-Fill AST Spill Containers slip on the remote-fill and vapor return piping connected to an above ground tank. Compatible with methanol, ethanol, jet and AV-Gas fuels.



Replacement Parts

Part #	Description
201758	4 x 2 Reducer Insert
201759	4 x 3 Reducer Insert
PBOOT	Nitrile (Fuel-Resistant) Boot
H14228M	Band Clamp for PBOOT
202312	Aluminum Flange
21BV-0075	Fullport ¾"
6211R-15-LegKit	Galvanized Steel Leg Kit - 15 Gal.
6211R-20-LegKit	Galvanized Steel Leg Kit - 20 Gal.
6211R-30-LegKit	Galvanized Steel Leg Kit - 30 Gal.
PC04427	Brass Drain Valve

211R Instruction Sheet Order Number: **H15857PA**

OPW 61fSTOP "THE STOPPER" Overfill Prevention Valves

The OPW 61fSTOP Overfill Prevention Valve ("The Stopper") is designed to prevent overfilling of above ground storage tanks by providing a positive shut-off during a pressurized-fill (pump-on fill) delivery. "The Stopper" threads into the fill opening and is an integral part of the fill tube. The OPW61fSTOP is fully adjustable to allow for easy installation in new or existing above ground tanks of various heights and storage capacities.

The Stopper is a single-action, complete shut-off valve. When the liquid level rises to your specific, pre-determined tank capacity, the valve mechanism is released and automatically closes with the flow of the product. Any excess product left between the valve and the fuel delivery coupler is drained into the tank through internal drain vents. The drain vents on the 61fSTOP act as an anti-siphon, by introducing air/vapor into the fill line, to help isolate the tank from a potential siphon due to a broken or leaking fill pipe.

The 61fSTOP, available in either 2" or 3" full-flow models, maximizes flow rates and minimizes delivery times. The 2" 61fSTOP requires a 4" tank opening and minimum tank ullage (space from the top of the stored product to the inside top of the tank) of 8" on the 61fSTOP-1000 Cylindrical Float model and a minimum ullage of 4" on the 61fSTOP-2000 Float Arm model. The 61fSTOP-1000, with the cylindrical float, eliminates the need to position the valve to avoid tank walls or cross-bracing. The 61fSTOP-2000 with the float arm allows for increased usable storage capacity in the tank, and is well-suited for small capacity rectangular ASTs. The 3" 61fSTOP requires a 6" tank opening and incorporates a cylindrical float requiring 8" of tank ullage space.

Materials

- Valve Body, Adaptor and Collar:** Cast aluminum
- Poppet:** Cast aluminum, hard-coated
- Cam:** Stainless steel
- Follower:** Brass
- Shaft:** CRS zinc-plated
- Bearing:** Sintered bronze
- Float:** Closed-cell nitrile
- Nipple:** 2" - 3" schedule 40 steel pipe
- Lower Nipple:** 2" - 3" schedule 40 steel pipe with Duragard® coating



Features

- ◆ **A Special Crossbar Tank-Inlet Adaptor** – is provided with each Stopper to provide for tight-fills and help prohibit open-fills. Mounting hardware, upper drop tube and 14" lower drop tube provided (longer-length drop tubes can be purchased or added)
- ◆ **Completely Automatic Operation** – no pre-checks to perform, no resets, and no overrides to be broken or abused
- ◆ **Direct or Remote-Fill Compatible** – fuel delivery couplers can be connected directly to the 61fSTOP, or steel pipe can be threaded into the top of the valve and piped to a remote location where the couplers are contained in a 211-RMOT Spill Container
- ◆ **Integral Anti-Siphon Valve** – drain vents on the 61fSTOP act as an anti-siphon, by introducing air/vapor into the fill line after the valve actuates, to help isolate the tank from a potential siphon due to a broken or leaking remote-fill pipe
- ◆ **150 psi (10 bar) Pressure Rated* with Low Pressure Drop** – to enable quick, safe delivery of fuel into the tank
- ◆ **25 GPM (95 lpm) Minimum Flow Rate Required**
- ◆ **UL and ULC Listed** – to satisfy Third Party accreditation requirements of many jurisdictions
- ◆ **CARB Approved**

*OPW does not recommend pumping pressures above 100 psi for Class 1B fuels and we make no warranties for products use in conjunction with the 61fSTOP.

NOTE: OPW recommends the use of the 61fSTOP with clean product only. Debris and other products such as contaminated waste oil may cause improper operation of the valve.

NOTE: The 61fStop can be used in gravity drop provided the minimum flow rate is maintained.

A tight shut-off is not achieved in the closed position. However with a minimum tank size of 1,000 gallons, the leak rate will provide a 30-minute warning before the tank is full.

**Approvals
and Listings**

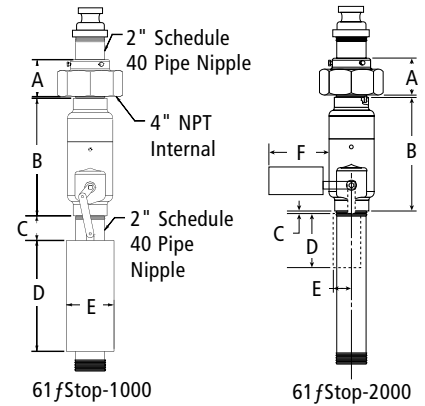


**CARB Certified
AST Phase I Enhanced Vapor Recovery (EVR) System**

Ordering Specifications and Dimensions

Product #	Description	A		B		C		D		E		F	
		in.	cm	in.	cm	in.	cm	in.	cm	in.	cm	in.	cm
61fSTOP-1000	2" Cyl. Float	3	7.6	10	25.4	2	5.1	9	22.4	3 ¹⁵ / ₁₆	10	n/a	n/a
61fSTOP-100M*	2" Cyl. Float for Methanol	3	7.6	10	25.4	2	5.1	9	22.4	3 ¹⁵ / ₁₆	10	n/a	n/a
61fSTOP-2000	2" Float Arm	3	7.6	10	25.4	1/2	3.8	5-18	22.4	1 ³¹ / ₃₂	5	6	15.2
61fSTOP-200M*	2" Float Arm for Methanol	3	7.6	10	25.4	1/2	3.8	5-18	22.4	1 ³¹ / ₃₂	5	6	15.2
61fSTOP-3050	3" Cyl. Float	3	7.6	10 ⁵ / ₈	27	2	5.1	8	20.3	5 ¹ / ₈	13	n/a	n/a
61fSTOP-305A*	3" Cyl. Float for Aviation, Methanol and AV-GAS	3	7.6	10 ⁵ / ₈	27	2	5.1	8	20.3	5 ¹ / ₈	13	n/a	n/a
61fSTOP-100M*	2" Cyl. Float for E85	3	7.6	10	25.4	2	5.1	9	22.4	3 ¹⁵ / ₁₆	10	n/a	n/a
61fSTOP-200M*	2" Cyl. Float for E85	3	7.6	10	25.4	1/2	3.8	5-18	22.4	1 ³¹ / ₃₂	5	6	15.2

*Recommended for E85



Replacement Parts 2"

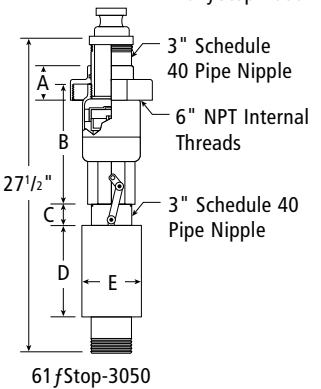
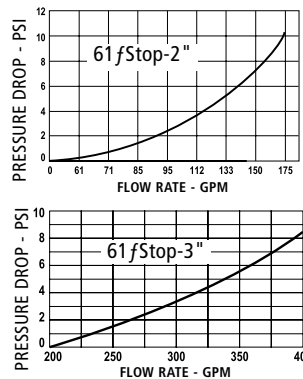
Product #	Description
C04093M	4" Retaining Collar
C04114RS	14" Nipple

Replacement Parts 3"

Product #	Description
D02037M	6" Retaining Collar
C04474RS	14" Nipple

61fSTOP Weights

Product #	Weight	
	lbs.	kg
61fSTOP-1000	13	5.89
61fSTOP-2000	12	5.44
61fSTOP-3050	22	9.97



CARB Approved AST Equipment

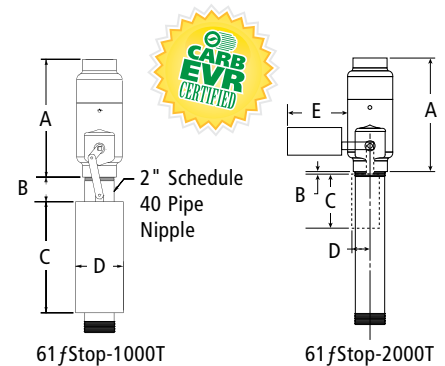
Product #	Description	A		B		C		D		E	
		in.	cm	in.	cm	in.	cm	in.	cm	in.	cm
61FSTOP-1000T	2" NPT with cylindrical float	10	25.4	2	5.1	9	22.4	3 ¹⁵ / ₁₆	10	n/a	n/a
61FSTOP-2000T	2" NPT with float arm	10	25.4	1/2	3.8	5-18	22.4	1 ³¹ / ₃₂	5	6	15.2
61FSTOP-3050T	3" NPT with cylindrical float	10 ⁵ / ₈	27	2	5.1	8	20.3	5 ¹ / ₈	13	n/a	n/a

Replacement Parts 2"

Product #	Description
H12617M	Float for 1000 (4 pieces required)
61ARM-2000	Floating Arm Retrofit Kit For 2000

Replacement Parts 3"

Product #	Description
C04438M	Float (4 pieces required for 3050)



OPW 61FT Drop Tube

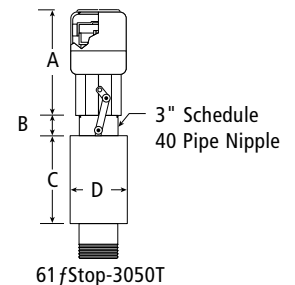
The OPW 61FT Drop Tube is designed to install on the bottom of the 61fSTOP AST Overfill Prevention Valves when a lightweight, longer, lower drop tube is required. Constructed of extruded aluminum, the OPW 61FT is connected to the bottom of the 61fSTOP by a clevis and cotter pin assembly, and allows for submerged filling of ASTs.

Ordering Specifications and Dimensions

CARB APPROVED AST EQUIPMENT

Product #	Description
61FT-0206	2" x 6' Drop Tube Kit
61FT-0312	3" x 12' Drop Tube Kit
205-0340	2- ¹³ / ₁₆ " x 1" Fill Pipe Strainer

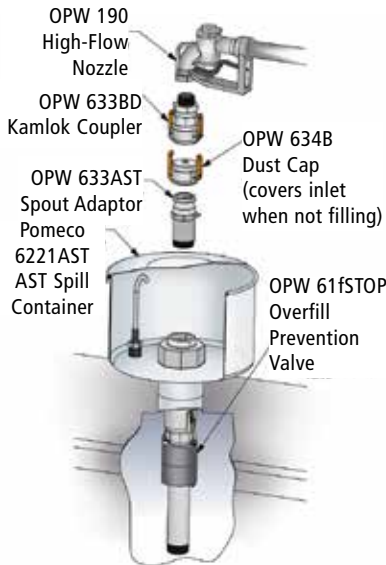
61FSTOP-1000, 100M, 200M Instruction Sheet Order Number: **H12676M**
 61FSTOP-2000 Instruction Sheet Order Number: **H13337M**
 61FSTOP-3000, 3050, 305A Instruction Sheet Order Number: **H13315M**
 61FT-0312, 0206 Instruction Sheet Order Number: **H14428PA**
 61FSTOP-1000T, 2000T, 3050T Instruction Sheet Order Number: **203163**



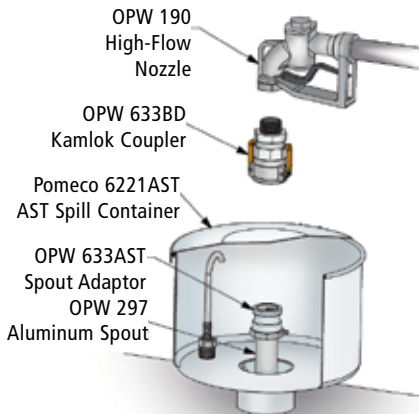
NOTE: When ordering a CARB EVR Certified OPW 61f STOP, the Fill Adaptor must be ordered separately.

Fuel Delivery Couplers And Accessories

Fuel Delivery Couplers and Accessories are designed to connect fuel delivery transport truck hoses or nozzles to the fill pipe of an aboveground storage tank.



Typical AST Filling Application



Typical AST Filling Application



Dedicated Gauging Port

For use with 633AST-XXXX Female NPT Kamlok Gauging Port.

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Description
204247	Dedicated Gauging Port



Kamlok® Couplers

The 633BD has a Kamlok® Coupler on one end and external threads on the other end. This coupler should be threaded into an OPW 190 Nozzle and then coupled to the 61fSTOP for filling ASTs.

Ordering Specifications

Product #	Elbow/Thread	
	in.	mm
633BD-1261	2 x 1-1/2	51 x 38
633B-0150	2 x 2	51 x 51



633B Coupler

Tank Inlet Spout Adaptors With Crossbar

The 633AST Series Adaptors, with a boss installed across the inlet, are designed to prohibit open-fills. Adaptors are supplied with the 61fSTOP to provide for tight-fills.

Ordering Specifications

Product #	Elbow/Thread	
	in.	mm
633AST-2061	2 x 2	51 x 51
633AST-3061	3 x 3	77 x 77



633AST Spout Adaptor

Tank Inlet Spout Adaptors

The 633AST is an adaptor that can be threaded onto a 297 Spout. The spout and adaptor assembly may then be attached to a 190 Nozzle equipped with a 633BD Kamlok® coupler for open filling of ASTs when a 61fSTOP is not installed.

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Elbow/Thread	
	in.	mm
633AST-0200	2 x 2	51 x 51
633AST-0250	2.5 x 2.5	64 x 64
633AST-0300	3 x 3	76 x 76
633AST-0400	4 x 4	102 x 102

633FAST-XXXX, Male Thread Equivalent of Adaptors above



633AST Spout Adaptor

Dust Caps

The 634B Dust Caps are installed on 633AST Adaptors when not in use to deter dust, debris and water from entering the tank.

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Description	in.	mm
634B-0140	For 633AST-0150	1 1/2	38
634B-0150	Caps 633AST-2061 or 633AST-0200 Adaptor	2	51
634B-0160	Caps 1611AN-0200 or 633AST-0250 or 1611AN-2040 or 1612AN-2040 Adaptors	2 1/2	64
634B-0170	Caps 61fSTOP (633AST-3061) or 366AST-0300 or 1611AN-3060 or 1612AN-3060 Adaptors	3	77
634B-0180	1611AN-0300 Kamvalok® Adaptor or 633AST-0400 Adaptor	4	103



Dust Cap

1611 & 1612 Series Kamvalok® Adaptors

Installed onto the 61fSTOP overfill prevention valve. Contains an internal spring loaded valve assembly that automatically closes to help prevent fuel spillage.

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Seal	in.	mm
1611AN-2040	Direct Fill with Buna seal	2	51
1612AN-2040	Direct Fill with Viton seal	2	51
1611AN-3060	Direct Fill with Buna seal	3	77
1612AN-3060	Direct Fill with Viton seal	3	77

1611AN Adaptor Instruction Sheet Order Number: 204016



Kamvalok® Adaptor for Direct Fill

Poppeted Kamvalok® Adaptors

The 1611AN Series Kamvalok® Adaptor is installed at the fill pipe and replaces the 633AST. The 1611AN contains an internal spring-loaded valve assembly that automatically closes to help prevent fuel spillage. The 1611AN mates with the 1711D Coupler to open the spring-loaded valve and proceed with a delivery 204016.

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Seal	in.	mm
1611AN-0200	Remote Fill with Buna Seal	2	51
1611AN-0300	Remote Fill with Buna Seal	3	77
1612AN-0150	Remote Fill with Viton® Seal	1½	38
1612AN-0200	Remote Fill with Viton® Seal	2	51
1612AN-0300	Remote Fill with Viton® Seal	3	77
1672AN-SS20	2" Stainless Steel Kamvalok® Adaptor	2	51
1672AN-SS30	3" Stainless Steel Kamvalok® Adaptor	3	77

* Thread and Kamvalok® same size



Poppeted Kamvalok® Couplers for Remote Fill

1611AN Adaptor Instruction Sheet Order Number: 204016

Poppeted Kamvalok® Couplers

The 1711D Series Kamvalok® Couplers are installed on the fuel delivery transport truck hose and mate with the 1611AN Adaptors. The combination of the 1711D and 1611AN enable dry connection and dry disconnection of delivery fittings to help prevent accidental spillage of product.

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Seal	in.	mm
1711D-1075	Buna	2	51
1711D-1080	Buna	3	77
1712D-1085	Viton®	1½	38
1712D-1090	Viton®	2	51
1712D-1095	Viton®	3	77
1772DL-SS20	2" Stainless Steel Poppeted Kamvalok® Coupler w/ Locking Arms and Lever	2	51
1772DL-SS30	3" Stainless Steel Poppeted Kamvalok® Coupler w/ Locking Arms and Lever	3	77

* Thread and Kamvalok® same size



Poppeted Kamvalok® Couplers

H32116PA Coupler Instruction Sheet Order Number: 204016

Dust Plugs

The 634A Dust Plug is installed in the end of the 1711D, and is designed to help prevent dust, dirt and debris from damaging the internal components of the Coupler.

Ordering Specifications

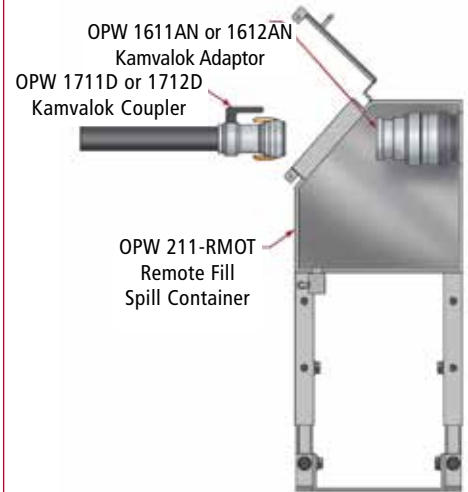
Product #	Description	in.	mm
634A-0160	Plugs 1711D or 1712D - 2" Kamvalok® Coupler	2½	64
634A-0180	Plugs 1711D or 1712D - 3" Kamvalok® Coupler	4	103



Dust Plug

Spout Kits And Delivery Couplers And Accessories

Fuel Delivery Couplers and Accessories are designed to connect fuel delivery transport truck hoses or nozzles to the fill pipe of an aboveground storage tank.



Typical AST Filling Application



Lockable Dust Plug

Lockable Dust Caps

The 634BK-0090 is a 2" lockable dust cap for the 61fSTOP. It will cap off any 2" 633AST Tank Inlet Spout Adaptor and offers the added feature of being lockable.

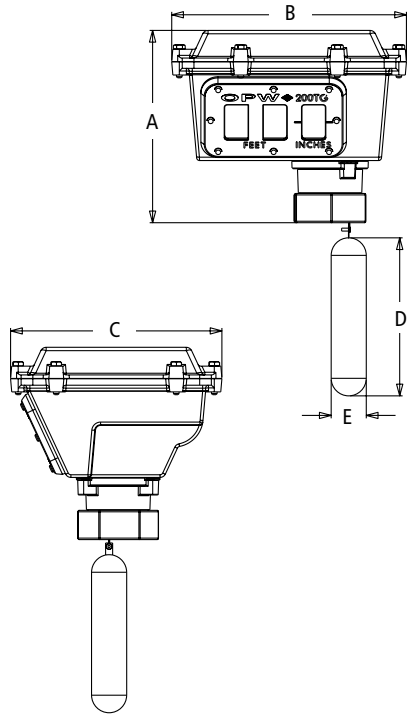
Ordering Specifications

CARB APPROVED AST EQUIPMENT

Product #	Description	in.	mm
634BK-0090	Caps 633AST Adaptor	2	51
634BK-0100	Caps 633AST Adaptor	3	77
634BK-0200	Caps 633AST Adaptor	4	103

OPW 200TG AST Mechanical Tank Gauge

The OPW 200TG Tank Gauge is designed for reading liquid levels in horizontal or vertical above ground storage tanks. The 200TG Tank Gauge provides an accurate numerical counter readout, eliminating the need for any on-site manual gauging.



Dimensions:

	in.	cm
A	8 1/4	21
B	10 1/4	26
C	9	22.75
D	6 3/4	17.25
E	1 1/2	3.75

Replacement Parts:

Part #	Description
C05165M	Float
H15325M	Lens
H15267M	Lens Gasket
H14909M	Lid Gasket



Underwriters Laboratory Listed UL Listing MH29367. Liquid level gauges which are intended to be used on above ground storage tanks and monitor the level of petroleum-based flammable or combustible fluids.

Materials

- Enclosure:** Powder-coated aluminum
- Swivel Base:** Hard-coat aluminum
- Float:** 304 stainless steel
- Lenses:** Tempered borosilicate
- Gears:** Acetal
- Gaskets & O-Rings:** Nitrile*
- All Hardware:** Stainless steel
- Accuracy:** + or - 2"



Features

- ◆ **Vapor-Tight** – allows for standard tank pressure testing and sealing up to 25-psig (1.72 bar)
- ◆ **Angled Face** – improves visibility from ground on large diameter tanks. May be read easily up to 30 feet away (9.14 m)
- ◆ **Swivel Adaptor Base** – allows for 360° of rotation of gauge face for easy viewing wherever needed
- ◆ **Easy Installation** – 2" NPT-threaded base reduces labor time, and comes standard with female thread. A H11421RS may be purchased for male threaded applications
- ◆ **Corrosion-Resistant Construction** – powder-coated die cast-aluminum body assures for long service life in many fluids
- ◆ **Drop Tube** – prevents float entanglement in the tank, and gives the gauge a more accurate reading when turbulence is present (Drop Tubes sold separately. They are recommended for use in tanks with high turbulence, and where other piping and structures inside the tank may cause entanglement)
- ◆ **Float Buoyancy** – designed to float in all approved fuels with a specific gravity of 0.65 and greater
- ◆ **Tank Height** – unit designed for use on any horizontal or vertical aboveground tank up to 18 feet (5.5 m) in depth. Specials available upon request
- ◆ **Numbering** – black letters on white background for ultimate contrast and better visibility. Characters stand over 1" (25 mm) tall
- ◆ **Unit Measurement** – Can be purchased in metric units to read in meters, 1/10, 1/100, or in English units to read in feet and inches
- ◆ **Maintenance** – No annual maintenance required
- ◆ **Compatible Fuels** – see chart on page 228
- ◆ **Temperature Rating** – 120°F to -40°F (49°C to -40°C)

200TG Tank Gauge Instruction Sheet
Order Number: **H14912PA**

Ordering Specifications:

Product #	Description	lb.	kg
200TG-ENG	English Unit Tank Gauge up to 18 ft.	7.75	3.52
200TG-ENG40	English Unit Tank Gauge - 40 ft.	7.75	3.52
200TG-MET	Metric Unit Tank Gauge up to 6 m	7.75	3.52
200TGMET40	Metric Unit Tank Gauge - 10 m	7.75	3.52

(Ancillary Equipment)

Product #	Description	lb.	kg
H11421RS	2" NPT Male x Male Nipple	1.5	0.68

CARB CERTIFIED AST EQUIPMENT

Product #	Description	lb.	kg
61T-0208	2" Dia. x 8' Long Drop Tube	2.67	1.21
61T-0212	2" Dia. x 12' Long Drop Tube	4.00	1.81
61T-0216	2" Dia. x 16' Long Drop Tube	5.33	2.42

Materials

- Enclosure:** Polybutylene terephthalate
- Wire Grommet:** Nylon w/ buna seal
- Float Switch:** Closed cell buna float & stainless steel rod
- Pipe:** Stainless steel
- Tank Adaptor:** Aluminum hardcoat anodized

444TA



Features

- ◆ **Up to four alarm signals (444TA)** – can be used for high or low liquid level sensing, interstitial monitoring, and/or other signals in one to 4 separate tanks
- ◆ **Self-Powered** – lithium battery with a 10-year shelf life for long service life.
- ◆ **Audible Alarm** – sounds a 90-decibel alarm at 4 feet away
- ◆ **Visual Notifications** – red alarm light will flash during use for notification to the user. Low battery light indicates when battery needs replaced
- ◆ **Corrosion-Resistant Construction** – petroleum and environmental resistant housing and all stainless steel pipe fitting ensure a long product life
- ◆ **Product / Alarm Identification Label** – located on top of the alarm for quick and easy identification, allowing you to correspond alarms to signals. Label has a protective covering
- ◆ **Intrinsically Safe** – complies with ANSI/UL 913 for Class 1, Division 1 & 2 for Groups C & D hazardous locations
- ◆ **Cold Weather Resistant** – all components are safe for temperatures down to -40°F operation (and up to 120° F)
- ◆ **Long Life Lithium Battery** – self-powered by a lithium battery which includes a 10-year shelf life to ensure peace of mind for the owner
- ◆ **Easy Installation** – requires no calibration and installs easily into a 1" tank bung. May be assembled remotely or directly on top of tank



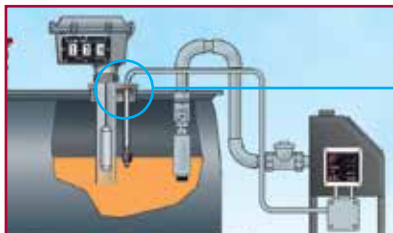
TGTA-0400 4" Tank Bung Combo Fitting
Note: Drop Tube must be used with TGTA-0400.

444TA and 144TA Instruction Sheet
Order Number: 200655

Ordering Specifications:

Product #	Description	lb.	kg
444TA-0100*	Four Signal Tank Alarm, does not include Float Switch	4	1.8
44TA-LLFS**	36" Liquid-Level Float Switch Sub-Assembly	0	0.0
144TA-0100	Single Channel Liquid Level Tank Alarm, does not include Float Switch	4	1.8
TGTA-0400	4" Tank Bung Gauge and Alarm Combo Fitting (OPW 61T required for use)	10	4.5

**The OPW 144TA Requires the OPW 44TA-LLFS, the OPW 44TA-LLFS must be purchased as a separate item.



Replacement Parts:

Part #	Description
44TA-LLFS	Liquid-Level Float Switch ASSY
H15412M	Wire Fitting
H15411M	Float Switch
Items to Convert to a Low Level Alarm:	
C05295M	SST Tube
H15937M	444TA-0100 Battery Module
202891	144TA Battery Module

OPW 444TA AST Four Signal Tank Alarm and OPW 144TA AST Liquid Level Tank Alarm

The OPW AST remote Four Signal Tank Alarm is designed to sense up to four different liquid levels or other signals using just one device.

The OPW 144TA Tank Alarm is designed for liquid level sensing.

Alarm Technical Information:

- Hazardous Location Approval: Class I, Groups C & D
- Maximum Voltage: 7.2 Volts
- Maximum Current: 8 ma. per input (32 ma. total)
- Maximum Internal Capacitance: 23 uF
- Maximum Internal Inductance: 33 mH
- Maximum Ambient Temperature Rating: 60° C
- Maximum Surface Temperature Classification: T4 Surface Code
- Wiring limitations:** 1000 foot maximum between the 144TA/444TA unit and any remote switch for each channel of the alarm. This assumes that maximum capacitance for any input is 60 nanoFarads and that the maximum inductance is 0.2 milliHenry per input (UL-913 A7.3)
- Note:** This device is designed to work independently and should not be wired in parallel with another device, except as defined in the following instructions.

Requirements for devices wired to the 144TA/444TA:

- Attached wiring and devices must be classed Intrinsically Safe
- No voltage or current source
- Maximum capacitance: 60 nanoFarads (.06 uF) per input
- Maximum inductance: 200 microHenrys (.2 mH) per input

Float Switch Technical Information:

- Minimum liquid specific gravity: 0.45.
- Stem material: Stainless steel. Float Material: Closed Cell Buna-N (UL Approved) for gasoline services
- Max Pressure: 150 psi @ 70° F. Thread 1/8" NPT.

444TA Dimensions:

	in.	cm
A	5 1/32	12.8
B	5 1/32	12.8
C	4 3/16	10.6

144TA Dimensions:

	in.	cm
A	5 1/32	12.8
B	5 1/32	12.8
C	3	7.6
D	4 3/16	10.6
E	1 15/16	4.9
F	35	88.9
G	1 15/16	4.9
H	1	2.5

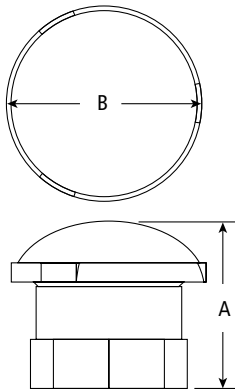
Approvals and Listings



Conforms to ANSI / UL STD 913
Certified to CAN / CSA STD C22.2 No. 157-92
Florida EQ-610
CARB Certified

OPW 301 Emergency Vents

The OPW 301 Emergency Vent is designed to prevent an above ground storage tank from becoming over-pressurized by providing high-capacity venting in the event of a fire or blockage. The 301 is a weighted, mushroom-style emergency vent. When the AST builds pressure, the weighted cast iron lid is forced up off its seat to relieve the pressure. When pressure is relieved, the lid lowers and is automatically reset. The appropriate 301 Series vent is determined by the emergency venting capacity requirements of the AST and the type of connection at the tank's emergency vent opening. The OPW 301 Emergency Vent is available in 4", 6", 8" and 10" openings with female NPT, male NPT or flanged connections (8"-10") to allow for easy installation in new or existing above ground tanks. Various lid pressure settings determine the initial venting of the valve.



Replacement Parts

Part #	Description
201877	4" Seal
202721	6" Seal
203325	8" Seal

Materials

Lid: Cast iron with powder-coated finish
Body: Aluminum
Shaft: Zinc-plated steel
O-Ring: Buna-N

301 SCFH @ 2 1/2 PSI
 (0.17 bar)
 4" - 101,000
 6" - 250,000
 8" - 471,000



Features

- ◆ **Automatically Resets** – weighted cast iron cover reseats once the pressure in the tank is relieved
- ◆ **Aluminum Body and Cast Iron Lid**
- ◆ **Epoxy Powder-Coated Cover** – prevents rusting of the cover to protect expensive finishes on ASTs
- ◆ **UL Listed** – to satisfy third party accreditation requirements of many jurisdictions
- ◆ **CARB Certified** – AST Phase 1 Enhanced Vapor Recovery (EVR) System

301 Series Instruction Sheet Order Number: **203568**

Ordering Specifications

CARB APPROVED AST EQUIPMENT

Model #	Pressure		Mounting Connection	A		B		Weight		
	in.	mm		Setting	in.	mm	in.	mm	lbs.	kg
301-3080	3	76	8 oz.	Female NPT	4.7	119.4	5.1	129.5	6.7	3
301M-3081	3	76	8 oz.	Male NPT	4.7	119.4	5.1	129.5	6.7	3
301-3160	3	76	16 oz.	Female NPT	5.7	144.8	5.1	129.5	11.4	5.2
301M-3161	3	76	16 oz.	Male NPT	5.7	144.8	5.1	129.5	11.4	5.2
301-4080	4	101.5	8 oz.	Female NPT	4.9	124.5	6.1	154.9	10.6	4.8
301M-4081	4	101.5	8 oz.	Male NPT	4.9	124.5	6.1	154.9	10.6	4.8
301-4160	4	101.5	16 oz.	Female NPT	6.1	154.9	6	152.4	18.1	8.2
301M-4161	4	101.5	16 oz.	Male NPT	6.1	154.9	6	152.4	18.1	8.2
301-6080	6	152	8 oz.	Female NPT	5.9	149.9	8.1	205.7	20.9	9.5
301M-6081	6	152	8 oz.	Male NPT	5.9	149.9	8.1	205.7	20.9	9.5
301-6160	6	152	16 oz.	Female NPT	7.4	188	8.1	205.7	37.5	17
301M-6161	6	152	16 oz.	Male NPT	7.4	188	8.1	205.7	37.5	17
301-8080	8	203	8 oz.	Female NPT	6.2	157.5	10.1	256.5	33.9	15.4
301M-8081	8	203	8 oz.	Male NPT	6.2	157.5	10.1	256.5	33.9	15.4
301-8160	8	203	16 oz.	Female NPT	7.8	198.1	10.1	256.5	61.9	28
301M-8161	8	203	16 oz.	Male NPT	7.8	198.1	10.1	256.5	61.9	28
301F-8085	8	203	8 oz.	Flange	6.2	157.5	10.1	256.5	41.8	19
301F-8165	8	203	16 oz.	Flange	7.8	198.1	10.1	256.5	70	31.8
301F-1085	10	254	8 oz.	Flange	6.5	165.1	13	330.2	65.2	29.6

Approvals and Listings

CARB Certified
AST Phase 1 Enhanced Vapor Recovery (EVR) System

Materials

Cover and body: Aluminum
Link: Duratuff®
Spring: Stainless steel
Sealing surface:
 Teflon®-coated aluminum

202 SCFH @ 2 1/2 PSI
 (0.17 bar)
 4" 125,000 SCFH @ 2.5 psi
 6" 280,000 SCFH @ 2.5 psi
 8" 455,000 SCFH @ 2.5 psi



Features

- ◆ **Lightweight Construction** – allows for safe, easy installation on large aboveground tanks
- ◆ **Spring-Loaded, O-Ring Sealed Cover with Teflon-Coated Seat** – Ensures smooth, vapor-tight sealing surface and reliable service life
- ◆ **Full-Bore, High-Capacity Upward Venting** – enables smaller diameter vents, with higher venting capacity, to be used on ASTs when compared to weighted, mushroom-style vents
- ◆ **Aluminum Cover and Body with Stainless Steel Components** – corrosion-resistant construction to protect expensive finish or epoxy coatings on ASTs
- ◆ **Mounts Vertical or Horizontal**
- ◆ **Alerts Tank Operators of Possible Venting Problems** – when the emergency vent is actuated, the lid remains open for inspection until manually reset. The actuation of the emergency vent indicates abnormal excessive pressure build-up in the tank due to either a blockage in the normal tank vent or in the event of a rapid expansion of vapors possibly from a fire
- ◆ **Easy Vent Reset** – no extra parts required. Simply push the vent lid closed until an audible “click” is heard, indicating the vent is back in operation
- ◆ **UL Listed** – to satisfy Third Party accreditation requirements of many jurisdictions

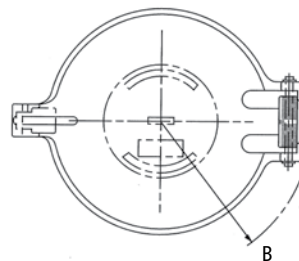
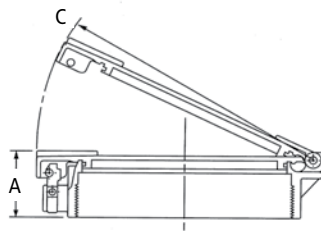
202 Series Instruction Sheet Order Number: H11792M

Ordering Specifications

Model #	in.	mm	lbs.	kg
202-0640	4	102	2.05	.95
202-0660	6	152	3.55	1.6
202-0680	8	203	5.1	2.3

Dimensions 202

	4" (102mm)		6" (152mm)		8" (203mm)	
	in.	mm	in.	mm	in.	mm
A	2 3/8	60	2 3/8	60	2 5/8	67
B	4	102	5	127	5 7/8	149
C	6 1/2	165	8 9/16	218	10 3/4	273

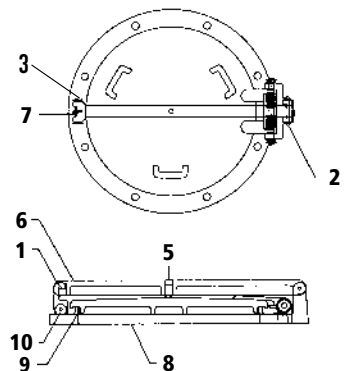


OPW 202 Emergency Vents

The OPW 202 Emergency Vent is designed to prevent an aboveground storage tank from becoming over-pressurized by providing full-bore, high-capacity venting in the event of a fire or blockage of the OPW 23, 113, 523V, or 623V. The 202 is a vapor-tight, spring-loaded emergency vent. When the AST builds pressure to 2.5 psi, the spring-loaded lid opens full-bore and discharges vapors upward to relieve the pressure. The lid remains open for inspection to indicate a problem with the normal tank venting, or if a fire has taken place, until manually reset. The appropriate 202 Series vent is determined by the emergency venting capacity requirements of the AST and the type of connection at the tank’s emergency vent opening. The OPW 202 Emergency Vent is available in 4", 6", and 8" openings with female NPT connections.

Ordering Specifications Flange Mount

Model #	in.	mm	lbs.	kg
202F-0600 (Flange Mount)	8	203	5.2	2.4



202F Replacement Parts

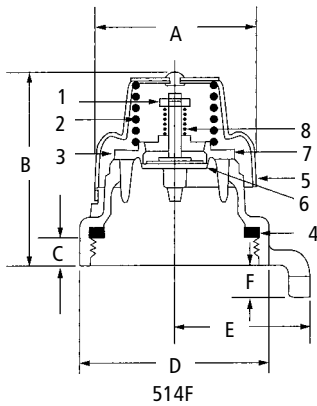
Key	Part #	Description
1	H04869RE	Break Link
2	H06475RE	Rivet
3	H04981M	Cotter Pin
4	H04928	Parts S/A
5	H04929M	Screw
6	C01288I	Bar
7	H04871M	Break Pin
8	C01289M	Gasket
9	H04873M	O-Ring
10	H06449RE	Rivet

Approvals and Listings



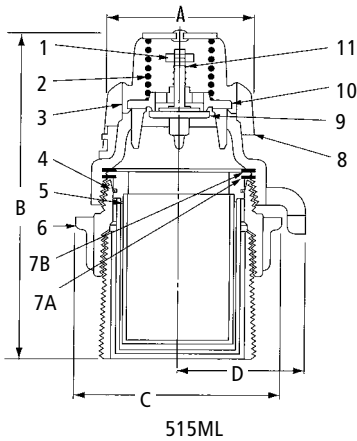
OPW Utility Tank Vents

OPW Utility Tank Vents are installed directly on the top of above ground storage tank or utility tank vent pipes. The vent cap is designed to protect the tank against intrusion of water, debris or insects. The 515ML incorporates a flame arrestor screen for jurisdictions that require these on tanks. A normally closed poppet in the valve opens at a predetermined pressure or vacuum setting to allow the tank to vent.



Dimensions (514F)

	in.	mm
A	2 ⁵ / ₁₆	59
B	2 ⁵ / ₁₆	75
C	1 ⁵ / ₁₆	24
D	2 ²¹ / ₃₂	67
E	1 ¹⁵ / ₁₆	49
F	7 ⁷ / ₁₆	11



Dimensions (515ML)

	in.	mm
A	2 ⁵ / ₁₆	59
B	5 ¹ / ₄	133
C	3 ³ / ₈	79
D	1 ¹⁵ / ₁₆	49

Materials

Cap body: High-tensile aluminum alloy construction. Has straight pipe threads with Nitrile for tight seal to tank. 2" - 11¹/₂" NPSH threads.

Dome: Plated steel

Screen: 40-mesh brass

514F



Features

- ◆ 3-Pound Pressure and 1 oz. Vacuum Settings – factory preset and tested to protect against product vapor loss and allow for rapid withdrawal of product from the tank.
- ◆ Reliable Service – precision-machined, lapped bronze pressure and vacuum seats ensure consistent seating of the pressure/vacuum valve.
- ◆ Corrosion-Resistant Construction – zinc/aluminum alloy body and zinc-plated steel dome assure a long service life.
- ◆ Easy Installation – 514F is available in 2" (11¹/₂" NPSH) female straight threads with a Buna-N gasket.

- ◆ High Maximum Flow Rate – 3500 SCFH at 4.5 psi (0.31 bar) pressure drop.
- ◆ Lockable Base - a provision for padlocking the vent to the tank is integrated into the base.

Replacement Parts

Key	Part #	Description
1	H01967M	Nut
2	H10096M	Pressure Spring
3	H07355M	Screen
4	H11432M	Seal
5	C03991M	Dome
6	H07356B	Vacuum Disc
7	H08380AH	Pressure Disc
8	H07353M	Vacuum Spring

Ordering Specifications

Product #	in.	mm	lbs.	kg
514F-3050	2	51	.46	.21

Materials

Cap Body: High-tensile aluminum alloy construction. Has straight pipe threads with Nitrile gasket for tight seal to tank.

Dome: Plated steel

Screen: 40 mesh brass

515ML



Features

- ◆ Flame Arrestor Screen – for jurisdictions that require flame arrestors on tank vents.
- ◆ 5 PSI (0.34 bar) Pressure and 1 oz. Vacuum Settings – factory preset and tested to protect against product vapor loss and allow for rapid withdrawal of product from the tank.
- ◆ Reliable Service – precision-machined, lapped bronze pressure and vacuum seats ensure consistent seating of the pressure/vacuum valve.

- ◆ Corrosion-Resistant Construction – zinc/aluminum alloy body and zinc-plated steel dome assure a long service life.
- ◆ Easy Installation – 515ML is available in 2" (11¹/₂" NPSH) male straight threads.
- ◆ High-Maximum Flow Rate – 3500 SCFH at 7.5 psi (0.52 bar) pressure drop.

Replacement Parts

Key	Part #	Description
7A	H11211M	O-Ring
7B	H03636M	Cap Gasket
8	C03991M	Dome
9	H07356B	Vacuum Disc
10	H08380AH	Pressure Disc
11	H07353M	Vacuum Spring

Ordering Specifications

Product #	in.	mm	lbs.	kg
515ML-1030	2	51	1.80	.82

Materials

- Body: Zinc/aluminum
- Screen: brass
- Cap: 2" - Steel 4" - cast iron
- Screen: 40-mesh stainless steel

113



Ordering Specifications

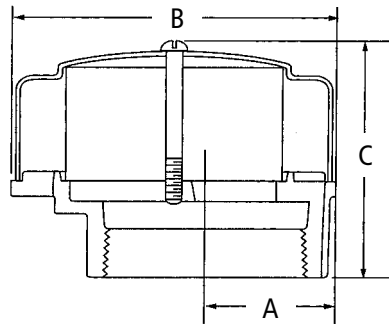
Product #	in.	mm	lbs.	kg
113-0066	2	51	.88	.40
113-0099	4	102	7.50	3.41

Dimensions

	2" (51mm)		4" (102mm)	
	in.	mm	in.	mm
A	1 1/2	38	2 3/4	70
B	3 3/4	95	7 7/16	189
C	2 3/4	70	4 15/16	125

OPW 113 Series Open Atmospheric Utility Vents

OPW 113 Open Atmospheric Utility Vents are installed on the top of above ground fuel storage tanks. The vent cap and internal wire screen are designed to protect the tank vent lines against intrusion and blockage from water, debris or insects. These vents are always open to atmosphere and allow any pressure or vacuum into the tank to vent. The 113 vents vapors downward and is used primarily on diesel, fuel oil, waste-oil and motor-oil tanks, but can also be used on a wide variety of above ground storage tank venting applications.



OPW 723V Pressure Vacuum Vents



See page 122

OPW 623V Pressure Vacuum Vent



See page 123

OPW 523V Pressure Vacuum Vent

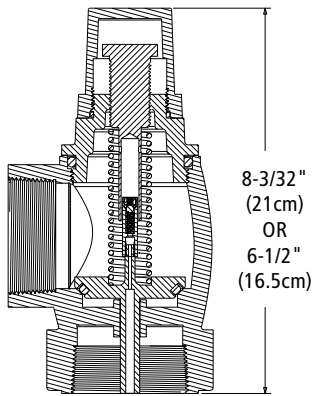


See page 124

For more information contact OPW Customer Service at 1-800-422-2525; International call 1-513-870-3315.

OPW 199ASV Anti-Siphon Valve

The OPW 199ASV Anti-Siphon Valve is designed to help prevent siphoning of an above ground storage tank should a leak or break occur in the fuel supply line. The 199ASV installs on the top of an above ground storage tank with a suction rod on the inlet and the fuel supply line (to a remote pump) on the outlet of the valve. A poppet in the valve remains normally closed, isolating the tank from siphoning. When the remote pump is activated, it overcomes a factory-adjusted spring set to a predetermined hydrostatic head pressure and allows flow of fuel out of the AST. An internal pressure relief valve helps absorb thermal expansion in the fuel supply line. The 199ASV is available in female NPT threads with four different factory-adjusted hydrostatic head pressure settings.



- ◆ 8³/₃₂" model for 1½" and 2" (20.55 cm model for 3.81 cm and 5.08 cm)
- ◆ 6½" model for ¾" and 1" (16.51 cm model for 1.90 cm and 2.54 cm)

Materials

- Body:** Clear anodized aluminum
- Bonnet:** Powder-coated aluminum
- Cap:** Powder-coated aluminum
- Spring:** Stainless steel
- Poppet:** Hard-coated aluminum
- Screw:** Hard-coated aluminum
- Poppet Seal:** Nitrile



199ASV

Features

- ◆ **Factory-Adjusted Hydrostatic Head Pressure Settings** – allow for quick, safe and easy installation on above ground tanks
- ◆ **Internal Pressure Relief Valve** – helps protect piping and fittings from damage due to thermal expansion. Set to operate between 20 to 40 PSI (1.3 to 2.7 bar)
- ◆ **Aluminum Bodies** – compatible with gasoline, diesel, kerosene, ethanol, methanol, fuel oil and jet fuels
- ◆ **Temperature Rating** – -20°F - 120°F (29°C - 49°C)

Valve Rating
ft of gasoline
S.G. = 0.7

Approximate Cracking Pressure

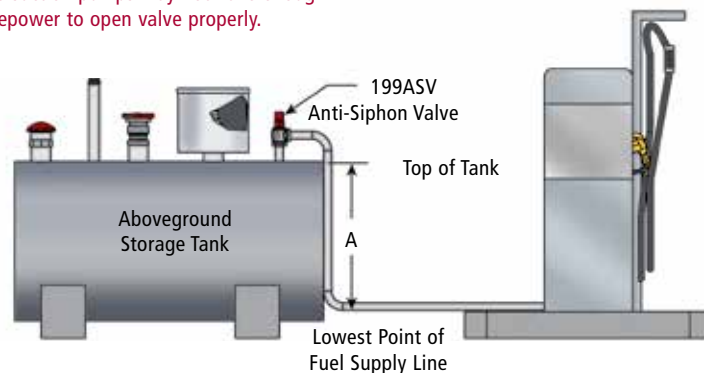
	PSI	ft. H ₂ O	in. H ₂ O	in. Hg	ft. Gas	ft. Diesel
0-5	1.88	4.33	51.96	3.85	6.2	5.35
5-10	3.68	8.48	101.76	7.53	12.12	10.47
10-15	5.6	12.92	155.04	11.47	18.51	15.95
15-20	7.4	17.07	204.84	15.16	24.4	21.07

*Note: Some suction pumps may not have enough horsepower to open valve properly.

Ordering Specifications

Product #	in.	mm	lbs.	kgs	Hydrostatic Head Pressure* (Dimension A)
199ASV-1075	¾	19	1.6	.725	0'-5'
199ASV-2075	¾	19	1.6	.725	5'-10'
199ASV-3075	¾	19	1.6	.725	10'-15'
199ASV-1100	1	25	1.6	.725	0'-5'
199ASV-2100	1	25	1.6	.725	5'-10'
199ASV-3100	1	25	1.6	.725	10'-15'
199ASV-1150	1½	38	2.0	.907	0'-5'
199ASV-2150	1½	38	2.0	.907	5'-10'
199ASV-3150	1½	38	2.0	.907	10'-15'
199ASV-1200	2	51	2.0	.907	0'-5'
199ASV-2200	2	51	2.0	.907	5'-10'
199ASV-3200	2	51	2.0	.907	10'-15'

*Note: Head Pressure calculated for gasoline.



Listings and Certifications



Warning: Do not disassemble.
Do not field adjust.

Materials

- Body: Aluminum
- Diaphragm: Viton®
- Seals & Disc: Viton®
- Spring: Stainless steel
- Rider Rings: Teflon®
- Disc Holder: Nylon
- Core Guide: Acetal, delrin
- Core & Plugnut: Stainless steel



Features

- ◆ **Aluminum Body** - compatible with gasoline, diesel, kerosene, low grades ethanol/methanol, fuel oil and jet fuels
- ◆ **Strainer** - strainer with 100-mesh screen is recommended at the inlet
- ◆ **Mount** - vertical
- ◆ **Explosion Proof Shell & Water-Tight**
- ◆ **Standard Operation** - 120/60 volts AC
- ◆ **Thermal Expansion**
- ◆ **Power Draw** - 20 Watts @ 60 Hz

Ordering Specifications

Product #	NPT Size in.	General Purpose	*CV Flow	Fluid Temp.	Operating Pressure Differential (PSI)		Operating Pressure Differential (BAR)		Weight		Mounting Position
					Min.	Max.	Min.	Max.	lbs.	kg	
821-0075AC	3/4	AC	5.1	125	0	50	0	3.4	2.75	1.25	Any Position
821-0100AC	1	AC	21	125	0	25	0	1.7	5.25	2.38	Upright & Vertical
821-0150AC	1 1/2	AC	35	125	0	25	0	1.7	7.25	3.29	Upright & Vertical
821-0200AC	2	AC	60	125	0	25	0	1.7	7.25	3.29	Upright & Vertical

*CV Flow: GPM @ 1 psi Pressure Drop

Dimensions

Product #	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
821-0075AC	3.31	84	3.64	92	4.46	113	2.33	59
821-0100AC	5.00	127	5.59	142	6.84	174	5.38	137
821-0150AC	5.00	127	5.59	142	6.84	174	5.38	137
821-0200AC	6.09	155	5.94	151	7.47	190	6.31	160

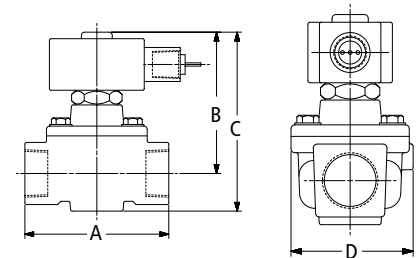
OPW 82RV - Thermal Pressure Relief Valve

Product #	NPT Size in.	Operating Pressure 25 psi, Stainless Steel Construction	Weight	
			lbs.	kg
82RV-2505	1/2		.25	.113

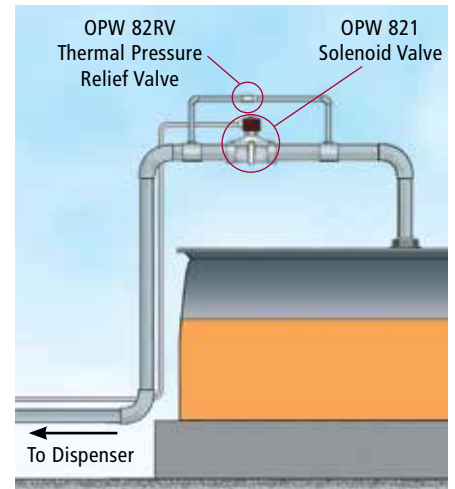


OPW 821 Solenoid Valve

The OPW 821 Solenoid Valve is designed to prevent accidental siphoning of above ground storage tanks if a leak or break occurs in the fuel supply line. The 821 valve is a two-way, normally closed diaphragm valve that opens when energized to allow fuel to flow to the pump or dispenser. Available in female NPT threads.



82RV-2505 Series Pressure Relief Valve
Instruction Sheet Order Number: 200517



OPW 82RV

The 82RV is designed to give thermal pressure relief to our 821 Series Solenoid Valve line. Made of all stainless steel construction with a Viton® seal, it is suitable for all petroleum products. The 82RV is precision set at the factory at 25 PSI (1.7 bar), and is field adjustable from 5 to 30 psi (.34 to 2 bar).

Listings and Certifications

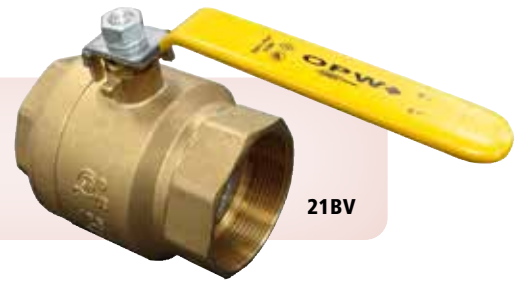


OPW 21BV Full Port Two-Way Ball Valve

OPW Ball Valves are used throughout fueling systems where a shut-off point is desirable to isolate a section of the piping system. These full-port, forged brass valves feature a manual open-close arm and a quick quarter-turn handle, allowing easy shut down of your AST or UST system. Compatible with gasoline, alcohol fuels, diesel and MTBE. Available with Lockable Handle (LH).

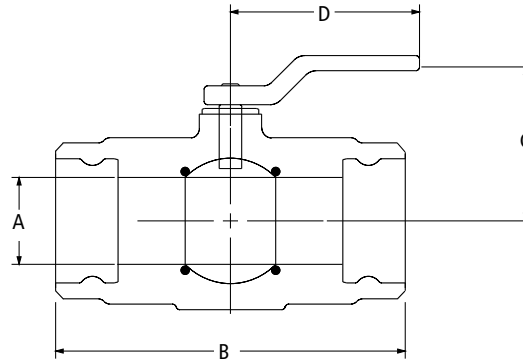
Materials

Body: Brass
Ball: Hard chrome plated
Seal: Teflon®



Features

- ◆ Pressure rated to 600 psig (41 bar) WOG
- ◆ Blowout-proof stem
- ◆ Chrome-plated brass ball
- ◆ Secondary O-ring stem seal
- ◆ PTFE seats, thrust bearing and stem packing



Ordering Specifications and Dimensions

Model #	Size (in.)	Dimensions (in.)			
		A	B	C	D
21BV-0050	1/2	0.59	2.28	1.81	3.35
21BV-0075	3/4	0.78	2.51	2.36	4.29
21BV-0100	1	0.98	2.97	2.52	4.29
21BV-0150	1 1/2	1.57	3.87	2.72	5.63
21BV-0200	2	1.96	4.29	3.03	5.63
21BV-0200SS*	2	1.96	4.80	3.66	7.09
21BV-0300	3	3.15	6.10	5.12	8.35
*SS denotes Stainless Steel.					
202233	Lockable Handle Kit for 1/2" Model (Handles sold separately)				
202234	Lockable Handle Kit for 3/4" and 1" Models (Handles sold separately)				
202235	Lockable Handle Kit for 1-1/2" and 2" Models (Handles sold separately)				

Listings and Certifications



Materials

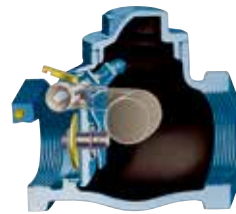
- Body and Cap:** Ductile iron
- Packing Nut and Stem:** Stainless steel
- Disc:** Viton®
- Stem Seat:** Viton®
- Seat Ring:** Brass
- Cap and Packing Nut Seals:** Viton®



(Valve Shown in Open Position)



(Valve Shown in Closed Position)

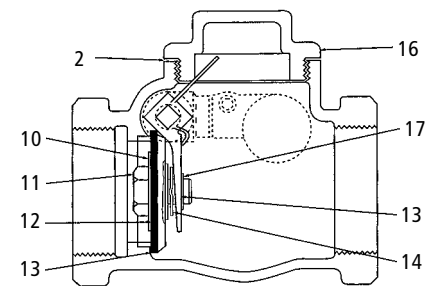
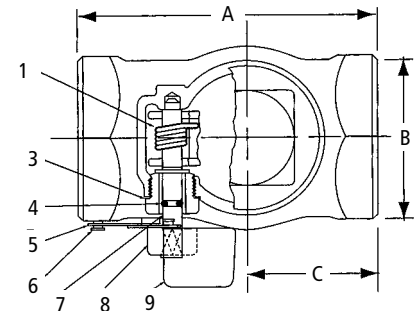


Features

- ◆ **178S Ductile Iron Construction** – valve is manufactured from a ferrous metal to resist fracturing from high temperatures
- ◆ **Full-Bore Inside Diameter for Superior Flow Rates** – maximizes flow rates in the fuel supply lines
- ◆ **Protected Main Poppet Disc** – main poppet seal is held out of the main flow stream and protected from damage due to dirt or debris in the fuel
- ◆ **Compensator Ring on Main Poppet Carrier** – ensures full seating of the main poppet for a tight seal
- ◆ **Viton® Main Disc and Stem Seat** – compatible with gasoline, diesel, kerosene, ethanol, methanol, MTBE, fuel oil, mogas, motor oil and various other blends of fuel
- ◆ **Rated at Normal Pressure Limit of 125 psi (8.6 bar) (cold)**
- ◆ **Non-Shock Pressure Limit of 200 psi (13.8 bar)**
- ◆ **Temperature Limit 225° F**

OPW 178S Series External AST Emergency Shut-Off Valve

The OPW 178S Series External AST Shut-Off Valve is designed to shut off product flow from an above ground storage tank, bulk loading rack or any place in the fuel supply line in the event of a fire. The 178S installs in-line on fuel supply piping. A fusible link attached to a spring-operated lever holds the poppet normally open. In the event of a fire, the fusible link melts at 160° F, allowing the spring-actuated poppet to shut off the flow of product in the fuel supply line. The 178S is available in 2" female NPT connections.



Replacement Parts

Key	Part #	Description
1	H05973M	Spring
2	H12070M	O-ring (Viton®)
3	H7635RB	Packing Nut
4	H10445M	O-ring (Viton®)
5	H01344M	Fusible Link Sub-Assy.
6	H01505RB	Pin
7	C01533RB	Stem
8	H07644M	Set Screw
9	H07642ZA	Lever
10	H03295M	Washer
11	H04035M	Disc Nut
12	H12071R	Disc (Viton®)
13	H10004A	Disc Holder
14	H11293M	Compensating Ring
15	C03144M	Carrier
16	H11547DI	Cap
17	H10003M	Retaining Ring

Ordering Specifications

Product #	in.	mm	lbs.	kg
178S-6130	2	51	5.35	2.43

Dimensions

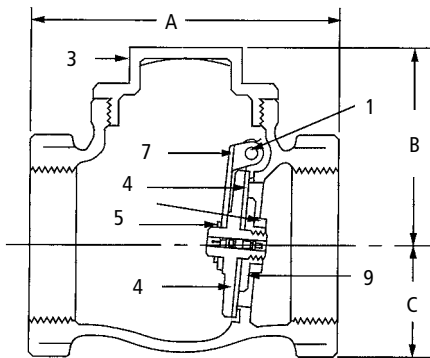
	in.	mm
A	5 ¹⁷ / ₃₂	140
B	3 ¹ / ₁₆	78
C	3 ¹ / ₁₆	62



For more information contact OPW Customer Service at 1-800-422-2525; International call 1-513-870-3315.

OPW Swing Check Valve

The OPW Swing Check Valves are designed to allow one-way product flow in fuel supply lines. OPW Swing Check Valves are installed in-line on fuel supply or transfer piping. A free-swinging poppet in the valve opens with flow of product and closes to prevent back-flow. The swing check valves can be located in either horizontal or vertical piping. The 175 is available in 2" female NPT connections. The 175B is similar to the 175 except it has an internal pressure relief valve to help absorb thermal expansion in the fuel supply or transfer line, pressure relief set at approx. 25 psi (1.7 bar). The 1175 is available in 3" female NPT connections.



Dimensions

	in.	mm
A	7 ¹ / ₂	191
B	7 ³ / ₁₆	183
C	2 ¹⁹ / ₃₂	66

Materials

Body: Bronze
Seat Ring: Brass
Disc: Viton®
Cap: Bronze



Swing Check Valve

Features

- ◆ **Viton Main Disc** - compatible with gasoline, diesel, kerosene, ethanol, methanol, MTBE, fuel oil, mogas, motor oil and various other blends of fuel
- ◆ **Full-Bore Inside Diameter for Superior Flow Rates** – maximizes flow rates in the fuel supply lines
- ◆ **Easy Service Entry** – threaded cap assembly allows removal, replacement or servicing of the carrier, disc or disc holder
- ◆ **Rated Normal Pressure Limit:** 125 psi (8.6 bar)
- ◆ **Cold Non-Shock Pressure Limit:** 200 psi. (13.8 bar)
- ◆ **Temperature Limit:** 225° F

Ordering Specifications

Product #	in.	mm	lbs.	kg
175-0044	2	51	4.7	2.14
175B-1544	2	51	4.6	2.10
1175-0050	3	76	16.8	7.60

Replacement Parts

OPW 175, 175B, 1175

Key	Part #	Description
1 (175,175B)	H00409RB	Pin
1 (1175)	H06797RB	Stem
2 (175,175B)	H00404RB	Plug
2 (1175)	H06798RB	Plug
3 (175,175B)	H00642B	Cap
3 (1175)	H06800B	Cap
4 (175,175B)	H12071R	Disc
4 (1175)	H06799	Disc Sub-Assy.
5 (175, 175B)	H04035M	Disc Nut
6 (175)	H07488A	Disc Holder
6 (175B)	H07495A	Disc Holder
7 (175, 175B)	H07610RB	Carrier
7 (1175)	H06796B	Carrier
8 (175, 175B)	H05792M	Retaining Ring
9 (175, 175B)	H03295M	Washer
10 (1175)	H04250M	Lock Nut



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