

**S**panning three centuries, Morrison Bros. Co. is among North America's oldest manufacturing firms west of the Mississippi River. Established in 1855 and among the first 20th century producers of equipment for the oil industry, the Morrison trademark for quality products and service became well established. Now, early in the 21st century, our mission is to strengthen this tradition for the exclusive benefit of our distributors and those we serve in the energy business.

**PRODUCT LINE...** Morrison products are used primarily in the marketing segment of the petroleum industry, "downstream" from refining operations. Petroleum marketing systems include bulk terminal storage and handling, transportation, motor fueling, and related infrastructure which bring energy to the consumer. Morrison components and hardware are system-integrated and engineered for optimizing operation and providing conformance with fire safety and environmental requirements.

**WARRANTY...** All Morrison products are thoroughly tested before shipment and only material found to be defective in manufacture will be replaced or repaired at our discretion. Claims must be made within one year from the date of invoice. Morrison will not allow claims for labor or consequential damage resulting from purchase, installation, or misapplication of the product.

**PRODUCT SAFETY...** Morrison products are designed and manufactured to engineering standards which include safety protocols. Many Morrison products and system components are designed and built to meet certain life safety standards and codes. All of our products are designed and built to function as intended within a range of proper use. Sufficient knowledge, experience, and application thereof by those who specify, install, and operate this equipment is required to ensure proper use and performance. Improper use of Morrison equipment can lead to property damage, injury, and death.

**MANUFACTURING...** Morrison has a full range of manufacturing capabilities. From casting metal to finished product or assembly, a large percentage of our product line is completely manufactured in our facilities. This approach allows for better control of quality, schedule, and process knowledge resulting in greater long term value for Morrison distributors, suppliers, and employees.

**SERVICE...** The hallmark for Morrison service lies in our employees' relentless pursuit of customer satisfaction. From Sales and Customer Service to Engineering and Production, putting the customer first involves every level of the organization. Maintaining long term relationships through consistent and fair treatment will always be a top priority for the company.

#### NOTIFICATION REQUEST

Upon discovery of any possible safety risk involving Morrison product(s) and/or associated systems, please contact Morrison Bros. Co. immediately.

**800.553.4840**

This will enable the company to assist in proper evaluation and corrective action. In an emergency situation, seek safety and call 911.





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# 9095 Series Selection Guide

Model Series #	Tank Opening			Tight Fill Connection		Dry Disconnect Connection		Remote Fill Connection		Drop Tube Size			ULC Listed	CARB EVR Approved	Low Profile Tank	Fuel Compatibility					GPM Flow @ 10 PSI Pressure Drop
	2"	4"	6"	2"	3"	2"	2"	3"	1½"	2"	3"	Aviation				E-85	DEF	B100	Methanol		
 9095AA (2")		✓		✓	✓	✓	✓	✓		✓		✓	✓*			✓	✓		✓		230
9095AA (3")			✓		✓			✓			✓	✓	✓*			✓	✓		✓		550
 9095C		✓		✓		✓	✓			✓			✓	✓			✓		✓		175
9095C-A		✓		✓		✓	✓			✓			✓	✓	✓	✓	✓		✓		175
 9095AM (2")		✓						✓		✓ <sup>†</sup>		✓				✓	✓		✓	✓	230
9095AM (3")			✓					✓			✓ <sup>†</sup>	✓				✓	✓		✓	✓	550
 9095DS	✓				✓					✓ <sup>†</sup>					✓						26
 9095X		✓		✓				✓		✓		✓	✓*	✓	✓	✓	✓		✓		230
 9095SA	✓				✓			✓				✓		✓					✓		110
 9095SS	✓				✓									✓				✓	✓		164



## 9095AA Overfill Prevention Valve

The 9095AA series overfill prevention valve is designed to prevent the overfilling of storage tanks by providing a positive shut-off during a pressurized fill. The valve is installed at the fill port of a storage tank and can be set to the desired shut-off level by using standard length pipe nipples.

### Features

- Installs directly onto a 4" or a 6" riser or top-mounted spill container
- Minimum shut-off height is 2" from the tank top
- 2.35" of float height adjustment
- Drop tube adaptor accepts 2" or 3" drop fill tubes (Morrison 419)
- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- Integral anti-siphon function

### Operational Criteria

- Minimum 5 PSI flow requirements
- A tight fill connection is required
- The estimated flow rate for the 2" model is 230 GPM at 10 PSI pressure drop
- The estimated flow rate for the 3" model is 560 GPM at 10 PSI pressure drop

An optional manual test mechanism allows a technician to pull on the test line at any time during the filling process to actuate the float, stop the fill, and verify the valve is working properly.

#### NOTE

Flange adaptor available for remote fill overfill prevention valve models only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	3000 Centistokes
3"	100 PSI	300 Centistokes



### Construction Details

Male quick disconnect... Passivated aluminum  
 Female adaptor... Ductile iron, powder coated  
 Shaft, linkage, and hardware... Stainless steel  
 Lower pipe nipple... E-coated steel  
 Drop tube adaptor... Passivated aluminum  
 Body... Passivated aluminum  
 Plunger and dashpot... Anodized aluminum  
 Float... Nitrophyl®-M

### Certifications & Listings

ULC-S661-10 Listed; NFPA 30, 30A; UFC; IFC; PEI/RP 200, 600; Florida DEP EQ-851; CARB EVR Executive Order VR-402

#### NOTE

For use on clean liquids only.

	Item Number	Valve Size	Tank Opening	Inlet Size & Type	Weight (lbs)
Top Fill	9095AA0200 AV	2"	4"	Valve with 2" male quick disconnect	14.10
	9095AA4000 AV	2"	4"	Valve with 3" male quick disconnect	16.80
	9095AA5200AVEVR	2"	4"	Valve with 2" male dry disconnect; EVR approved	21.0
	9095AA0300 AV	3"	6"	Valve with 3" male quick disconnect	21.0
Remote Fill	9095AA3200AVEVR	2"	4"	Valve with 2" female threaded adaptor; EVR approved	14.10
	9095AA4200AVEVR	2"	4"	Valve with 3" female threaded adaptor; EVR approved	21.25
	9095AA3300AVEVR	3"	6"	Valve with 3" female threaded adaptor; EVR approved	30.0
Valve Only	9095AA9200AVEVR	2"	4"	Valve with 2" female threads (less top adaptor); EVR approved	14.10
	9095AA9300AVEVR	3"	6"	Valve with 3" female threads (less top adaptor); EVR approved	14.40
Kits packaged in one box					
Kits	9095A-KIT91 AV	2"	Includes 9095AA0200 AV, 2" x 6' 419 drop tube, and 305C cap		0.50
	9095ATKIT91 AV	2"	Same as 9095A-KIT91 AV, with test mechanism		0.50
	9095ATM0100 AM	2" & 3"	Mechanical test mechanism kit (9095A & 909AA), valve top not included		0.50
	9095ATM0200 AK	2"	Mechanical test mechanism, includes 9095AA0200 top, with 2" male quick disconnect x 4" female threads		0.50
	9095ATM0300 AK	3"	Mechanical test mechanism, includes 9095AA0300 top, with 3" male quick disconnect x 6" female threads		0.50
	9095ATM3200 AK	2"	Mechanical test mechanism, includes 9095AA3200AVEVR top, with 2" female threads x 4" female threads		0.50
	9095ATM3300 AK	3"	Mechanical test mechanism, includes 9095AA3300AVEVR top, with 3" female threads x 6" female threads		0.50
	9095AF3201 AA	2"	Adaptor 2" male thread to 2" raised face flange for use with remote fill models only		5.92
	9095AF3301 AA	3"	Adaptor 3" male thread to 3" raised face flange for use with remote fill models only		11.1



9095AM3200 (2")

# 9095AM Overfill Prevention Valve (Methanol)

The 9095AM series overfill prevention valve is designed to prevent the overfilling of storage tanks by providing a positive shut-off during a pressurized fill. The valve is installed at the fill port of a storage tank and can be set to the desired shut-off level by using standard length pipe nipples.

### Features

- Installs directly onto a 4" or a 6" riser or top-mounted spill container
- Minimum shut-off height is 2" from the tank top
- 2.35" of float height adjustment
- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- Integral anti-siphon function

### Operational Criteria

- Minimum 5 PSI flow requirements
- A tight fill connection is required
- Use methanol-compatible threaded pipe (not supplied: drop tube nor upper pipe)
- Estimated flow rate for the 2" model is 230 GPM at 10 PSI pressure drop
- Estimated flow rate for the 3" model is 560 GPM at 10 PSI pressure drop

An optional manual test mechanism allows a technician to pull on the test line at any time during the filling process to actuate the float, stop the fill, and verify the valve is working properly.

### Construction Details

- Remote adaptor... Ductile iron, powder coated
- Shaft, linkage and hardware... Stainless steel
- Lower pipe nipple... E-coated steel
- Drop tube coupler... Stainless steel
- Body... Nickel-plated aluminum

### Certifications & Listings

ULC-S661-10 Listed; NFPA 30, 30A; UFC; IFC; PEI/RP200, 600; Florida DEP EQ-895

**NOTE**  
For use on clean liquids only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	300 Centistokes
3"	100 PSI	300 Centistokes

Item Number	Valve Size	Tank Opening	Weight (lbs)
9095AM3200 AV	2"	4"	14.10
9095AM3300 AV	3"	6"	30.0

Remote Fill





## 9095C Overfill Prevention Valve (for low profile tanks)

The 9095C series overfill prevention valve is designed to prevent the overfilling of storage tanks by providing a positive shut-off during a pressurized fill. The valve is installed at the fill port of a storage tank.

### Features

- Shut-off level can be set to within 1¼" from the top of the tank
- Installs on a 4" schedule 40 NPT male riser connection
- Standard drop tubes (Morrison 419) are easily attached with included drop tube adaptor
- Field adjustable float can be adjusted up to 5" for precise shut-off level
- Aviation model includes additional float section
- Integral anti-siphon function
- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation

### Operational Criteria

- Minimum 5 PSI flow requirements
- Typical flow rate is 175 GPM at 10 PSI pressure drop
- A tight fill connection required. Top fill, remote fill, and dry disconnect connections available

An optional manual test mechanism allows a technician to pull on the test line at any time during the filling process to actuate the float, stop the fill, and verify the valve is working properly.

**NOTE**  
For use on clean liquids only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	300 Centistokes

	Item Number	EVR	Valve Size	Tank Opening	Inlet Size & Type	Weight (lbs)
Top Fill	9095C-0200 AV		2"	4"	Valve with 2" male quick disconnect	9.0
	9095C-5200AVEVR		2"	4"	Valve with 2" dry disconnect adaptor	9.64
	9095C-AV0200 AV		2"	4"	Aviation valve with 2" male quick disconnect	9.0
	9095CA5200AVEVR		2"	4"	Aviation valve with 2" dry disconnect	9.64
Remote Fill	9095C-3200AVEVR		2"	4"	Valve with 2" female threads	12.50
	9095CA3200AVEVR		2"	4"	Aviation valve with 2" female threads	12.50
Valve Only	9095C-9100AVEVR		2"	4"	Valve less top adaptor, 2" male threads, low profile	8.0
	9095C-9200AVEVR		2"	4"	Valve less top adaptor, 2" male threads	8.37
	9095CA9200AVEVR		2"	4"	Aviation valve less top adaptor, 2" male threads	8.37
	9095CTM0100 AM				Mechanical test mechanism	1.0

\*9095CA models used with fuels with specific gravity less than 0.72.



### Construction Details

Adaptor... Passivated aluminum  
 Body... Passivated aluminum  
 Float... Nitrophenyl®-M  
 Plunger and dashpot... Anodized aluminum  
 Upper tube... E-coated steel  
 Shut-off mechanism... Stainless steel  
 Shaft linkage hardware... Stainless steel

### Certifications & Listings

NFPA 30, 30A; UFC; BOCA;  
 SBCCI/SFC; PEI/RP 200, 600;  
 CARB EVR Executive Order 402;  
 Florida DEP EQ-900



9095DS

# 9095DS Overfill Prevention Valve (for 2" tank opening applications requiring a drop tube)

The 9095DS series overfill prevention valve is designed to prevent the overfilling of storage tanks by providing a positive shut-off during a pressurized fill. The valve installs in a 2" female-threaded opening at the fill port of a storage tank. The valve terminates the fill when the product reaches the preset level.

### Features

- Full flow to shut-off point
- The shut-off height is factory preset (measured from the bottom of the attachment threads)
- Can be retrofitted to existing tanks
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- A standard 1½" male-threaded pipe can be attached as a drop tube
- Integrated mechanical test mechanism

### Operational Criteria

- Minimum 10 PSI flow requirements
- Typical flow rates are 26 GPM at 10 PSI pressure drop and 60 GPM at 60 PSI pressure drop
- A tight fill connection is required

### Construction Details

Adaptor... Aluminum (Part A or Part F)  
 Body... Passivated aluminum  
 Float... Gasoline and diesel compatible  
 Plunger and dashpot... Brass  
 Shut-off mechanism...Brass

### Certifications & Listings

NFPA 30, 30A; UFC; IFC;  
 PEI/RP 200, 600

**NOTE**  
 For use on clean liquids only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	150 Centistokes

	Item Number	Valve Size	Tank Opening	Inlet Size & Type	Weight (lbs)
with Part F	9095DS0200 AV	2"	2"	Valve with 2" shut-off height	8.50
	9095DS0400 AV	2"	2"	Valve with 4" shut-off height	9.0
	9095DS0600 AV	2"	2"	Valve with 6" shut-off height	9.50
with Part A	9095DS2200 AV	2"	2"	Valve with 2" shut-off height	8.50
	9095DS2400 AV	2"	2"	Valve with 4" shut-off height	9.0
	9095DS2600 AV	2"	2"	Valve with 6" shut-off height	9.50
less adaptor	9095DS9200 AV	2"	2"	Valve with 2" shut-off height	8.50
	9095DS9400 AV	2"	2"	Valve with 4" shut-off height	9.0
	9095DS9600 AV	2"	2"	Valve with 6" shut-off height	9.50



## 9095SA Overfill Prevention Valve (for 2" tank opening applications not requiring a drop tube)

The 9095SA series overfill prevention valve is designed to prevent overfilling liquid storage tanks by providing a positive shut-off during a pressurized fill.

### Features

#### Direct Fill Installations

- Installs on tank top by threading onto a 2" male NPT riser
- Installs inside 2" Morrison 516 or 518 tank top spill container

#### Remote Fill Installations

- Valve has 2" female NPT inlet threads for installation piping to remote fill point
- Field adjustable shut-off range between 2" to 12"

#### Both Installations

- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- The vertical style float allows for installation in openings in close proximity to the tank wall

### Operational Criteria

- Minimum 5 PSI flow requirements
- The estimated flow rate is 110 GPM at 10 PSI pressure drop
- A tight fill connection is required

**NOTE**  
For use on clean liquids only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	300 Centistokes

Item Number	Valve Size	Tank Opening	Inlet Size & Type	Weight (lbs)
9095SA0200 AV	2"	2"	Valve with 2" part F male adaptor	6.10
9095SA0500 AV	2"	2"	Valve with 2" part A female adaptor	6.10
9095SA9200 AV	2"	2"	Valve less top connection	6.10

\*Consult Price List for BSP options.

\*9095S models have been replaced with 9095SA models.



9095SA

### Construction Details

Direct fill adaptor... Aluminum (Part A or Part F)

Body... Passivated aluminum  
Plunger dashpot... Anodized aluminum

Float and float guard... Polypropylene  
Float tube... Stainless steel

### Certifications & Listings

ULC-S661-10 Listed; NFPA 30, 30A; UFC; IFC; PEI/RP 200, 600; Florida DEP EQ-858



**9095SS**  
with 2"-16" shut-off tube

## 9095SS Overfill Prevention Valve (for 2" tank opening applications not requiring a drop tube)

The 9095SS series overfill prevention valve is designed to prevent the overfilling of liquid storage tanks by providing a positive shut-off during a pressurized fill.

### Features

#### Direct Fill Installations

- Installs on tank top by threading onto a 2" male NPT riser
- Installs inside 2" Morrison 516 or 518 tank top spill container

#### Remote Fill Installations

- Valve has 2" female NPT inlet threads for installations piping to a remote fill point
- Field adjustable float tube for setting the precise shut-off level (2" to 96" range)

#### Both Installations

- Stainless steel construction for increased compatibility with fuels, chemicals, and DEF
- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- The vertical style float allows for installation in openings in close proximity to the tank wall

### Operational Criteria

- Minimum 5 PSI flow requirements
- Estimated flow rate is 110 GPM at 10 PSI pressure drop
- A tight fill connection is required

### Construction Details

- Adaptor... Stainless steel (Part A or Part F)
- Body... Stainless steel
- Float... Polypropylene
- Plunger and dashpot... Stainless steel
- Float tube and float guard... Stainless steel
- Shut-off mechanism... Stainless steel

### Certifications & Listings

NFPA 30, 30A; UFC; IFC; PEI/RP 200, 600; Florida DEP EQ-858

### NOTE

For use on clean liquids only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	300 Centistokes

	Item Number	Valve Size	Tank Opening	Inlet Size & Type	Weight (lbs)
with Part F	9095SS0200 AV	2"	2"	Valve with 2"-16" shut-off	8.20
	9095SS0400 AV	2"	2"	Valve with 2"-28" shut-off	8.20
	9095SS0600 AV	2"	2"	Valve with 2"-76" shut-off	8.20
with Part A	9095SS2200 AV	2"	2"	Valve with 2"-16" shut-off	8.20
	9095SS2400 AV	2"	2"	Valve with 2"-28" shut-off	8.20
	9095SS2600 AV	2"	2"	Valve with 2"-76" shut-off	8.20
less adaptor	9095SS9200 AV	2"	2"	Valve with 2"-16" shut-off	7.50
	9095SS9400 AV	2"	2"	Valve with 2"-28" shut-off	7.50
	9095SS9600 AV	2"	2"	Valve with 2"-76" shut-off	7.50
	9095SS9800 AV	2"	2"	Valve with 2"-96" shut-off	7.0

\*Consult Price List for BSP options.





## 9095X Overfill Prevention Valve (2" integrated adaptor series)

The 9095X series is a top-fill overfill prevention valve designed to prevent the overfilling of storage tanks by providing a positive shut-off during a pressurized fill.

### Features

- Fill adaptor and shut-off mechanism are factory-assembled for ease of field installation
- Straight female threaded adaptor facilitates valve installation to a precise set point
- Minimum shut-off height is 1" from the tank top
- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Drop tube adaptor accepts 2" drop fill tubes (Morrison 419)
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- Integral anti-siphon function
- 305C--2000 cap included with 1100 and 2200 models
- A tight fill connection is required for the valve to operate
- Aviation models (9095X-2800 and 6800) include three-part float

### Operational Criteria

- Minimum 5 PSI flow requirements
- The estimated flow rate is 230 GPM at 10 PSI pressure drop
- A tight fill connection is required

An optional manual test mechanism allows a technician to pull on the test line at any time during the filling process to actuate the float, stop the fill, and verify the valve is working properly.

**NOTE**  
For use on clean liquids only.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	3000 Centistokes



### Construction Details

Male quick disconnect... Passivated aluminum  
 Female threaded adaptor... Powder coated ductile iron and stainless steel  
 Shaft, linkage and hardware... Stainless steel  
 Lower pipe nipple... E-coated steel  
 Plunger dashpot... Anodized aluminum  
 Body... Passivated aluminum  
 Drop tube adaptor... Passivated aluminum  
 Float... Nitrophyl@-M

### Certifications & Listings

ULC-S661-10 Listed; NFPA 30, 30A; UFC; IFC; PEI/RP 200, 600; Florida DEP EQ-858; CARB EVR Executive Order VR-402

Item Number	Valve Size	Drop Tube	Fill Connection	Application	Weight (lbs)
9095X-1100 AV	2"	No	Male quick disconnect	Generator base tanks with integrated spill container	6.50
9095X-6100 AV	2"	No	Female threads	Generator base tanks with integrated spill container	8.0
9095X-2200 AV	2"	Yes	Male quick disconnect	Low profile tanks; integrated spill container	15.0
9095X-6200AVEVR	2"	Yes	Female threads	Low profile tanks; integrated spill container; EVR approved	10.50
9095X-2800 AV	2"	Yes	Male quick disconnect	General purpose and aviation	14.80
9095X-6800AVEVR	2"	Yes	Female threads	General purpose and aviation; EVR approved	15.0
9095ATM1000 AK	Mechanical test mechanism for all 9095X series overfill valves				



## FMMASO & FMMATO Series Overfill Prevention Valve for Used Oil Systems



FMMASO-91S AV

### Construction Details

Valve body and collar... Anodized aluminum  
Float... Polypropylene  
Float rod and valve spool... Brass  
O-ring seals...FKM  
Hardware... Stainless and plated steel

### Certifications & Listings

ULC Listed; Florida DEP EQ-576

### Patent 5007450

Valve with optional alarm for use on used oil evacuation systems which use an air-operated pump

The ASO series of valves is used to shut-off the air supply to an AOD (Air-Operated Diaphragm) pump when the liquid level approaches full capacity.

The ATO valve is used to turn on the air supply to an AOD pump when the liquid level approaches the full capacity.

### Features

- Installs directly into a 2" female threaded tank top opening
- Accepts 1/4" air lines
- When the ASO valve closes, the air supply is diverted to an audible whistle on the 91S and 91EXS models
- Operating temperature range is -10°F to 185°F
- Air flow capacity is 20 CFM @ 100 PSI. Maximum air pressure is 100 PSI
- Valve automatically resets as liquid is removed and the air pressure to the valve is turned off
- **FMMASO-91 and 91S** shut-off height is 6 1/2" from the tank top
- **FMMASO-91EX and 91EXS** shut-off height is 17 3/8" from the tank top

Item Number	Size	Signal	Weight (lbs)
FMMASO-91EX AV	2"	No	5.0
FMMASO-91EXS AV	2"	Yes	5.0
FMMASO-91 AV	2"	No	2.50
FMMASO-91S AV	2"	Yes	2.60
FMMATO-91 AV	2"	No	2.50

\*Consult Price List for BSP options.



## 710 Series Solenoid Valves (Normally Closed)

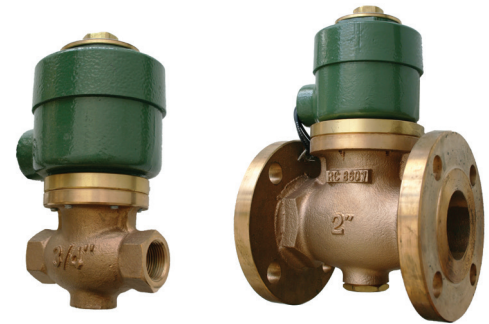
Normally closed solenoid valves are used to help prevent the accidental siphoning of a product from a tank in the event of a leak downstream below the liquid level. Valves generally installed on the dispensing side of a fuel system pipeline. The valve opens upon the receipt of an electronic signal such as when a dispenser or pump is switched to the ON position.

### Features

- Normally closed, hung piston design
- Installs in a horizontal pipeline in the upright vertical position
- Minimum operating temperature is -40°F
- Zero pressure differential
- Integral thermal relief allows the valve to relieve expansion pressure in the opposite direction of flow
- Continuous duty Class H standard coil operates at 120 volts
- Enclosure is watertight and rated for hazardous locations—NEMA 3, 4X, 7 and 9; groups C and D
- Additional coil voltages available
- Recommended for use with liquids having a maximum viscosity of 60 centistokes
- A strainer with a 100 mesh screen is recommended at the valve inlet
- **710F** has flanged body connections
- **710MO** has manual override feature. Available in sizes ranging from ¾" to 2" for operation during a power outage

Item Number	Size	Weight (lbs)
710---0075 1V	¾"	11.0
710---0100 1V	1"	13.0
710---0150 1V	1½"	16.0
710---0200 1V	2"	21.0
710---0300 1V	3"	44.0
710F--0150 1V	1½"	25.0
710F--0200 1V	2"	29.0
710F--0300 1V	3"	58.0
710MO-0075 1V	¾"	12.0
710MO-0100 1V	1"	14.0
710MO-0150 1V	1½"	17.0
710MO-0200 1V	2"	22.0

\*Consult Price List and/or contact Customer Service for other options and voltages.



710 (¾")

710F (2")

### Construction Details

Body... Cast bronze

Seals...PTFE

Solenoid housed in an integral, watertight, explosion-proof shell

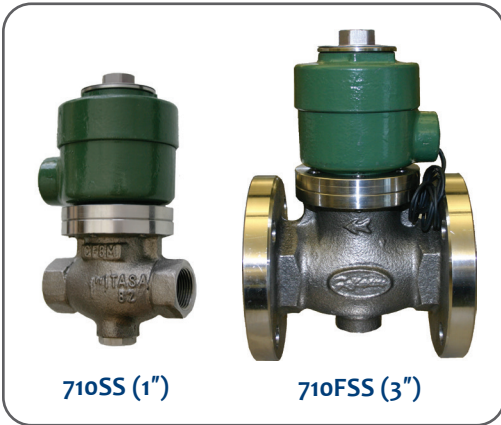
### Certifications & Listings

- CSA listed (File No. 108921, Model Z1314): Class I, Groups C and D; Class II, Groups E, F, and G; Class III, T3C
- cULus Listed

### NOTE

Product can only be pumped in one direction, the direction of the flow arrow.

Not designed for use as an overfill prevention or process control valve.



## 710SS Series Solenoid Valves (Normally Closed)

Normally closed solenoid valves are used to help prevent the accidental siphoning of a product from a tank in the event of a leak downstream below the liquid level. Valves are generally installed on the dispensing side of a fuel system pipeline. The valve opens upon the receipt of an electronic signal such as when a dispenser or pump is switched to the ON position.

### Features

- Normally closed, hung piston design
- Install in a horizontal pipeline in the upright vertical position
- Minimum operating temperature is -40°F
- Zero pressure differential
- Integral thermal relief allows the valve to relieve expansion pressure in the opposite direction of flow
- Continuous duty Class H standard coil operates at 120 volts
- Additional coil voltages available
- Enclosure is watertight and rated for hazardous locations—NEMA 3, 4X, 7 and 9; groups C and D
- Recommended for use with liquids having a maximum viscosity of 60 centistokes
- A strainer with a 100 mesh screen is recommended at the valve inlet
- **710FSS** has flanged body connections
- **710FSM** has manual override feature. Available in sizes ranging from ¾" to 2" for operation during a power outage

### Construction Details

Body... 304 stainless steel  
 Seals... FKM, PTFE  
 Solenoid housed in an integral, watertight, explosion-proof shell

### Certifications & Listings

CSA approved for hazardous locations:  
 Class I, Groups C and D; Class II, Groups E, F, and G; Class III, T3C

Item Number	Size	Seal	Weight (lbs)
710SS-2075 1V	¾"	PTFE	13.0
710SS-2100 1V	1"	PTFE	15.0
710SS-2150 1V	1½"	PTFE	16.0
710SS-2200 1V	2"	PTFE	21.0
710SS-0300 1V	3"	PTFE	44.0
710SS-3300 1V	3"	PTFE	44.0
710FSS2150 1V	1½"	PTFE	25.0
710FSS2200 1V	2"	PTFE	29.0
710FSS0300 1V	3"	PTFE	58.0
710FSM2200 1V	2"	PTFE	30.0

*\*Consult Price List and/or contact Customer Service for other options and voltages.*





## 711 Solenoid Valve (Normally Open)

The 711 series solenoid valve is a high-flow, pilot-operated piston valve that is "normally open." This general purpose valve is for applications such as pressure systems, machine tools, water processing, and steam applications. The valve closes upon the receipt of an electronic signal.

### Features

- 7.5 PSI pressure differential required to keep the valve in the open position
- Explosion and weather proof coil and housing
- 120V/60HZ standard; additional coil voltages available
- Must be installed in a horizontal pipeline with the coil in the upright and vertical position
- Recommended for use with liquids having a maximum viscosity of 60 centistokes
- A strainer with a 100 mesh screen is recommended at the valve inlet

Item Number	Size	Weight (lbs)
711--0075 1V	¾"	2.86
711--0100 1V	1"	5.50
711--0150 1V	1½"	8.60
711--0200 1V	2"	9.47
711--0300 1V	3"	40.0

*\*Consult Price List and/or contact Customer Service for other options and voltages.*



711 (¾")

### Construction Details

Body... Forged brass  
Cover... Forged brass  
Seals... FKM

### Certifications & Listings

UL Listed



## 711NC Solenoid Valve (Normally Closed)

The 711NC series solenoid valve is a high-flow, pilot-operated piston valve that is "normally closed." This general purpose valve is for applications such as pressure systems, machine tools, water processing, and steam applications. The valve opens upon the receipt of an electronic signal such as when a dispenser or pump is switched to the ON position.

### Features

- 7.5 PSI pressure differential required to keep the valve in the open position
- Explosion and weather proof coil and housing
- 120V/60HZ standard; additional coil voltages available
- Must be installed in a horizontal pipeline with the coil in the upright and vertical position
- Recommended for use with liquids having a maximum viscosity of 60 centistokes
- A strainer with a 100 mesh screen is recommended at the valve inlet

Item Number	Size	Weight (lbs)
711NC-0075 1V	¾"	2.86
711NC-0100 1V	1"	5.50
711NC-0150 1V	1½"	8.60
711NC-0200 1V	2"	9.47

*\*Consult Price List and/or contact Customer Service for other options and voltages.*



711NC (¾")

### Construction Details

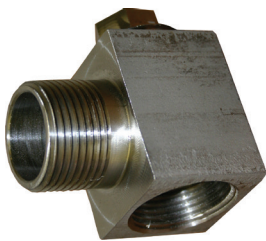
Body... Forged brass  
Cover... Forged brass  
Seals... FKM

### Certifications & Listings

UL Listed



912 (1/2")



912 (3/4")  
horizontal priming tee

**Construction Details**

Body... 304/316SS wetted components  
Disc... FKM

**912 Series  
Anti-Siphon Valves**

Anti-siphon valves are used to help prevent the accidental siphoning of a product from a tank in the event of a leak downstream below the liquid level.

**Features**

- Valve functions in horizontal and vertical position
- Integrated thermal expansion relief
- Factory preset to several ranges of water column
- Maximum working pressure is 200 PSI
- Operating temperature range is -10°F to 200°F
- Normally closed setting
- Priming tees and assemblies are available

Item Number	Size	Description	Weight (lbs)
912-050500 AV	1/2"	0'-5' W.C.	0.87
912-051000 AV	1/2"	5'-10' W.C.	0.87
912-051500 AV	1/2"	10'-15' W.C.	0.87
912-052000 AV	1/2"	15'-20' W.C.	0.87
912-070500 AV	3/4"	0'-5' W.C.	0.90
912-071000 AV	3/4"	5'-10' W.C.	0.90
912-071500 AV	3/4"	10'-15' W.C.	0.90
912-072000 AV	3/4"	15'-20' W.C.	0.90
912-100500 AV	1"	0'-5' W.C.	1.55
912-101000 AV	1"	5'-10' W.C.	1.55
912-101500 AV	1"	10'-15' W.C.	1.55
912-102000 AV	1"	15'-20' W.C.	1.55
912-050510 AT	1/2"	Horizontal priming tee with plug	0.60
912-050511 AT	1/2"	Vertical priming tee with plug	0.60
912-070510 AT	3/4"	Horizontal priming tee with plug	0.60
912-070511 AT	3/4"	Vertical priming tee with plug	0.60
912-100510 AT	1"	Horizontal priming tee with plug	1.25
912-100511 AT	1"	Vertical priming tee with plug	1.25



910 (1 1/2")

**Construction Details**

Body... Ductile iron (e-coated)  
Cap... Stainless steel  
Spring... Stainless steel  
Plunger... Stainless steel with FKM disc  
Thermal expansion valve... Stainless steel with FKM seal

**Certifications & Listings**

cULus Listed

**910  
Anti-Siphon Valve**



Anti-siphon valves are used to help prevent the accidental siphoning of a product from a tank in the event of a leak downstream below the liquid level.

**Features**

- Compatible in suction or pressurized systems
- Unique spring design allows for optimum opening pressure
- High flow at optimum pumping pressures
- Four elevation ranges available
- Tamper-proof cap to ensure accurate elevation ranges
- 90° configuration for easy piping from tank top to grade level
- Integrated thermal expansion relief
- Normally closed setting

Item Number	Size	Description	Weight (lbs)
910---1000 AV	1 1/2"	0'-5' W.C.	6.46
910---1100 AV	1 1/2"	5'-10' W.C.	6.46
910---1200 AV	1 1/2"	10'-15' W.C.	6.46
910---1300 AV	1 1/2"	15'-20' W.C.	6.46
910---2000 AV	2"	0'-5' W.C.	5.42
910---2100 AV	2"	5'-10' W.C.	5.42
910---2200 AV	2"	10'-15' W.C.	5.42
910---2300 AV	2"	15'-20' W.C.	5.42

\*Consult Price List for BSP options.



## 346DI Series External Emergency Valves

This normally open valve is designed to shut off the flow of liquid in the event of a fire or excessive temperature. The fusible link holds the spring-actuated poppet in the open position.

### Features

- Fully open design provides full flow when the valve is in the open position
- Cold non-shock pressure rated at 200 PSI W.O.G.
- Flanged model conforms to ANSI B16.42 specification for class 150# raised face flanges
- 165°F UL Listed fusible link standard (212°F available)
- **346FDI** has flanged body connection

Item Number	Size	Weight (lbs)
346DI-0400 AV	1½"	4.50
346DI-0500 AV	2"	6.50
346DI-0600 AV	3"	15.0
346DI-1000 AV *	¾"	7.30
346DI-1100 AV *	1"	7.30
346DI-1200 AV *	1¼"	7.0
346FDI0200 AV	2"	15.0
346FDI0300 AV	3"	27.0
346FDI0400 AV	4"	71.0

\*1½" valve with factory-installed reducer bushings.



346DI (1½")



346FDI (3")

### Construction Details

Body, cap, and poppet... Ductile iron  
Cap gasket... PTFE  
Stem seal... PTFE encapsulated fluorocarbon elastomer

## 346SS External Emergency Valve

This normally open valve is designed to shut off the flow of liquid in the event of a fire or excessive temperature. The fusible link holds the spring-actuated poppet in the open position.

### Features

- Fully open design provides full flow when the valve is in the open position
- Cold non-shock pressure rated at 200 PSI W.O.G.
- 165°F UL Listed fusible link standard (212°F available)

Item Number	Size	Weight (lbs)
346SS-0100 AV	1½"	6.0
346SS-0200 AV	2"	7.0



346SS (1½")

### Construction Details

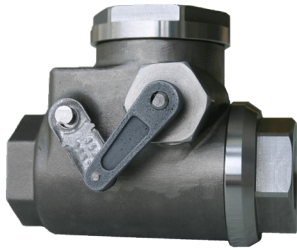
Body, cap, poppet... Stainless steel  
Cap gasket... PTFE  
Stem seal... PTFE encapsulated fluorocarbon elastomer

### NOTE

The valves shown on this page are not intended to be used as a "block valve."



## 446 Emergency Shut-Off Valve



446 (1")

### Construction Details

Body... 316 stainless steel  
Cap, shaft, tail fitting, poppet, and nut... 303 stainless steel  
Lever arm... 304 stainless steel  
Handle... 356-T6 aluminum  
Spring... 17-7 stainless  
O-ring and disc... FKM

### Certifications & Listings

cULus Listed to ULC/ORD-C842—  
Valves for Flammable and  
Combustible Liquids

The 446 series normally open valve is designed to shut off flow in the event of a fire or excessive temperatures. This emergency shut-off valve is installed in the fuel line from a storage tank to fuel burning equipment (e.g., back-up generators, boilers, and other flammable liquid burning appliances).

### Features

- 165°F (73°C) fusible link activates spring closure
- 1/2", 3/4", or 1" female NPT threaded connections
- Compact design reduces operational footprint requirement
- Operating pressure rated at 50 PSI
- Operating temperature range rated at -20°F (-28°C) to 125°F (51°C)

Item Number	Size	Weight (lbs)
446---0050 AV	1/2"	3.50
446---0075 AV	3/4"	3.50
446---0100 AV	1"	3.30

### NOTE

This valve is not intended to be used as a "block valve."



635 (5")



635 (swivel)

## 635 Series Offsets

Offsets are designed to simplify dispenser or suction pump installations where slight piping misalignments occur.

### Features

- Low profile designed for maximum flow
- 1 1/2" NPT female threads

Item Number	Thread Size	Offset Size	Weight (lbs)
635---0100 MAE	1 1/2"	1"	2.04
635---0150 MAE	1 1/2"	1 1/2"	2.29
635---0200 MAE	1 1/2"	2"	2.51
635---0250 MAE	1 1/2"	2 1/2"	2.75
635---0300 MAE	1 1/2"	3"	3.0
635---0350 MAE	1 1/2"	3 1/2"	3.24
635---0400 MAE	1 1/2"	4"	3.50
635---0450 MAE	1 1/2"	4 1/2"	3.72
635---0500 MAE	1 1/2"	5"	3.96
635---0600 MAE	1 1/2"	6"	4.45
635---0800 MAE	1 1/2"	8"	5.66
635---0302 2S	Swivel only (1 1/2" thread size)		1.09

\*Consult Price List for other options.

### Construction Details

Body... Cast iron e-coated

635---S

Swivel... Steel



## 272 Series Internal Emergency Valves

Internal emergency valves are designed for installation at the bottom inlet/outlet of an aboveground storage tank (AST) where product flow must be stopped in the event of a fire or excessive heat. A fusible link holds the spring-loaded valve open until activated.

### Features

- Adjustable hold-open mechanism
- 212°F UL Listed fusible link standard (165°F available)
- Shear section model provides added impact protection
- Locking models for added theft deterrent

Item Number	Size	Tank Connection	Body/Cap Material	Shear Section	Locking Mechanism	Weight (lbs)
272DI-0300 AV	4" x 3"	Flanged	Ductile Iron	No	No	34.15
272DI-0400 AV	6" x 4"	Flanged	Ductile Iron	No	No	42.50

Item Number	Size	Tank Connection	Body/Cap Material	Shear Section	Locking Mechanism	Weight (lbs)
272DLS0100 AV	2" x 2"	Male	Ductile Iron	Yes	Yes	6.50
272DLS0500 AV	3" x 3"	Male	Ductile Iron	Yes	Yes	11.50
272HDI0100 AV	2" x 2"	Male	Ductile Iron	No	No	6.22
272HDI0500 AV	3" x 3"	Male	Ductile Iron	No	No	9.66
272HDI0700 AV	4" x 4"	Male	Ductile Iron	No	No	16.75
272HDS0100 AV	2" x 2"	Male	Ductile Iron	Yes	No	7.0
272HDS0500 AV	3" x 3"	Male	Ductile Iron	Yes	No	9.68
272HDS0700 AV	4" x 4"	Male	Ductile Iron	Yes	No	16.30
272HDL0100 AV	2" x 2"	Male	Ductile Iron	No	Yes	7.0
272HDL0500 AV	3" x 3"	Male	Ductile Iron	No	Yes	10.0
272HLS0100 AV	2" x 2"	Male	Brass	Yes	Yes	7.0
272HLS0500 AV	3" x 3"	Male	Brass	Yes	Yes	11.46
272HLS0600 AV	4" x 3"	Male	Brass	Yes	Yes	16.56
272HO-0100 AV	2" x 2"	Male	Brass	No	No	6.50
272HO-0500 AV	3" x 3"	Male	Brass	No	No	11.20
272HOL0100 AV	2" x 2"	Male	Brass	No	Yes	7.46
272HOL0500 AV	3" x 3"	Male	Brass	No	Yes	11.60
272HOL0600 AV	4" x 3"	Male	Brass	No	Yes	16.30
272HOS0100 AV	2" x 2"	Male	Brass	Yes	No	6.78
272HOS0500 AV	3" x 3"	Male	Brass	Yes	No	9.68
272HOS0600 AV	4" x 3"	Male	Brass	Yes	No	17.0

\*Consult Price List for other options.

### NOTE

The valves shown on this page are not intended to be used as a "block valve."



272DI (6" x 4")

### Construction Details

#### 272DI

Body and plunger... Ductile iron  
 Shaft... Stainless steel  
 Shaft packing... PTFE  
 O-ring... PTFE encapsulated FKM (4" x 3")  
 Spring... Stainless steel



272HDI (2" x 2")

### Construction Details

#### 272HDI, HDS, DLS

Body and plunger... Ductile iron  
 Shaft... Zinc plated steel  
 Shaft packing... PTFE  
 O-ring... PTFE encapsulated FKM  
 Spring... Stainless steel



272HLS (2" x 2")

### Construction Details

#### 272HO, HOL, HOS, HLS

Body and plunger... Brass  
 Shaft Packing... PTFE impregnated Fiber or PTFE  
 O-ring... FKM or PTFE  
 Spring... Stainless steel  
 Shaft... Zinc plated steel





## 691 Series Full Port Ball Valves



Ball valves are used throughout fuel piping systems where a manual shut-off or "block valve" is required or desired.

### Features

- Quarter turn operation
- Full port for maximum flow and minimum pressure drop
- Can be operated in partially open position for flow control
- Double seal allows the valve to be operated in both directions
- Blowout-proof stem
- 600 PSIG non-shock cold working pressure rating for 1/4" to 2" size
- 450 PSIG non-shock cold working pressure rating for 2 1/2" to 4" size
- 275 PSI maximum operating pressure for 691FS models
- Can be used for air service
- **691B** is lockable with a padlock
- **691A** is spring loaded auto return
- **691FS** is stainless steel and has 150# raise face flanges and has API 607 4th Edition Fire Safe approval

### Construction Details

Body... Forged brass  
Ball... Hard chrome plated  
Seal... PTFE

### 691FS

Body, cap, and ball... CF8M stainless steel  
Seat... ME-PTFE (Molecularly Enhanced PTFE)

### Certifications & Listings

#### 691, 691A, and 691B

UL 842 Listed for flammable liquids; UL 125 Listed for LP gas shut-off; CSA listed (File No. 112439, Model S.95)

#### 691FS

ANSI B16.5, B16.10, and B16.34 full compliance; Test standard: API 598

Item Number	Size	Weight (lbs)	Item Number	Size	Weight (lbs)	Item Number	Size	Weight (lbs)
691--0100 1V	1/4"	0.25	691B--0100 1V	1/4"	0.66	691A--0100 1V	1/4"	0.38
691--0200 1V	3/8"	0.28	691B--0200 1V	3/8"	0.63	691A--0200 1V	3/8"	0.36
691--0300 1V	1/2"	0.50	691B--0300 1V	1/2"	0.82	691A--0300 1V	1/2"	0.49
691--0400 1V	3/4"	0.75	691B--0400 1V	3/4"	1.07	691A--0400 1V	3/4"	1.05
691--0500 1V	1"	1.0	691B--0500 1V	1"	1.49	691A--0500 1V	1"	1.40
691--0600 1V	1 1/4"	1.35	691B--0600 1V	1 1/4"	2.34	691A--0600 1V	1 1/4"	2.06
691--0700 1V	1 1/2"	2.40	691B--0700 1V	1 1/2"	2.74	691A--0700 1V	1 1/2"	2.65
691--0800 1V	2"	3.40	691B--0800 1V	2"	4.15	691A--0800 1V	2"	4.06
691--0900 1V	2 1/2"	7.40	691B--0900 1V	2 1/2"	11.0	691FS-0200 1V	2"	18.0
691--1000 1V	3"	9.75	691B--1000 1V	3"	13.79	691FS-0300 1V	3"	36.0
691--1100 1V	4"	15.0	691B--1100 1V	4"	15.0	691FS-0400 1V	4"	54.0



## 691BSS Full Port Locking Ball Valve

Ball valves are used throughout fuel piping systems where a manual shut-off or "block valve" is required or desired.

### Features

- Quarter turn operation
- Full port for maximum flow and minimum pressure drop
- Can be operated in partial open position for flow control
- Double seal allows the valve to be operated in both directions
- Blowout-proof stem
- 1000 PSIG non-shock cold working pressure
- Can be used for air service
- Lockable with a padlock

### Construction Details

Body and ball... CF8M stainless steel  
Seal... Pure PTFE

### Code Compliance

Test standard API 598; NACE compliance MR-01-75

Item Number	Size	Weight (lbs)
691BSS0200 1V	3/8"	0.50
691BSS0300 1V	1/2"	0.70
691BSS0400 1V	3/4"	1.16
691BSS0500 1V	1"	1.62
691BSS0700 1V	1 1/2"	3.38
691BSS0800 1V	2"	6.11
691BSS1000 1V	3"	19.60



## 215 Series Oil & Molasses Gate Valves

These manually-operated shut-off valves are for use with heavy oils and other non-flammable viscous fluids stored in non-pressurized containers.

### Features

- Lockable with a padlock up to and including 2" size
- **215ALH** long handle option for greater leverage when dispensing
- **215AN** locknut option for easy orientation of spout direction
- **215AS** spring loaded self-closing model available

Item Number	Size	Spring	Long Handle	Locknut	Weight (lbs)
215A-0100 1V	¾"	No	No	No	1.50
215A-0200 1V	1"	No	No	No	2.0
215A-0400 1V	1½"	No	No	No	3.0
215A-0500 1V	2"	No	No	No	4.0
215A-0600 1V	3"	No	No	No	6.0
215A-0700 1V	4"	No	No	No	17.50
215ALH0400 1V	1½"	No	Yes	No	4.33
215ALH0500 1V	2"	No	Yes	No	4.67
215AN-0100 1V	¾"	No	No	Yes	2.0
215AN-0500 1V	2"	No	No	Yes	4.50
215AS-0100 1V	¾"	Yes	No	No	1.50
215AS-0500 1V	2"	Yes	No	No	4.0



215ALH (2")

### Construction Details

Body... Cast iron  
Faceplate... Brass  
Handle... Stamped steel  
Long handle... Cast iron

**WARNING:** These faucets are intended for use with non-flammable viscous liquids stored in or dispensed from non-pressurized containers at ambient room temperature. Morrison Bros. is not responsible for the function or safety of this product if it has been altered in any way or used under conditions other than those stated above.

## 633 & 699F Series Barrel Faucets

Ball valve barrel faucets are installed on small tanks, utility tanks, overhead farm tanks, and drums as a gravity flow shut-off valve.

### Features

- Lockable with a padlock
- Ball valve style for quick and easy quarter turn operation
- **633** is male threads by male threads
- **633MF** is male threads by female threads
- **699F** is male threads by female threads

Item Number	Size	Weight (lbs)
633--0500 1F	1" M x 1" M	1.50
633MF-1100 1V	1" M x 1" F	1.50
699F--0400 1F	¾" M x ¾" F	1.25
699F--0500 1F	1" M x 1" F	1.75
699F--0600 AF	1" M x ¾" F	2.0



633 (1")



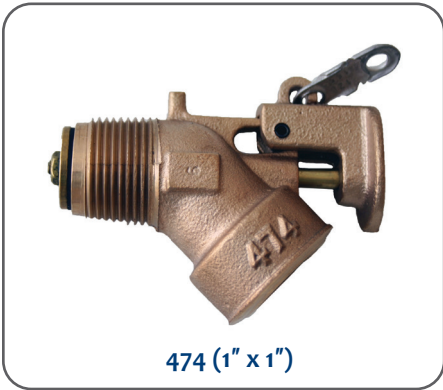
633MF (1")



699F (1")

### Construction Details

Faucet... Brass  
Handle and lock lever... Stainless steel



474 (1" x 1")

Construction Details

Body... Brass
Disc... Buna-N (standard), FKM or PTFE
O-Ring... Buna-N (standard) or FKM

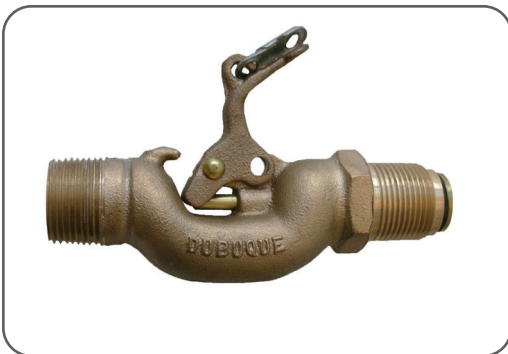
474 Farm Tank Emergency Valve

The farm tank emergency valve is designed to be installed in the bottom outlet of small tanks where product flow must be stopped in the event of a fire. Fusible link holds the spring-loaded valve open until activated.

Features

- Angle design
• Male threads install into the tank, female threaded outlet
• 5 PSI maximum pressure rating
• 165°F fuse link is UL Listed

Table with 5 columns: Item Number, Size, Disc, O-Ring, Weight (lbs). Rows include various configurations like 474--0100 AV, 474--0200 AV, etc.



Construction Details

Body... Brass
Disc... Buna-N (standard), FKM or PTFE
O-Ring... Buna-N (standard) or FKM
Fusible link... 165°F

574 Farm Tank Emergency Valve

The farm tank emergency valve is designed to be installed in the bottom outlet of small tanks where product flow must be stopped in the event of a fire. Fusible link holds the spring-loaded valve open until activated.

Features

- Straight design
• Male threads install into the tank, male threaded outlet
• 5 PSI maximum pressure rating
• 165°F fuse link is UL Listed

Table with 5 columns: Item Number, Size, Disc, O-Ring, Weight (lbs). Rows include configurations like 574--0100 AV, 574--0200 AV, etc.

NOTE

The 474 and 574 require periodic inspection to ensure the shut-off mechanism is operating correctly. They are not intended to be used as a "block valve" and should not be opened under pressure.





## 939 Fusible Globe/Gate Valve

Fusible globe/gate valve is used to shut off product flow in the event of fire.

### Features

- 165°F fusible element integrated into the hand-wheel
- Recommended use with fuel oil and kerosene service
- 10 PSI maximum operating pressure 1/4" to 3/4" sizes
- 25 PSI maximum operating pressure 1" size
- Not intended for use as a block valve; intended as a normally open valve
- 1/4", 3/8", and 1/2" are UL/ULC 842 Listed as a manually-operated shut-off valve for use with oil-burning equipment

Item Number	Size	Weight (lbs)
939--0100 1V	3/8"	0.50
939--0200 1V	1/2"	0.75
939--0300 1V	3/4"	1.0
939--0400 1V	1"	2.25



939 (1/4")

### Construction Details

Body, bonnet, and stem...  
Brass

### Certifications & Listings

Some models UL/ULC 842  
Listed (see Features)



## 110 Quick Closing Barrel Faucet

This valve is designed for use on barrels, drums, and small utility tanks for low pressure or gravity flow dispensing. The normally-closed valve must be held in the open position for dispensing.

### Features

- Self-closing
- Lockable
- Rated to 50 PSI
- **110** non-threaded outlet models include built-in hook makes it easy to dispense into small containers

Item Number	Size	Outlet	Weight (lbs)
110--0200 AF	3/4"	Non-threaded	1.25
110--0300 AF	1"	Non-threaded	2.25
110M--0300 AF	1"	Male	2.25

\*Consult Price List for PTFE or FKM options.



110 (3/4")

### Construction Details

Body... Brass  
Cap... Brass  
Disc... Buna-N (FKM and PTFE  
available for non-threaded  
models only)  
Spring... Stainless steel

### Certifications & Listings

3/4" and 1" models with Buna-N  
seals are UL Listed



246ADI (1 1/2")

**Construction Details**

Body and cap... Ductile iron  
 Internal components... Ductile and stainless steel  
 Gasket... PTFE  
 Expansion valve... Stainless steel and FKM

**246ADI  
 Swing Check Valve**

Swing check valves are designed to prevent backflow in horizontal piping systems, allowing liquid to flow in a single direction.

**Features**

- Durable metal-to-metal seats
- Thermal expansion relief available in 25 or 50 PSI settings
- 200 PSI cold non-shock pressure limit

Item Number	Size	Expansion Relief	Weight (lbs)
246ADI0150 AV	1 1/2"	N/A	5.50
246ADI0200 AV	1 1/2"	25	5.50
246ADI0250 AV	1 1/2"	50	5.20
246ADI0300 AV	2"	25	5.50
246ADI0400 AV	3"	25	12.50
246ADI0500 AV	2"	N/A	5.50
246ADI0600 AV	3"	N/A	12.50
246ADI0800 AV	3"	50	12.50
246ADI0900 AV	2"	50	5.50



246DRF (3")

**Construction Details**

Body and cap... Ductile iron  
 Internal components... Ductile and stainless steel  
 Gasket... PTFE  
 Expansion valve... Stainless steel and FKM

**246DRF  
 Swing Check Valve**

Swing check valves are designed to prevent backflow in horizontal piping systems, allowing liquid to flow in a single direction.

**Features**

- Durable metal-to-metal seats
- Thermal expansion relief available in 25 or 50 PSI settings
- 200 PSI cold non-shock pressure limit
- 150# raised face flange connections

Item Number	Size	Expansion Relief	Weight (lbs)
246DRF0100 AV	3"	N/A	26.75
246DRF0200 AV	3"	25	26.75
246DRF0300 AV	3"	50	26.75
246DRF0400 AV	4"	N/A	71.0
246DRF0500 AV	4"	25	71.0
246DRF0600 AV	4"	50	71.0



246A (1 1/2")

**Construction Details**

Body and cap... Brass  
 Internal components... Brass  
 Gasket... Nitrile composite  
 Expansion valve... Brass and FKM

**246A  
 Swing Check Valve**

Swing check valves are designed to prevent backflow in horizontal piping systems, allowing liquid to flow in a single direction.

**Features**

- Durable metal-to-metal seats
- Thermal expansion relief available in 25 or 50 PSI settings
- 200 PSI cold non-shock pressure limit

Item Number	Size	Expansion Relief	Weight (lbs)
246A--0100 AV	1 1/2"	N/A	3.50
246A--0200 AV	2"	N/A	6.0
246A--0400 AV	3"	N/A	13.2
246A--0500 AV	1 1/2"	25	3.5
246A--0600 AV	2"	25	6.0
246A--0800 AV	3"	25	13.20
246A--2100 AV	1 1/2"	50	3.50
246A--2200 AV	2"	50	6.0
246A--2400 AV	3"	50	13.20

\*Consult Price List for PTFE and other options.



## 137 Angle Check Valve

Angle check valves are used to prevent backflow in supply lines or as a prime holding valve in suction system.

### Features

- Soft seat
- Thermal expansion available (25 or 50 PSI approximate)

Item Number	Size	Weight (lbs)
137--0200 AV	1½"	4.25
137--0300 AV	2"	6.25

*\*Consult Price List for BSP, PTFE, FKM, and expansion relief options.*



137 (1½")

### Construction Details

Body... Brass  
 Cap... Brass  
 Plunger... Brass  
 Spring... Stainless steel  
 Discs... Buna-N (FKM and PTFE optional)  
 Expansion valve... Brass with FKM

## 137B Back Pressure Check Valve

Back pressure check valves are used to maintain line pressure and prevent backflow.

### Features

- Metal-to-metal seats
- Thermal expansion available (25 or 50 PSI approximate)
- 5 to 7 PSI spring settings

Item Number	Size	Weight (lbs)
137B--0300 AV	2"	6.25

*\*Consult Price List for other expansion relief options.*



137B (2")

### Construction Details

Body... Brass  
 Cap... Brass  
 Plunger... Brass  
 Spring... Stainless steel  
 Expansion valve... Brass with FKM

**NOTE**  
 Opening pressure settings are approximate.



158A (3")

**Construction Details**

- Body... Brass
- Cap... Brass
- Plunger... Brass
- Spring... Stainless steel
- Discs... Buna-N (FKM and PTFE available)
- Expansion valve... Brass with FKM

**158A  
Vertical Check Valve**

The single poppet, one-way check valves are used to prevent backflow in supply lines or as a prime holding valve in suction systems.

**Features**

- Soft seat
- Thermal expansion available (25 or 50 PSI approximate)
- ½ to 2 PSI spring setting

Item Number	Size	Weight (lbs)
158A--0300 AV	¾"	1.25
158A--0400 AV	1"	1.75
158A--0600 AV	2"	5.75
158A--0800 AV	3"	15.0

*\*Consult Price List for PTFE, FKM, and expansion relief options.*

**NOTE**  
Opening pressure settings are approximate.



158B (3")

**Construction Details**

- Body... Brass
- Cap... Brass
- Plunger... Brass
- Spring... Stainless steel
- Expansion valve... Brass with FKM

**158B  
Back Pressure Check Valve**

Back pressure single poppet, one-way check valves are used to maintain line pressure and prevent backflow.

**Features**

- Metal-to-metal seats
- Thermal expansion available (25 or 50 PSI approximate)
- 5 to 7 PSI spring settings for back pressure applications

Item Number	Size	Weight (lbs)
158B--0300 AV	¾"	1.25
158B--0400 AV	1"	1.75
158B--0600 AV	2"	5.75
158B--0800 AV	3"	15.0

*\*Consult Price List for other expansion relief options.*

**NOTE**  
Opening pressure settings are approximate.



## 958 In-Line Check Valve

In-line check valves are used to prevent backflow in supply lines on storage tank systems.

### Features

- Valve functions in horizontal and vertical piping systems. If vertical, flow arrow must be pointing up
- 200 PSI maximum working pressure
- -40°F to 300°F operating temperature range
- Optional thermal expansion relief feature is available

Item Number	Size	Expansion Relief	Weight (lbs)
958--0500 AV	½"	No	0.87
958--0700 AV	¾"	No	0.90
958--1000 AV	1"	No	1.50
958--10500 AV	½"	Yes	0.87
958--10700 AV	¾"	Yes	0.90
958--11000 AV	1"	Yes	1.50
958--1100 1V	1½"	No	1.62
958--1200 1V	2"	No	3.00



958 (½")

### Construction Details

Body... Stainless steel  
Seals... FKM

## 174 By-Pass Valve

By-pass valves are designed for applications where maximum pressure control is needed (e.g., bypassing a pump in order to reduce the pressure at the outlet).

### Features

- Wide range of pressure settings available (20 to 75 PSI)
- Metal-to-metal seat
- Field adjustable +/- 5 to 10 PSI from set point
- Valve is normally closed. Opens when pressure overcomes the spring tension

Item Number	Size	Pressure Setting	Weight (lbs)
174--0100 AV	1½"	20	7.75
174--1300 AV	1½"	30	7.75
174--1400 AV	1½"	40	7.75
174--1500 AV	1½"	50	7.75
174--1600 AV	1½"	60	7.75
174--1750 AV	1½"	75	7.75
174--2200 AV	2"	20	9.50
174--2300 AV	2"	30	9.50
174--2400 AV	2"	40	9.50
174--2500 AV	2"	50	9.50
174--2600 AV	2"	60	9.50
174--2750 AV	2"	75	9.50



174 (1½")

### Construction Details

Body and bonnet... Brass  
Spring... Stainless steel  
Stem packing... PTFE

### NOTE

Morrison 174 is NOT a  
"pressure regulating device."



529

**Construction Details**

Body, spring, and poppet... Brass  
O-ring... FKM

## 529 Series Nipple Check Valves

Nipple check valves are one-way check valves used to prevent backflow.

**Features**

- Expansion relief activates below 15 PSI
- **529R** does not have expansion relief

Item Number	Size	Weight (lbs)
529--0100 AV	2"	1.50
529R--0100 AV	2"	1.50

**NOTE**

Morrison 529 is NOT intended for use with leak detection systems.



530

**Construction Details**

Body and poppet... Brass  
Spring... Stainless steel  
O-ring... FKM

## 530 Nipple Check Valve

Nipple check valves are one-way check valves used to prevent backflow.

**Features**

- Expansion relief settings activate at precise settings

Item Number	Size	Expansion Relief	Weight (lbs)
530--0100 AV	2"	25 PSI	1.50
530--0300 AV	2"	50 PSI	1.50



331

**Construction Details**

Body and spring... Brass  
Disc... FKM

**331S**

Screen... 20 mesh brass

## 331 Series Union Check Valves

Union check valves install inside pipe unions where space is limited and a check valve is desired.

**Features**

- Easy to install in new or existing unions
- **331S** includes screen

Item Number	Size	Weight (lbs)
331--0100 AV	1½"	0.25
331S--0100 AV	1½"	0.50



## 234DI & 534DI Series Flanged Gate Valves

Rising stem gate valves or "block valves" are used for manual flow control in petro-chemical liquid handling systems and bulk plants.

### Features

- Double disc design provides positive shut-off when in the closed position
- 200 PSI WOG cold non-shock
- 150# raised face flanges
- Valve can be left partially open to control flow rate
- **234BDI** and **534BDI** are lockable with a padlock
- **534DI** and **535BDI** includes integrated thermal expansion relief set at approximately 50 PSI

### NOTE

Morrison 234DI/BDI series is not equipped with expansion relief capability. If expansion relief is needed, specify Morrison 534DI/BDI.

Item Number	Size	Expansion Relief PSI	Weight (lbs)
234DI-0150 AV	2"	--	20.0
234DI-0200 AV	3"	--	37.25
234BDI0150 AV	2"	--	21.50
234BDI0200 AV	3"	--	38.0
534DI-0125 AV	2"	25	20.0
534DI-0150 AV	2"	50	20.0
534DI-0200 AV	3"	50	33.0
534BDI0125 AV	2"	25	21.0
534BDI0150 AV	2"	50	21.0
534BDI0200 AV	3"	50	38.0
534BDI0225 AV	3"	25	38.0



234DI (2")

534BDI (3")  
lockable with expansion relief

### Construction Details

Body and bonnet... Ductile iron  
Stem... Brass  
Discs and spreader... Brass  
Packing and gasket... PTFE  
Hand-wheel... Aluminum, powder coated black  
Expansion relief... Brass with FKM quad-ring (Morrison 534DI/BDI)

## 235DI & 535DI Series Gate Valves

Rising stem gate valves or "block valves" are used for manual flow control in petro-chemical liquid handling systems and bulk plants.

### Features

- Double disc design provides positive shut-off when in the closed position
- 200 PSI WOG cold non-shock
- Female NPT threaded connections
- Valve can be left partially open to control flow rate
- **235BDI** and **535BDI** are lockable with a padlock
- **535DI** and **535BDI** includes integrated thermal expansion relief set at approximately 50 PSI

Item Number	Size	Weight (lbs)
235DI-0300 AV	2"	8.0
235DI-0400 AV	3"	16.50
235BDI0300 AV	2"	10.0
235BDI0400 AV	3"	18.0
535DI-0300 AV	2"	9.0
535DI-0400 AV	3"	18.0
535BDI0300 AV	2"	10.50
535BDI0400 AV	3"	18.50

### NOTE

Morrison 235DI/BDI series is not equipped with expansion relief capability. If expansion relief is needed, specify Morrison 535DI/BDI.



235DI (3")

535DI (2")  
with expansion relief

### Construction Details

Body and bonnet... Ductile iron  
Stem and discs... Brass  
Packing and gasket... PTFE  
Hand wheel... Aluminum, powder coated black





## 235 & 535 Series Brass Gate Valves

Rising stem gate valves or "block valves" are used for manual flow control in petro-chemical liquid handling systems and bulk plants.

### Features

- Double disc design provides positive shut-off when in the closed position
- 200 PSI WOG cold non-shock
- Female NPT threaded connections
- Valve can be left partially open to control flow rate
- **235B** and **535B** are lockable with a padlock
- **535** and **535B** includes integrated thermal

Item Number	Size	Weight (lbs)
235---0200 AV	2"	10.0
235---0400 AV	3"	17.75
235B--0200 AV	2"	10.0
235B--0400 AV	3"	17.75
535---0100 AV	2"	8.75
535---0300 AV	3"	17.50
535B--0100 AV	2"	10.0
535B--0300 AV	3"	19.0

\*Consult Price List for PTFE options.



**235**



**535B (3")**  
lockable with  
expansion relief

### Construction Details

Body, bonnet, stem, discs... Brass  
Packing... PTFE impregnated fiber, PTFE  
Hand wheel... Aluminum, powder coated black  
Gasket... Nitrile composite, PTFE

### NOTE

Morrison 235/235B series is not equipped with expansion relief capability. If expansion relief is needed, specify Morrison 535/535B series.

## 238 & 438 Series Quick Opening Gate Valves

Quick opening gate valves or "block valves" are manually-operated double disc gate valves designed for use where simple lever action opens or closes the valve.

### Features

- Rated to 200 PSI WOG cold non-shock
- Lever action may be used for throttling product flow
- **238** includes an external spring
- **438** includes an internal spring

Item Number	Size	Spring	Weight (lbs)
238---0100 AV	1 1/4"	External	4.75
438---0100 AV	1 1/4"	Internal	5.0

**238 (1 1/4")**  
with external spring



**438 (1 1/4")**  
with internal spring







### Construction Details

Body and cap... Brass  
Discs... Brass  
Handle... Ductile iron  
Shaft seal on 1 1/4"... Nitrile composite  
All other sizes shaft seal... PTFE impregnated fiber packing  
Gasket... Nitrile composite or PTFE



## 560 Series Extractors

Installed on a 4" opening of an underground storage tank, extractors provide connections for vent lines to be manifolded. Available with ball float cage or without. Extractors installed on a 4" aboveground storage tank opening can provide added connections for retrofitting or upgrading with pressure vacuum vents, gauges, and vapor recovery adaptors.

Item Number	Size	Cage	Weight (lbs)
560--0100 AE	4" x 4" x 2" x 2"	Yes	18.25
560--0101 MBE 	4" x 4" x 2" x 2"	No	18.25
561--0100 AE	4" x 4" x 2"	Yes	15.0
561--0101 MBE 	4" x 4" x 2"	No	15.0
562--0100 AE	4" x 4" x 3" x 2"	Yes	17.50
562--0101 MBE 	4" x 4" x 3" x 2"	No	17.50
563--0100 AE	4" x 4" x 3"	Yes	15.50
563--0101 MBE 	4" x 4" x 3"	No	15.50
561P--0104 MP	4" x 2" extractor plug		2.95



562



563

### Construction Details

Body... Cast iron (epoxy coated)  
Cage... Brass  
O-ring... Buna-N

### Certifications & Listings

CARB Approval 90-09, CARB EVR Executive Order VR-402 (560, 561, 562 models);  
CARB Approval 95-43, CARB EVR Executive Order VR-402 (563 models)

## 578 Extractor Pipe Cap

An extractor pipe cap is used as a cover for the extractor/float vent valve riser pipe. It is installed at grade level, normally inside a manhole.

Item Number	Size	Weight (lbs)
578--0100 AC	4"	2.75

**Note:** Probe cap with threaded port hole (578P) is also available. See Caps & Adaptors section.



578

### Construction Details

Cap... Brass  
Gasket... Buna-N  
Pin (handle)... Plated steel

### Certifications & Listings

CARB Approval 89-12



076S (1/2")

**Construction Details**

Body and cap... Stainless steel  
 Relief fitting... Stainless steel with FKM

**076S  
Expansion Relief Valve**

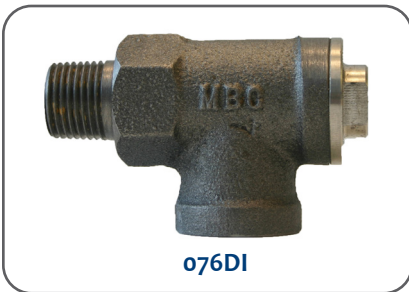
The 76S series expansion relief valves are installed in aboveground storage tank piping systems to allow excess pressure, caused by thermal expansion, to relieve back to the storage tank.

**Features**

- Compatible with line leak detection systems
- 90° configuration
- Precise settings of 25 or 50 PSI (specify)

Item Number	Inlet Size	Outlet Size	Expansion Relief	Weight (lbs)
076S-0100 AV	1/2" M	1/2" F	25 PSI	1.50
076S-0200 AV	1/2" M	1/2" F	50 PSI	1.50

*\*Consult Price List for BSP options.*



076DI

**Construction Details**

Body... Ductile iron  
 Cap... Stainless steel  
 Relief fitting... Stainless steel with FKM

**076DI  
Expansion Relief Valve**

The 76DI series expansion relief valves are installed in aboveground storage tank piping systems to allow excess pressure, caused by thermal expansion, to relieve back to the storage tank.

**Features**

- For use with most leak detection systems
- Unidirectional flow
- Precise settings of 25 or 50 PSI

Item Number	Size	Setting	Weight (lbs)
076DI-0100 AV	1/2"	25 PSI	0.75
076DI-0200 AV	1/2"	50 PSI	0.75



078DI

**Construction Details**

Body... Ductile iron  
 Cap... Stainless steel  
 Spring... Stainless steel  
 Ball... Stainless steel

**078DI  
Expansion Relief Valve**

Designed for use on aboveground storage tank piping systems, expansion relief valves allow excess pressure, caused by thermal expansion, to relieve back to the storage tank.

**Features**

- Not for use with leak detection systems
- Unidirectional flow
- Approximate settings available: 25, 40, or 100 PSI

Item Number	Size	Setting	Weight (lbs)
078DI-0100 AV	1/2"	25 PSI	0.75
078DI-0200 AV	1/2"	40 PSI	0.75
078DI-0300 AV	1/2"	100 PSI	0.75



## 157 Suction Pipe Strainer

Suction strainers are installed at the inlet of a suction line, normally at the bottom of the storage tank. The screen prevents debris from entering the line.

Item Number	Size	Weight (lbs)
157--0100 AS	1½"	1.13
157--0200 AS	2"	1.25

\*See 334LP for smaller sizes.



157 (2")

### Construction Details

Body... Brass  
Screen... 20 mesh stainless steel

## 334 Series Single Poppet Foot Valves

The 334 series single poppet foot valves are designed to be used as prime-holding valves installed at the inlet of a suction line, normally at the bottom of the storage tank.

### Features

- Metal-to-metal seat for long life
- Screen helps filter debris from collecting on the seats
- **334LP** is less poppet for use as a suction stub strainer

Item Number	Size	Weight (lbs)
334--0100 AV	¾"	.80
334--0200 AV	1"	1.25
334--0300 AV	1½"	2.25
334--0400 AV	2"	4.75
334LP-0100 AV	¾"	1.0
334LP-0200 AV	1"	1.25



334 (1")

### Construction Details

Body and poppet... Brass  
Screen... 20 mesh stainless steel

## 335A Double Poppet Foot Valve

The 335A series double poppet foot valves are designed to be used as a prime-holding valve installed at the inlet of a suction line, normally at the bottom of the storage tank.

### Features

- Dual seats provide twice the prime-holding capability as single poppet designs
- Screen helps filter debris from collecting on the seats
- Metal-to-metal seats ensure long life

Item Number	Size	Weight (lbs)
335A--0100 AV	1½"	4.50
335A--0200 AV	2"	6.50



335A (1½")

### Construction Details

Body, seat, and poppets... Brass  
Screen... 20 mesh stainless steel



334BP (1½")

Construction Details

All brass construction

### 334BP Single Poppet Vertical Check Valve

Generally used in suction systems, the Morrison 334BP check valve is designed for use as a prime-holding check valve in vertical piping systems.

Features

- Includes ¼" test port with pipe plug

Item Number	Size	Weight (lbs)
334BP-0100 AV	1½"	2.50



335B (1½")

Construction Details

All brass construction

### 335B Series Double Poppet Vertical Check Valves

Generally used in suction systems, the Morrison 335B series check valves are designed for use as a prime-holding check valve in vertical piping systems.

Features

- Dual seats provide twice the prime holding capability as single poppet designs
- **335BP** includes ¼" test port with pipe plug

Item Number	Size	Weight (lbs)
335B--0100 AV	1½"	4.75
335B--0200 AV	2"	6.50
335BP-0100 AV	1½"	4.75



128DIS (1")

Construction Details

wBody... Ductile iron  
 Cap... Stainless steel  
 Lock bonnet... Brass  
 Stem... Stainless steel  
 O-Ring... PTFE encapsulated FKM

### 128 Series Frost Proof Drain Valves

Installed at the low point of an aboveground storage tank, frost-proof drain valves allow for drainage of water and sediment from the bottom of the tank.

Features

- Frost-proof seat
- Pad-lockable
- Built-in wrench for opening or closing the valve
- **128** is brass
- **128DIS** is ductile iron

Item Number	Size	Weight (lbs)
128--0100 AV	1"	1.85
128DIS0100 AV	1"	1.85



## 934 Stainless Steel Single Poppet Foot Valve

Stainless steel single poppet foot valves are installed at the inlet of a suction line normally at the bottom of the storage tank as a prime holding valve.

### Features

- Expansion relief (1/2", 3/4", and 1" models only): 25 PSI
- Opening pressure: less than 1 PSI
- Maximum working pressure: 200 PSI
- Working temperature: -40°F to 300°F
- 20 mesh inlet screen used to help filter debris from collecting on the seats

Item Number	Size	Description	Expansion Relief	Weight (lbs)
934--10500 AV	1/2"	NPT Threads	Yes	0.87
934--10700 AV	3/4"	NPT Threads	Yes	1.03
934--11000 AV	1"	NPT Threads	Yes	1.75
934--1500 AV	1 1/2"	NPT Threads	No	2.28
934--2000 AV	2"	NPT Threads	No	3.89
934---0500 AS	1/2"	Suction pipe strainer only	No	0.20
934---0700 AS	3/4"	Suction pipe strainer only	No	0.30
934---1000 AS	1"	Suction pipe strainer only	No	0.45
934---1500 AS	1 1/2"	Suction pipe strainer only	No	0.64
934---2000 AS	2"	Suction pipe strainer only	No	0.95

\*Consult Price List for BSP options.



### Construction Details

Valve body... 304 stainless steel  
 Strainer body... 303 stainless steel  
 Screen... 304 stainless steel  
 Seals... FKM-GF

## 514 150# Raised Face Companion Flange

Companion flanges convert male threaded pipe connections to flanged connections.

### Features

- Compatible with:
  - Morrison 234DI and 534DI gate valves
  - Morrison 246DRF swing check valves
  - Morrison 272DI and 346FDI emergency valves
  - Morrison 285FDI and 286FDI line strainers
  - Morrison 710F and 710FSS solenoid valves
  - Morrison 691FS ball valves

Item Number	Size	Description	Weight (lbs)
514--0201 2F	2"	Flange only; 6" OD, (4) 3/4" diameter holes on 4 3/4" BC	4.95
514--0301 2F	3"	Flange only; 7 1/2" OD, (4) 3/4" diameter holes on 6" BC	8.0
514--0401 2F	4"	Flange only; 9" OD, (8) 3/4" diameter holes on 7 1/2" BC	13.0
514--0200 AF	2"	Companion flange assembly (includes nuts, bolts, gasket, and 150# flange)	--
514--0300 AF	3"	Companion flange assembly (includes nuts, bolts, gasket, and 150# flange)	--
514--0400 AF	4"	Companion flange assembly (includes nuts, bolts, gasket, and 150# flange)	--
514SS-0201 2F	2"	Flange only; 6" OD, (4) 3/4" diameter holes on 4 3/4" BC	--
514SS-0301 2F	3"	Flange only; 7 1/2" OD, (4) 3/4" diameter holes on 6" BC	--
514SS-0401 2F	4"	Flange only; 9" OD, (8) 3/4" diameter holes on 7 1/2" BC	--
514SS-0200 AF	2"	Companion flange assembly (includes nuts, bolts, gasket, and 150# flange)	--
514SS-0300 AF	3"	Companion flange assembly (includes nuts, bolts, gasket, and 150# flange)	--
514SS-0400 AF	4"	Companion flange assembly (includes nuts, bolts, gasket, and 150# flange)	--



### Construction Details

514  
 Body... Cast steel

514SS  
 Body... Stainless steel





184 (2")

Construction Details

Body... Cast iron

Certifications & Listings

CARB EVR Executive Order VR-402

184 Series Double Tapped Bushings & Pipe Plugs

Double tapped bushings are used to reduce tank or pipe opening thread size.

Features

- Male NPT threads (OD)
- Female NPT threads from the top down and from the bottom up
- Pipe plugs are solid cast iron with male threads

Item Number	Size	Weight (lbs)
184--0000 1B	1½" x ¾" x ¾"	0.75
184--0100 1B	2" x ¾" x ¾"	0.75
184--0110 1B	1½" x ½" x ½"	0.75
184--0120 1B	1¼" x 1" x 1"	0.75
184--0130 1B	1½" x 1" x 1"	0.75
184--0200 1B	2" x ½" x ½"	0.75
184--0300 1B	2" x ¾" x ¾"	0.75
184--0400 1B	2" x 1" x 1"	1.0
184--0500 1B	2" x 1¼" x 1¼"	0.75
184--0600 1B	2" x 1½" x 1½"	0.75
184--0800 1B	2½" x 1¼" x 1¼"	1.25
184--0900 1B	2½" x 1½" x 1½"	1.25
184--1000 1B	2½" x 2" x 2"	1.25
184--1100 1B	3" x 1" x 1"	1.50
184--1200 1B	3" x 1¼" x 1¼"	2.0
184--1300 1B	3" x 1½" x 1½"	2.0
184--1400 MB	3" x 2" x 2"	2.0

Item Number	Size	Weight (lbs)
184---1500 1B	3" x 2½" x 2½"	2.0
184---1800 1B	3½" x 1½" x 1½"	2.25
184---1900 1B	3½" x 2" x 2"	2.50
184---2100 1B	3½" x 3" x 3"	2.25
184---2200 MB	4" x 1" x 1"	3.75
184---2300 MB	4" x 1¼" x 1¼"	4.90
184---2400 MB	4" x 1½" x 1½"	2.50
184---2500 MB	4" x 2" x 2"	2.50
184---2600 1B	4" x 2½" x 2½"	4.25
184---2700 MB	4" x 3" x 3"	3.40
184---2800 MB	6" x 3" x 3"	8.0
184---2900 1B	6" x 4" x 4"	8.35
184---2900 1P	6" black pipe plug	8.0
184---3000 1P	4" black pipe plug	1.50
184---3100 1P	3" black pipe plug	3.0
184---3200 1P	2" black pipe plug	2.75
184---3300 1P	1½" black pipe plug	1.50
184---3400 1P	1" black pipe plug	0.25
184---3500 1P	¾" black pipe plug	0.15



184D (2")

Construction Details

Body... Zinc plated cast iron (2" models only)

Body... Cast iron (4" models)

Compression fittings... Brass

184D Duplex Bushing

Duplex bushings are used to convert a single tank or pipe opening to two smaller threaded openings.

Features

- Male NPT threads (OD)
- Two female NPT threads from the top down
- One of the female threaded openings is also threaded from the bottom up
- Compression fittings available

Item Number	Size	Fittings	Weight
184D--0100 1B	2" x ¾" x ¾"	Yes	12 oz
184D--0200 1B	2" x ½" x ½"	Yes	11 oz
184D--0300 AB	4" x ¾" x ¾"	Yes	4.65 lbs
184D--0301 MB	4" x ¾" x ¾"	No	4.10 lbs
184D--0401 MB	4" x 1" x 1"	No	3.80 lbs





## 184Q Quad Tapped Bushing

Quad tapped bushings are used to convert a single tank or pipe opening to two smaller threaded openings.

### Features

- Male NPT threads (OD)
- Two female NPT threads from the top down and from the bottom up
- Compression fittings available

Item Number	Size	Weight (lbs)
184Q--4075 MB	4" x ¾" x ¾"	5.25
184Q--4100 MB	4" x 1" x 1"	5.25



184Q

### Construction Details

Body... Cast iron












## 184S Series Double Tapped Bushings & Pipe Plugs

Double tapped bushings are used to reduce tank or pipe opening thread size. Pipe plugs are used to plug female threaded opening in tanks and piping systems.

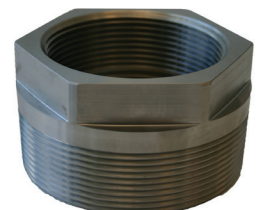
### Features

- Male NPT threads (OD)
- Wrenching surface for easy installation or removal
- Female NPT threads from the top down and from the bottom up

Item Number	Size	Weight (lbs)
184S--0200 MB 	2" x ½" x ½"	0.75
184S--0300 MB 	2" x ¾" x ¾"	0.75
184S--0400 MB 	2" x 1" x 1"	0.75
184S--0500 MB 	2" x 1½" x 1½"	0.75
184S--2100 MB 	4" x ¾" x ¾"	4.25
184S--2200 MB 	4" x 1" x 1"	4.25
184S--2400 MB 	4" x 1½" x 1½"	4.25
184S--2500 MB 	4" x 2" x 2"	4.25
184S--2700 MB 	4" x 3" x 3"	4.25
184S--3000 MP	4" stainless steel plug	4.50
184S--3200 MP	2" stainless steel plug	0.75
912-050512 21	½" stainless steel plug	0.15
912-070512 MP	¾" stainless steel plug	0.20
912-100512 MP	1" stainless steel plug	0.30



184S (2")



184S (4")

### Construction Details

Body... Stainless steel

### Certifications & Listings

CARB EVR Executive Order  
VR-402





## 155 Series Double Outlet Vents

T-style open vent directs vapors downward and is primarily used to vent small storage tanks.

### Features

- Outlet ports on either side of the vent line for maximum air flow
- Rain resistant design
- Screen helps prevent debris and insects from entering the vent line
- **155** has female NPT threads
- **155S** is slip-on with a set screw

### NOTE

Open vents will allow unrestricted evaporation of product.

Item Number	Size	Weight (lbs)
155---0100 AV	¾"	0.25
155---0200 AV	1"	0.50
155---0300 AV	1¼"	0.50
155---0400 AV	1½"	0.75
155---0500 AV	2"	1.0
155---0600 AV	3"	2.50
155S--0100 AV	¾"	0.25
155S--0200 AV	1"	0.50
155S--0300 AV	1¼"	0.50
155S--0400 AV	1½"	0.75
155S--0500 AV	2"	1.0
155S--0600 AV	3"	2.50

\*Consult Price List for BSP options.



155 (2")



155S (¾")

### Construction Details

Body... Aluminum  
Screens... 20 mesh stainless steel

## 155FA Double Outlet Vent

T-style open vent directs vapors downward and is primarily used to vent small storage tanks.

### Features

- Outlet ports on either side of the vent line for maximum air flow
- The cone shaped flash arrester prevents outside flames from entering the tank
- Female NPT threads
- Rain-resistant design
- Screens help prevent debris and insects from entering the vent line

Item Number	Size	Weight (lbs)
155FA-0500 AVAJ	2"	1.50



155FA

### Construction Details

Body... Aluminum  
Screens... 20 mesh stainless steel  
Flash arrester... Anodized aluminum, perforated metal

**WARNING: DO NOT FILL OR UNLOAD FUEL FROM A STORAGE TANK UNLESS IT IS CERTAIN THAT THE TANK VENTS WILL OPERATE PROPERLY.** Morrison tank vents are designed only for use on shop fabricated atmospheric tanks which have been built and tested in accordance with UL 142, NFPA 30 & 30A, and API 650 and in accordance with all applicable local, state, and federal laws. In normal operation, dust and debris can accumulate in vent openings and block air passages. Certain atmospheric conditions such as a sudden drop in temperature, below freezing temperatures, and freezing rain can cause moisture to enter the vent and freeze which can restrict internal movement of vent mechanisms and block air passages. All storage tank vent air passages must be completely free of restriction and all vent mechanisms must have free movement in order to insure proper operation. Any restriction of airflow can cause excessive pressure or vacuum to build up in the storage tank, which can result in structural damage to the tank, fuel spillage, property damage, fire, injury, and death. Monthly inspection, and immediate inspection during freezing conditions, by someone familiar with the proper operation of storage tank vents, is required to insure venting devices are functioning properly before filling or unloading a tank.



354 (2")

Construction Details

Body and cap... Aluminum die cast  
Screen... 40 mesh stainless steel

Certifications & Listings

CARB Approval 89-12 (1½" and 2" models)

354 Updraft Vent

An atmospheric updraft vent is installed on the top of storage tank vent pipes on underground and aboveground fuel storage tanks.

Features

- Directs vapors outward and upward in compliance with NFPA 30
- Protects the vent line from debris and insects
- Water-resistant rain cap diverts water away from the vent line
- Slip-on design with set screws for easy installation
- Internal drain channels water penetration out through weep hole

Item Number	Size (slip-on)	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
354--0100 AV	1½"	27,650	0.75
354--0200 AV	2"	27,650	0.75
354--0300 AV	3"	59,000	1.50
354--0400 AV	4"	116,900	2.25



354T (2")

Construction Details

Body and cap... PTFE coated  
black aluminum  
Screen... 40 mesh stainless steel

354T Updraft Vent

Atmospheric updraft vents are installed on the top of storage tank vent pipes on underground and aboveground fuel storage tanks.

Features

- Compatible with DEF
- Directs vapors outward and upward in compliance with NFPA 30
- Protects the vent line from debris and insects
- Water-resistant rain cap diverts water away from the vent line
- Slip-on design with set screws for easy installation
- Internal drain channels water penetration out through weep hole

Item Number	Size (slip-on)	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
354T--0200 AV	2"	27,650	0.75
354T--0300 AV	3"	59,000	1.50

NOTE

Open vents will allow unrestricted evaporation of product.

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## 749 Series Pressure Vacuum Vents

Pressure vacuum vents are installed on the top of underground and low volume aboveground storage tank vent pipes. Vent allows tank to "breathe" during filling and discharging operations. Pressure and vacuum poppets seal vapors in tank when pressure is equalized.

### Features

- Screen protects the vent line from debris and insects
- Water-resistant rain cap diverts water away from the vent line
- Internal drain channels water penetration out through weep hole
- Directs vapors outward and upward in compliance with NFPA 30
- Conserves fuel
- Certified SCFH ratings
- Settings are approximate



**749 (2")**  
with 3" threaded adaptor

Item Number	Size	Connection	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
749---0100 AV	2"	Threaded	8.0	0.5	8,500	1.0
749---0200 AV	2"	Threaded	12.0	0.5	8,500	1.0
749---1100 AV	3"	Threaded	8.0	0.5	8,500	1.55
749---1200 AV	3"	Threaded	12.0	0.5	8,500	1.55
749S--0100 AV	2"	Slip-on	8.0	0.5	8,500	1.0
749S--0200 AV	2"	Slip-on	12.0	0.5	8,500	1.0
749S--1100 AV	3"	Slip-on	8.0	0.5	8,500	1.55
749S--1200 AV	3"	Slip-on	12.0	0.5	8,500	1.55
749CRB0500 AV	2"	Threaded	8.0	5.0	11,000	1.45
749CRB0600 AV	2"	Threaded	3" W.C.	8" W.C.	11,000	1.95
749CRB1500 AV ♦	3"	Threaded	8.0	5.0	8,500	1.65
749CRB1600 AV ♦	3"	Threaded	3" W.C.	8" W.C.	11,000	1.65
749CRBS600 AV	2"	Slip-on	3" W.C.	8" W.C.	11,000	1.45
749CRBS1600 AV ♦	3"	Slip-on	3" W.C.	8" W.C.	11,000	1.95

\*Consult Price List for BSP options.

♦Meet the requirements of EPA 40 CFR part 63 for Gasoline Dispensing Facilities.

### Construction Details

Body... Aluminum  
 Pressure poppet... Aluminum  
 Adaptor... Aluminum  
 Vacuum poppet... Brass  
 Pipe seal... Buna-N  
 Screen... 40 mesh stainless steel

### Certifications & Listings

CARB Approval 95-14  
 (749CRB0500);  
 CARB Approval 95-15  
 (749CRB0600);  
 CARB Approval 96-19  
 (749CRBS0600)

### NOTE

Morrison 749 P/V vent must only be used in conjunction with motor fueling and/or low capacity flow. Fluid handling in lines larger than that used for retail service stations can cause tank to rupture or implode.

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749T

## 749T Pressure Vacuum Vent

The 749T provides the same functions as the 749 and is designed for use on underground and low volume aboveground tanks storing Diesel Exhaust Fluid (DEF) and other products requiring PTFE and stainless steel construction.

### Features

- Screen protects the vent line from debris and insects
- Water-resistant rain cap diverts water away from the vent line
- Certified SCFH ratings

### Construction Details

- Hood body... PTFE coated aluminum
- Body... HDPE
- Pressure poppet... HDPE
- Vacuum poppet... Stainless steel
- Pipe seal... FKM
- Screen... 40 mesh stainless steel

Item Number	Size	Connection	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
749T-0200 AV	2"	Slip-on	8.0	0.5	8,500	1.0

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## 922 Vent Alarm

The 922 pressure vacuum vent allows the tank to "breathe" during filling and dispensing operations. When the liquid level in the aboveground storage tank reaches the preset level, an audible whistle alarm is generated.

### Features

- Functions as both a pressure vacuum vent and audible alarm while utilizing a single 2" or 3" tank opening
- Installs on the top of the vent pipe, generally 12 feet above grade
- 105 to 120 decibel whistle alarm (measured at a distance of 1 foot with a fill rate of 90 GPM)
- Fully mechanical alarm does not require electricity or batteries
- The alarm level can be set to activate at desired liquid level by adjusting the float device cable length
- Minimum fill rate of 20 GPM required for alarm to operate

### WARNING

All emergency vents, fill connections, tank openings, and piping connections must be airtight. Alarm/vent airway must be free of any obstruction such as dirt or ice when filling or unloading tank. Emergency vent should be set at least 2 oz. higher than combination vent.

Item Number	Size	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
922---0200 AA	2" - 8 oz	30,300	8.50
922---0300 AA	3" - 8 oz	43,020	6.30
922---0400 AA	2" - 6 oz	30,120	8.50
922---0500 AA	3" - 6 oz	44,160	6.30



922 (3")

### Construction Details

Body... Anodized aluminum  
Screens... Stainless steel  
Rainguard... Aluminum  
Seals... FKM  
Ball... PTFE  
Float... Stainless steel

### Certifications & Listings

Florida DEP EQ-227

**WARNING: DO NOT FILL OR UNLOAD FUEL FROM A STORAGE TANK UNLESS IT IS CERTAIN THAT THE TANK VENTS WILL OPERATE PROPERLY.** Morrison tank vents are designed only for use on shop fabricated atmospheric tanks which have been built and tested in accordance with UL 142, NFPA 30 & 30A, and API 650 and in accordance with all applicable local, state and federal laws. In normal operation, dust and debris can accumulate in vent openings and block air passages. Certain atmospheric conditions such as a sudden drop in temperature, below freezing temperatures, and freezing rain can cause moisture to enter the vent and freeze which can restrict internal movement of vent mechanisms and block air passages. All storage tank vent air passages must be completely free of restriction and all vent mechanisms must have free movement in order to insure proper operation. Any restriction of airflow can cause excessive pressure or vacuum to build up in the storage tank, which can result in structural damage to the tank, fuel spillage, property damage, fire, injury, and death. Monthly inspection, and immediate inspection during freezing conditions, by someone familiar with the proper operation of storage tank vents, is required to insure venting devices are functioning properly before filling or unloading a tank. Normal vents such as pressure vacuum and updraft vents for aboveground storage tanks should be sized according to NFPA 30 (2008) 21.4.3.





748A (2")



748A (3")

**Construction Details**

- Body and hood... Aluminum
- Seats... Passivated aluminum
- Poppets... Brass
- Screens... Stainless steel

## 748A Series Pressure Vacuum Vents

This pressure vacuum vent is designed for installation on top of the vent pipe of an aboveground or underground storage tank. Poppets seal vapors in the tank when pressure is equalized. The vent allows the tank to "breathe" during filling and dispensing operations.

**Features**

- Directs vapors outward and upward in compliance with NFPA 30
- Tri-polar design for mounting exhaust hood in any of three positions
- Optional dryer connections accommodate the installation of desiccant dryers on vacuum connection
- Optional pressure discharge hood facilitates piping pressure relief to desired discharge point
- Settings are approximate

Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
2"	748A-0100 AV	2.0	1.0	20,200	6.50
	748A-0200 AV	4.0	1.0	20,200	7.15
	748A-0300 AV	6.0	1.0	20,200	7.55
	748A-0400 AV	8.0	1.0	20,200	8.15
	748A-0500 AV	12.0	1.0	18,600	9.30
	748A-0600 AV	16.0	1.0	18,600	10.35
3"	748A-3100 AV	2.0	1.0	43,000	9.75
	748A-3200 AV	4.0	1.0	43,000	11.15
	748A-3300 AV	6.0	1.0	43,000	12.15
	748A-3400 AV	8.0	1.0	43,000	13.10
	748A-3500 AV	12.0	1.0	40,000	15.30
	748A-3600 AV	16.0	1.0	40,000	17.75

*\*Consult Price List for other options including male threaded dryer connection and female threaded pressure discharge hood.*

**NOTE**

Normal vents such as pressure vacuum and updraft vents for aboveground storage tanks should be sized according to NFPA 30 (2012) 21.4.3.

**NOTE**

This vent must be used in conjunction with an emergency vent. It is recommended that the opening pressure setting is set below that of the emergency vent so the normal vent operates first.

**WARNING: DO NOT FILL OR UNLOAD FUEL FROM A STORAGE TANK UNLESS IT IS CERTAIN THAT THE TANK VENTS WILL OPERATE PROPERLY.** Morrison tank vents are designed only for use on shop fabricated atmospheric tanks which have been built and tested in accordance with UL 142, NFPA 30 & 30A, and API 650 and in accordance with all applicable local, state, and federal laws. In normal operation, dust and debris can accumulate in vent openings and block air passages. Certain atmospheric conditions such as a sudden drop in temperature, below freezing temperatures, and freezing rain can cause moisture to enter the vent and freeze which can restrict internal movement of vent mechanisms and block air passages. All storage tank vent air passages must be completely free of restriction and all vent mechanisms must have free movement in order to insure proper operation. Any restriction of airflow can cause excessive pressure or vacuum to build up in the storage tank, which can result in structural damage to the tank, fuel spillage, property damage, fire, injury, and death. Monthly inspection, and immediate inspection during freezing conditions, by someone familiar with the proper operation of storage tank vents, is required to insure venting devices are functioning properly before filling or unloading a tank.



## 748ALT Pressure Vacuum Vent

The 748ALT pressure vacuum vent valve is used with aqua-ammonia and ag-chemical products allowing the tank to "breathe" during filling and dispensing operations. Pressure and vacuum poppets seal vapors in the tank when pressure is equalized.

### Features

- Settings are approximate
- Conserves vapors
- Tri-polar design for mounting exhaust hood in any of three positions

Item Number	Size	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Weight (lbs)
748ALT0100 AV	2"	8.0	1.0	20,200	5.50
748ALT0200 AV	2"	16.0	1.0	18,000	5.50
748ALT0300 AV	2"	32.0	1.0	--	5.50

*\*Consult Price List for other options including male threaded dryer connection and female threaded pressure discharge hood.*



748ALT

### Construction Details

Body and hood... Aluminum  
 Seats and poppets... PTFE coated aluminum  
 Screens... Stainless steel

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**351S**  
flame arrester with pressure vacuum vent

**Construction Details**

**351S**

Body and cover... Cast iron  
Arrester plates... Stainless steel  
Arrester grid housing... Brass

**748A**

Body and hood... Aluminum  
Poppets... Brass  
Screens... Stainless steel

## 351S Flame Arrester/Pressure Vacuum Vent

Flame arresters provide a barrier that deters flames from passing through the pressure vacuum vent line into a storage tank’s vapor space.

**Features**

- When the Morrison 748A is combined with a Morrison 351S, it functions as a flame arrester and pressure vacuum vent

Item Number	Size	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@2.5 PSI)	Weight (lbs)
351S--0200 AV	2"	2.0	1.0	15,500	42.0
351S--0300 AV	2"	4.0	1.0	15,500	42.50
351S--0400 AV	2"	6.0	1.0	15,500	42.75
351S--0500 AV	2"	8.0	1.0	15,500	43.50
351S--0600 AV	2"	12.0	1.0	13,000	44.50
351S--0700 AV	2"	16.0	1.0	13,000	45.75
351S--4100 AV	2"	8.0	.50	--	32.0

*\*Consult Price List for other options including male threaded dryer connection and female threaded pressure discharge hood.*

**WARNINGS:** Do not use with acetylene, carbon disulfide, etheleneoxide or hydrogen gases. For use with normal hydrocarbon flames such as gasoline in air. Routine inspection is required to ensure airways are clear and free of debris. Blocked airways can cause structural deformation of the tank.

**WARNING: DO NOT FILL OR UNLOAD FUEL FROM A STORAGE TANK UNLESS IT IS CERTAIN THAT THE TANK VENTS WILL OPERATE PROPERLY.** Morrison tank vents are designed only for use on shop fabricated atmospheric tanks which have been built and tested in accordance with UL 142, NFPA 30 & 30A, and API 650 and in accordance with all applicable local, state, and federal laws. In normal operation, dust and debris can accumulate in vent openings and block air passages. Certain atmospheric conditions such as a sudden drop in temperature, below freezing temperatures, and freezing rain can cause moisture to enter the vent and freeze which can restrict internal movement of vent mechanisms and block air passages. All storage tank vent air passages must be completely free of restriction and all vent mechanisms must have free movement in order to insure proper operation. Any restriction of airflow can cause excessive pressure or vacuum to build up in the storage tank, which can result in structural damage to the tank, fuel spillage, property damage, fire, injury, and death. Monthly inspection, and immediate inspection during freezing conditions, by someone familiar with the proper operation of storage tank vents, is required to insure venting devices are functioning properly before filling or unloading a tank.



## 352 End-of-Line, Open Air Deflagration Flame Arrester

End-of-Line flame arresters are designed to be installed at the end connection of a tank vent line. The flame arrester provides a protection barrier that deters a flame generated from a source outside of the tank from flashing through the vent into the vapor space of the tank.

### Features

- 304 stainless arrester plates provide long term corrosion resistance and durability
- Easy access for visual inspection and periodic maintenance
- Full 2" and 3" NPT vent line air flow capacity
- Water-resistant cover sheds water away from the vent line

Item Number	Size	Venting Capacity (SCFH) (@2.5 PSI)	Weight (lbs)
352--0200 AA	2"	57,000	8.30
352--0300 AA	3"	117,000	16.20

### NOTE

For petroleum storage tanks containing Group D\* fluids.

*\*NFPA 70, the National Electrical Code, lists or defines hazardous gases, vapors, and dusts by "Groups."  
Consult these resources for information on Group D fluids.*



352 (3")

### Construction Details

Base... 356 tempered aluminum  
 Cover... Aluminum  
 Arrester plates... 304 stainless steel  
 Threaded hardware... 18-8 stainless steel

### Certifications & Listings

UL 525 Listed—Standard for Flame Arresters—Edition 8

## 779 & 780 Series Relief Cap Arrester

The relief cap and arrester are installed on flexible fabric fuel or water tank vent lines.

### Features

- Hinged cap relieves pressure at 2" of water column +/- 1"
- Arrester protects tank contents from fire during filling operations
- **780** includes flash arrester

Item Number	Size	Description	Weight (lbs)
779--0100 ACAA	2"	For use with fuels	0.50
779--0200 ACAA	2"	For use with potable water	0.50
780--0100 ACA	2"	For use with fuels	1.0
780--1100 ACA	2"	For use with potable water	1.0



779

780

### Construction Details

Body and handle... Anodized aluminum  
 Cover... Stainless steel  
 Gasket... Buna-N or FDA Buna-N  
 Flash arrester... Anodized aluminum;  
 0.040 perforated metal



## 244 Series Emergency Vents



2583



244OMA (2")

### Construction Details

#### 2" Vent

- Body... Aluminum
- Cover... Aluminum
- O-Ring... FKM
- Screen... 4 mesh stainless steel (optional)
- Center Pin... Zinc plated steel

Emergency vents are installed on aboveground storage tanks as a code requirement. Emergency vents provide high capacity pressure relief if the tank is exposed to fire. When the internal tank pressure reaches the opening pressure of the vent, the weighted cover moves up on the center pin allowing air to escape.

### Features

- Automatically resets after opening
- Durable powder coated cast iron covers (3" to 10")
- Certified SCFH flow capacities
- Theft deterrent screens available

Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Mounting Connection	Weight (lbs)
2"	244OMA0030AVEVR	16.0	31,917	Male NPT	0.40

\*Consult Price List for BSP, screen, and other options.



244OM (8")

### Construction Details

#### 3", 4", 5", 6", 8", 10" Vents

- Body... Aluminum
- Cover... Power coated cast iron
- O-Ring... FKM-A, standard models
- O-Ring... FKM-B, Model numbers ending in AVEVR
- Screen... 3 mesh stainless steel (3", 4", 5" and 6") (optional)

Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Mounting Connection	Weight (lbs)
3"	244OM-0050 AV	8.0	60,994	Male NPT	6.40
	244OM-0060 AV	16.0	60,994	Male NPT	11.0
	244OM-0060AVEVR				
4"	244OM-0100 AV	8.0	131,700	Male NPT	10.0
	244OM-0170 AV	16.0*	131,700	Male NPT	19.0
	244OM-0170AVEVR				
5"	244OM-0800 AV	8.0	190,087	Male NPT	15.0
	244OM-0900 AV	16.0*	190,087	Male NPT	28.0
	244OM-0900AVEVR				
6"	244OM-0200 AV	8.0*	299,684	Male NPT	20.0
	244OM-0200AVEVR				
	244OM-0400 AV	16.0*	299,684	Male NPT	37.0
	244OM-0400AVEVR				
8"	244OM-0600 AV	8.0*	503,517	Male NPT	44.0
	244OM-0600AVEVR				
	244OM-0700 AV	16.0*	503,517	Male NPT	63.0
244OM-0700AVEVR					

\*Consult Price List for BSP, screen, and other options.

**WARNING:** The Morrison 244 emergency vent is for "emergency pressure relief only" and must be used in conjunction with a "normal vent" or pressure vacuum vent such as a Morrison 354, 548,748, 749 or 922. This vent must be properly sized and selected for each specific tank application in order to meet the proper "venting capacity" requirements. See the Morrison Vent Guide for further instructions.

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### Certifications & Listings

UL 2583 Listed ; (\*10 inch 2.5oz vent is UL Listed, but NOT Listed to UL 2583)

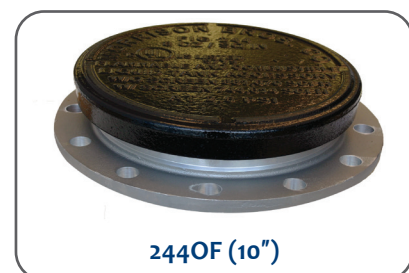
When properly sized for the tank, this vent will conform to the requirements of NFPA 30, 30A; UL 142; ULC S601; IFC; PEI RP200; CARB EVR Executive Order VR-402





Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Mounting Connection	Weight (lbs)
3"	244O-0050 AV	8.0	60,994	Female NPT	7.0
	244O-0060 AV	16.0	60,994		11.50
	244O-0060AVEVR				
4"	244O-0100 AV	8.0	131,700	Female NPT	10.0
	244O-0170 AV	16.0	131,700	Female NPT	18.0
	244O-0170AVEVR				
5"	244O-0800 AV	8.0	190,087	Female NPT	14.0
	244O-0900 AV	16.0	190,087	Female NPT	27.0
	244O-0900AVEVR				
6"	244O-0200 AV	8.0	299,684	Female NPT	19.0
	244O-0200AVEVR	16.0	299,684	Female NPT	36.0
	244O-0400 AV				
	244O-0400AVEVR				
8"	244O-0600 AV	8.0	503,517	Female NPT	43.0
	244O-0600AVEVR	16.0	503,517	Female NPT	62.0
	244O-0700 AV				
	244O-0700AVEVR				

\*Consult Price List for BSP, screen, and iron body options.



Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH) (@ 2.5 PSI)	Mounting Connection	Weight (lbs)
4"	244OF-0600 AV	8.0	131,700	Flanged	11.0
	244OF-0600 AVE				
	244OF-0170 AV	16.0	131,700	Flanged	20.0
	244OF-0170AVEVR				
6"	244OF-0050 AV	8.0	299,684	Flanged	21.0
	244OF-0050AVEVR				
	244OF-0075 AV	16.0	299,684	Flanged	38.0
	244OF-0075AVEVR				
8"	244OF-0100 AV	8.0	503,517	Flanged	43.0
	244OF-0100AVEVR				
	244OF-0200 AV	16.0	503,517	Flanged	67.0
	244OF-0200AVEVR				
10"	244OF-0300 AV	2.5	881,670	Flanged	25.0
	244OF-0400 AV	8.0	890,275	Flanged	57.0
	244OF-0400AVEVR				
	244OF-0500 AV	16.0	890,275	Flanged	103.0
	244OF-0500AVEVR				

\*Consult Price List for BSP and screen options.

Size	Item Number	Flanged Kits	Weight (lbs)
4"	244OF-04080 AK	Includes 244OF-0600 AV vent, flange adaptor, gasket, and nuts/bolts	N/A
	244OF-04160 AK	Includes 244OF-0170AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A
6"	244OF-06080 AK	Includes 244OF-0050AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A
	244OF-06160 AK	Includes 244OF-0075AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A
8"	244OF-08080 AK	Includes 244OF-0100AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A
	244OF-08160 AK	Includes 244OF-0200AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A
10"	244OF-10025 AK	Includes 244OF-0300 AV vent, flange adaptor, gasket, and nuts/bolts	N/A
	244OF-10080 AK	Includes 244OF-0400AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A
	244OF-10160 AK	Includes 244OF-0500AVEVR vent, flange adaptor, gasket, and nuts/bolts	N/A

### Construction Details

**3", 4", 5", 6", 8", 10" Vents**  
 Body... Aluminum  
 Cover... Power coated cast iron  
 O-Ring... FKM-A, standard models  
 O-Ring... FKM-B, Model numbers ending in AVE or AVEVR  
 Screen... 3 mesh stainless steel (3", 4", 5" & 6") (optional)

### Certifications & Listings

UL 2583 Listed; (\*10 inch 2.5oz vent is UL Listed, but NOT Listed to UL 2583)  
 When properly sized for the tank, this vent will conform to the requirements of NFPA 30, 30A; UL 142; ULC S601; IFC; PEI RP200; CARB EVR Executive Order VR-402

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244A (4")

Construction Details

Body... Carbon steel

### 244A Flange Adaptor

Flange adaptors are welded to tank top openings in aboveground storage tanks creating a flanged emergency vent connection.

Features

- Pre-drilled for easy installation of emergency vent
- Gaskets, nuts, and bolts are available

Item Number	Size	Weight (lbs)
244A--0400 1A	4"	10.0
244A--0000 1A	6"	12.0
244A--0100 1A	8"	19.0
244A--0200 1A	10"	20.0



244C (8")

Construction Details

Body... Cast iron

### 244C Companion Flange

This companion flange has female threads and is designed to convert a male threaded pipe nipple to a flanged emergency vent connection.

Item Number	Size	Weight (lbs)
244C--0100 1F	8"	27.0
244C--0200 1F	10"	36.0



244N (4" x 8")  
(T.O.E)

Construction Details

Body... Carbon steel—NPT

### 244N Pipe Nipple

A steel pipe nipple has male threads on one end (T.O.E) or male threads on both ends (T.B.E).

Item Number	Size	Threads	Weight (lbs)
244N--0100 1N	4" x 8"	T.O.E	7.0
244N--0200 1N	6" x 8"	T.O.E	13.0
244N--0300 1N	8" x 12"	T.O.E	28.0
244N--0600 1N	4" x 8"	T.B.E	7.0
244N--0700 1N	6" x 8"	T.B.E	13.0
244N--0800 1N	8" x 12"	T.B.E	28.0
244N--1000 1N	8" x 8"	T.O.E	20.0
244N--1100 1N	8" x 8"	T.B.E	20.0





## 245 Lightweight Emergency Vents

This lightweight, spring-loaded emergency vent (pressure relief only) is used on aboveground storage tanks, as a code requirement, to help prevent the tank from becoming over-pressurized and possibly rupturing if ever exposed to fire. This vent must be used in conjunction with a "normal vent." Correct application of this vent requires proper vent size and selection for the tank system in order to meet the specific venting capacity.

Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH)(@ 2.5 PSI)	Mounting Connection	Height	Weight (lbs)
2"	245M--0200 AV	8.0	31,917	Male NPT	1.50"	.50
3"	245M--0300 AV	8.0	67,162	Male NPT	3.30"	2.50
4"	245M--0400 AV	8.0	129,369	Male NPT	5.40"	4.50
6"	245M--0600 AV	8.0	331,750	Male NPT	5.40"	6.20
8"	245M--0800 AV	8.0	527,441	Male NPT	5.70"	10.10

Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH)(@ 2.5 PSI)	Mounting Connection	Height	Weight (lbs)
3"	245F--0300 AV	8.0	67,162	Female NPT	2.80"	2.80
4"	245F--0400 AV	8.0	129,369	Female NPT	3.10"	3.30
6"	245F--0600 AV	8.0	331,750	Female NPT	3.40"	5.50
8"	245F--0800 AV	8.0	527,441	Female NPT	4.50"	9.20

Size	Item Number	Pressure Setting (oz./in <sup>2</sup> )	Venting Capacity (SCFH)(@ 2.5 PSI)	Mounting Connection	Height	Weight (lbs)
4"	245F--0400 AV	8.0	129,369	Flanged	2.50"	6.0
6"	245F--0600 AV	8.0	331,750	Flanged	5.40"	9.10
8"	245F--0800 AV	8.0	527,441	Flanged	3.30"	14.50
10"	245F--1000 AV	8.0	972,110	Flanged	2.80"	20.0

\*Consult Price List for BSP and screen options for all connections.

Size	Item Number	Flanged Kits	Bolt Size
4"	245F--0408 AK	Includes 245F--0400 AV vent, flange adaptor, gasket, and (8) nuts/bolts	0.625" dia; 2" length
6"	245F--0608 AK	Includes 245F--0600 AV vent, flange adaptor, gasket, and (8) nuts/bolts	0.75" dia; 2.75" length
8"	245F--0808 AK	Includes 245F--0800 AV vent, flange adaptor, gasket, and (8) nuts/bolts	0.75" dia; 2.75" length
10"	245F--1008 AK	Includes 245F--1000 AV vent, flange adaptor, gasket, and (12) nuts/bolts	0.875" dia; 3" length



245M (3")



245F (4")



245 (6")

### Construction Details

Body... Aluminum  
Cover... Aluminum  
Seat... FKM  
Bolt... Zinc plated steel

### Certifications & Listings

UL-2583 Listed; NFPA 1, 30, 30A, 31, 37, 110; PEI RP200, PEI RP800; UL 142, UL 142A, UL 2085, UL 2244; CAN/ULC S601, CAN/ULC S602, CAN/ULC S652

### NOTE

Emergency vent should be set higher than the normal vent so the normal vent operates first.

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153B

**Construction Details**

Body and lever poppets... Brass

**Certifications & Listings**

U.S. Coast Guard approved No. 162.017/179

**153B  
Barge & Tanker Vent**

The 153B pressure vacuum vent is designed for installation on top of the vent pipe on barge fuel storage tanks. The vent allows the tank to "breathe" during filling and dispensing operations.

**Features**

- Normally closed to conserve vapor emissions

Item Number	Size	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Weight (lbs)
153B--0100 AV	2½"	1.5	1.5	25.20
153B--0200 AV	2½"	4.0	1.5	25.20
153B--0300 AV	2½"	8.0	1.5	25.20
153B--0400 AV	2½"	16.0	1.5	25.20
153B--0500 AV	2½"	32.0	1.5	25.20



153BSS

**Construction Details**

Body, cover, and poppets... 316 stainless steel

**Certifications & Listings**

U.S. Coast Guard approved No. 162.017/178

**153BSS  
Barge & Tanker Vent**

The 153BSS pressure vacuum vent is designed for installation on top of the vent pipe on barge fuel storage tanks. The vent allows the tank to "breathe" during filling and dispensing operations.

**Features**

- Normally closed to conserve vapor emissions

Item Number	Size	Pressure Setting (oz./in <sup>2</sup> )	Vacuum Setting (oz./in <sup>2</sup> )	Weight (lbs)
153BSS0100 AV	2½"	1.5	1.5	29.0
153BSS0200 AV	2½"	4.0	1.5	29.0
153BSS0300 AV	2½"	8.0	1.5	29.0
153BSS0400 AV	2½"	16.0	1.5	29.0
153BSS0500 AV	2½"	32.0	1.5	29.0



# 818 Series Clock Gauge (Feet & Inches)

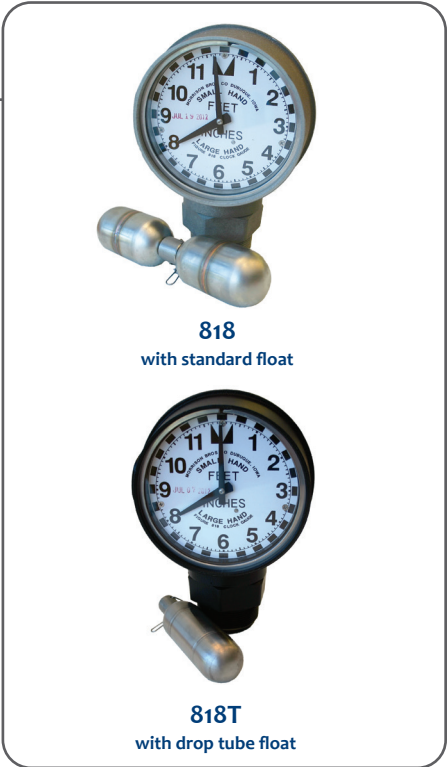
The Morrison 818 series clock gauges are designed to measure the liquid level in storage tanks up to 12 feet in measurement. The liquid level reading is displayed in feet and inches.

**Features**

- Gauge readout in feet and inches:
  - Hour hand (short hand) = feet
  - Minute hand (long hand) = inches
- Easy to install and calibrate in a 2" tank top opening
- Easily read from 30 feet away
- Accurate to 1/8 of an inch
- Vapor tight and fog-free construction
- Gauge rotates 360° for placement in the desired orientation
- Visual indicator decals for high level (red) and low level (green) are included with the dial face cover
- Standard float fits through a 2" schedule 40 pipe nipple
- Optional drop tube style float for use with drop tube reduces the risk of float entanglement when turbulent tank conditions occur (compatible with Morrison 419 2" models)
- **818T** and **818FT** series are compatible for use with Diesel Exhaust Fluid (DEF)

Item Number	M/F	Float	Weight (lbs)
818---0100AGEVR	M	Standard	4.50
818---0400AGEVR	M	Drop tube	4.50
818F--0100AGEVR	F	Standard	4.50
818F--0400AGEVR	F	Drop tube	4.50
818T-0100 AG	M	Standard	4.50
818T-0400 AG	M	Drop tube	4.50
818FT-0400 AG	F	Drop tube	4.50

\*Consult Price List for BSP options.



**Construction Details**

**818 & 818F**  
 Body... Aluminum  
 Float... Stainless steel  
 Cable... Stainless steel

**818T & 818FT**  
 Body... PTFE coated aluminum  
 Float... Stainless steel  
 Cable... Stainless steel

**Certifications & Listings**

CARB EVR Executive Order VR-402;  
 Florida DEP EQ-873



818C

**Construction Details**

Body... Aluminum  
Float... Stainless steel  
Cable... Stainless steel

**Certifications & Listings**

CARB EVR Executive Order  
VR-402; Florida DEP EQ-873

**NOTE**

Clock faces must be ordered with tank gauges and will be factory assembled.

## 818C Series Clock Gauge (Gallons & Liters)

The Morrison 818C series clock gauge is designed to measure and display product liquid levels in aboveground storage tanks up to 12 feet (3.7 meters) in height.

**Features**

- Gauge readout in gallons or liters
- Gallon/liter faceplates are made to order for specific horizontal, vertical, and rectangular tank sizes
- Easy to install and calibrate in a 2" tank top opening
- Vapor tight and fog-free construction
- Gauge head rotates 360° making it easy for placement in the desired orientation
- A red area on the gauge face serves as a visual indicator when the tank reaches 90-100% full
- Standard float fits through a 2" schedule 40 pipe nipple
- Optional drop tube style float for use with drop tube reduces the risk of float entanglement when turbulent tank conditions occur (compatible with Morrison 419 2" models)

Item Number		M/F	Float	Weight (lbs)
818C-0100AGEVR		M	Standard	4.50
818C-0400AGEVR		M	Drop tube	4.50
818CF-0100AGEVR		F	Standard	4.50
818CF-0400AGEVR		F	Drop tube	4.50

\*See website or contact Customer Service for other options and custom orders.



## 818MET Series Clock Gauges (Meters & Centimeters)

The Morrison 818MET series clock gauge is designed to measure and display product liquid levels in aboveground storage tanks up to 3.7 meters in height.

**Features**

- Easy to install and calibrate in a 5.08 centimeter (2") tank top opening
- Gauge readout in feet and inches:
  - Hour hand (short hand) = meters (m)
  - Minute hand (long hand) = centimeters (cm)
- Accurate to .32 centimeters (1/8 of an inch)
- Easily read from 9 meters (30 feet) away
- Vapor tight and fog-free construction
- Gauge rotates 360° for ease of placement in the desired orientation
- Visual indicator decals for high level (red) and low level (green) are included with the dial face cover
- Standard float fits through a 2" schedule 40 pipe nipple
- Optional drop tube style float for use with drop tube reduces the risk of float entanglement when turbulent tank conditions occur (compatible with Morrison 419 2" models)

Item Number		M/F	Float	Weight (lbs)
818MET0100AGEVR		M	Standard	4.50
818MET0400AGEVR		M	Drop tube	4.50
818MEF0100AGEVR		F	Standard	4.50
818MEF0400AGEVR		F	Drop tube	4.50

\*Consult Price List for BSP options.



818MEF

**Construction Details**

Body... Aluminum  
 Float... Stainless steel  
 Cable... Stainless steel

**Certifications & Listings**

CARB EVR Executive Order  
 VR-402; Florida DEP EQ-873

## 818I Floating Suction Indicator

The floating suction indicator is a mechanical means of displaying movement of the floating suction arm as the liquid level changes.

**Features**

- Easy to install and calibrate in a 2" tank top opening
- Cable attaches to the floating suction arm
- Bright green and yellow face
- Vapor tight construction and fog-free construction
- Gauge rotates 360° for ease of placement in the desired orientation

Item Number	M/F	Weight (lbs)
818I-0000 AG	M	4.0



818I

**Construction Details**

Body... Aluminum  
 Cable... Stainless steel



## 918 Series Clock Gauges & Alarms (Feet & Inches)



**918**  
with standard float



**918T**  
PTFE with drop tube float

The Morrison 918 series clock gauges are designed to measure the liquid level in storage tanks up to 12 feet in measurement. The liquid level reading is displayed in feet and inches. The Model 918 audible alarm sounds when the liquid level in the tank reaches the user's specified level.

### Features

- Easy to install in a single 2" tank top opening
- Easy to calibrate
- Battery-powered audible alarm
- Gauge readout in feet and inches:
  - Hour hand (short hand) = feet
  - Minute hand (long hand) = inches
- Accurate to 1/8 of an inch
- Easily read from 30 feet away
- Vapor tight and fog-free construction
- Gauge rotates 360° for ease of placement in the desired orientation
- Visual indicator decals for high level (red) and low level (green) are included with the dial face cover
- Standard float fits through a 2" schedule 40 pipe nipple
- Optional drop tube style float for use with drop tube reduces the risk of float entanglement when turbulent tank conditions occur (compatible with Morrison 419 2" models)
- **918T** and **918FT** series are compatible for use with Diesel Exhaust Fluid (DEF)

### Construction Details

#### 918 & 918F





Body... Aluminum  
 Float... Stainless steel  
 Cable... Stainless steel

#### 918T & 918FT

Body... PTFE coated aluminum  
 Float... Stainless steel  
 Cable... Stainless steel

### Certifications & Listings

Alarm unit is UL 913 Listed; 918 single channel alarm and clock gauge is Florida DEP EQ-527; CARB EVR Executive Order VR-402

Item Number	Size	M/F	Description	Float	Weight (lbs)
918--0000AGEVR 	2"	M	Clock gauge without alarm	Standard	6.20
918--0100 AG	2"	M	Clock gauge with alarm	Standard	6.30
918--0400 AG	2"	M	Clock gauge with alarm	Drop tube	6.30
918--2000AGEVR 	2"	M	Clock gauge without alarm	Drop tube	6.20
918F--0000AGEVR 	2"	F	Clock gauge without alarm	Standard	6.20
918F--0100 AG	2"	F	Clock gauge with alarm	Standard	6.30
918F--0400 AG	2"	F	Clock gauge with alarm	Drop tube	6.30
918F--2000AGEVR 	2"	F	Clock gauge without alarm	Drop tube	6.20
918FT-0400 AG	2"	F	Clock gauge with alarm	Drop tube	6.30
918FT-2000 AG	2"	F	Clock gauge without alarm	Drop tube	4.50
918T--0400 AG	2"	M	Clock gauge with alarm	Drop tube	6.30
918T--2000 AG	2"	M	Clock gauge without alarm	Drop tube	4.50
918S--1100 AA		N/A	Single channel alarm box; battery powered	N/A	1.13
918D--1100 AA		N/A	Dual channel alarm box; battery powered	N/A	1.13
918Q--1100 AA		N/A	Quad channel alarm box; battery powered	N/A	1.13

\*See 918AC for AC-powered option.





# 918C Series Clock Gauges & Alarms (Gallons or Liters)

The Morrison 918C series clock gauges are designed to measure the liquid level in storage tanks up to 12 feet in measurement. The liquid level reading is displayed in gallons or liters. The Model 918 audible alarm sounds when the liquid level in the tank reaches the user’s specified level.

**Features**

- Easy to install in a single 2” tank top opening
- Easy to calibrate
- Battery-powered audible alarm
- Gauge face displays level reading for specified tank in gallons
- Vapor tight and fog-free construction and design
- Gauge rotates 360° for ease of placement in the desired orientation
- A red area on the gauge face serves as a visual indicator when the tank reaches 90-100% full
- Standard float fits through a 2” schedule 40 pipe nipple
- Optional drop tube style float for use with drop tube reduces the risk of float entanglement when turbulent tank conditions occur (compatible with Morrison 419 2” models)



918C

**Construction Details**

Body... Aluminum  
 Float... Stainless steel  
 Cable... Stainless steel

**Certifications & Listings**

Alarm unit is UL 913 Listed; CARB  
 EVR Executive Order VR-402

**NOTE**

Clock faces must be ordered with tank gauges and will be factory assembled.

Item Number	M/F	Description	Float	Weight (lbs)
918C-0000AGEVR	M	Clock gauge without alarm	Standard	6.20
918C-0100 AG	M	Clock gauge with alarm	Standard	6.30
918C-0400 AG	M	Clock gauge with alarm	Drop tube	6.30
918C-2000AGEVR	M	Clock gauge without alarm	Drop tube	6.30
918CF-0000AGEVR	F	Clock gauge without alarm	Standard	6.20
918CF-0100 AG	F	Clock gauge with alarm	Standard	6.30
918CF-0400 AG	F	Clock gauge with alarm	Drop tube	6.30
918CF-2000AGEVR	F	Clock gauge without alarm	Drop tube	6.30
918S-1100 AA	N/A	Single channel alarm box; battery powered	N/A	1.13
918D-1100 AA	N/A	Dual channel alarm box; battery powered	N/A	1.13
918Q-1100 AA	N/A	Quad channel alarm box; battery powered	N/A	1.13

*\*Products listed above include blank gallon or liter reading faces. Custom reading faces must be ordered separately but with the gauge. See website or contact Customer Service for other options and custom orders.*

*\*See 918AC for AC-powered option.*





## 918MET Series Clock Gauges & Alarms (Meters & Centimeters)



918MET

### Construction Details

Body... Aluminum  
Float... Stainless steel  
Cable... Stainless steel

### Certifications & Listings

CARB EVR Executive Order  
VR-402

The Morrison 918MET series clock gauge is designed to measure and display product liquid levels in aboveground storage tanks up to 3.7 meters in height. The 918 audible alarm sounds when the liquid level in the tank reaches the user's specified level.

### Features

- Easy to install in a single 5.08 centimeter (2") tank top opening, easy to calibrate
- Battery-powered audible alarm
- Gauge readout in meters and centimeters:
  - Hour hand (short hand) = meters (m.)
  - Minute hand (long hand) = centimeters (cm.)
- Gauge rotates 360° making it easy for the face to be read from the desired orientation
- Visual indicators for high level (red) and low level (green) are applied to the dial face cover
- Accurate to .32 centimeters (1/8 of an inch)
- Easily read from 9 meters (30 feet) away
- Vapor tight and fog-free construction
- Standard float fits through a 2" schedule 40 pipe nipple
- Optional drop tube style float for use with drop tube reduces the risk of float entanglement when turbulent tank conditions occur (compatible with Morrison 419 2" models)

Item Number	M/F	Description	Float	Wt. (lbs)
918MET0100 AG	M	Clock gauge with alarm	Standard	6.30
918MET0400 AG	M	Clock gauge with alarm	Drop tube	6.30
918MET0000AGEVR	M	Clock gauge without alarm	Standard	6.30
918MET2000AGEVR	M	Clock gauge without alarm	Drop tube	6.30
918MEF0100 AG	F	Clock gauge with alarm	Standard	6.30
918MEF0400 AG	F	Clock gauge with alarm	Drop tube	6.30
918MEF0000AGEVR	F	Clock gauge without alarm	Standard	6.30
918MEF2000AGEVR	F	Clock gauge without alarm	Drop tube	6.30
918S--1100 AA	N/A	Single channel alarm box*	N/A	1.13
918D--1100 AA	N/A	Dual channel alarm box*	N/A	1.13
918Q--1100 AA	N/A	Quad channel alarm box*	N/A	1.13

\*Models are battery-powered. See 918AC for AC-powered option.

## 918DP Series Dual Point Clock Gauge



918DP

### Construction Details

Body... Aluminum  
Float... Stainless steel  
Cable... Stainless steel

### Certifications & Listings

Florida DEP EQ-861; CARB  
EVR Executive Order VR-402

The Morrison 918DP dual point clock gauge is designed to measure the liquid level in storage tanks up to 12 feet in measurement. The liquid level reading is displayed in feet and inches. Two set points are provided to signal alarms at both set points.

### Features

- Gauge and dual alarm set points in one 2" tank opening
- Easy to install and calibrate
- Two normally open switches can be set at desired alarm set points
- Accurate to 1/8 of an inch
- Vapor tight construction
- Easy to read up to 30 feet
- Can be paired with Morrison 918D or 918Q battery-powered tank alarms and 918AC system interface

Item Number	Description	Weight (lbs)
918DP-0000AGEVR	Clock gauge with 2 set points, standard float, male threads, no alarm box	6.20
918DP-2000AGEVR	Clock gauge with 2 set points, drop tube float, male threads, no alarm box	6.20
918DPF0000AGEVR	Clock gauge with 2 set points, standard float, female threads, no alarm box	6.20
918DPF2000AGEVR	Clock gauge with 2 set points, drop tube float, male threads, no alarm box	6.20
918D--1100 AA	Dual channel alarm box; battery powered	1.13
918Q--1100 AA	Quad channel alarm box; battery powered	1.13

\*See 918AC for AC-powered option.



# 718 Series Liquid Level Gauge

The Morrison 718 liquid level gauge is designed for measuring liquid level in an aboveground storage tank. This gauge installs on top of the tank and is activated by a float connected to a cable.

**Features**

**718**

- Two models accommodate tank depths up to 72" and 108"
- Measurement readout is inches to empty
- 2" male NPT threads
- Float installs through a 2" female threaded opening or a schedule 40 riser
- Easy float length adjustment (1" or 2" increments)
- Vapor space sealed to prevent lens fogging
- UV resistant liquid level tape
- Approximately 12" of extra cable to accommodate installations with riser pipes

**718G**

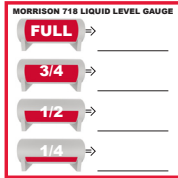
- Gallon models accommodate tanks of specific dimensions
- Measurement readout is gallons to empty

**718M**

- This model accommodates tank depths up to 275CM
- Measurement readout is centimeters to empty
- Easy float length adjustment (2.54CM or 5.08CM increments)

**718U**

- This model measures ullage and accommodates tank depths up to 72"
- Measurement readout is inches to full



Tank label included with every gauge. →



**718 with standard float**  
(for use with schedule 40 pipe)

**718 with gasoline-compatible float**  
(can be used with schedule 40 and schedule 80 pipe)

**718G**

Item Number	Description	Gas Float	Diameter	Length	Width	Height	Weight (lbs)
718--7200 AG	For tanks up to 72"		N/A	N/A	N/A	72"	2.0
718--7250 AG	For tanks up to 72"	✓	N/A	N/A	N/A	72"	2.0
718--10800 AG	For tanks up to 108"		N/A	N/A	N/A	108"	2.0
718--10850 AG	For tanks up to 108"	✓	N/A	N/A	N/A	108"	2.0
718U--7200 AG	For tanks up to 72", ullage		N/A	N/A	N/A	72"	2.0
718U--7250 AG	For tanks up to 72", ullage	✓	N/A	N/A	N/A	72"	2.0
718G--27500 AG	275 gallon tank capacity		N/A	60"	27"	44"	2.0
718G--27550 AG	275 gallon tank capacity	✓	N/A	60"	27"	44"	2.0
718G--52000 AG	520 gallon tank capacity		48"	68"	N/A	N/A	2.0
718G--52050 AG	520 gallon tank capacity	✓	48"	68"	N/A	N/A	2.0
718G--56000 AG	560 gallon tank capacity		48"	72"	N/A	N/A	2.0
718G--56050 AG	560 gallon tank capacity	✓	48"	72"	N/A	N/A	2.0
718G-100000 AG	1,000 gallon tank capacity		64"	72"	N/A	N/A	2.0
718G-100050 AG	1,000 gallon tank capacity	✓	64"	72"	N/A	N/A	2.0
718G-100001 AG	1,000 gallon tank capacity		48"	128"	N/A	N/A	2.0
718G-100051 AG	1,000 gallon tank capacity	✓	48"	128"	N/A	N/A	2.0
718G-200000 AG	2,000 gallon tank capacity		64"	144"	N/A	N/A	2.0
718G-200050 AG	2,000 gallon tank capacity	✓	64"	144"	N/A	N/A	2.0
718M--27500 AG	For tanks up to 275CM		N/A	N/A	N/A	275CM	2.0
718M--27550 AG	For tanks up to 275CM	✓	N/A	N/A	N/A	275CM	2.0

**Construction Details**

- Body... Cast aluminum
- Spring... 301 stainless steel
- Float... Polypropylene and aluminum
- Shaft bushing... Stainless steel
- O-ring... FKM
- Cable... 30# braided microfilament
- Lens cover... Lexan

\*Consult Price List for CSI Lube Cube models.



## 918 Series Tank Alarm Single, Dual, & Quad Channel Alarm Box

The Morrison 918 series alarm box is designed for applications requiring an intrinsically safe audible alarm and visual alarm indication upon activation of a simple switch input signal.

### Features

- Visual alarm indicators lights turn red identifying which input channel is alarming
- Self-powered by long-life replaceable lithium battery
- Monitor up to four sensor signals
- User-defined alarm labels
- NEMA 4X water-resistant enclosure
- Compatible with Morrison 918 clock gauges and 924, 924LS, and 925 level sensors
- Can be installed remote from gauge or level sensor
- Low battery light turns yellow indicating battery power is low
- 90 dB audible alarm at 4 feet
- Modular contacts make it easy to connect a variety of dry contact simple switch devices
- In compliance with UL 913 and CSA 157 intrinsic safety standards
- Intrinsically safe for Class I, Division 1 and 2, Group D hazardous locations
- Internal ON/OFF power switch
- ON/OFF switch for audible alarm
- ON/OFF switch for auto-silence mode
- Normally open or normally closed selectable by input channel
- **918S** is a single input channel tank alarm box
- **918D** is a dual (2) input channel tank alarm box
- **918Q** is a quad (4) input channel tank alarm box



918S



918D



918Q

Item Number	Description	Weight (lbs)
918S--1100 AA	Single channel tank alarm box only	1.13
918D--1100 AA	Dual channel tank alarm box only	1.13
918Q--1100 AA	Quad channel tank alarm box only	1.13

### Construction Details

Alarm box... Polycarbonate plastic  
Battery... Lithium

### Certifications & Listings

cULus 913 Listed; Florida DEP  
EQ-527; Intrinsically safe for  
Class I, Division 1 & 2, Group D  
hazardous locations



# 918 Series Tank Alarm with Rotating Beacon Single, Dual, & Quad Channel Alarm Box

The Morrison 918 series alarm box with rotating beacon is designed for applications requiring an intrinsically safe audible alarm and 360° rotating visual beacon for alarm indication upon activation of a simple switch input signal.

**Features**

- 10 red LED lamps create strobe visual effect during alarm indication
- Audible alarm ON/OFF globally selectable
- Audible alarm auto-silence mode (10 minutes) ON/OFF globally selectable
- Normally open or normally closed selectable by input channel
- Internal ON/OFF power switch
- 90 dB audible alarm at 4 feet
- Self-powered by long-life replaceable lithium battery
- Low battery light turns yellow indicating battery power is low
- Simple push test button
- Alarm indication latched until alarm activation is acknowledged
- User-defined alarm labels
- NEMA 4X water-resistant enclosure
- Compatible with Morrison 918 clock gauges and 924, 924LS, and 925 level sensors
- Can be installed remote from gauge or level sensor
- Modular contacts make it easy to connect a variety of dry contact simple switch devices
- **918SB** is a single input channel tank alarm box
- **918DB** is a dual (2) input channel tank alarm box (input channel indicator light on front panel)
- **918QB** is a quad (4) input channel tank alarm box (input channel indicator light on front panel)

Item Number	Description	Weight (lbs)
918SB-1000 AA	Single channel tank alarm box only	2.04
918DB-1100 AA	Dual channel tank alarm box only	2.04
918QB-1100 AA	Quad channel tank alarm box only	2.04



**Construction Details**

Alarm box... Polycarbonate plastic  
Battery... Lithium

**Certifications & Listings**

cULus 913 Listed; Florida DEP EQ-868; Intrinsically safe for Class I, Division 1 & 2, Group D hazardous locations





## 918AC System Interface

The Morrison 918AC system interface is an AC-powered console designed to monitor 1 to 4 simple input switch devices such as the Morrison 918, 924, and 925. Audible and or visual indication when an input switch is activated, the Morrison 918AC has the optional capability to add 1 to 4 configurable relay outputs to interface with remote audible and or visual indicators or other external simple switch-activated devices.

### Features

- Power requirements are 100-240 VAC, +/-10%, 50/60 Hz
- Input sensors are simple switch devices
- Output relays are dry switch contact, form C SPDT, rated up to 5 AMPS at 240 VAC
- Enclosure is a NEMA 4X indoor/outdoor weather protected lockable box (non-hazardous location only)
- 95 dBA audible horn at two feet away
- Operating temperature of -40°F to 140°F
- Compatible with Morrison 918 tank alarms, 924, 924LS, and 925 series level sensors

### Expandability with Plug-n-Play Capabilities

- Intrinsically safe input modules expandable from 1 to 4 input channels
- Electromechanical output modules expandable from 0 to 4 output relays
- Input and output modules can be purchased separately

### Configurability

- Audible alarm ON/OFF selectable by channel
- Auto silence ON/OFF selectable by channel
- Normally open (NO) or normally closed (NC) selectable on input and output
- Output relay activation selectable to one or more input channels
- Fail safe mode selectable to indicate power outage at console
- Red lens color interchangeable with optional amber or green



918AC

### Construction Details

Alarm box... Polycarbonate plastic

### Certifications & Listings

Florida DEP EQ-834; UL/cUL 913 Listing for Ordinary Location with Hazardous Location Intrinsically Safe Input Circuits for Class I, Division 1, Group D

Item Number	Description	Inputs	Outputs	Weight (lbs)
918AC-1000 AI	System interface console	1	0	6.0
918AC-1100 AI	System interface console	1	1	6.0
918AC-1200 AI	System interface console	1	2	6.0
918AC-1300 AI	System interface console	1	3	6.0
918AC-1400 AI	System interface console	1	4	6.0
918AC-2000 AI	System interface console	2	0	6.0
918AC-2100 AI	System interface console	2	1	6.0
918AC-2200 AI	System interface console	2	2	6.0
918AC-2300 AI	System interface console	2	3	6.0
918AC-2400 AI	System interface console	2	4	6.0
918AC-3000 AI	System interface console	3	0	6.0
918AC-3100 AI	System interface console	3	1	6.0
918AC-3200 AI	System interface console	3	2	6.0
918AC-3300 AI	System interface console	3	3	6.0
918AC-3400 AI	System interface console	3	4	6.0
918AC-4000 AI	System interface console	4	0	6.0
918AC-4100 AI	System interface console	4	1	6.0
918AC-4200 AI	System interface console	4	2	6.0
918AC-4300 AI	System interface console	4	3	6.0
918AC-4400 AI	System interface console	4	4	6.0





# 924LS Liquid Sensor

The Morrison 924LS is a float-actuated sensor capable of detecting the presence of liquid in containment areas.

### Features

- 1/2" male NPT connection
- Flat surface provides stability when free-standing on flat containment surfaces
- 3/8" and 1/2" cable connector included
- Audible and visual alarm functionality when paired with Morrison 918AC system interface or 918S/D/Q tank alarm

### Electrical Switch Ratings

- 5 watt resistive load, 100VAC-250mA max / 140VDC-350mA max

*\*Switch ratings are for resistive loads only.  
\*Do not use for inductive loads.*

Item Number	Description	Weight (lbs)
924LS-0150 AS	Level sensor with 15' lead wire	1.20
924LS-0250 AS	Level sensor with 25' lead wire	1.30
924LS-0400 AS	Level sensor with 40' lead wire	1.50
924LS-0600 AS	Level sensor with 60' lead wire	1.70



### Construction Details

Wires... PTFE coated in PTFE coated jacket  
 Float... Nitrophenyl®-M  
 Shroud... 304 stainless steel

### Liquid Detection Level

Normally Open (NO) 0.625 ± 0.125  
 Normally Closed (NC) 0.125 + 0.125 / - 0.0

### Location Approval

UL Class I, Division 1, Group D when used in conjunction with the model 918AC and model 918S/D/Q

### Certifications & Listings

Florida DEP EQ-862; National Work Group on Leak Detection Evaluations listed ([www.nwglde.org](http://www.nwglde.org))



924 (12")

## 924 Series Adjustable Level Sensors

An adjustable and float-activated simple switch device, the Morrison 924 is used to monitor liquid level at a desired set point.

### Features

- Level sensor in liquid storage tanks
- Four length ranges available
- Fully adjustable within range specified by model
- Installs into a 2" female threaded opening (1/2" NPT fitting at top of sensor)
- Normally open switch easily converted to normally closed operation
- Audible and visual alarm functionality when paired with Morrison 918AC system interface or 918S/D/Q tank alarm

### Electrical Switch Ratings

- 50-watt resistive load, 300VAC - 700mA max / 350VDC - 1.0A max, SPST

*\*Switch ratings are for resistive loads only.*

*\*Do not use for inductive loads.*

*\*Compatible with 918S/D/Q alarm box and 918AC system interface or similar listed systems that are designed for use with sensing devices located in a hazardous location.*

### Construction Details

- Wires... PTFE jacketed
- Floats... Nitrophyl®-M (924);  
316 stainless steel (924S)
- Tube... Brass (924);  
304 stainless steel (924S)
- Bushing... E-coated steel (924);  
304 stainless steel (924S)

### Certifications & Listings

Florida DEP EQ-862; National Work Group on Leak Detection Evaluations listed ([www.nwglde.org](http://www.nwglde.org))

Item Number	Description	Activation Length		Overall Length	Weight (lbs)
		Minimum*	Maximum		
924---0600 AS	6" Brass adjustable level sensor	1"	6"	13.35"	3.30
924---1200 AS	12" Brass adjustable level sensor	1"	12"	19.35"	3.60
924---2000 AS	20" Brass adjustable level sensor	1"	20"	27.35"	4.20
924---3000 AS	30" Brass adjustable level sensor	1"	30"	37.35"	4.40
924S--0600 AS	6" Stainless steel adjustable level sensor	1"	6"	13.35"	4.70
924S--1200 AS	12" Stainless steel adjustable level sensor	1"	12"	19.35"	5.0
924S--2000 AS	20" Stainless steel adjustable level sensor	1"	20"	27.35"	5.50
924S--3000 AS	30" Stainless steel adjustable level sensor	1"	30"	37.35"	5.70
925---0113 2B	Conduit junction box (NEMA 4)				0.50
925---0114 2B	Conduit junction box (NEMA 7, Group C & D)				2.25

*\*Activation length minimum may depend on specific gravity of liquid.*





## 918S/924S Series Alarm with Adjustable Sensors

This adjustable, float-activated simple switch device with integrated alarm box is used to monitor liquid level at a desired set point.

### Alarm Box Features

- Audible and visual alarm indicators
- Self-powered by long-life replaceable lithium batteries
- Low battery visual indicator
- 90 dB alarm at four feet away
- Corrosion-resistant and water-resistant housing

### Sensor Features

- Four stem length ranges available
- Fully adjustable within range specified by model
- Installs into a 2" female threaded opening (1/2" NPT fitting at top of sensor)
- Normally open switch easily converted to normally closed operation

### Additional Features

- Level sensor in liquid storage tanks
- Activates audible alarm

### Electrical Switch Ratings (level sensor)

- 50-watt resistive load, 300VAC - 700mA max / 350VDC - 1.0A max, SPST

*\*Switch ratings are for resistive loads only*

*\*Do not use for inductive loads*

Item Number	Description	Weight (lbs)
918S--92406 AK	6" Brass adjustable level sensor with alarm	4.80
918S--92412 AK	12" Brass adjustable level sensor with alarm	5.10
918S--92420 AK	20" Brass adjustable level sensor with alarm	5.70
918S--92430 AK	30" Brass adjustable level sensor with alarm	5.90
918S--924S06 AK	6" Stainless steel adjustable level sensor with alarm	4.70
918S--924S12 AK	12" Stainless steel adjustable level sensor with alarm	5.0
918S--924S20 AK	20" Stainless steel adjustable level sensor with alarm	5.50
918S--924S30 AK	30" Stainless steel adjustable level sensor with alarm	5.70

*\*Note: Alarm and sensor are packaged separately.*



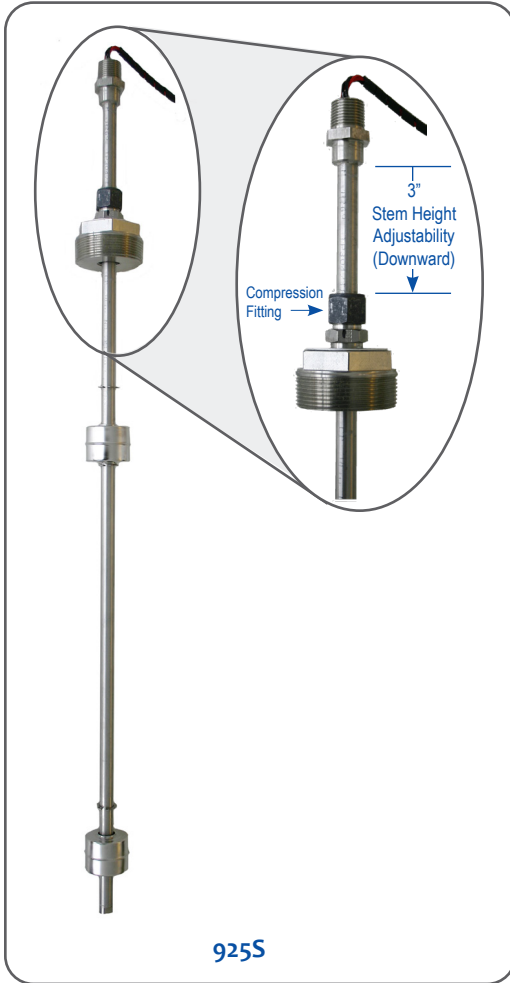
918S--924S20 AK

### Construction Details

Alarm box... Polycarbonate plastic  
 Wires... PTFE jacketed  
 Floats... Nitrophenyl@-M (924); 316 stainless steel (924S)  
 Tube... Brass (924);  
 304 stainless steel (924S)  
 Bushing... E-coated steel (924);  
 304 stainless steel (924S)

### Certifications & Listings

Florida DEP EQ-527 (918S); Florida DEP EQ-862 (924/924S); Intrinsically safe for Class I, Division 1 & 2, Group D hazardous locations; National Work Group on Leak Detection Evaluations listed ([www.nwglde.org](http://www.nwglde.org))



925S

## 925 Series Multi-Level Sensors

The Morrison 925 series multi-level sensor is a float-activated, simple switch device capable of sensing liquid levels from 1 to 5 specified set points.

### Features

- 1 to 5 user-specified liquid level set points (1 $\frac{1}{8}$ " minimum to 14 $\frac{1}{4}$ " maximum set point range)
- 3" stem height adjustability (downward) to assist in desired set point alignment
- Installs into a 2" NPT female threaded opening (1/2" NPT fitting at top of sensor)
- 24" lead wire length
- Normally open or normally closed switch orientations available (specified at time of order)
- Audible and visual alarm functionality when paired with Morrison 918AC system interface or 918S/D/Q tank alarm

### Electrical Switch Ratings

- 50-watt resistive load, 300VAC - 700mA max / 350VDC - 1.0A max, SPST

*\*Switch ratings are for resistive loads only*

*\*Do not use for inductive loads*

### Ordering

- To order, please complete the **925 Multi-Level Sensor Order Form** and submit with your purchase order to Morrison Bros. Please note that each unit is made to order specifically to the requirements on the order form; longer lead times may apply.

*Table containing item numbers can be found on the following page.*

### Construction Details

Wires... PTFE jacketed

Floats... Nitrophyl®-M (925); 316 stainless steel (925S)

Stem... Brass (925); 304 stainless steel (925S)

Bushing... E-coated steel (925); 304 stainless steel (925S)

### Certifications & Listings

Florida DEP EQ-862; National Work Group on Leak Detection Evaluations listed ([www.nwglde.org](http://www.nwglde.org)); Third party EPA evaluated with both 918AC system interface and 918S/D/Q tank alarm



Item Number	Number of Floats	Stem Material	Stem Length	Weight (lbs)
925---1030 AS	1	Brass	3 $\frac{3}{8}$ " to 36"	5.0
925---1060 AS	1	Brass	Greater than 36" to 72"	8.50
925---1090 AS	1	Brass	Greater than 72" to 108"	10.50
925---1120 AS	1	Brass	Greater than 108" to 144"	13.0
925---2030 AS	2	Brass	3 $\frac{3}{8}$ " to 36"	5.0
925---2060 AS	2	Brass	Greater than 36" to 72"	8.50
925---2090 AS	2	Brass	Greater than 72" to 108"	10.50
925---2120 AS	2	Brass	Greater than 108" to 144"	13.0
925---3030 AS	3	Brass	3 $\frac{3}{8}$ " to 36"	5.0
925---3060 AS	3	Brass	Greater than 36" to 72"	8.50
925---3090 AS	3	Brass	Greater than 72" to 108"	10.50
925---3120 AS	3	Brass	Greater than 108" to 144"	13.0
925---4030 AS	4	Brass	3 $\frac{3}{8}$ " to 36"	5.0
925---4060 AS	4	Brass	Greater than 36" to 72"	8.50
925---4090 AS	4	Brass	Greater than 72" to 108"	10.50
925---4120 AS	4	Brass	Greater than 108" to 144"	13.0
925---5030 AS	5	Brass	3 $\frac{3}{8}$ " to 36"	5.0
925---5060 AS	5	Brass	Greater than 36" to 72"	8.50
925---5090 AS	5	Brass	Greater than 72" to 108"	10.50
925---5120 AS	5	Brass	Greater than 108" to 144"	13.0
925S--1030 AS	1	Stainless steel	3 $\frac{3}{8}$ " to 36"	5.0
925S--1060 AS	1	Stainless steel	Greater than 36" to 72"	8.50
925S--1090 AS	1	Stainless steel	Greater than 72" to 108"	10.50
925S--1120 AS	1	Stainless steel	Greater than 108" to 144"	13.0
925S--2030 AS	2	Stainless steel	3 $\frac{3}{8}$ " to 36"	5.0
925S--2060 AS	2	Stainless steel	Greater than 36" to 72"	8.50
925S--2090 AS	2	Stainless steel	Greater than 72" to 108"	10.50
925S--2120 AS	2	Stainless steel	Greater than 108" to 144"	13.0
925S--3030 AS	3	Stainless steel	3 $\frac{3}{8}$ " to 36"	5.0
925S--3060 AS	3	Stainless steel	Greater than 36" to 72"	8.50
925S--3090 AS	3	Stainless steel	Greater than 72" to 108"	10.50
925S--3120 AS	3	Stainless steel	Greater than 108" to 144"	13.0
925S--4030 AS	4	Stainless steel	3 $\frac{3}{8}$ " to 36"	5.0
925S--4060 AS	4	Stainless steel	Greater than 36" to 72"	8.50
925S--4090 AS	4	Stainless steel	Greater than 72" to 108"	10.50
925S--4120 AS	4	Stainless steel	Greater than 108" to 144"	13.0
925S--5030 AS	5	Stainless steel	3 $\frac{3}{8}$ " to 36"	5.0
925S--5060 AS	5	Stainless steel	Greater than 36" to 72"	8.50
925S--5090 AS	5	Stainless steel	Greater than 72" to 108"	10.50
925S--5120 AS	5	Stainless steel	Greater than 108" to 144"	13.0
925---0113 2B	Conduit junction box (NEMA 4)			0.50
925---0114 2B	Conduit junction box (NEMA 7, Group C & D)			2.25



## 925---W Series Oil/Water Sensors



925---W

Float-activated simple switch device capable of sensing the accumulation of oil in oil/water separators.

### Features

- 1 to 4 user-specified liquid level set points (1 $\frac{1}{8}$ " minimum to 141 $\frac{3}{4}$ " maximum set point range)
- Set point configuration options:
  - 1-2 interface floats (sink in oil and fuel but float on water) set to normally closed switch orientation only
  - 0-2 standard floats (float on oil, fuel, and water) set to customer's specified orientation (normally open or normally closed)
- 1" stem height adjustability (downward) to assist in desired set point alignment
- Installs into a 2" NPT female threaded opening (1/2" NPT fitting at top of sensor)
- 24" lead wire length
- Audible and visual alarm functionality when paired with Morrison 918AC System Interface

### Electrical Switch Ratings

- 50-watt resistive load, 300VAC - 700mA max / 350VDC - 1.0A max, SPST

*\*Switch ratings are for resistive loads only.*

*\*Do not use for inductive loads.*

### Ordering

- To order, please complete the 925 Oil Water Sensor Order Form and submit with your purchase order to Morrison Bros. Please note that each unit is made to order specifically to the requirements on the order form; longer lead times may apply.

*Table containing item numbers can be found on the following page.*

### Construction Details

Wires... PTFE jacketed

Floats... 316 stainless steel

Stem... Brass (925); 304 stainless steel (925S)

Bushing... E-coated steel (925); 304 stainless steel (925S)

### Certifications & Listings

Florida DEP EQ-862; National Work Group on Leak Detection Evaluations listed ([www.nwglde.org](http://www.nwglde.org)); Third party certification for 925 series sensors used with both 918AC system interface and 918S/D/Q tank alarm



Item Number	Number of Floats	Stem Material	Stem Length	Weight (lbs)
925---W10030 AS	1 Interface / 0 Standard	Brass	3¾" to 36"	5.0
925---W10060 AS	1 Interface / 0 Standard	Brass	Greater than 36" to 72"	8.50
925---W10090 AS	1 Interface / 0 Standard	Brass	Greater than 72" to 108"	10.50
925---W10120 AS	1 Interface / 0 Standard	Brass	Greater than 108" to 144"	13.0
925---W11030 AS	1 Interface / 1 Standard	Brass	3¾" to 36"	5.0
925---W11060 AS	1 Interface / 1 Standard	Brass	Greater than 36" to 72"	8.50
925---W11090 AS	1 Interface / 1 Standard	Brass	Greater than 72" to 108"	10.50
925---W11120 AS	1 Interface / 1 Standard	Brass	Greater than 108" to 144"	13.0
925---W12030 AS	1 Interface / 2 Standard	Brass	3¾" to 36"	5.0
925---W12060 AS	1 Interface / 2 Standard	Brass	Greater than 36" to 72"	8.50
925---W12090 AS	1 Interface / 2 Standard	Brass	Greater than 72" to 108"	10.50
925---W12120 AS	1 Interface / 2 Standard	Brass	Greater than 108" to 144"	13.0
925---W20030 AS	2 Interface / 0 Standard	Brass	3¾" to 36"	5.0
925---W20060 AS	2 Interface / 0 Standard	Brass	Greater than 36" to 72"	8.50
925---W20090 AS	2 Interface / 0 Standard	Brass	Greater than 72" to 108"	10.50
925---W20120 AS	2 Interface / 0 Standard	Brass	Greater than 108" to 144"	13.0
925---W21030 AS	2 Interface / 1 Standard	Brass	3¾" to 36"	5.0
925---W21060 AS	2 Interface / 1 Standard	Brass	Greater than 36" to 72"	8.50
925---W21090 AS	2 Interface / 1 Standard	Brass	Greater than 72" to 108"	10.50
925---W21120 AS	2 Interface / 1 Standard	Brass	Greater than 108" to 144"	13.0
925---W22030 AS	2 Interface / 2 Standard	Brass	3¾" to 36"	5.0
925---W22060 AS	2 Interface / 2 Standard	Brass	Greater than 36" to 72"	8.50
925---W22090 AS	2 Interface / 2 Standard	Brass	Greater than 72" to 108"	10.50
925---W22120 AS	2 Interface / 2 Standard	Brass	Greater than 108" to 144"	13.0
925S--W10030 AS	1 Interface / 0 Standard	Stainless steel	3¾" to 36"	5.0
925S--W10060 AS	1 Interface / 0 Standard	Stainless steel	Greater than 36" to 72"	8.50
925S--W10090 AS	1 Interface / 0 Standard	Stainless steel	Greater than 72" to 108"	10.50
925S--W10120 AS	1 Interface / 0 Standard	Stainless steel	Greater than 108" to 144"	13.0
925S--W11030 AS	1 Interface / 1 Standard	Stainless steel	3¾" to 36"	5.0
925S--W11060 AS	1 Interface / 1 Standard	Stainless steel	Greater than 36" to 72"	8.50
925S--W11090 AS	1 Interface / 1 Standard	Stainless steel	Greater than 72" to 108"	10.50
925S--W11120 AS	1 Interface / 1 Standard	Stainless steel	Greater than 108" to 144"	13.0
925S--W12030 AS	1 Interface / 2 Standard	Stainless steel	3¾" to 36"	5.0
925S--W12060 AS	1 Interface / 2 Standard	Stainless steel	Greater than 36" to 72"	8.50
925S--W12090 AS	1 Interface / 2 Standard	Stainless steel	Greater than 72" to 108"	10.50
925S--W12120 AS	1 Interface / 2 Standard	Stainless steel	Greater than 108" to 144"	13.0
925S--W20030 AS	2 Interface / 0 Standard	Stainless steel	3¾" to 36"	5.0
925S--W20060 AS	2 Interface / 0 Standard	Stainless steel	Greater than 36" to 72"	8.50
925S--W20090 AS	2 Interface / 0 Standard	Stainless steel	Greater than 72" to 108"	10.50
925S--W20120 AS	2 Interface / 0 Standard	Stainless steel	Greater than 108" to 144"	13.0
925S--W21030 AS	2 Interface / 1 Standard	Stainless steel	3¾" to 36"	5.0
925S--W21060 AS	2 Interface / 1 Standard	Stainless steel	Greater than 36" to 72"	8.50
925S--W21090 AS	2 Interface / 1 Standard	Stainless steel	Greater than 72" to 108"	10.50
925S--W21120 AS	2 Interface / 1 Standard	Stainless steel	Greater than 108" to 144"	13.0
925S--W22030 AS	2 Interface / 2 Standard	Stainless steel	3¾" to 36"	5.0
925S--W22060 AS	2 Interface / 2 Standard	Stainless steel	Greater than 36" to 72"	8.50
925S--W22090 AS	2 Interface / 2 Standard	Stainless steel	Greater than 72" to 108"	10.50
925S--W22120 AS	2 Interface / 2 Standard	Stainless steel	Greater than 108" to 144"	13.0
925---0114 2B	Conduit junction box (NEMA 7, Group C&D)			2.25



913

## 918TCP Series Overfill & Interstitial Alarms

The Morrison 918TCP alarm and float level sensor can be set to provide an audible alarm for a high level or low level alarm or serve as an interstitial alarm.

### Features

- Alarm activation point is field-adjustable within probe length range
- Intrinsically safe battery-powered alarm can be mounted remote from the tank
- The float sensor installs into a 2" tank opening
- Low level activation or interstitial alarm point can be set up to 113"
- **918TCPS** coupler and adaptor assembly for easy sensor removal and inspection

### Electrical Switch Ratings

10 watt resistive load, 200VAC/DC max / 500mA max

*\*Switch ratings are for resistive loads only.*

*\*Do not use for inductive loads.*



918TCP

918TCPS

918S

### Construction Details

Float and weight assembly... Stainless steel

Tubing enclosure... PTFE

TCPS coupler, adaptor, and bushing... Stainless steel

### Certifications & Listings

Alarm unit is UL 913 Listed; 918 clock gauge with 918S, 918D, or 918Q alarm is Florida DEP EQ-536

Item Number	Threads (M/F)	Description	Probe length	Weight (lbs)
918TCP0400 AA	M	Alarm assembly with sensor	5'	3.45
918TCP0500 AA	M	Alarm assembly with sensor	9½'	3.25
918TCP0400 AS	M	Sensor assembly (no alarm)	5'	4.60
918TCP0500 AS	M	Sensor assembly (no alarm)	9½'	4.60
918TCPS400 AA	M	Alarm assembly with probe and part F & D	5'	8.0
918TCPS500 AA	M	Alarm assembly with probe and part F & D	9½'	8.0
918TCPS800 AA	F	Alarm assembly with probe and part A & D	5'	7.80
918TCPS900 AA	F	Alarm assembly with probe and part A & D	9½'	8.0
918TCPS400 AS	M	Sensor assembly with part F & D	5'	6.60
918TCPS500 AS	M	Sensor assembly with part F & D	9½'	6.60
918TCPS800 AS	F	Sensor assembly with part A & D	5'	6.40
918TCPS900 AS	F	Sensor assembly with part A & D	9½'	6.40
918S--1100 AA	NA	Single channel tank alarm box only	NA	1.13
918D--1100 AA	NA	Dual channel tank alarm box only	NA	1.13
918Q--1100 AA	NA	Quad channel tank alarm box only	NA	1.13



## 915 Tank Alarm For Automotive Fluids

The 915 tank alarm is an AC-powered console designed to monitor 1 to 2 simple input switch devices and provide both audible and visual indication when an input switch is activated. This tank alarm is compatible with automotive fluids including, but not limited to: windshield washer fluid, antifreeze, transmission fluid, brake fluid, diesel, biodiesel (B-20), lube oil, and waste oil.

### Features

#### Control Console

- One or two configurable input channels
- Two fully configurable low voltage, dry contact outputs with
  - Normally-open and normally closed outputs
  - Current limited 12VDC available to be used with the outputs
- A dedicated configurable output for Remote Horn with Beacon
- Can control up to 20 solenoids (10 per channel)
- Selectable auto-silence feature

#### Remote Horn with Beacon

- Audible horn (95dB at 2 feet)
- Beacon
  - Visible in bright sunlight at 100 feet or more
  - 360° visibility
- Rated for outdoor or indoor use

#### Solenoid with Timer

- AC/DC adapter
- Normally-closed (fail safe)
- Adjustable timer (0 to 15 minutes)
- Controlled by start/stop button
- Solenoid deactivated by console on input alarm
- Can be located up to 300 feet from console
- Maximum working pressure—225 PSI

#### Solenoid without Timer

- AC/DC adapter
- Normally-closed (fail safe)
- Solenoid deactivated by console on input alarm
- Can be located up to 300 feet from console
- Maximum working pressure—225 PSI

#### Sensor

- Actuation distance: 1" (minimum) to 7.6" (maximum)
- Rated for outdoor or indoor use
- Normally open switch easily converted to normally closed operation
- Installs into a 2" female threaded opening

Table containing item numbers can be found on the following page.



915 console (1 input channel)

915 console (2 input channels)

915S  
Solenoid

915ST  
Solenoid with  
timer

915HB  
Horn and beacon

915  
Sensor

### Construction Details

Enclosure... Polycarbonate plastic

Solenoid... Brass

Sensor

Body... PVC

Cable connector... Nylon and  
Buna-N

Conduit box... Aluminum

Retaining ring... Copper

Float... Nitrophenyl-M

### Certifications & Listings

Third Party Approved; Florida DEP  
EQ-928; wall-mounted power supplies  
are UL60950-1





Item Number	Description	Weight (lbs)
915---1000 AA	Alarm console; single channel (no sensor)	2.10
915---2000 AA	Alarm console; dual channel (no sensor)	2.10
915---3000 AS	Tank sensor	1.45
915S--1000 AS	Solenoid	3.25
915ST-1000 AS	Solenoid with timer	3.25
915HB-1000 AB	Remote horn with beacon	1.50
<b>Kits</b>		
915---1100 AP	Tank alarm kit; single channel w/ one sensor	3.55
915---1200 AP	Tank alarm kit; dual channel w/ two sensors	3.55
915---2100 AP	Tank alarm kit; single channel w/ sensor & solenoid w/o timer	6.80
915---2200 AP	Tank alarm kit; single channel w/ sensor & solenoid w/ timer	6.80
915---3100 AP	Tank alarm kit; dual channel w/ two sensors & solenoid w/o timer	8.25
915---3200 AP	Tank alarm kit; dual channel w/ two sensors & solenoid w/ timer	8.25
915---4100 AP	Tank alarm kit; dual channel w/ two sensors & two solenoids w/o timer	11.5
915---4200 AP	Tank alarm kit; dual channel w/ two sensors & two solenoids w/ timer	11.5



**724 Leak Indicator  
(in alarm state)**

**724 Leak Indicator  
(with guard)**

**724 Overfill Indicator**

## 724 & 724O Leak Indicator and Overfill Indicator

The Leak Indicator is designed to detect leaks in the interstitial space of an aboveground storage tank. The Overfill Indicator provides a high level visual signal indicating that the aboveground storage tank is almost full.

### Features

- 2" male NPT threads
- Float installs through a 2" female threaded opening, a schedule 40 riser, or a schedule 80 riser
- Highly visible indicator
- Durable construction
- Optional aluminum guard
- **724**...one model accomodates tanks up to 168"

Item Number	Description	Minimum Length	Maximum Length	Weight (lbs)
724---0200 AI	2" Leak indicator	6.50"	168"	1.30
724---1200 AI	2" Leak indicator with guard	6.50"	168"	1.45
724O--0200 AI	2" Overfill indicator	6.50"	40"	1.30
724O--1200 AI	2" Overfill indicator with guard	6.50"	40"	1.45

### Construction Details

Body... Aluminum  
 Window... Glass  
 Float... Stainless steel  
 Guard (optional)... Aluminum

### Certifications & Listings

Florida DEP EQ-929



## 1218 Electronic Tank Gauge

The Morrison 1218 electronic tank gauge series monitors and displays the liquid level and/or volume of product stored in 1 to 4 aboveground storage tanks. The tank sensor utilizes a mechanical float to monitor the tank liquid level and electronically converts the tank level to display on the system console located within 1000' of the tank sensor.

### System Console Features

- 4.3" diagonal color LCD display (480x272 pixels) with auto LED backlight adjustment
- System console displays liquid volume level in horizontal, rectangular, or vertical tanks
- Level units: feet and inches or centimeters (resolution to 1/10 of an inch)
- Volume units: gallons or liters
- Visual and audible alarm indication when alarm condition is activated
- 2 output relays—3 Amps @ 240 VAC
- Simple push to test or acknowledge alarm button
- USB port functionality—software updates and download event logs
- Configuration setup via Ethernet PC connection, Ethernet Network connection, or manually at console
- NEMA 4X (IP65) indoor/outdoor weather protected, lockable enclosure
- Optional remote secondary console with operational functionality
- Optional External Input/Output Expansion Module adds 6 inputs and 6 output relays

### Tank Sensor Features

- 25' and 50' models available for use with system console
- 2 dry contact, intrinsically safe inputs available in tank sensor for additional simple switch inputs
- 25' tank sensor accuracy +/- 0.3"; 50' tank sensor accuracy +/- 0.6"
- DEF compatible

### Configuration Options

- User defined tank identifications, alarm levels, and input alarm labels
- Up to 4 programmable liquid level alarm set points per tank
- Audible alarm ON/OFF and Auto-Silence ON/OFF is programmable by input channel
- Output relays programmable as normally activated or normally deactivated and for desired alarm activations
- Email address book supports email and SMS/text message alarm and status notifications
- Sloped tank and manifold tank functionality available for specific parameters
- Heartbeat power indicator is user selectable

### Network Connectivity

- Ethernet port connection (RJ-45 connector)
- TCP/IP configured with static IP address or dynamically using DHCP and local host name
- HTTPS secure web-based interface with system console for remote viewing
- Multiple display system consoles can be networked by utilizing Ethernet functionality
- Option: Cellular Gateway connection

### FuelCloud Connectivity

- Allows FuelCloud accounts to collect tank inventory information from any 1218 tank gauge console with internet service via FuelCloud web portal

### Business Management System Connectivity

- Modbus RTU and TCP interface configuration

More information and table containing item numbers can be found on the following page.



1218C

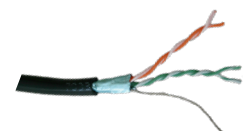


1218S



Drop Tube Float

\*Please note that a 4" tank opening is required for these models.



Belden Cable

### Construction Details

Tank sensor body... Passivated aluminum

Cable and float... Stainless steel cable and float

System console... Polyester fiberglass

### Certifications & Listings

UL/cUL 913 Listed; Listing for Tank Monitoring Equipment for Ordinary Location with Hazardous Location Intrinsically Safe Input Circuits for Class I, Division 1, Group D; Florida DEP EQ-872



## Reports

- System stores an event log (up to 1,000 events) and creates a downloadable report
- Event log can be downloaded via network Ethernet connection or via USB port inside system console

## Specifications

- Operating temperature range: -40°F to 140°F (-40°C to 60°C); Humidity: 0% to 95% non-condensing
- System console dimensions (H x W x D): 9<sup>3</sup>/<sub>8</sub>" x 7<sup>7</sup>/<sub>8</sub>" x 4<sup>5</sup>/<sub>8</sub>"
- 100-240 VAC +/- 10%, 50/60 Hz

## Materials of Construction

- Tank sensor body... Passivated aluminum
- Cable and float... Stainless steel cable and float
- Console enclosure... Polyester fiberglass

\*1218S contains the following materials that will be exposed to vapors from stored product: Aluminum, stainless steel, Viton®, UHMW plastic, and steel.

## Belden 7933A Cable

- Multi-Conductor - Category 5e Data Tuff® twisted pair cable
- .030" industrial grade sunlight- and oil-resistant PVC jacket
- 24 AWG Bonded-Pairs solid bare copper conductors
- Polyolefin insulation
- Overall Beldfoil® shield (100% coverage) with drain wire
- Operating temperature range: -40°C to 75°C (-40°F to 167°F)
- Code Compliance: UL (NEC, CEC/C)-CMR, NEMA 63.1 Category 5e, EU-ROHS, ELV, WEEE, BFR

## Approvals

UL/cUL 913; UL/cUL 508; Listing for Tank Monitoring Equipment for Ordinary Location with Hazardous Location Intrinsically Safe Input Circuits for Class I, Division 1, Group D; Florida DEP EQ-872

Item Number	Description	Weight (lbs)
1218C-0200 AC	System console monitors up to 2 tanks	6.0
1218C-0400 AC	System console monitors up to 4 tanks	6.0
1218C-0000 AC	Remote secondary console (optional)	6.0
1218S-2500 AS	25' tank sensor	8.0
1218S-2510 AS	25' tank sensor with drop tube float*	N/A
1218S-5000 AS	50' tank sensor	11.0
1218S-5010 AS	50' tank sensor with drop tube float*	N/A
1218S-2539 CC	1,000' spool Belden 7933A cable	N/A
1218S-2543 CC	50' spool Belden 7933A cable	N/A
1218S-2544 CC	100' spool Belden 7933A cable	N/A
1218S-2545 CC	500' spool Belden 7933A cable	N/A

\*Please note that a 4" tank opening is required for drop tube float models.



### 1218 Electronic Tank Gauge Wireless Connectivity Accessories

#### Wireless Client—UBIQUITI NanoStation locoM2

- 2+ mile wireless connection (line of sight) to Wireless Client Device (1218C-0163 2C)
- 2,000'+ Wi-Fi connection (line of sight) to Wireless Access Point (1218C-0154 2A)
- Frequency range: 2.4 GHz
- Pole mounting kit included
- Weather-resistant enclosure for outdoor deployment
- 24V, 0.5A PoE adaptor included
- Operating temperature range: -30°C to 75°C (-22°F to 167°F)

#### Wireless Access Point—UBIQUITI UAP-AC-M-PRO

- Up to 600' Wi-Fi connection to mobile devices
- 2,000'+ Wi-Fi connection (line of sight) to one or more Wireless Client Devices (1218C-0163 2C)
- High-performance wide-area Wi-Fi with UniFi® Mesh Technology
- Frequency range: 2.4 GHz
- Pole or wall mounting options
- Weather-resistant enclosure for outdoor deployment
- 3x3 multiple-input multiple-output dual band technology
- Powered with an 802.3af compatible switch, UniFi PoE switch, or included PoE adaptor
- Operating temperature range: -40°C to 70°C (-40°F to 158°F)

#### Long Range Wireless Base Station Kit—UBIQUITI Rocket MZ Base Station & UBIQUITI AirMax Omni AMO-2G10 Antenna

- 2+ mile wireless connection (line of sight) to one or more Wireless Client Devices (1218C-0163 2C)
- Up to 600' Wi-Fi connection to mobile devices
- Frequency range: 2.35-2.55 GHz
- Pole mount included
- Weather-resistant enclosure for outdoor deployment
- Can provide a wireless connection to another Base Station with Antenna
- Provides base station with 360° of coverage
- Long range antenna signal strength, 10dBi
- 24V, 0.5A PoE adaptor included
- Operating temperature range: -30°C to 75°C (-22°F to 167°F)

Item Number	Description	Weight (lbs)
1218C-0163 2C	Wireless client	1.98
1218C-0154 2A	Wireless access point	0.36
1218C-0164 AK	Long range wireless base station kit	5.50



Wireless Client



Wireless Access Point



Antenna

Long Range Wireless Base Station Kit

#### Certifications & Listings

CE, FCC, IC



918AC-0156 2L



918AC-0154 AH



918AC-0157 AHS



925---0113 2B



925---0114 2B

### Certifications & Listings

#### Remote Strobe

UL and cUL Listed

#### Remote Horn

UL and cUL Listed; CSA listed (File No. 005835, Model 350) and FM Approved

#### Remote Horn with Strobe

UL Listed; CSA listed (File No. 005835, Model VALS)

#### 925---0113 2B

UL and cUL Listed; NEMA 4

#### 925---0114 2B

UL Listed; NEC/CEC: Class I, Division 1 & 2, Groups C, D; Class II, Division 1, Groups E, F, G; Class II, Division 2, Groups F, G; Class III; ANSI Standard: C33.27; CSA listed (File No. 013046, Model GUAB); NEMA 3, 4, 7CD, 9EFG

## 918AC/1218 Alarm & Sensor Accessories

### Remote Strobe Features

- Compact rotating warning light
- Single retaining screw allows for quick and easy access for inspection and relamping
- Water-resistant
- Indoor and outdoor applications

### Remote Horn Features

- Produces a loud horn tone by the electro-mechanical vibration of a diaphragm (100dB at 10 feet)
- Excellent for general alarm in areas of high ambient noise levels
- Enclosed in a zinc die-cast housing and sealed with grey powder-coat paint
- Compact size and heavy-duty construction

### Remote Horn with Strobe Features

- Units can either independently or simultaneously wired with the audible device
- Recommended for use in industrial applications and situations where effective visual warning is needed
- Compact size
- Indoor and outdoor applications

### Conduit Junction Housing Features

- Act as pull and splice boxes
- Connect lengths of conduit
- Provide access to connectors for maintenance and future changes
- Act as pull outlets for connectors being installed
- 1/2" conduit connection

Item Number	Description	Voltage	Operating Current	Weight (lbs)
918AC-0156 2L	Remote strobe	120VAC 50/60HZ	0.22 amps	2.70
918AC-0154 AH	Remote horn	120VAC 50/60Hz	0.18 amps	1.50
918AC-0157 AHS	Remote horn with strobe	120 VAC 50/60HZ	0.24 amps	1.75
925---0113 2B	Conduit junction box	N/A	N/A	0.50
925---0114 2B	Conduit junction box	N/A	N/A	2.25



### 1218 Electronic Tank Gauge Cellular Gateway

Provides a private internet connection (VPN) through 4G LTE cellular network (carrier can vary by location). The cellular gateway has a single Ethernet port which can be used to connect directly to a single device or to multiple devices through an Ethernet switch.

#### Components

- Lockable NEMA 4X enclosure
- Mounting bracket and connections for cellular device
- Power supply for cellular device
- Cellular device (provided by OptConnect; assembled by Morrison)
- Two (2) 4G LTE antennas

#### Specifications

- Operating temperature range: -40°F to 140°F (-40°C to 60°C)
- Humidity: 0% to 95% non-condensing
- System console dimensions (H x W x D): 9<sup>3</sup>/<sub>8</sub>" x 7<sup>7</sup>/<sub>8</sub>" x 4<sup>5</sup>/<sub>8</sub>"
- 100-240 VAC +/- 10%, 50/60 Hz
- Supports up to five (5) 1218C consoles

Item Number	Description	Weight (lbs)
1218C-0169 AG	Cellular Gateway Assembly	3.99

\*Cellular device to be provided by OptConnect.  
 OptConnect lease or purchase contracts available:  
 • Two-year lease: \$35/month  
 • Purchase: \$295 plus \$25 month-to-month  
 Consult MBC Customer Service for additional details.



1218C-0169 AG

#### Construction Details

Console enclosure... Polyester fiberglass  
 Mounting bracket... zinc-coated steel (corrosion resistant)

### 1218 Electronic Tank Gauge Outdoor Ethernet Switch Assemblies

Connects multiple Ethernet devices together. Can be used to connect multiple devices to a network through a single Ethernet connection. The lockable enclosure is NEMA 4X indoor/outdoor weather protected.

#### Specifications

- Operating temperature range: -40°F to 140°F (-40°C to 60°C)
- Humidity: 0% to 95% non-condensing
- 100-240 VAC +/- 10%, 50/60 Hz

Item Number	Description	Weight (lbs)
1218C-0171 AS	Outdoor 5-Port Ethernet Switch Assembly	3.68
1218C-0172 AS	Outdoor 8-Port Ethernet Switch Assembly	3.84



1218C-0171 AS

#### Construction Details

Console enclosure... Polyester fiberglass





1218C-6600 AM

### Construction Details

Console enclosure... Polyester fiberglass

## 1218 Electronic Tank Gauge External I/O Expansion

The 1218C External Input/Output Expansion Module provides an additional 6 digital inputs (OrdLoc) and 6 relay outputs (up to 2A and 250VAC) to the 1218C Electronic Tank Gauge. The expansion module inputs and outputs are configured from the 1218C web interface. The lockable enclosure is NEMA 4X indoor/outdoor weather protected.

### Specifications

- Operating temperature range: -40°F to 140°F (-40°C to 60°C)
- Humidity: 0% to 95% non-condensing
- 100-240 VAC +/- 10%, 50/60 Hz

Item Number	Description	Weight (lbs)
1218C-6600 AM	External Input/Output Expansion Module	3.68



1218CT FMS Translator Kit

### Construction Details

Enclosure... Polycarbonate  
Conduit body... Powder-coated aluminum

### Certifications & Listings

Enclosure: Meets NEMA 1, 2, 4, 4X, 12 and 13 specifications; UL Listed to UL508-4x specifications (File E194432); meets IP65 and IP66 specifications

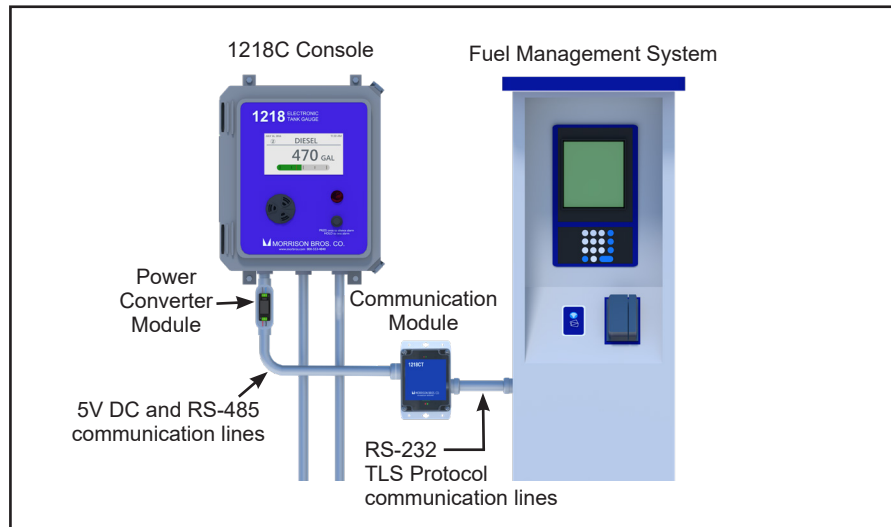
## 1218CT Fuel Management System (FMS) Translator Kit

The 1218CT Fuel Management System Translator Kit provides an interface between Morrison's 1218 Electronic Tank Gauge and any fuel management system (FMS) that utilizes TLS protocol.

### Features

- Designed for outdoor applications (-40°F to 140°F to 100% humidity)
- Maximum wiring distance from communication module to fuel management system is 50 feet
- Maximum wiring distance from communication module to 1218C console is 1,000 feet
- A USB port is used for any firmware updates to be uploaded on-site.

Item Number	Description
1218CT0100 AK	Fuel Management System Translator Kit





## 1518 Mechanical Tank Top Gauges

The 1518 mechanical tank gauge is designed to mount on top of horizontal and vertical tanks up to 25' in height and provides a readout in feet and inches.

### Features

- Up to 25' line of sight viewing distance
- Easy to read from wide viewing angle
- Easy to install and calibrate
- Installs through 2" schedule 40 pipe or 2" tank bung (drop tube float models require a 4" tank opening)
- Vapor tight to allow for standard tank pressure testing and sealing up to 5 PSI
- Vapor is contained from viewing area to prevent lens fogging
- **1518M**...metric versions available to mount on top of horizontal and vertical tanks up to 7 meters (23') in height, providing readouts in centimeters

Item Number	Description	Float	Length	Weight (lbs)
1518--2500 AG	Mechanical tank top gauge, angled face	Standard	0-25'	10.0
1518--2550 AG	Mechanical tank top gauge, vertical face	Standard	0-25'	10.0
1518--2510 AG	Mechanical tank top gauge, angled face	Drop Tube	0-25'	10.0
1518--2515 AG	Mechanical tank top gauge, vertical face	Drop Tube	0-25'	10.0
1518--2520 AG	Mechanical tank top gauge, angled face	Drop Tube	0-25'	10.0
1518--2525 AG	Mechanical tank top gauge, vertical face	Drop Tube	0-25'	10.0
1518M-7000 AG	Metric mechanical tank gauge, angled face	Standard	7M (700 CM)	10.0
1518M-7050 AG	Metric mechanical tank gauge, vertical face	Standard	7M (700 CM)	10.0
1518M-7010 AG	Metric mechanical tank gauge, angled face	Drop Tube	7M (700 CM)	10.0
1518M-7015 AG	Metric mechanical tank gauge, vertical face	Drop Tube	7M (700 CM)	10.0



1518



1518M



Standard Float



Drop Tube Float

*\*Please note that a 4" tank opening is required for models with Drop Tube Floats.*

### Construction Details

Body... Cast aluminum  
 Gears and gear cogs... Acetal  
 Hardware (including captive screws on front cover)... Stainless  
 Float... Stainless  
 Cable... Stainless  
 Pulleys... Aluminum

### Certifications & Listings

Florida DEP EQ-941

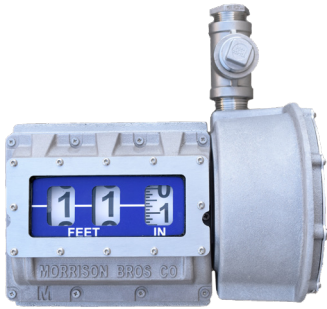


## 1618 Mechanical Vertical Tank Gauges

The 1618 mechanical tank gauge is designed for vertical tanks up to 50' in height and provides a readout in feet and inches at ground level.

### Features

- 30'+ line of sight viewing distance
- Easy to read from wide viewing angle
- Easy to install with single vertical pipe connection
- Easy to calibrate
- Installs through 2" schedule 40 pipe or 2" tank bung
- Vapor is contained to prevent lens fogging
- Mounting options
  - Foot base
  - Tank mount bracket for easy attachment to Uni-Strut Channel or other tank brackets



1618



1618M



Standard Float



Drop Tube Float

*\*Please note that a 4" tank opening is required for models with Drop Tube Floats.*

Item Number	Description	Length	Weight (lbs)
1618--3000 AG	Mechanical vertical tank gauge	0-30'	15.0
1618--4000 AG	Mechanical vertical tank gauge	0-40'	15.0
1618--5000 AG	Mechanical vertical tank gauge	0-50'	15.0
1618--0167 AB	Tank mount bracket	--	15.0

### Construction Details

- Body... Cast aluminum
- Gears and gear cogs... Acetal
- Hardware (including captive screws on front cover)... Stainless
- Float... Stainless
- Cable... Stainless
- Pulleys... Aluminum

### Certifications & Listings

Florida DEP EQ-941



# 1519

## Mechanical Tank Top Gauge with Level Alarm Relay Output

Designed for installation on top of horizontal and vertical tanks up to 25' in height, the 1519 mechanical tank gauge provides a readout in feet and inches and includes a single liquid level set point to activate an external alarm box.

### Features

- Viewable up to 25' in tank height
- Readout in feet and inches
- Easy to read from wide viewing angle
- Easy to install and calibrate
- Installs through 2" schedule 40 pipe or 2" tank bung (drop tube float models require a 4" tank opening)
- Vapor tight to allow for standard tank pressure testing and sealing up to 5 PSI
- Vapor is contained from viewing area to prevent lens fogging
- **1519M**...metric versions available to mount on top of horizontal and vertical tanks up to 7 meters (23') in height, providing readouts in centimeters

### Gauge with Relay Output

- Desired alarm level is set within gauge head
- Alarm level setting can be verified
- The level alarm relay output wiring from the gauge has to be connected to an external alarm box (sold separately). Options include the 918 series and 918AC series alarm boxes

**Alarm Options**  
*(sold separately)*



**AND**

918 Series Alarm Boxes 918AC Series Alarm Boxes

### Battery Power Module

- Can be installed in any convenient location
- One 3.6 volt lithium AA replaceable battery
- Anticipated battery life is 4 years
- Low battery light indicator

### Alpha Wire 77112 *(required cable for connecting gauge to Battery Power Module)\**

- 5 Conductors
- 22 AWG (7/30 Stranded) tinned copper
- Foil shield with drain wire
- Temperature range: -50 to 150C

*\*Wire needs to be purchased to connect a 1519 gauge to the Battery Power Module.*

*Separate wire is required from the gauge to external alarm. See external alarm specifications for wire requirements.*



### Construction Details

- Body... Cast aluminum
- Gears and gear cogs... Acetal
- Hardware (including captive screws on front cover)... Stainless
- Float... Stainless
- Cable... Stainless
- Spring... 301 stainless steel
- Shaft bushing... Stainless steel
- O-ring... FKM
- Lens cover... Acrylic
- Power module enclosure... Polyester fiberglass

### Certifications & Listings

UL/cUL 913; Florida DEP EQ-942



## GAUGES & ALARMS

Item Number	Description	Float	Length	Weight (lbs)
1519--2500 AG	Mechanical tank top gauge with level alarm relay output, angled face	Standard	0-25'	10.0
1519--2550 AG	Mechanical tank top gauge with level alarm relay output, vertical face	Standard	0-25'	10.0
1519--2510 AG	Mechanical tank top gauge with level alarm relay output, angled face	Drop Tube	0-25'	10.0
1519--2515 AG	Mechanical tank top gauge with level alarm relay output vertical face	Drop Tube	0-25'	10.0
1519M-7000 AG	Metric mechanical tank top gauge with level alarm relay output, angled face	Standard	0-700 CM	10.0
1519M-7050 AG	Metric mechanical tank top gauge with level alarm relay output, vertical face	Standard	0-700 CM	10.0
1519M-7010 AG	Metric mechanical tank top gauge with alarm relay, angled face	Drop Tube	0-700 CM	10.0
1519M-7015 AG	Metric mechanical tank top gauge with alarm relay, vertical face	Drop Tube	0-700 CM	10.0
Alpha Wire 77112 (required cable)				
1519--0015 CC	Five-conductor shielded cable	N/A	15'	N/A
1519--0025 CC	Five-conductor shielded cable	N/A	25'	N/A
1519--0050 CC	Five-conductor shielded cable	N/A	50' (spool)	N/A
1519--0100 CC	Five-conductor shielded cable	N/A	100' (spool)	N/A
1519--0200 CC	Five-conductor shielded cable	N/A	200' (spool)	N/A



## 1619

### Mechanical Vertical Tank Gauge with Level Alarm Relay Output

Designed for installation on vertical tanks up to 50' in height, the 1619 mechanical vertical tank gauge provides a readout in feet and inches at ground level and includes a single level alarm relay output to activate an external alarm box.

#### Features

- 30'+ line of sight viewing distance
- Readout in feet and inches
- Easy to read from wide viewing angle
- Easy to install with single vertical pipe connection
- Easy to calibrate
- Installs through 2" schedule 40 pipe or 2" tank bung (drop tube float models require a 4" tank opening)
- Vapor is contained from the viewing area to prevent lens fogging
- Mounting options
  - Foot base
  - Tank mount bracket for easy attachment to Uni-Strut Channel or other tank brackets
- **1619M**...metric versions available, providing readouts in centimeters

#### Gauge with Relay Output

- Desired alarm level is set within gauge head
- The level alarm relay output wiring from the gauge has to be connected to an external alarm box (sold separately). Options include the 918 series and 918AC alarm boxes



#### Battery Power Module

- Can be installed in any convenient location
- Alarm level setting can be verified
- One 3.6 volt lithium AA replaceable battery
- Anticipated battery life is 4 years
- Low battery light indicator

#### Alpha Wire 77112 (required cable for connecting gauge to Battery Power Module)\*

- 5 Conductors
- 22 AWG (7/30 Stranded) tinned copper
- Foil shield with drain wire
- Temperature range: -50 to 150C

\*Three feet of wire is included with a 1619 gauge. If the Battery Power Module is installed further than three feet from the gauge, additional wire needs to be purchased.

Separate wire is required from the gauge to external alarm. See external alarm specifications for wire requirements.



#### Construction Details

Body... Cast aluminum  
 Gears and gear cogs... Acetal  
 Hardware (including captive screws on front cover)... Stainless steel  
 Float... Stainless steel  
 Cable... Stainless steel  
 Pulleys... Cast aluminum  
 Spring... 301 stainless steel  
 Shaft bushing... Stainless steel  
 O-ring... FKM  
 Lens cover... Acrylic  
 Power module enclosure... Polyester fiberglass

#### Certifications & Listings

UL/cUL 913; Florida DEP EQ-941





## GAUGES & ALARMS

Item Number	Description	Float	Length	Weight (lbs)
1619--3000 AG*	Mechanical vertical tank gauge with level alarm relay output	Standard	0-30'	15.0
1619--4000 AG*	Mechanical vertical tank gauge with level alarm relay output	Standard	0-40'	15.0
1619--5000 AG*	Mechanical vertical tank gauge with level alarm relay output	Standard	0-50'	15.0
1619--3010 AG*	Mechanical vertical tank gauge with level alarm relay output	Drop Tube	0-30'	15.0
1619--4010 AG*	Mechanical vertical tank gauge with level alarm relay output	Drop Tube	0-40'	15.0
1619--5010 AG*	Mechanical vertical tank gauge with level alarm relay output	Drop Tube	0-50'	15.0
1619M-9500 AG*	Metric mechanical vertical tank gauge with level alarm relay output	Standard	950 CM	15.0
1619M-9510 AG*	Metric mechanical vertical tank gauge with level alarm relay output	Drop Tube	950 CM	15.0
1618--0167 AB	Tank mount bracket (sold separate)	N/A	N/A	5.0
Alpha Wire 77112 (required cable)				
1519--0015 CC	Five-conductor shielded cable		15'	N/A
1519--0025 CC	Five-conductor shielded cable		25'	N/A
1519--0050 CC	Five-conductor shielded cable		50' (spool)	N/A
1519--0100 CC	Five-conductor shielded cable		100' (spool)	N/A
1519--0200 CC	Five-conductor shielded cable		200' (spool)	N/A

\*Includes float, pulley assembly, conduit body, base, and gauge.



**464 (1/2" x 33 ft)**  
complete with plumb bob

### Construction Details

Frame... Stainless steel  
Tape... Plated steel or stainless steel  
Plumb bob... Brass or stainless steel

## 464 Oil Gauging Tape

Handheld gauging tapes are used to manually measure liquid levels in storage tanks.

### Features

- Heavy-duty frame designed for years of rugged use
- All frames include grounding straps
- Standard tapes read from left to right in 1/8" increments
- Plumb bob length included in total measurement. (Plumb bobs sold separately.)

Item Number	Size	Description	Weight (lbs)
464---0100 1T	1/2" x 33 ft	Oil gauging tape complete less bob	1.50
464---0300 1T	1/2" x 50 ft	Oil gauging tape complete less bob	1.50
464---0900 1B	6 3/4"	Plumb bob	1.25

\* Consult Price List for metric gauge tapes and other options.



## 517 Series 3½ Gallon AST Spill Containers

Tank top spill containers are designed to contain small spills that occur at the fill point of aboveground storage tanks.

### Features

- 3½-gallon (13.25 liters) capacity
- Hinged cover is lockable with a padlock
- Centered connection
- **517** has male threaded inlet and outlet
- **517F** has female threaded inlet and outlet
- **517WO** includes removable screen for use as used oil collection point, male threads

Item Number	Size	Weight (lbs)
517--0100 AC	2"	9.0
517--0200 AC	4"	9.0
517F--0100 AC	2"	10.50
517F--0200 AC	4"	10.50
517F--2500 ACPW	2½"	9.0
517WO-0100 AC	2"	11.0



517

### Construction Details

Body... 16 gauge spun steel, powder coated white  
Cover... 16 gauge steel, powder coated white

### Certifications & Listings

CAN-ULC-S663-11 (for tanks having up to 5,000 liter capacity); Florida DEP EQ-345



## 516 Series 5 Gallon AST Spill Containers

Tank top spill containers are designed to contain small spills that occur at the fill point of aboveground storage tanks.

### Features

- 5-gallon (18.94 liters) capacity
- Hinged cover is lockable with a padlock
- **516** has female threads and a centered connection
- **516D** has female threads and includes integral drain assembly
- **516M** has male threads
- **516O** has offset connection for space saving

Item Number	Size	Weight (lbs)
516--0200 ACPW	2"	17.0
516--0400 ACPW	4"	21.0
516D--0200 ACPW	2"	17.0
516D--0400 ACPW	4"	21.0
516M--0200 ACPW	2"	16.50
516M--0400 ACPW	4"	19.0
516MD-0200 ACPW	2"	17.50
516MD-0400 ACPW	4"	20.50
516MO-0200 ACPW	2"	17.0
516MO-0400ACEVR	4"	19.0
516MOD0200 ACPW	2"	17.50
516MOD0400 ACPW	4"	20.50
516MWO0200 ACPW	2"	N/A
516O--0400ACEVR	4"	21.0
516OD-0200 ACPW	2"	17.0
516OD-0400 ACPW	4"	21.0



516 (4")

### Construction Details

Body... 12 gauge spun steel, powder coated white  
Cover... 14 gauge steel, powder coated white  
Drain valve... Brass  
Drain o-ring... FKM

### Certifications & Listings

CAN-ULC-S663-11 (except 516MWO0200 ACPW); Florida DEP EQ-725; CARB EVR Executive Order VR-402

\*Consult Price List for black powder coated models.



518 (4")

### 518 Series 7½ Gallon AST Spill Containers

Tank top spill containers are designed to contain small spills that occur at the fill point of aboveground storage tanks.

#### Features

- 7½-gallon (28.39 liters) capacity
- Hinged cover is lockable with a padlock
- Space saving offset design
- **518** has female threaded offset connection
- **518CC** has female threaded centered connection
- **518M** has male threaded offset connection

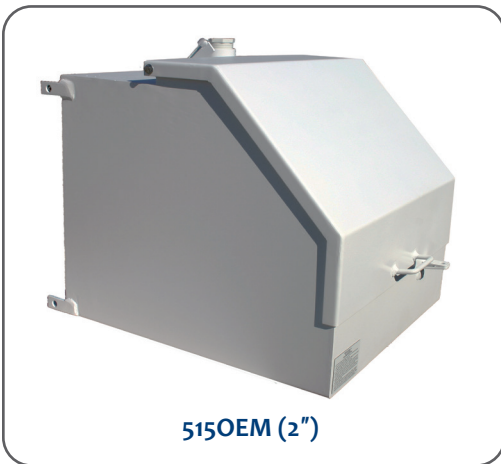
#### Construction Details

Body... 12 gauge spun steel, powder coated white  
 Cover... 14 gauge steel, powder coated white  
 Drain valve... Brass  
 Drain o-ring... FKM

#### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-345

Item Number	Size	Weight (lbs)
518--0100 AC	4"	26.0
518CC-0100 AC	4"	26.0
518M--0100 AC	4"	25.0
518M--0200 AC	2"	22.50



515OEM (2")

### 515OEM 15 Gallon Remote Spill Container (Tank or Wall Mount)

The 515OEM remote spill container provides containment of small spills during tank filling operations.

#### Features

- 15-gallon (56.78 liters) capacity
- Hinged lid opens upward, is pad-lockable, and is held open by a hydraulic cylinder
- 1" locking drain valve
- Four mounting tabs on the back of the unit for easy wall or tank mounting
- Female threaded piping entries connect from the top of the container
- 2" female threaded pump return connection

#### Construction Details

Container and lid... 12 gauge steel, powder coated white

#### Certifications & Listings

CAN-ULC-S663-11

Item Number	Size	Weight (lbs)
515OEM0200 AC	2"	145.0
515OEM0300 AC	3"	145.0

\*Consult MBC Customer Service for other options.



## 515 Series 15 Gallon Remote Spill Containers

The 515 series remote fill containers provide containment for small spills that may occur at the fill point during remote filling operations.

### Features

- 15-gallon (56.78 liters) capacity
- Gas spring cylinder holds the lid in the up position when fueling
- Hinged lid is lockable with a padlock
- Weather-tight enclosure
- Vented cover
- 2" female threaded pump return connection
- Four-leg stand ships knocked down and requires minimal assembly
- Grade level to centerline connection height 30" to 48" (pedestal mount model)
- Grade level to centerline connection height 31" to 47" (four-leg stand model)
- Grade level to centerline connection height 15" to 22½" (low profile model)
- **515** has a 1" NPT drain with locking ball valve
- **515SD** has an integrated sump drain with ½" with locking ball valve

Item Number	Mounting Connection	Pipe Size	Weight (lbs)
515---0200 AC	Pedestal mount	2"	155.0
515---0300 AC	Pedestal mount	3"	156.0
515---0400 AC	Pedestal mount	4"	157.0
515---2200 AC	Pedestal mount	2" & 2"	159.0
515---2300 AC	Pedestal mount	3" & 3"	160.0
515---3200 AC	Pedestal mount	2" & 3"	160.0
<hr/>			
515-ST0200 AC	Four-leg stand	2"	136.50
515-ST0300 AC	Four-leg stand	3"	138.0
515-ST0400 AC	Four-leg stand	4"	140.0
515-ST2200 AC	Four-leg stand	2" & 2"	147.0
515-ST2300 AC	Four-leg stand	3" & 3"	150.0
515-ST3200 AC	Four-leg stand	2" & 3"	148.50
<hr/>			
515ST-0100 AS	Four-leg adjustable stand, powder coated		
<hr/>			
515SD-0200 AC	Pedestal mount	2"	155.0
515SD-0300 AC	Pedestal mount	3"	156.0
515SD-0400 AC	Pedestal mount	4"	157.0
<hr/>			
515SDST0200 AC	Four-leg stand	2"	--
515SDST0300 AC	Four-leg stand	3"	--
515SDST0400 AC	Four-leg stand	4"	--
<hr/>			
515SD-0200 ACO	NO post or stand	2"	155.0
515SD-0300 ACO	NO post or stand	3"	156.0
515SD-0400 ACO	NO post or stand	4"	157.0
515SD-2200 ACO	NO post or stand	2" & 2"	159.0
515SD-2300 ACO	NO post or stand	3" & 3"	160.0
<hr/>			
515STS0100 AS	Four-leg adjustable stand, stainless steel		

\*Consult MBC Customer Service for other options.



### Construction Details

#### 515

Box and lid... 12 gauge steel, powder coated white  
 Adjustable four-leg stand... Powder coated steel white or 10 gauge stainless steel  
 Adjustable post mount... Schedule 40, powder coated white  
 Ball valve... Brass  
 Gasket... PTFE

#### 515SD

Box and lid... 12 gauge stainless steel  
 Adjustable four-leg stand... 10 gauge stainless steel  
 Adjustable post mount... Schedule 40, stainless steel  
 Ball valve... Stainless steel  
 Flange connection gasket... PTFE

### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-535

\*Low profile stand excluded from ULC Listing.



## 715 Series Remote Fill Boxes - Top Connection



The 715 series remote fill box provides containment of small spills during tank filling operations.

### Features

- 10-gallon (37.85 liter) capacity
- 3" male NPT threaded top connection
- Vented and weatherproof
- Hinged door is lockable with a padlock
- Bottom sloped (right to left) toward drain and pump mounting location
- Vapor recovery mounting bracket integrated into the cabinet exterior
- Mating tank mount bracket supplied with fill box for easy installation
- Available with hand pump assembly, ball valve, quick disconnect check valve coupler/adaptor, dry disconnect adaptor, and dust cap/plug in 2" or 3" configuration
- All connection assemblies are factory installed and tested prior to shipping
- Also available:
  - DEF, Aviation, and E-85 models
  - Vapor recovery adaptor and cap
  - Alarm panel mounting plate
  - U-bolt kits
  - Post mount kits
  - Four-leg stand

### Ordering

- The 715 series remote fill boxes are manufactured to the customer's specifications and, therefore, are non-returnable and non-cancellable once in production



715

### Construction Details

**715** box and door... 14-gauge steel, powder coated white

**715S** box and door... 14-gauge 304 stainless steel  
Ball valve... Morrison 691 series brass or Morrison 691BSS stainless steel

Quick disconnect coupler and plug... Aluminum or stainless steel

Quick disconnect adaptor and cap... Passivated aluminum

Dry disconnect adaptor and cap... Aluminum, passivated aluminum, or stainless steel

### Vapor recovery kit

Vapor recovery adaptor... Aluminum with FKM

Vapor recovery cap... Aluminum, powder coated orange

Hand pump... Steel construction, PTFE seals with FKM o-rings, or stainless steel with PTFE and FKM

### Box dimensions

Width = 24.38"

Height = 28.88"

Depth = 19.19"

### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-787

Item Number	Size	Description	Wt. (lbs)
715--T00-0000-0	10 gal	No outlets	101.0
715--TT3-0000-0	3"—10 gal	Fill box only	101.0
715--TT3-2QBB-0	2"—10 gal	AL female QD coupler, BR ball valve, hand pump	132.0
715--TT3-2MBB-0	2"—10 gal	AL male QD adaptor, BR ball valve, hand pump	132.0
715--TT3-3QBB-0	3"—10 gal	AL female QD coupler, BR ball valve, hand pump	144.0
715--TT3-3MBB-0	3"—10 gal	AL male QD adaptor, BR ball valve, hand pump	144.0
715--TT3-2DBB-0	2"—10 gal	AL dry-disc adaptor, BR ball valve, hand pump	135.0
715--TT3-3DBB-0	3"—10 gal	AL dry-disc adaptor, BR ball valve, hand pump	148.0
715--TT3-2QB0-0	2"—10 gal	AL female QD coupler, BR ball valve	141.0
715--TT3-2MB0-0	2"—10 gal	AL male QD adaptor, BR ball valve	--
715S-TT3-0000-0	3"—10 gal	Fill box only	101.0
715S-TT3-2QBB-0	2"—10 gal	AL female QD coupler, BR ball valve, hand pump	132.0
715S-TT3-2MBB-0	2"—10 gal	AL male QD adaptor, BR ball valve, hand pump	132.0
715S-TT3-3QBB-0	3"—10 gal	AL female QD coupler, BR ball valve, hand pump	144.0
715S-TT3-3MBB-0	3"—10 gal	AL male QD adaptor, BR ball valve, hand pump	144.0
715S-TT3-2DBB-0	2"—10 gal	AL dry-disc adaptor, BR ball valve, hand pump	135.0
715S-TT3-3DBB-0	3"—10 gal	AL dry-disc adaptor, BR ball valve, hand pump	144.0
715--VR30 AK †	3"	Vapor recovery kit	6.60
715--VR40 AK †	4"	Vapor recovery kit	7.50
715--P060 AK †	60"	Post mount kit	--
715--S400 AS †	--	Four-leg stand	--
715S--S400 SS †	--	Four-leg stand, stainless steel	--
715--0373 2PPW †	--	Mounting plate	1.67

\*Consult Price List for additional options.

† For more information, visit page 83.





## 715 Series Remote Fill Box - Back Connection

The 715 series remote fill box provides containment of small spills during tank filling operations.

### Features

- 10-gallon (37.85 liter) capacity
- 3" male NPT threaded back connection
- Vented and weatherproof
- Hinged door is lockable with a padlock
- Bottom sloped (right to left) toward drain and pump mounting location
- Vapor recovery mounting bracket integrated into the cabinet exterior
- Mounting bracket with slotted openings integrated top and bottom flush with the back
- Mating wall mount bracket supplied with fill box for easy installation
- Available with hand pump assembly, ball valve, quick disconnect check valve coupler/adaptor, dry disconnect adaptor, and dust cap/ plug in 2" or 3" configuration
- All connection assemblies are factory installed and tested prior to shipping
- Also available:
  - DEF, Aviation, and E-85 models
  - Vapor recovery adaptor and cap
  - Alarm panel mounting plate
  - U-bolt kits
  - Post mount kits
  - Four-leg stand

### Ordering

- The 715 series remote fill boxes are manufactured to the customer's specifications and, therefore, are non-returnable and non-cancellable once in production

Item Number	Size	Description	Weight (lbs)
715--TK3-0000-0	3"—10 gal	Fill box only	118.0
715--TK3-2QBB-0	2"—10 gal	AL female QD coupler, BR ball valve, hand pump	149.0
715--TK3-2MBB-0	2"—10 gal	AL male QD adaptor, BR ball valve, hand pump	149.0
715--TK3-3QBB-0	3"—10 gal	AL female QD coupler, BR ball valve, hand pump	161.0
715--TK3-3MBB-0	3"—10 gal	AL male QD adaptor, BR ball valve, hand pump	161.0
715--TK3-2DBB-0	2"—10 gal	AL dry-disc adaptor, BR ball valve, hand pump	152.0
715--TK3-3DBB-0	3"—10 gal	AL dry-disc adaptor, BR ball valve, hand pump	165.0
715---P060 AK †	60"	Post mount kit	--
715S-TK3-0000-0	3"—10 gal	Fill box only	--
715S-TK3-2ESS-0	2"—10 gal	SS dry-disc adaptor, SS ball valve, SS hand pump	129.0
715S-TK3-2SSS-0	2"—10 gal	SS female QD coupler, SS ball valve, SS hand pump	114.0
715S-TK3-3MBB-0	3"—10 gal	AL male QD adaptor, BR ball valve, hand pump	120.0
715S-TK3-3MS0-0	3"—10 gal	AL male QD adaptor, SS ball valve	120.0
715S-TK3-3SS0-0	3"—10 gal	SS female QD coupler, SS ball valve	150.0
715S-TK3-3SSS-0	3"—10 gal	SS female QD coupler, SS ball valve, SS hand pump	120.0
715---S400 AS †	--	Four-leg stand	--
715S--S400 SS †	--	Four-leg stand, stainless steel	--
715---0373 2PPW †	--	Mounting plate	1.67

\*Consult Price List for additional options.

† For more information, visit page 83.



715--TK

### Construction Details

715--TK3 box and door... 14-gauge steel, powder coated white

715S-TK3 box and door... 14-gauge steel, stainless steel  
Ball valve... Morrison 691 series brass or Morrison 691BSS stainless steel

Quick disconnect coupler and plug... Aluminum or stainless steel

Quick disconnect adaptor and cap... Passivated aluminum  
Dry disconnect adaptor with cap... Aluminum, passivated aluminum or stainless steel

Vapor recovery adaptor... Aluminum with FKM

Vapor recovery cap... Aluminum, powder coated orange  
Hand pump... Steel construction, PTFE seals with FKM o-rings or stainless steel with PTFE and FKM

### Box dimensions

Width = 24.26"

Height = 33.07"

Depth = 22.20"

### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-787





## 715F Series Remote Fill Box - In-Wall with Back Connection



The 715F series remote fill box provides containment of small spills during tank filling operations. Each unit is supplied with wall mounting flanges for easy installation.

### Features

- 7-gallon (26.5 liter) capacity
- 2" male NPT threaded back connection
- Installs flush into a wall
- Vented and weatherproof
- Hinged door is lockable with a padlock
- Drain located bottom front center
- Available with hand pump assembly, ball valve, quick disconnect check valve coupler/adaptor, dry disconnect adaptor, and dust cap/plug in 2" configuration
- All connection assemblies are factory installed and tested prior to shipping
- Also available:
  - Aviation and E-85 models

### Construction Details

Box and door... 14-gauge steel, powder coated white

Ball valve... Morrison 691 series brass or 691BSS series stainless steel

Quick disconnect coupler and plug... Aluminum or stainless steel

Quick disconnect adaptor and cap... Passivated aluminum

Dry disconnect adaptor and cap... Aluminum, passivated aluminum, or stainless steel

Hand pump... Steel construction, PTFE seals with FKM o-rings, or stainless steel with PTFE and FKM

### Box dimensions

Width = 24.26" (Flange included = 30")

Height = 32.51" (Flange included = 38.50")

Depth = 19"

### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-787

### Ordering

- The 715 series remote fill boxes are manufactured to the customer's specifications and, therefore, are non-returnable and non-cancellable once in production

Item Number	Size	Description	Weight (lbs)
715F-TK2-0000-0	2"—7 gal	Fill box only	120.0
715F-TK2-2QBB-0	2"—7 gal	AL female QD coupler, BR ball valve, hand pump	162.0
715F-TK2-2MBB-0	2"—7 gal	AL male QD adaptor, BR ball valve, hand pump	162.0
715F-TK2-2DBB-0	2"—7 gal	AL dry-disc adaptor, BR ball valve, hand pump	160.0
715FS-TK2-0000-0	2"—7 gal	Fill box only	--
715FS-TK2-2D00-0	2"—7 gal	AL dry-disc adaptor	--
715FS-TK2-2DBB-0	2"—7 gal	AL dry-disc adaptor, BR ball valve, hand pump	129.0
715FS-TK2-2ES0-0	2"—7 gal	SS dry disc adaptor, SS ball valve	129.0

\*Consult Price List for additional options.



## 715 Series Remote Fill Box - Bottom Connection

The 715 series remote fill box provides containment of small spills during tank filling operations.

### Features

- 10-gallon (37.85 liter) capacity
- 2" or 3" male NPT threaded or flanged bottom connection
- On-wall flush mount
- Hinged door is lockable with a padlock
- Integral grounding stud
- Vapor recovery mounting brackets
- Sloped bottom (right to left)
- Drain located in front
- Also available:
  - Four-leg stand
  - Alarm panel mounting plate

### Ordering

- The 715 series remote fill boxes are manufactured to the customer's specifications and, therefore, are non-returnable and non-cancellable once in production

Item Number	Size	Description	Weight (lbs)
715--TB2-0000-0	2"—10 gal	Fill box only	--
715--TB3-0000-0	3"—10 gal	Fill box only	--
715--TB2-2MBB-0	2"—10 gal	AL male QD adaptor, BR ball valve, hand pump	--
715--TB2-2QBB-0	2"—10 gal	AL female QD coupler, BR ball valve, hand pump	--
715--TB3-3MS0-0	3"—10 gal	AL male QD adaptor, SS ball valve	--
715--TB3-3QBB-0	3"—10 gal	AL female QD coupler, BR ball valve, hand pump	--
715--S400 AS †	--	Four-leg stand	--
715S--S400 SS †	--	Four-leg stand, stainless steel	--
715--0373 2PPW †	--	Mounting plate	1.67

\*Consult Price List for additional options.

† For more information, visit page 89.



715--TB



715--TB  
(flanged connection)

### Construction Details

- Box and door... 14-gauge steel, powder coated white
- Ball valve... Morrison 691 series brass or 691BSS series stainless steel
- Quick disconnect coupler and plug... Aluminum or stainless steel
- Quick disconnect adaptor and cap... Passivated aluminum
- Dry disconnect adaptor and cap... Aluminum, passivated aluminum, or stainless steel
- Hand pump... Steel construction, PTFE seals with FKM o-rings, or stainless steel with PTFE and FKM

### Box dimensions

- Width = 24.26"
- Height = 28.92" (Flange included = 34.80")
- Depth = 19.19"

### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-787



715

## 715 Series Top Connection, 150# Raised Face Flange



The Morrison 715 Series remote fill box is a simple 10-gallon capacity cabinet that provides containment of small spills during tank filling operations. Each unit is supplied with tank mount brackets for easy installation on storage tanks.

### Features

- 10-gallon (37.85 liter) capacity
- 3" 150# raised face flange top connection
- Vented and weatherproof
- Hinged door is lockable with a padlock
- Bottom sloped (right to left) toward drain and pump mounting location; drains on left side
- Vapor recovery mounting bracket integrated into the cabinet exterior
- Vapor recovery adaptor, cap, and u-bolt kits are available
- Available with hand pump assembly, ball valve, quick disconnect check valve coupler/adaptor, dry disconnect adaptor, and dust cap/plug in 2" or 3" NPT configuration
- All connection assemblies are factory installed and tested prior to shipping
- Post mount kits are available in powder coated steel
- Four-leg stands are available in powder coated steel or stainless steel
- Alarm box mounting kit available in powder coated steel

### Ordering

- The 715 series remote fill boxes are manufactured to the customer's specifications and, therefore, are non-returnable and non-cancellable once in production

### Construction Details

- Box and door... 14-gauge steel, powder coated white, or 304 stainless steel
- Ball valve... Morrison 691 series brass or 691BSS series stainless steel
- Quick disconnect coupler and plug... Aluminum or stainless steel
- Quick disconnect adaptor and cap... Passivated aluminum
- Dry disconnect adaptor and cap... Passivated aluminum or stainless steel

### Vapor recovery kit

- Vapor recovery adaptor... Aluminum with FKM
- Vapor recovery cap... Aluminum, powder coated orange
- Hand pump... steel construction, PTFE seals with PTFE o-rings, or stainless steel with PTFE and FKM

### Box dimensions

- Width = 24.38"
- Height = 30.31" (Flange = 36.25")
- Depth = 19.19"

### Certifications & Listings

CAN-ULC-S663-11; Florida DEP EQ-787

Item Number	Size	Description	Weight (lbs)
715--TF5-0000-0	3"—10 gal	Fill box only	--
715S--TF5-0000-0	3"—10 gal	Fill box only	--
715--S400 AS †	--	Four-leg stand	--
715S--S400 SS †	--	Four-leg stand, stainless steel	--
715--P060 AK †	60"	Post mount kit	--
715--0373 2PPW †	--	Mounting plate	1.67

\*Consult Price List for additional options.

† For more information, visit page 83.



### 715 Series Accessories

**Four-leg Stand...** Powder coated steel or stainless steel stand for 10-gallon models.

**Post Mount Kit...** 3" x 60" post with cap, base, and U-bolts.

**Vapor Recovery Kit...** Includes 323 adaptor, 323C cap, and 715 U-bolts. Available in 3" or 4".

**Mounting Plate Kit...** Powder coated steel plate for mounting a 918AC System Interface, 918 Series Tank Alarm, or 1218 Electronic Tank Gauge.

Item Number	Description	Weight (lbs)
715---S400 AS	Four-leg stand	--
715S--S400 SS	Four-leg stand, stainless steel	--
715---P060 AK	60" post mount kit	--
715---0373 2PPW	Mounting plate	1.67
715---VR30 AK	3" Vapor recovery kit	6.60
715---VR40 AK	4" Vapor recovery kit	7.50



715---S400 AS

715S--S400 SS



715---P060 AK



715---0373 2PPW



715---VR40 AK







## 305 Series Top Seal Adaptors

Top seal adaptors are installed on underground and aboveground storage tank fill ports and riser pipes where a tight fill connection is required.

### Features

- Accommodates Morrison and most brands of top seal caps
- Straight threads with gasket secure Morrison 419 drop tube onto the riser pipe
- 4" available with internal lugs for easy installation
- **305H and 305LH** have a higher profile
- **305L and 305LH** have internal lugs

Item Number	Size	Lugs	Height	Weight (lbs)
305---0000 AA	2"	Without	2 $\frac{5}{8}$ "	1.50
305---0000AAEVR 	2"	Without	2 $\frac{5}{8}$ "	1.50
305---0200 AA	4"	Without	2 $\frac{5}{16}$ "	2.40
305---0200AAEVR 	4"	Without	2 $\frac{5}{16}$ "	2.40
305L-0100 AA	4" x 3"	With	2 $\frac{5}{16}$ "	2.50
305L-0200 AA	4"	With	2 $\frac{1}{2}$ "	2.00
305H-0200 AA	4"	Without	2 $\frac{3}{4}$ "	3.25
305LH-0200 AA	4"	With	2 $\frac{3}{4}$ "	3.25



305 (4")

### Construction Details

Body... Brass  
Gasket... Buna-N

### Certifications & Listings

CARB Approval 89-12 (4" top seal adaptor); CARB EVR Executive Order VR-402

## 405 Series Side Seal Adaptors

Side seal adaptors are installed on underground storage tank fill ports and riser pipes where a tight fill connection is required.

### Features

- Accommodates Morrison 405C locking caps
- Straight threads with gasket secure Morrison 419 drop tube onto the riser pipe
- **405K** has cross-bar and kerosene label

Item Number	Size	Height	Weight (lbs)
405---0100 AA	4"	1 $\frac{5}{8}$ "	2.25
405K-0100 AA	4"	1 $\frac{5}{8}$ "	2.25



405

### Construction Details

Body... Brass  
Gasket... Buna-N

### Certifications & Listings

CARB Approval 89-12







### 305C Top Seal Fill Cap

Top seal caps are designed to mate with top seal adaptors when the adaptors are not in use.

#### Features

- Keeps water, dirt, and debris out of the tank
- Lockable with a padlock
- Vapor tight
- Low profile models when space is limited
- Easy to engage push-on
- Large, easy-to-grip pull ring makes it fast and easy to remove (4")

Item Number	Size	Description	Gasket	Weight (lbs)
305C--0000 AC	2"	Low profile	Buna	0.75
305C--2000 AC	2"	Standard handle	Buna	0.75
305C--2000ACEVR 	2"	Standard handle	Buna	0.75
305C--0100 AC	This model has been replaced with 305C--0100ACEVR.			
305C--0100ACEVR 	4"	Low profile	Buna	2.0
305C--4100 AC	4"	Low profile	FKM	2.0

#### Construction Details

Body... Aluminum  
 Cam levers... Aluminum (4") or brass (2")  
 Gaskets... Buna-N or FKM

#### Certifications & Listings

CARB Approval 89-12; CARB EVR Executive Order VR-101 or VR-402



### 405C Side Seal Cap

Side seal caps are designed to mate with side seal adaptors when the adaptors are not in use.

#### Features

- Keeps water, dirt, and debris out of the tank
- Lockable with a padlock
- Vapor tight
- Low profile design
- Easy to engage push-on or step-on
- Large, easy-to-grip pull ring makes it fast and easy to remove

Item Number	Size	Weight (lbs)
405C--0100 AC	4"	2.0

#### Construction Details

Body and cam assembly... Aluminum  
 Gasket... Buna-N

#### Certifications & Listings

CARB Approval 89-12



## 305XP Series Tank Monitor Caps & Kits

Tank monitor caps and adaptors are installed on tank monitor riser pipes to keep water and debris out while providing a liquid tight opening for the probe wire to pass through.

### Features

- Keeps water, dirt, and debris out of the tank
- Lockable with a padlock
- Vapor tight
- Low profile models when space is limited
- Easy to engage push-on
- Large, easy-to-grip pull ring makes it fast and easy to remove

Item Number (Caps)	Size	Hole Size	Connector	Weight (lbs)
305XP-2100 AC	2"	3/8"	No	0.75
305XP-2200 AC	2"	3/8"	Yes	0.75
305XP-2200ACEVR	2"	3/8"	Yes	0.75
305XP-2300 AC	2"	1/2"	No	0.75
305XP-2400 AC	2"	1/2"	Yes	0.75
305XP-2400ACEVR	2"	1/2"	Yes	0.75
305XP-0100 AC	This model has been replaced with 305XP-0100ACEVR.			
305XP-0100ACEVR	4"	3/8"	No	2.0
305XP-0200 AC	This model has been replaced with 305XP-0200ACEVR.			
305XP-0200ACEVR	4"	3/8"	Yes	2.0
305XP-1100 AC	This model has been replaced with 305XP-1100ACEVR.			
305XP-1100ACEVR	4"	1/2"	No	2.0
305XP-1200 AC	This model has been replaced with 305XP-1200ACEVR.			
305XP-1200ACEVR	4"	1/2"	Yes	2.0
305XPV0100 AC	4"	2 x 3/8"	Yes	2.75

Item Number (Kits)	Size	Hole Size	Connector	Weight (lbs)
305XPA2100 AK	2"	3/8"	No	2.50
305XPA2200 AK	2"	3/8"	Yes	2.50
305XPA2200AKEVR	2"	3/8"	Yes	2.50
305XPA2300 AK	2"	1/2"	No	2.60
305XPA2400 AK	2"	1/2"	Yes	2.60
305XPA2400AKEVR	2"	1/2"	Yes	2.60
305XPA0100 AK	4"	3/8"	No	5.0
305XPA0100AKEVR	4"	3/8"	No	5.0
305XPA0200 AK	4"	3/8"	Yes	5.0
305XPA0200AKEVR	4"	3/8"	Yes	5.0
305XPA1100 AK	4"	1/2"	No	5.0
305XPA1200 AK	4"	1/2"	Yes	5.0
305XPA1100AKEVR	4"	1/2"	No	5.0
305XPA1200AKEVR	4"	1/2"	Yes	5.0
305XPV0100 AK	4"	2 x 3/8"	Yes	2.75



**305XP**  
(2" with 3/8" hole)



**305XPA**  
(4" with 1/2" hole)



**305XPV**  
(4" with two 3/8" holes)

### Construction Details

Cap body... Aluminum  
 Cap cam levers... Aluminum (4"), brass (2")  
 Cap gaskets... Buna-N or FKM  
 Cable connector... Plastic  
 Adaptor body... Brass

**305XPV**  
 Vent tube... Copper

### Certifications & Listings

CARB EVR Executive Order VR-102 or  
 VR-402

**Kits include 305  
 Adaptors and Caps**

**Also includes vent tube**



### 179 Series Hinged Style Fill Caps

Hinged style fill caps are designed for tank filling applications where a tight fill connection is not required. The threaded body installs onto riser a pipe or directly into a tank bung.

#### Features

- Easy to open and close hinged operation
- Positive stop to prevent cover from contacting tank
- Lockable with a padlock
- Integrated venting when closed
- Your company name can be cast into the cover upon request
- **179** and **179CI** have female threads
- **179M** and **179MCI** have male threads

#### Construction Details

Body... Cast iron (powder coated black) or aluminum  
 Cap... Cast iron (powder coated black) or aluminum  
 Hinge pin... Zinc plated steel

#### 179 & 179M

Body... Aluminum  
 Cap... Aluminum  
 Hinge pin... Zinc plated steel

#### 179CI & 179MCI

Body... Cast iron (powder coated black)  
 Cap... Cast iron (powder coated black)  
 Hinge pin... Zinc plated steel

Item Number	Material	Size	Weight (lbs)
179--0100 AC	Aluminum	2"	0.75
179--0200 AC	Aluminum	2½"	1.0
179--0300 AC	Aluminum	3"	1.0
179--0400 AC	Aluminum	4"	2.0
179M--0100 AC	Aluminum	2"	0.75
179M--0200 AC	Aluminum	2½"	1.25
179CI-0100 AC	Cast iron	2"	2.50
179MCI0100 AC	Cast iron	2"	2.75



### 305GSP Gauge Stick Port Cap & Adaptor

The 305GSP provides an access port for manual gauging of aboveground storage tanks.

#### Features

- Lockable with a padlock
- Straight threads with gasket secure drop tubes into the riser pipe
- Clearly labeled "Gauge Stick Port" to ensure proper access
- Vapor and liquid tight
- Use with Morrison 419 drop tube
- Kit includes cap, adaptor, and label

#### Construction Details

Adaptor... Brass  
 Cap... Aluminum  
 Gasket... Buna-N

Item Number	Size	Weight (lbs)
305GSP0000 AK	2"	2.50
305GSP2000AKEVR 	2"	2.50



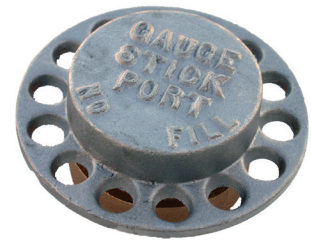
## 178GSP Threaded Style Gauge Stick Port Cap & Adaptor

These adaptors are designed to identify and secure tank openings dedicated to gauging the product with a gauge stick. The adaptor permanently threads onto a riser pipe or pipe nipple and the cap threads onto an adaptor.

### Features

- Lockable with a padlock
- Vapor tight when properly secured
- "Gauge Stick Port" cast into the cap
- Use with Morrison 419 2" drop tube

Item Number	Size	Weight (lbs)
178GSP0100 AC	2"	1.0



178GSP

### Construction Details

Adaptor body... Brass  
Cap... Aluminum  
Gaskets... Buna-N

## 178 Series Threaded Style Fill Cap & Adaptor

This cap and adaptor are designed for tank filling applications where a tight fill connection is not required. The adaptor permanently threads onto a riser pipe or fill nipple and the cap threads onto adaptor.

### Features

- Lockable with a padlock
- Vapor tight when properly secured
- **178DT** is a drop tube adaptor designed with 2" straight pipe threads to secure a Morrison 419 drop tube to the fill riser

Item Number	Size	Body Material	Cap Material	Weight (lbs)
178--0100 AC	2"	IB	IC	2.0
178--0200 AC	2"	IB	BC	2.0
178--0300 AC	2"	BB	IC	2.0
178--0400 AC	2"	BB	BC	2.25
178--1200 AC	3"	BB	BC	4.25
178--1600 AC	4"	BB	BC	7.0
178AL-0900 AC	3"	AL	AL	1.54
178AL-1300 AC	4"	AL	AL	2.44
178DT-0300 AC	2"	BB	IC	2.0
178DT-0400 AC	2"	BB	BC	2.25



178 BB-IC (2")

### Construction Details

#### 178

Adaptor body... Brass (BB), cast iron (IB) (powder coated black), or aluminum (AL)  
Cap... Brass (BC), or cast iron (IC) (powder coated black), or aluminum (AL)  
Gasket... Buna-N

#### 178DT

Gasket... Buna-N



379

Construction Details

Body... Aluminum  
Screens... Stainless steel

### 379 Fill Cap & Vent Combination

The Morrison 379 is designed for tank filling applications where a tight fill connection is not required. Atmospheric venting takes place through the fill opening.

Features

- Male threaded vent installs directly into a female threaded opening of a small storage tank
- Provides direct filling access point when the hinged fill cap is in the open position
- When closed, the screened opening protects the tank from debris and insects
- Lockable with a padlock

Item Number	Size	Weight (lbs)
379---0100 AC	2" NPT	1.25

NOTE

Tank fill caps must not be used as a substitute for proper normal and emergency venting on tanks. It is essential that proper venting be provided in compliance with all applicable codes for every tank system.



307 (2")  
with adaptor and chain

Construction Details

Body and cap... Brass  
Gasket... Buna-N

### 307 Threaded Style Fill Cap & Adaptor

The 307 adaptor is designed for tank filling applications where a tight fill connection is not required. The adaptor permanently threads onto riser pipe and the cap threads onto the adaptor.

Features

- Vapor tight and water tight when properly secured
- Cap attached to the adaptor with a chain eliminates the possibility of dropping or losing the cap

Item Number	Size	Description	Weight (lbs)
307---0100 AC	2"	With adaptor and chain	1.75
307---0300 AC	2"	With chain and gasket only	0.75



## 180M Spin Secure Locking Fill Cap & Adaptor

This lockable fill cap is designed to prevent the theft of fuel from stationary storage tanks where a tight fill hose connection is not required.

### Features

- Patented Spin-Secure locking design provides maximum fuel theft protection
- Threaded male riser adaptor sold with cap to convert female tank opening if needed
- Cap has built-in fusible material for thermal relief that vents at 195° (+/-10°)
- Cap is vapor tight when properly installed
- Can be ordered in “keyed alike” quantities

Item Number	Size	Key Code	Weight (lbs)
180M-2100 1C	2" NPT	1	2.10
180M-2200 1C	2" NPT	2	2.10
180M-2300 1C	2" NPT	3	2.10
180M-2400 1C	2" NPT	4	2.10



180M

### Construction Details

Cap... Zamack 3—silver zinc plated  
 Adaptor... Zamack 27—silver zinc plated  
 O-Ring... FKM

## 180MTL & 180TL Spin-Secure Vented Locking Fill Cap

This lockable fill cap is designed to prevent the theft of fuel from stationary storage tanks where a tight fill hose connection is not required.

### Features

- Patented Spin-Secure locking design provides maximum fuel theft protection
- Adaptor has open air channels to allow tank to breathe as needed
- Provided with necessary adaptor. Please specify male or female when ordering cap
- 2" NPT cap opening with 1½" nozzle opening
- Can be ordered in “keyed alike” quantities

Item Number	Size	Male or Female	Key Code	Weight (lbs)
180MTL2100 1C	2" NPT	Male	1	2.15
180MTL2400 1C	2" NPT	Male	4	2.15
180TL-2100 1C	2" NPT	Female	1	1.50
180TL-2400 1C	2" NPT	Female	4	1.50



180MTL (male)

180TL (female)

### Construction Details

Cap... Hardened steel—silver zinc plated





### 571 Series Fill Pipe Extensions

Fill pipe extensions are installed on the tank riser pipe to make up for adjustment in the grade level due to tank settlement. They thread in between the riser pipe and the fill adaptor.

Item Number	Size	Weight (lbs)
571---0100 AE	4" x 4" x 3½"	3.0
571S--0100 AE	4" x 4" x 27/16"	3.0

#### Construction Details

Body... Cast iron



### 821 Fill Hatch

This 6" fill hatch fitting is designed to be welded on a liquid storage tank during the tank fabrication process. The primary function of this fitting is to provide an access point to fill or inspect the liquid level for used oil storage tanks.

#### Features

- Components are uncoated for easy weld installation and can be painted after they are installed
- Lockable with a padlock
- Hinged cover

#### Construction Details

Body... Steel  
Cover... Iron

821---G  
Gasket... Cork/Buna-N

#### Certifications & Listings

Gasket is UL Listed

Item Number	Size	Gasket	Weight (lbs)
821---0600 AH	6"	No	6.20
821---G600 AH	6"	Yes	6.30



## 307P Probe Cap

The 307P probe cap is designed for tank monitoring applications where a male threaded riser is provided and a thread-on style cap is required.

### Features

- Vapor tight when properly secured

Item Number	Size	Description	Weight (lbs)
307P--0050 AC	2"	With ¼" NPT port hole	1.50
307P--0100 AC	2"	With ⅜" NPT port hole	1.50
307P--0200 AC	2"	With ⅝" cable connector	1.50
307P--1100 AC	2"	With ½" NPT port hole	1.50
307P--1200 AC	2"	With ½" cable connector	1.50



**307P**  
(2" with ⅜" port hole)

### Construction Details

Cap... Brass  
Gasket... Buna-N

## 578P Series Probe Caps

The 578P probe cap is designed for tank monitoring applications where a male threaded riser is provided and a thread-on style cap is required.

### Features

- Vapor tight when properly secured
- **578PV** has two connectors—one for the vent tube (included) and one for a monitoring device cable

Item Number	Size	Port Hole Size	Weight (lbs)
578P--0100 AC	4"	⅜"	2.75
578P--0200 AC	4"	½"	2.75
578PV-0100 AK	4"	2 - ⅜"	3.0

**Note:** Probe Cap without port hole (578) is also available. See Valves & Fittings section.



**578P**



**578PV**

### Construction Details

Cap... Brass  
Gasket... Buna-N  
Pin (handle)... Plated steel

**578PV**  
Vent tube... Copper



### 323 Series Vapor Recovery Adaptors



323EVR (4" x 3")

323B (4" x 4")

Vapor recovery poppeted adaptors mate with vapor recovery elbows and couplings as a connection device to return fuel vapors from the tank to the delivery vehicle during the filling operation.

#### Features

- Self-guiding poppet
- **323B** has an air brake valve mount option for tank truck

#### Construction Details

- Body... Anodized aluminum
- Spring... Stainless steel
- Disc... Buna-N or FKM
- Stem... Stainless steel
- Disc washer... Zinc plated steel
- Poppet assembly... Stainless steel and PTFE (EVR models only)

#### Certifications & Listings

CARB Approval 89-12; CARB EVR Executive Order VR-402

Item Number	Adaptor Size	Threads	Disc	Weight (lbs)
323--0100 AA	4"	3"	Buna-N	3.50
323--0200 AA	4"	4"	Buna-N	3.50
323--0300 AA	4"	3"	FKM	3.50
323--0300AAEVR	4"	3"	FKM	3.50
323--0400 AA	4"	4"	FKM	3.50
323--0400AAEVR	4"	4"	FKM	3.50
323B--0050 AA	4"	3"	Buna-N	4.0
323B--0100 AA	4"	4"	Buna-N	4.25
323B--0200 AA	4"	4"	FKM	4.25

\*Consult Price List for other options.



323C (4")

### 323C Vapor Recovery Cap



Vapor recovery caps are designed to mate with vapor recover adaptors when the adaptors are not in use. The cap prevents vapors from escaping and prevents dirt and water from entering the tank.

#### Features

- Low profile
- Large diameter pull ring for easy removal
- Bright orange color
- Lockable with a padlock
- Vapor tight when installed on adaptor

#### Construction Details

- Body... Die cast aluminum, powder coated
- Gasket... Buna-N
- Hardware... Stainless steel

#### Certifications & Listings

CARB Approval 89-12; CARB EVR Executive Order VR-101 and VR-402

Item Number	Size	Weight (lbs)
323C--0100 AC	This model has been replaced with 323C--0100ACEVR.	
323C--0100ACEVR	4"	2.0






## 927 Series Dry Disconnect Adaptors

Dry disconnect adaptors and couplers are designed to connect fuel delivery transport truck hoses or nozzles to the fill pipe of an aboveground storage tank. Adaptors are generally mounted to the tank.

### Features

- Minimizes spills and dripping of fuel at disconnect
- Compatible with other brands of cam-and-groove style dry disconnect couplers (such as the Morrison 928, PT Maxi-Dry® and OPW Kamvalok®)
- Quick and easy connect and disconnect
- Compatible with Morrison 735DC dust caps
- **927** is aluminum
- **927B** is brass
- **927S** is stainless steel

Item Number	Thread Size	Coupler Size	Weight (lbs)
927---0150 1A	1½"	2"	1.63
927---0200AAEVR 	2"	2½"	1.98
927---0300AAEVR 	3"	4"	3.50
927---0400AAVER 	4"	4"	3.50
927B--0200 AA	2"	2½"	4.25
927S--0150 1A	1½"	2"	3.79
927S--0200 1A	2"	2½"	5.93
927S--0300 1A	3"	4"	18.23



927 (1½")

### Construction Details

Body and tail piece... Anodized aluminum or stainless steel  
Disc and gasket... FKM

### Certifications & Listings

CARB EVR Executive Order VR-402






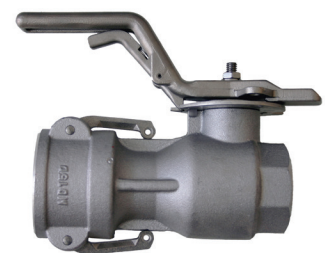
## 928 Series Dry Disconnect Couplers

Dry disconnect couplers and adaptors are designed to connect fuel delivery transport truck hoses or nozzles to the fill pipe of an aboveground storage tank. The dry disconnect coupler is generally installed on the fuel truck delivery hose.

### Features

- Minimizes spills and dripping of fuel at disconnect
- Compatible with other brands of cam-and-groove style dry disconnect adaptors
- Quick and easy connect and disconnect
- **928** is aluminum
- **928S** is stainless steel

Item Number	Thread Size	Coupler Size	Weight (lbs)
928--0150 1C	1½"	2"	4.39
928--0150ACEVR 	1½"	2"	4.39
928--0200 1C	2"	2½"	5.98
928--0200ACEVR 	2"	2½"	5.98
928--0300 1C	3"	4"	12.61
928--0300ACEVR 	3"	4"	12.61
928S--0150 1C	1½"	2"	7.03
928S--0200 1C	2"	2½"	10.36
928S--0300 1C	3"	4"	23.23



928 (1½")

### Construction Details

Body and tail piece... Anodized aluminum or stainless steel  
Disc and gasket... FKM

### Certifications & Listings

CARB EVR Executive Order VR-402



## 800 Series Cam-and-Groove-Fittings

Cam-and-groove adaptors and couplers are used in specialized applications where it is necessary to be able to connect and disconnect components quickly.

### Features

- **Part A** female threads to male quick disconnect adaptor
- **Part B** male threads to female quick disconnect coupler
- **Part C** hose shank to female quick disconnect coupler
- **Part D** female threads to female quick disconnect coupler
- **Part E** hose shank to male quick disconnect adaptor
- **Part F** male threads to male quick disconnect adaptor
- **Part DC** dust caps
- **Part DP** dust plugs



### Construction Details

Standard couplings... Aluminum (brass, carbon steel, and stainless steel are available)  
 Handles... Brass or stainless steel  
 Gaskets... Buna-N

**800A- A 0000 1C**

↑ Letter in this location indicates material of construction

- A** = Aluminum
- B** = Brass
- S** = Stainless steel
- C** = Carbon steel

Item Number	Size	Weight (lbs)
800A-A0000 1C	¾"	0.10
800A-A0100 1C	1"	0.14
800A-A0200 1C	1½"	0.26
800A-A0300 1C	1½"	0.30
800A-A0400 1C	2"	0.30
800A-A0500 1C	2½"	0.64
800A-A0600 1C	3"	0.60
800A-A0700 1C	4"	1.36
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800B-A0000 1C	¾"	0.30
800B-A0100 1C	1"	0.38
800B-A0200 1C	1½"	0.68
800B-A0300 1C	1½"	0.78
800B-A0400 1C	2"	1.02
800B-A0500 1C	2½"	2.0
800B-A0600 1C	3"	2.0
800B-A0700 1C	4"	2.0
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800C-A0000 1C	¾"	0.47
800C-A0100 1C	1"	0.52
800C-A0200 1C	1½"	0.86
800C-A0300 1C	1½"	0.80
800C-A0400 1C	2"	1.14
800C-A0500 1C	2½"	2.0
800C-A0600 1C	3"	2.50
800C-A0700 1C	4"	4.0
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800D-A0000 1C	¾"	0.25
800D-A0100 1C	1"	0.44
800D-A0200 1C	1½"	0.76
800D-A0300 1C	1½"	0.84
800D-A0400 1C	2"	0.80
800D-A0500 1C	2½"	2.0
800D-A0600 1C	3"	2.0
800D-A0700 1C	4"	2.80

Item Number	Size	Weight (lbs)
800E-A0000 1C	¾"	0.26
800E-A0100 1C	1"	0.26
800E-A0200 1C	1½"	0.39
800E-A0300 1C	1½"	0.54
800E-A0400 1C	2"	0.82
800E-A0500 1C	2½"	1.50
800E-A0600 1C	3"	1.66
800E-A0700 1C	4"	2.50
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800F-A0000 1C	¾"	0.15
800F-A0100 1C	1"	0.24
800F-A0200 1C	1½"	0.48
800F-A0300 1C	1½"	0.52
800F-A0400 1C	2"	0.60
800F-A0500 1C	2½"	0.86
800F-A0600 1C	3"	1.36
800F-A0700 1C	4"	2.50
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800DCA0000 1C	¾"	0.20
800DCA0100 1C	1"	0.42
800DCA0200 1C	1½"	2.0
800DCA0300 1C	1½"	0.74
800DCA0400 1C	2"	0.70
800DCA0500 1C	2½"	1.24
800DCA0600 1C	3"	1.40
800DCA0700 1C	4"	2.40
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800DPA0000 1C	¾"	0.12
800DPA0100 1C	1"	0.16
800DPA0200 1C	1½"	0.16
800DPA0300 1C	1½"	0.25
800DPA0400 1C	2"	0.38
800DPA0500 1C	2½"	0.59
800DPA0600 1C	3"	1.0
800DPA0700 1C	4"	2.0

\*Items listed above are aluminum.  
 Consult Price List for brass, carbon steel, and stainless steel options.











## 735DC Series Dust Caps

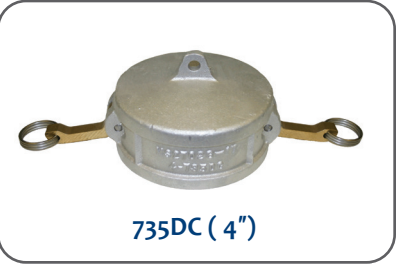
Dust caps are used with quick disconnect adaptors where it is necessary and/or convenient to be able to connect and disconnect components quickly.

### Features

- Provides protection to cam-and-groove adaptor when not in service
- Dual cam arms secure the cap to the adaptor

Item Number	Size	Description	Weight (lbs)
735DC-2000ACEVR 	2"	Aluminum, EVR, less chain and rings	1.0
735DC-2500ACEVR 	2½"	Aluminum, EVR, less chain and rings	1.20
735DC-3000ACEVR 	3"	Aluminum, EVR, less chain and rings	1.50
735DC-4000ACEVR 	4"	Aluminum, EVR, less chain and rings	2.50
735DCA2000ACEVR 	2"	Anodized aluminum, EVR, less chain and rings	1.0
735DCA2500ACEVR 	2½"	Anodized aluminum, EVR, less chain and rings	1.10
735DCA3000ACEVR 	3"	Anodized aluminum, EVR, less chain and rings	1.50
735DCA4000ACEVR 	4"	Anodized aluminum, EVR, less chain and rings	2.50

\*Consult Price List for other options.



735DC ( 4")

### Construction Details

Body... Aluminum or anodized aluminum  
Cam arms... Brass  
Gasket... Buna-N

### Certifications & Listings



CARB EVR Executive Order VR-402

## 73590 90° Check Valves

The 73590 cam-and-groove check valves are used in specialized applications where it is necessary and/or convenient to be able to connect and disconnect tank filling components quickly and cleanly.

### Check Valve Adaptors Features and Details

- Male quick connect adaptor mates with traditional quick disconnect fill couplers
- Integrated check valve and fill adaptor reduces product loss at disconnect
- Space saving 90° design fits into small spaces such as the Morrison 715 remote fill

Item Number	Size	Description	Weight (lbs)
73590CA0200 AV	2"	90° check valve; male adaptor; female threads	2.0
73590CA0300 AV	3"	90° check valve; male adaptor; female threads	5.0
<i>Optional dust caps</i>			
735DCA2000ACEVR 	2"	Anodized aluminum dust cap; EVR approved	--
735DCA3000ACEVR 	3"	Anodized aluminum dust cap; EVR approved	--

### Check Valve Couplers Features and Details

- Female quick disconnect coupler mates with traditional quick connect adaptors
- Integrated check valve and fill coupler reduces product loss at disconnect
- Space saving 90° design fits into small spaces such as Morrison model 715 remote fill boxes

Item Number	Size	Description	Weight (lbs)
73590CD0200 AV	2"	90° check valve; female coupler, female threads	2.4
73590CD0300 AV	3"	90° check valve; female coupler, female threads	6.0
<i>Optional dust caps</i>			
800DPA0400 1C	2"	Aluminum dust plug	--
800DPA0600 1C	3"	Aluminum dust plug	--



73590CA (2")

73590CD (3")

### Construction Details

Body... Coated aluminum  
Plunger... Stainless steel  
Disc... FKM  
Cam arms... Brass (73590CD models only)





## 735LAT & 735LBT Series Flange Adaptors & Couplers

Cam-and-groove adaptors and couplers are used in specialized applications where it is necessary and/or convenient to be able to connect and disconnect components quickly.

### Features

- **735LAT** is a TTMA flange to male quick disconnect adaptor
- **735LBT** is a TTMA flange to female quick disconnect coupler

Item Number	Size	Description	Weight (lbs)
735LAT4000 1A	4"	4" flange to 4" male quick disconnect adaptor	2.0
735LAT6000 1A	6"	6" flange to 6" male quick disconnect adaptor	5.30
735LBT4000 AC	4"	4" flange to 4" male quick disconnect coupler	4.50
735LBT6000 AC	6"	6" flange to 6" male quick disconnect coupler	6.85

\*Consult Price List for other sizes.



735LAT (4")



735LBT (4")

### Construction Details

Body... Aluminum or anodized aluminum

### 735LBT

Cam arms... Brass  
Gasket... Buna-N

### Certifications & Listings

US Military CID A-A-59326D

## 419EG Drop Tube Extender for Gauging Applications

The 419EG drop tube extender sleeve connects two sections of the same diameter drop tube end-to-end. Use the 419EGT installation tool to connect the sleeve to the drop tube. The 419EG drop tube extenders are designed for use in gauging applications and are only compatible with Morrison 2" drop tubes.

### Features

- Available in 2" size
- Allows for combining up to 50 feet of drop tube
- Can be utilized with Morrison's 818 and 918 series gauges
- **419EGT** is a reusable tool required for installation of the 419EG

Item Number	Size	Description	Weight (lbs)
419EG-0200 AE	2"	Drop tube extender sleeve with installation sticker	0.05
419EGT0200 AT	3"	Drop tube extender installation tool	0.73
419EG-1200 AK	4"	Drop tube extender sleeve, sticker, and installation tool kit	0.78



419EG (2")



419EGT

(required for installation of 419EG)

### Construction Details

Sleeve... Aluminum  
Installation tool... Aluminum/  
stainless steel/steel



## 419 Drop Tube

Drop tubes are installed in the riser at the fill connection or attached to the bottom of overflow prevention valves to direct product flow from the fill point to within 6" of the tank bottom.

### Features

- Facilitates a submerged fill when properly installed
- Improves flow efficiency
- Reduces the build-up of vapors in the tank
- .062" wall thickness for durability
- Compatible with Morrison 539 diffusers
- Compatible with Morrison 9095AA, 9095C, and 9095X (certain models) series overflow prevention valves

Item Number		Size	CARB	Weight (lbs)
419---02061TEVR		2" x 6'	Yes	2.50
419---03081TEVR		3" x 8'	Yes	5.0



419 (2")

### Construction Details

Tube... Aluminum  
Gaskets... Buna-N

### Certifications & Listings

CARB Approval 95-19 (3" and 4" models); CARB EVR Executive Order VR-402 (2" and 3" models)



## 419E Drop Tube Extender

The 419E drop tube extender connects two sections of the same size drop tube end-to-end without disrupting the flow of liquid through the drop tubes. Stock these extenders to eliminate having multiple drop tube lengths in inventory. The 419E drop tube extender is also ideal for use with damaged drop tubes. Simply cut off the damaged sections and connect using the 419E. Drop tube extenders are for use with **FILLING APPLICATIONS ONLY**. They are not for use in gauging applications.

### Features

- Male quick connect adaptor mates with traditional quick disconnect fill couplers
- Integrated check valve and fill adaptor reduces product loss at disconnect
- Space saving 90° design fits into small spaces such as the Morrison 715 remote fill boxes

Item Number		Size	Description	Drop Tube ID	Weight (lbs)
419E--0200AEEVR		2"	Drop tube extender	1.75" - 1.81"	--
419E--0300AEEVR		3"	Drop tube extender	2.81" - 2.87"	--
419E--0400AEEVR		4"	Drop tube extender	3.72" - 3.78"	--



419E (3")

### Construction Details

Machined components...  
Aluminum 6061  
Seals... FKM  
Fasteners... Stainless steel



## 539 Series Diffusers

The diffuser is designed for installation at the bottom end of a drop tube to reduce turbulence and vapor loss during the filling operation.

### Features

- Does not increase filling time
- Reduces filter usage
- Catches rags left in drop elbow
- Tank filling, manual sticking, water detection, and cathodic protection can be accomplished without any change in procedure or routine (TC and TO models)
- **539AS, 539TC, and 539TO** are slip-on style
- **539AT** is threaded style
- **539TC** has a telescoping closed bottom
- **539TO** has a telescoping open bottom



### Construction Details

Body and plates... Aluminum or chromate conversion  
O-Ring... PTFE encapsulated FKM (telescoping models)

### Certifications & Listings

CARB EVR Executive Order VR-402

Item Number	Size	Gauge Stick	Anodized	Weight (lbs)
539AS-0200 AD	2"	No	No	1.10
539AS-0200ADEV	2"	No	No	1.10
539ASA0200ADEV	2"	No	Yes	1.10
539AS-0300 AD	3"	No	No	1.10
539AS-0300ADEV	3"	No	No	1.10
539AS-0400 AD	4"	No	No	1.10
539ASA0300ADEV	3"	No	Yes	1.10
539AT-0200 AD	2"	Yes	No	1.10
539AT-0200ADEV	2"	Yes	No	1.10
539AT-0300 AD	3"	Yes	No	1.10
539AT-0300ADEV	3"	Yes	No	1.10
539ATA0200ADEV	2"	Yes	Yes	1.10
539ATA0300ADEV	3"	Yes	Yes	1.10
539TC-0400 AD	4"	Yes	No	1.10
539TC-0400 ADA	4"	Yes	Yes	1.10
539TO-0400 AD	4"	Yes	No	1.90
539TO-0400 ADA	4"	Yes	Yes	1.90

\*Consult Price List for BSP options.



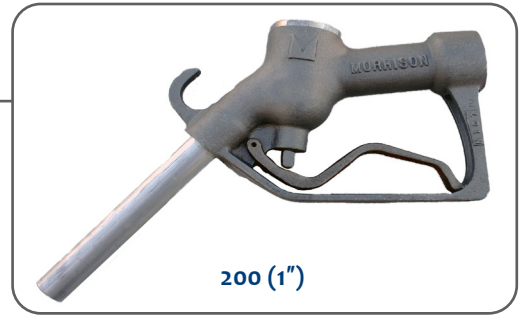
## 200 Series Farm/Utility Nozzles

Used for gravity and low pressure fueling, the 200 series manual shut-off nozzles are lightweight and easy to operate.

### Features

- Body has dual outlet threads to accept either leaded or unleaded spouts
- Replaceable spouts
- Maximum working pressure 25 PSI
- Nozzle trigger pinned in place

Item Number	Size	Spout Size	Weight (lbs)
200---0600 AN	¾"	13/16"	1.75
200---0700 AN	1"	13/16"	1.75
200---0800 AN	¾"	15/16"	1.75
200---0900 AN	1"	15/16"	1.75
200TMC0200 2N	¾"	None	1.50
200TMC0700 2N	1"	None	1.50



200 (1")

### Construction Details

Body... Aluminum  
 Disc... Buna-N  
 Stem... Brass  
 Stem seal... Buna-N o-ring  
 Spout leaded... Aluminum (15/16" OD)  
 Spout unleaded... Aluminum (13/16" OD)

## 300 Series Manual Nozzles

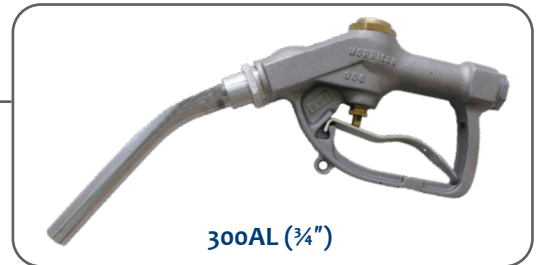
The 300 series manual shut-off nozzle is used for gravity and low pressure fueling.

### Features

- 35 PSI maximum working pressure
- Heavy duty construction

Item Number	Size	Spout	Weight (lbs)
300---3100 AN	¾"	13/16"	4.25
300---3200 AN	1"	13/16"	4.25
300AL-3100 AN	¾"	13/16"	2.25
300AL-3200 AN	1"	13/16"	2.25
300AL-3300 AN	¾"	15/16"	2.25
300AL-3400 AN	1"	15/16"	2.25
300ATS4000 AN	1"	None	2.30
300ATS4400 AN	1"	15/16"	2.50

\*Consult Price List for other options.



300AL (¾")

### Construction Details

**300**  
 Body and cap... Brass  
 Disc... FKM  
 Stem... Brass  
 O-ring... FKM  
 Spout... Brass

**300AL**  
 Body and cap... Aluminum  
 Disc... FKM  
 Stem... Aluminum  
 O-ring... FKM  
 Spout... Aluminum

**300ATS**  
 Body... Aluminum  
 Cap... Stainless steel  
 Disc... PTFE  
 Stem... Stainless steel  
 Packing... PTFE  
 Spout... Aluminum



**300ALM**

### Construction Details

Body... Anodized aluminum  
 Cap... Anodized aluminum  
 Disc... FKM or FDA Buna-N  
 Stem... Stainless steel  
 O-Ring... Buna-N  
 Spout unleaded... Brass (<sup>13</sup>/<sub>16</sub>" OD),  
 aluminum (<sup>13</sup>/<sub>16</sub>" OD)

### Certifications & Listings

Water nozzles to military drawing  
 #13225E1707 and #13225E9094;  
 Fuel nozzles to CID AA-52030,  
 Type I, Size 1, Class A or B, Style 1

## 300ALM Series Manual Nozzles

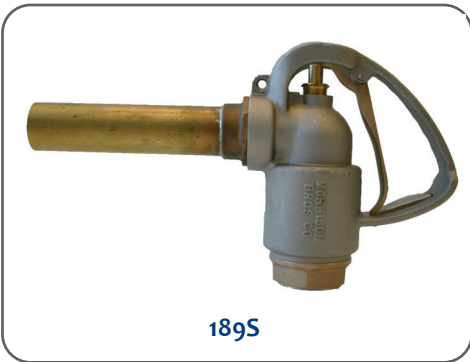
Used for gravity and low pressure fueling and water dispensing, the 300ALM is a manual shut-off nozzle.

### Features

- 35 PSI maximum working pressure
- Heavy duty construction
- **300ALMM** includes arctic mitten expanded handle guard

Item Number	Size	Spout	Weight (lbs)
300ALM0500 AN	1"	<sup>13</sup> / <sub>16</sub> "	2.25
300ALM0600 AM	1"	<sup>15</sup> / <sub>16</sub> "	2.25
300ALMM100 AN	1"	<sup>15</sup> / <sub>16</sub> "	3.0

*\*Consult Price List for other options.*



**189S**

### Construction Details

Body... Aluminum  
 Disc... FKM (PTFE optional)  
 Stem... Brass  
 Packing... PTFE  
 Spout... Brass (<sup>21</sup>/<sub>8</sub>" OD)

## 189S 90° Bulk Fueling Nozzle

The 189S 90° manual shut-off nozzle is used in bulk fueling in pressure applications.

### Features

- Dash pot design for easier opening action and cushioned closure
- Integrated hold-open notches
- Optional NPS straight tube adaptor facilitates longer custom length spouts for submerged filling
- 50 PSI working pressure
- 100 PSI cold non-shock maximum pressure

Item Number	Size	Weight (lbs)
189S--0100 AN	2" with 9" tube	11.0
189S--0200 AN	2" with 36" tube	14.30
189S--0500 AN	2" without tube	9.0

*\*Consult Price List for PTFE options.*



## 602 Series Automatic Shut-Off Nozzles

Husky brand automatic shut-off nozzles are designed for dispensing motor fuel in retail and commercial applications. The nozzle automatically shuts off when the tank is full.

### Features

- **602** is a high volume truck nozzle with a three-notch hold-open clip and full grip guard
- **602GS** is a general service nozzle with a three-notch hold-open clip, full grip guard, and hanging hook
- **602HVS** is a high volume pressure-activated nozzle with a black hand guard, spout bushing, hold-open clip, full grip guard, and waffle splash guard

Item Number	Size	Spout Size	Weight (lbs)
602--0700 1N	1"	1 <sup>5</sup> / <sub>16</sub> "	3.0
602GS-0100 1N	1"	1 <sup>5</sup> / <sub>16</sub> "	3.0
602GS-0200 1N	1"	1 <sup>3</sup> / <sub>16</sub> "	3.0
602HVS0100 1N	1"	1 <sup>5</sup> / <sub>16</sub> "	3.0

\*Consult Price List for other options.



602



602GS

### Construction Details

Body... Aluminum

### Certifications & Listings

UL Listed (602HVS model only)

## 602DEF Automatic Shut-Off Nozzle for DEF

These automatic shut-off nozzles are designed for dispensing retail and commercial Diesel Exhaust Fluid (DEF).

### Features

- Automatically shuts off when the tank is full
- Optional Miss-filling Prevention Device (MFPD) is permanently installed in DEF tank fill pipe. Eliminates the risk of accidental DEF filling or environmental contamination
- 11 GPM maximum flow rate

Item Number	Size	Miss-filling Device	Weight (lbs)
602DEF0000 1N	3/4"	No	5.20
602DEFM000 1N	3/4"	Yes	5.30

\*Consult Price List for BSP options.



602DEFM

### Construction Details

Body... Stainless steel





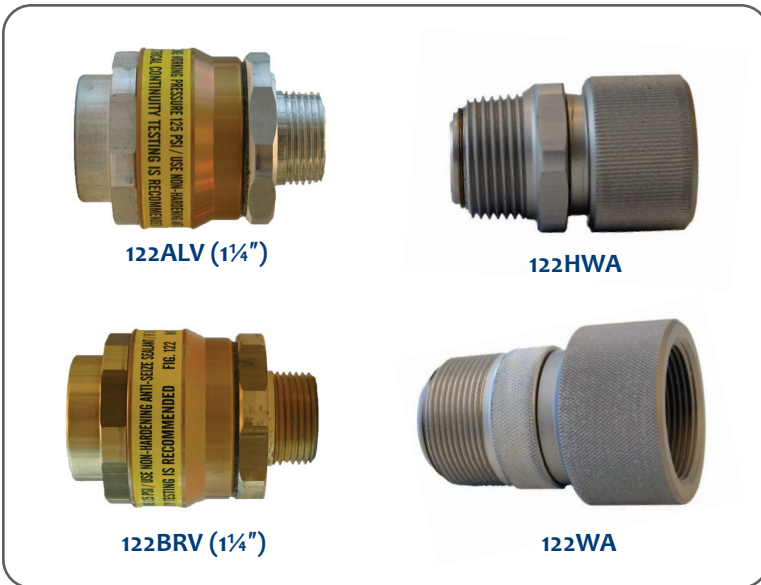
## 122 Series Hose Nozzle Swivels

Hose nozzle swivels are installed between the hose and the inlet of the nozzle.

### Features

- Improves operator handling
- Reduces hose wear
- Smooth 360° single plane rotation
- Durable construction
- Tested for electrical continuity per UL 567
- **122BRVS** have 1½"-16UN2A (Scully threads)

Item Number	Male Threads	Female Threads	Weight (lbs)
122ALV0100 AS	1"	1"	0.75
122ALV0200 AS	1¼"	1¼"	0.75
122ALV0230 AS	1½"	1¼"	0.75
122ALV0300 AS	1½"	1½"	0.75
122ALV0400 AS	2"	2"	1.10
122BRV0100 AS	1"	1"	1.85
122BRV0200 AS	1¼"	1¼"	1.85
122BRV0230 AS	1½"	1¼"	1.85
122BRV0300 AS	1½"	1½"	1.85
122BRVS0200 AS	1¼"	1¼"	1.25
122BRVS0300 AS	1½"	1½"	1.25
122HWA0100 ASA	1"	1"	0.50
122WA-0300 ASA	1½"	1½"	1.0



### Construction Details

#### 122ALV

Body... Anodized aluminum  
 Male end... Anodized aluminum  
 Female end... Anodized aluminum  
 O-rings... FKM

#### 122BRV & 122BRVS

Body... Anodized aluminum  
 Male end... Brass  
 Female end... Brass  
 O-rings... FKM

#### 122HWA

Female end... Anodized aluminum  
 Male end... Steel, plated  
 O-rings... FKM-FDA

#### 122WA

Female end... Anodized aluminum  
 Male end... Steel, plated  
 O-rings... EPDM rubber or FKM

### Certifications & Listings

**122HWA**...1" meets U.S. military specs. Drawings 8837317-03 and 13225E9138-1.

**122WA**...1½" meets U.S. military specs. Drawing 13225E9139-3.



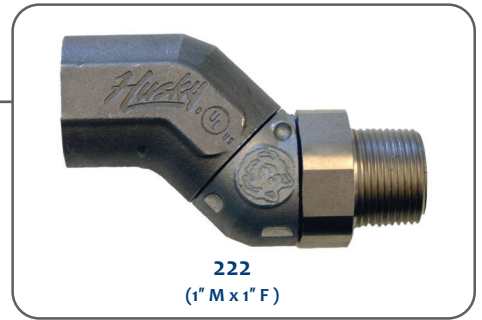
## 222 Series Hose Swivels

Husky brand multi-plane hose swivels are installed between the nozzle and the dispensing hose.

### Features

- Reduces hose damage and wear
- Improves operator handling
- **222** is high flow
- **222F, 222G, and 222J** are conventional fueling

Item Number	Size	Description	Weight (lbs)
222--0100 1S	1" M x 1" F	Dual plane hose nozzle swivel, dual joint, high flow	0.50
222F--0100 1S	¾" M x ¾" F	Dual plane hose nozzle swivel	0.50
222G--0100 1S	1" M x 1" F	Dual plane hose nozzle swivel, single joint	0.50
222J--0100 1S	1" M x ¾" F	Dual plane hose nozzle swivel	0.50



**222**  
(1" M x 1" F)

### Construction Details

Body... Aluminum  
O-rings... FKM and fluorosilicone

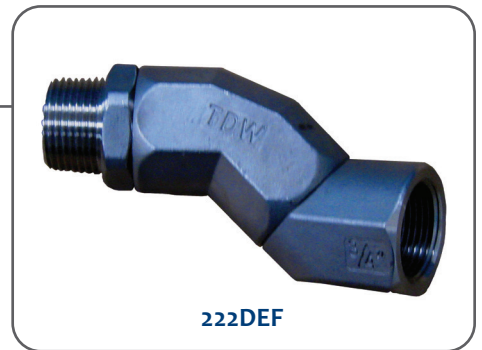
## 222DEF Hose Swivel

Installed between the nozzle and the dispensing hose, construction materials of this hose swivel are well-suited for use with Diesel Exhaust Fluids (DEF).

### Features

- Reduces hose damage and wear
- Improves operator handling
- 50 PSI maximum pressure

Item Number	Size	Weight (lbs)
222DEF0000 1S	¾" M x ¾" F	0.25



**222DEF**

### Construction Details

Body... Stainless steel  
O-ring... PTFE



609 (3/4" x 3/4")

### Construction Details

Body... Aluminum

## 609 Safe-T-Break®

Husky brand Safe-T-Breaks® are designed for conventional, farm, and consumer pump hoses to help protect against damages resulting when a motorist drives away from the dispenser with the nozzle remaining in the vehicle fuel port.

### Features

- Reconnectable
- Scuff guard protected

Item Number	Size	Weight (lbs)
609--0100 1B	3/4" F x 3/4" F	1.15
609--0200 1B	1" F x 1" F	1.15



609DEF (3/4" x 3/4")

### Construction Details

Body... Stainless steel

## 609DEF Break-A-Way

Designed for conventional and consumer pump Diesel Exhaust Fluid (DEF) dispensing, this break-a-way helps protect against damages resulting when a motorist drives away from the dispenser with the nozzle remaining in the vehicle fuel port.

### Features

- Integrated swivel design

*\*Not intended be to installed into the base of a nozzle.*

Item Number	Size	Weight (lbs)
609DEF0000 1B	3/4" M x 3/4" F	1.0



## 610 Series High Hose Retriever

The 610 hose retriever suspends the fueling hose above the dispenser and assists in keeping the hose off the drive.

### Features

- Prevents the hose from kinking and tangling
- Retriever head rotates 360° assisting the operator in nozzle positioning
- Reduces safety hazards at the fueling point while reducing hose wear
- Standard base makes the anchoring process easier and less costly by eliminating the need to break concrete
- Two 10-pound counterweights connect via stainless steel cable
- Extra weight kits are available

**610 Hinged Base** (optional) is a heavy-duty base designed to simplify hose retriever installation and maintenance.

### Features

- Reduces installation time
- Base is anchored to concrete; hinged retriever mount can be tilted to grade
- Inspection and service are easier and safer from grade level with the hinged base

Item Number	Description	Weight (lbs)
610---0000 AR	Hose retriever assembly, less weights and cable	7.10
610---0100 AR*	Hose retriever assembly, with weight kit	27.0
610B--0000 AR*	Hose retriever assembly, with weight kit and standard base	33.30
610H--0100 AR*	Hose retriever assembly, with ¾" to 1" 610 urethane hose hanger	30.50
610H--0125 AR*	Hose retriever assembly, with 1¼" hosebun	31.0
610H--0150 AR*	Hose retriever assembly, with 1½" hosebun	31.50
610H--0200 AR*	Hose retriever assembly, with 2" hosebun	32.50
610H--0300 AR*	Hose retriever assembly, with 3" hosebun	33.0
610HB-0100 AR*	Hose retriever with standard base and ¾" to 1" 610 urethane hose hanger	36.80
610HB-0125 AR*	Hose retriever with standard base and 1¼" hosebun	37.30
610HB-0150 AR*	Hose retriever with standard base and 1½" hosebun	37.80
610HB-0200 AR*	Hose retriever with standard base and 2" hosebun	38.80
610HB-0300 AR*	Hose retriever with standard base and 3" hosebun	39.30
610HH-0100 AR*	Hose retriever assembly, with 1" 611 aluminum hose hanger	30.50
610HH-0150 AR*	Hose retriever assembly, with 1¼" to 1½" 611 aluminum hose hanger	31.50
610HH-0200 AR*	Hose retriever assembly, with 2" 611 aluminum hose hanger	32.50
610HHB0100 AR*	Hose retriever with base, with 1" 611 aluminum hose hanger	36.80
610HHB0150 AR*	Hose retriever with base, with 1¼" to 1½" 611 aluminum hose hanger	37.80
610HHB0200 AR*	Hose retriever with base, with 2" 611 aluminum hose hanger	38.80
610HHBH0100 AR	Hose retriever with hinged base, with 1" 611 aluminum hose hanger	54.80
610HHBH0150 AR	Hose retriever with hinged base, with 1¼" to 1½" 611 aluminum hose hanger	55.80
610HHBH0200 AR	Hose retriever with hinged base, with 2" 611 aluminum hose hanger	56.80
610---0103 AK*	Single Weight Kit (includes one 10lb weight and cable)	11.0
610---0203 AK*	Two Weight Kit (includes two 10lb weights and cable)	21.0
610B--0100 WAPB	Standard base (threaded) assembly	5.30
610B--0200 AB	Hinged base assembly	24.0
610B--0300 AB	6x6 square base (slip-fit) assembly	8.65

\*Includes weight kit.

**Note:** Kits are also available. See Price List for more information.

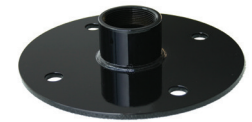


610

### Construction Details

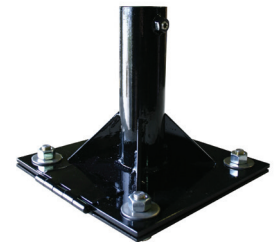
#### 610

Head... Cast iron (e-coated black)  
 Cable... Stainless steel  
 Pulley... Aluminum  
 Ball bearing swivel... Stainless steel  
 Installs on 2" Schedule 80 pipe  
 (installer supplied)



610B

Standard Base



610B

Hinged Base



610B

6x6 Square Base

### Construction Details

#### 610B- Standard Base

Steel, powder coated black

#### 610B- Hinged Base

Steel, powder coated black  
 Set screws... Stainless steel  
 Hinge... Stainless steel

#### 610B- 6x6 Square Base

Steel, powder coated black  
 Set screws... Stainless steel

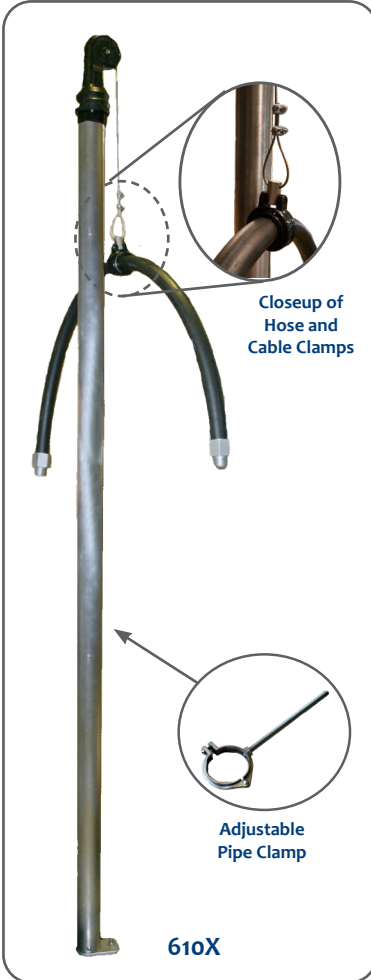


## 610X Series Hose Retrievers

The 610X hose retriever assembly suspends the fueling hose above the dispenser eliminating kinks and tangles while keeping the hose off the drive.

### Features

- Smooth operation—counterweight assemblies matched with specified hose diameters and lengths
- 360° rotating retriever head assists the operator in positioning the hose to the fueling point
- Easy to install—pre-cut pipe and all required components included
- Minimal maintenance—durable construction and minimal moving parts



Item Number	Size	Pipe	Description	Weight (lbs)
610X--0100 AR	90"	Aluminum	Hose retriever assembly with 3/4" hose clamp for 12'-14' hose length	27.0
610X--0200 AR	110"	Aluminum	Hose retriever assembly with 3/4" hose clamp for 15'-20' hose length	31.0
610X--0300 AR	90"	Aluminum	Hose retriever assembly with 1" hose clamp for 12'-14' hose length	31.0
610X--0400 AR	110"	Aluminum	Hose retriever assembly with 1" hose clamp for 15'-18' hose length	36.0
610X--0500 AR	90"	Aluminum	Hose retriever assembly less hose clamp, coaxial model 11'-13' hose	34.0
610X--0100 ARP	90"	PC black	Hose retriever assembly with 3/4" hose clamp for 12'-14' hose length	27.0
610X--0200 ARP	110"	PC black	Hose retriever assembly with 3/4" hose clamp for 15'-20' hose length	31.0
610X--0300 ARP	90"	PC black	Hose retriever assembly with 1" hose clamp for 12'-14' hose length	31.0
610X--0400 ARP	110"	PC black	Hose retriever assembly with 1" hose clamp for 15'-18' hose length	36.0
610X--0500 ARP	90"	PC black	Hose retriever assembly less hose clamp, coaxial model 11'-13' hose	34.0

\*Hose clamps not included with the coaxial model.

\*PC = Powder coated.

### Construction Details

- Retriever head... Cast iron (e-coated black)
- Cable and connectors... Stainless steel
- Pulley... Aluminum
- Ball bearing swivel... Stainless steel
- Mounting base... Anodized aluminum
- Pipe... Aluminum, schedule 40 or powder coated black
- Counterweights... Steel
- Hose clamp... Plastic (3/4" or 1" sizes)
- Adjustable pipe clamp... Cast iron (zinc plated)

### NOTE

The 110" models come with 20" and 80" posts along with a coupler to connect the two pieces.



Closeup of Coupler



## 610XB Series Hose Retrievers

The 610XB includes a square base (rather than the post base used in the 610X) and does not include an adjustable pipe clamp.

### Features

- Smooth operation—counterweight assemblies matched with specified hose diameters and lengths
- 360° rotating retriever head assists the operator in positioning the hose to the fueling point
- Easy to install—pre-cut pipe and all required components included
- Minimal maintenance—durable construction and minimal moving parts

Item Number	Size	Pipe	Description	Weight (lbs)
610XB-0100 AR	90"	Aluminum	Hose retriever assembly with ¾" hose clamp for 12'-14' hose length	42.0
610XB-0200 AR	110"	Aluminum	Hose retriever assembly with ¾" hose clamp for 15'-20' hose length	46.0
610XB-0300 AR	90"	Aluminum	Hose retriever assembly with 1" hose clamp for 12'-14' hose length	46.0
610XB-0400 AR	110"	Aluminum	Hose retriever assembly with 1" hose clamp for 15'-18' hose length	51.0
610XB-0500 AR	90"	Aluminum	Hose retriever assembly less hose clamp, coaxial model 11'-13' hose	49.0
610XB-0600 AR	110"	Aluminum	Hose Retriever Assembly less hose clamp, coaxial model 13'-15' hose	51.0
610XB-0100 ARPB	90"	PC black	Hose retriever assembly with ¾" hose clamp for 12'-14' hose length	42.0
610XB-0200 ARPB	110"	PC black	Hose retriever assembly with ¾" hose clamp for 15'-20' hose length	46.0
610XB-0300 ARPB	90"	PC black	Hose retriever assembly with 1" hose clamp for 12'-14' hose length	46.0
610XB-0400 ARPB	110"	PC black	Hose retriever assembly with 1" hose clamp for 15'-18' hose length	51.0
610XB-0500 ARPB	90"	PC black	Hose retriever assembly less hose clamp, coaxial model 11'-13' hose	49.0
610XB-0600 ARPB	110"	PC black	Hose retriever assembly less hose clamp, coaxial model 13'-15' hose	51.0

\*Hose clamps not included with the coaxial models.

\*PC = Powder coated.

Note: Packaged in two boxes. Hose not included.

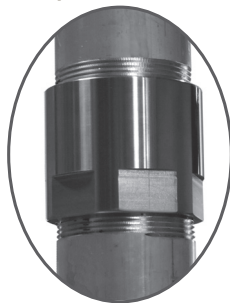


### Construction Details

- Retriever head... Cast iron (e-coated black)
- Cable and connectors... Stainless steel
- Pulley... Aluminum
- Ball bearing swivel... Stainless steel
- Mounting base... Anodized aluminum
- Pipe... Aluminum, schedule 40 or powder coated black
- Counterweights... Steel
- Hose clamp... Plastic (¾" or 1" sizes)

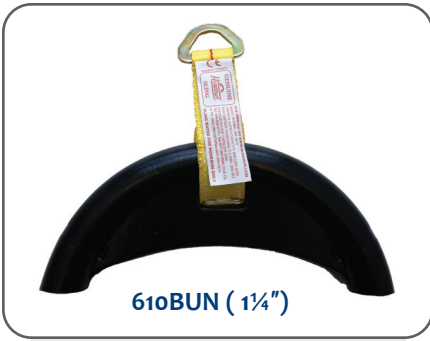
### NOTE

The 110" models come with 20" and 80" posts along with a coupler to connect the two pieces.



Closeup of Coupler





**610BUN ( 1 1/4" )**

### Construction Details

Hosebun™... Urethane  
Sling... Nylon

## 610BUN Hosebun™

The 610BUN Hosebun™ is the proper way to cradle a hose while suspended from a hose retriever. By providing support along the bend radius of the hose, the Hosebun™ prevents the hose from kinking

### Features

- Easy to install
- Extends life of the hose

Item Number	Size	Description	Weight (lbs)
610BUN0125 1B	1 1/4"	Hosebun (black)	3.25
610BUN0150 1B	1 1/2"	Hosebun (black)	3.75
610BUN0200 1B	2"	Hosebun (black)	4.0
610BUN0300 1B	3"	Hosebun (black)	4.25

*\*Consult Customer Service for other options.*



**610HGR ( 3/4-1" )**

**611 (1")**

### Construction Details

#### 610

Hose hanger... Urethane  
Sling... Nylon

#### 611

Cast aluminum, powder coated  
Hardware... Stainless steel  
Spacers... Nylon (1 1/4"-2" size)  
D-ring... Zinc plated  
Sling... UV resistant polyester  
Hose clamps with hose protectors...  
Stainless steel

## 610 & 611 Series Hose Hangers

The 610 and 611 hose hangers are the proper way to cradle a hose suspended from a hose retriever. By providing support along the bend radius of the hose, the hose hangers prevent the hose from kinking.

### Features

- Easy to install
- Durable construction
- Economical
- Extends life of the hose

Item Number	Hose Size	Description	Weight (lbs)
610HGR0100 AH	3/4" to 1"	610 urethane hose hanger with sling	3.50
611--0100 AH	1"	611 aluminum hose hanger with sling	3.0
611--0150 AH	1 1/4" - 1 1/2"	611 aluminum hose hanger with sling	3.75
611--0200 AH	2"	611 aluminum hose hanger with sling	4.0



## 285 Series Bottom Clean-Out Line Strainers

Bottom clean-out Y-type line strainers are used in horizontal pipelines to filter debris and protect downstream equipment.

### Features

- 50 PSI operating pressure
- Strainer cylinder is removable for cleaning or replacement
- NPT female threaded connection

Size	Screen Mesh	285	285AL	285DI
1½"	6	285---0100 AS	285AL-0100 AS	--
2"	6	285---0200 AS	285AL-0200 AS	285DI-3000 AS
3"	6	285---0400 AS	285AL-0400 AS	285DI-3200 AS
2"	10	285---0600 AS	285AL-0600 AS	285DI-3400 AS
3"	10	285---0800 AS	285AL-0800 AS	285DI-3600 AS
1½"	20	285---0900 AS	285AL-0900 AS	--
2"	20	285---1000 AS	285AL-1000 AS	285DI-3800 AS
3"	20	285---1200 AS	285AL-1200 AS	285DI-4000 AS
1½"	40	285---1300 AS	285AL-1300 AS	--
2"	40	285---1400 AS	285AL-1400 AS	285DI-4200 AS
3"	40	285---1600 AS	285AL-1600 AS	285DI-4400 AS
1½"	60	285---1700 AS	285AL-1700 AS	--
2"	60	285---1800 AS	285AL-1800 AS	285DI-4600 AS
3"	60	285---2000 AS	285AL-2000 AS	285DI-4800 AS
1½"	80	285---2100 AS	285AL-2100 AS	--
2"	80	285---2200 AS	285AL-2200 AS	285DI-5000 AS
3"	80	285---2400 AS	285AL-2400 AS	285DI-5200 AS
1½"	100	285---2500 AS	285AL-2500 AS	--
2"	100	285---2600 AS	285AL-2600 AS	285DI-5400 AS
3"	100	285---2800 AS	285AL-2800 AS	285DI-5600 AS
1½"	None	285---6500 AS	285AL-5700 AS	--
2"	None	285---6600 AS	285AL-5800 AS	--
3"	None	285---6800 AS	285AL-6000 AS	--

\*Consult Price List for other options.



### Construction Details

#### 285

Body and cap... Cast iron  
Yoke... Ductile iron  
Strainer cylinder... 304 stainless steel  
Gasket... Nitrile composite, Buna-N, PTFE

#### 285AL

Body and cap... Aluminum  
Yoke... Ductile iron  
Strainer cylinder... 304 stainless steel  
Gasket... Nitrile composite, Buna-N, PTFE

#### 285DI

Body and cap... Ductile iron  
Yoke... Ductile iron  
Strainer cylinder... 304 stainless steel  
Gasket... PTFE

	Size	Weight (lbs)
285	1½"	8.98
	2"	13.24
	3"	24.20
285AL	1½"	4.50
	2"	6.70
	3"	9.08
285DI	2"	13.88
	3"	27.50



285FDI (3")

Construction Details

Body and cap... Ductile iron
Yoke... Ductile iron
Strainer cylinder... 304 stainless steel
Gasket... PTFE

285FDI Series
Bottom Clean-Out Line Strainers

Bottom clean-out Y-type line strainers are used in horizontal pipelines to filter debris and protect downstream equipment.

Features

- 50 PSI operating pressure
• Strainer cylinder is removable for cleaning or replacement
• 150# raised face flanged connections

Table with 4 columns: Item Number, Size, Screen Mesh, Weight (lbs). Rows include 285FDI1500 AS, 285FDI1700 AS, 285FDI1900 AS, 285FDI2100 AS, 285FDI2300 AS, 285FDI2500 AS, 285FDI2700 AS.



284B (1")

Construction Details

Body and cap... Cast bronze
Gasket... FKM
Strainer cylinder... 304 stainless steel (through size 2"); 3/64" perforated 304 stainless steel (sizes 2 1/2" and 3")

284B
Bottom Clean-Out Line Strainer

Bottom clean-out Y-type line strainers are used in pipelines to filter debris and protect downstream equipment.

Features

- Rated to 200 PSI W.O.G. at 150°F
• Strainer cylinder is removable for cleaning or replacement

Table with 4 columns: Item Number, Size, Mesh, Weight (lbs). Rows include 284B--1000 1S, 284B--1100 1S, 284B--1200 1S, 284B--1300 1S, 284B--1400 1S, 284B--1500 1S, 284B--2200 1S, 284B--2300 1S, 284B--2400 1S.



## 284S Bottom Clean-Out Line Strainer

Bottom clean-out Y-type line strainers are used in pipelines to filter debris and protect downstream equipment.

### Features

- Rated to 1440 PSI W.O.G. at 100°F
- Strainer cylinder is removable for cleaning or replacement

Item Number	Size	Mesh	Weight (lbs)
284S-1000 1S	½"	20	1.50
284S-1100 1S	¾"	20	5.0
284S-1200 1S	1"	20	6.0
284S-1300 1S	½"	40	1.50
284S-1400 1S	¾"	40	5.0
284S-1500 1S	1"	40	6.0
284S-2200 1S	½"	100	1.50
284S-2300 1S	¾"	100	5.0
284S-2400 1S	1"	100	6.0
284S-3000 1S	1½"	20	10.0
284S-3100 1S	2"	20	16.0
284S-3200 1S	3"	20	43.0
284S-3300 1S	1½"	40	10.0
284S-3400 1S	2"	40	16.0
284S-3500 1S	3"	40	43.0
284S-4200 1S	1½"	100	10.0
284S-4300 1S	2"	100	16.0
284S-4400 1S	3"	100	43.0



284S (¾")



284S (1½")

### Construction Details

Body and cap... 316 stainless steel  
 Gasket... 304 stainless steel spiral wound  
 Strainer cylinder... 304 stainless steel



## 286 Series Top Clean-Out Line Strainers

Top clean-out Y-type line strainers are used in horizontal pipelines to filter debris and protect downstream equipment.

### Features

- 50 PSI operating pressure
- Strainer basket is removable and accessible from the top for cleaning or replacement
- NPT flanged threaded connection
- **286U** is UL Listed



286 (2")

### Construction Details

Body and cap... Cast iron  
 Yoke... Ductile iron  
 Strainer basket... 304 stainless steel  
 Gasket... Nitrile composite, Buna-N, PTFE

### Certifications & Listings

#### 286U

14 mesh strainer is UL Listed for No. 4, 5, and 6 fuel oil; 24 mesh strainer is UL Listed for No. 1 and 2 fuel oil

Item Number	Size	Screen Mesh	Weight (lbs)	Item Number	Size	Screen Mesh	Weight (lbs)
286--0100 AS	2"	6	16.62	286--1600 AS	2"	80	16.62
286--0300 AS	3"	6	37.75	286--1800 AS	3"	80	37.75
286--0400 AS	2"	10	16.62	286--1900 AS	2"	100	16.62
286--0600 AS	3"	10	37.75	286--2100 AS	3"	100	37.75
286--0700 AS	2"	20	16.62	286--8300 AS	2"	--	17.0
286--0900 AS	3"	20	37.75	286--8500 AS	3"	--	37.25
286--1000 AS	2"	40	16.62	286U-0100 AS	2"	14	15.55
286--1200 AS	3"	40	42.0	286U-0200 AS	2"	24	17.25
286--1300 AS	2"	60	16.62				
286--1500 AS	3"	60	37.75				



286FDI (3")

## 286FDI Top Clean-Out Line Strainer

Top clean-out Y-type line strainers are used in horizontal pipelines to filter debris and protect downstream equipment.

### Features

- 50 PSI operating pressure (3")
- 125 PSI operating pressure (4")
- Strainer basket is removable and accessible from the top for cleaning or replacement
- 150# raised face flanged connections
- 3/8" NPT drain and plug

### Construction Details

#### 3"

Body and cap... Ductile iron  
 Yoke... Ductile iron  
 Strainer basket... 304 stainless steel  
 Gasket... PTFE

Item Number	Size	Screen Mesh	Weight (lbs)
286FDI2200 AS	3"	6	45.0
286FDI2500 AS	3"	10	45.0
286FDI2800 AS	3"	20	45.0
286FDI3100 AS	3"	40	49.0
286FDI3400 AS	3"	60	45.0
286FDI3700 AS	3"	80	45.0
286FDI4000 AS	3"	100	45.0

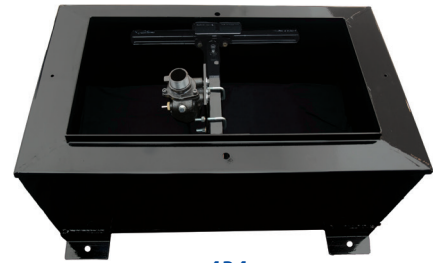


## 434 & 434S Series Dispenser Pedestals

Dispenser pedestals provide a raised platform for dispensers and pumps in aboveground fueling systems.

### Features

- Provides containment for small leaks
- AST pedestal sold with a dispenser-specific mounting platform
- Dispenser pedestal less entry penetrations for desired placement in the field
- Pre-drilled anchor holes
- Dispenser mounting platform overhangs the pedestal base minimizing the ability for water penetration
- Stabilizer bar kits included
- Connection boots available



**434**  
(34" L x 21" W x 16 1/8" H)



**434S**  
(34" L x 21" W x 16 1/8" H)

### Construction Details

#### 434

12 gauge steel, powder coated black

#### 434S

12 gauge 304 stainless steel

### Certifications & Listings

Florida DEP EQ-823

Item Number	Description	Single (S) or Dual (D) Products	Opening Size (L x W)	Dispenser/Pedestal selection guide	Weight (lbs)
434--12001 AK	AST pedestal base, platform, and stabilizer bar	S	14 1/2" x 10"	Gasboy 215/216A	140.0
434--14001 AK	AST pedestal base, platform, and stabilizer bar	S	22 1/4" x 12"	Gasboy Atlas 8700K, 8800K, 9100K, 9800K; Bennett Big Squirt/Big Fueler 3000 series	125.70
434--14002 AK	AST pedestal base, platform, and stabilizer bars	D	22 1/4" x 12"	Gasboy Atlas 8700K, 8800K, 9100K, 9800K; Bennett Big Squirt/Big Fueler 3000 series	125.70
434--17001 AK	AST pedestal base, platform, and stabilizer bar	S	28" x 15"	Wayne Century 3/G2200, Reliance G5200 and G6200, Select 3/G7200	122.20
434--17002 AK	AST pedestal base, platform, and stabilizer bars	D	28" x 15"	Wayne Century 3/G2200, Reliance G5200 and G6200, Select 3/G7200	122.20
434S-14001 AK	AST pedestal base, platform, and stabilizer bar	S	22 1/4" x 12"	Gasboy Atlas 8700K, 8800K, 9100K, 9800K; Bennett Big Squirt/Big Fueler 3000 series	125.70
434S-14002 AK	AST pedestal base, platform, and stabilizer bars	D	22 1/4" x 12"	Gasboy Atlas 8700K, 8800K, 9100K, 9800K; Bennett Big Squirt/Big Fueler 3000 series	134.87
434S-17001 AK	AST pedestal base, platform, and stabilizer bar	S	28" x 15"	Wayne Century 3/G2200, Reliance G5200 and G6200, Select 3/G7200	122.20
434S-17002 AK	AST pedestal base, platform, and stabilizer bars	D	28" x 15"	Wayne Century 3/G2200, Reliance G5200 and G6200, Select 3/G7200	131.37

\*Consult Price List for connection boots.





318L (38" x 10")

### Construction Details

Cover... Engineered laminate encapsulated with polyurea elastomer  
 Lift lug, handle, and pry-plate... Stainless steel  
 Ring... 3/16" hot rolled angle iron  
 Skirt... 12 gauge hot rolled steel  
 Gasket... Polyisoprene rubber

### Certifications & Listings

Meets H-20 load rating

## 318L Lightweight Manhole

Lightweight manholes serve as a safer access port to below grade sumps and equipment in service stations driveways and other commercial applications.

### Features

- Durable and lightweight
- Heavy-duty handle acts as a lift lug
- Stainless steel pry plate
- Anchor lugs secure skirt and ring in concrete

Item Number	Size* & Description	Gasket	Cover Diameter	Overall Height	Weight (lbs)	Weight (lbs)
					(Cover only)	(Complete)
318L--3800 AMC	38" x 10" Non-bolted	Yes	38 <sup>7</sup> / <sub>8</sub> "	12"	56.0	125.0
318L--3900 AMC	38" x 18" Non-bolted	Yes	38 <sup>7</sup> / <sub>8</sub> "	20"	55.0	157.0
318L--4400 AMC	44" x 10" Non-bolted	Yes	44 <sup>7</sup> / <sub>8</sub> "	12 <sup>1</sup> / <sub>2</sub> "	89.0	172.0
318L--4500 AMC	44" x 18" Non-bolted	Yes	44 <sup>5</sup> / <sub>8</sub> "	20"	89.0	188.0

\*Size: Approximate cover diameter x skirt length

Item Number	Size & Description	Cover Diameter	Weight (lbs)
			(Cover only)
318L--3812 ACC	38" 318L replacement cover	38 <sup>7</sup> / <sub>8</sub> "	56.0
318L--4412 ACC	44" 318L replacement cover	44 <sup>7</sup> / <sub>8</sub> "	89.0



418L (38" x 10")

### Construction Details

Cover... Engineered laminate encapsulated with polyurea elastomer  
 Lift lug, handle, and pry-plate... Stainless steel  
 Gasket... Polyisoprene rubber  
 Ring... 3/16" hot rolled angle iron  
 Skirt... 12 gauge hot rolled steel  
 Bolts... Stainless steel

### Certifications & Listings

Meets H-20 load rating

## 418L Limited Access Lightweight Manhole

Lightweight manholes serve as a safer access port to below grade sumps and equipment in service stations driveways and other commercial applications where water resistance is required.

### Features

- Lightweight covers
- Heavy-duty handle acts as a lift lug
- Stainless steel pry plate
- Bolt down covers secured in place by 3 cap screws
- Gasket reduces surface water penetration
- Anchor lugs secure skirt and ring in concrete

Item Number	Size* & Description	Gasket	Cover Diameter	Overall Height	Weight (lbs)	Weight (lbs)
					(Complete)	(Cover only)
418L--3800 AMC	38" x 10" bolt down	Yes	38 <sup>7</sup> / <sub>8</sub> "	12"	126.0	56.0
418L--4400 AMC	44" x 10" bolt down	Yes	44 <sup>7</sup> / <sub>8</sub> "	12 <sup>1</sup> / <sub>2</sub> "	168.0	89.0
418L--4500 AMC	44" x 18" bolt down	Yes	44 <sup>7</sup> / <sub>8</sub> "	20"	188.0	89.0

\*Size: Approximate cover diameter x skirt length

Item Number	Size & Description	Cover Diameter	Weight (lbs)
			(Cover only)
418L--3812 ACC	38" 418L replacement cover	38 <sup>7</sup> / <sub>8</sub> "	56.0
418L--4412 ACC	44" 418L replacement cover	44 <sup>7</sup> / <sub>8</sub> "	89.0



## 418LC Cam Style Lightweight Manhole

Lightweight manholes serve as a safer access port to below grade sumps and equipment in service stations driveways and other commercial applications where water resistance is required.

### Features

- Lightweight cover
- Heavy-duty handle acts as a lift lug
- Cover secured in place by quarter turn cam style hold down mechanism
- Gasket seal between cover and ring
- Anchor lugs secure ring and cover in concrete

Item Number	Size* & Description	Gasket	Cover Diameter	Overall Height	Weight	Weight
					(Complete)	(Cover only)
418LC-3800 AMC	38" x 10" with cam arm	Yes	38 <sup>7</sup> / <sub>8</sub> "	12"	126.0	56.0
418LC-3900 AMC	38" x 18" with cam arm	Yes	38 <sup>7</sup> / <sub>8</sub> "	20"	158.0	56.0
418LC-4400 AMC	44" x 10" with cam arm	Yes	44 <sup>7</sup> / <sub>8</sub> "	12 <sup>1</sup> / <sub>2</sub> "	172.0	89.0
418LC-4500 AMC	44" x 18" with cam arm	Yes	44 <sup>7</sup> / <sub>8</sub> "	20"	188.0	89.0

\*Size: Approximate cover diameter x skirt length

Item Number	Size & Description	Cover Diameter	Weight (lbs)
			(Cover only)
418LC-3812 ACC	38" 418LC replacement cover	38 <sup>7</sup> / <sub>8</sub> "	56.0
418LC-4412 ACC	44" 418LC replacement cover	44 <sup>7</sup> / <sub>8</sub> "	89.0



418LC (38" x 10")

### Construction Details

Cover... Engineered laminate encapsulated with polyurea elastomer  
 Lift lug, handle and pry-plate... Stainless steel  
 Cam assemblies... Nylon and stainless steel  
 Gasket... Polyisoprene rubber  
 Ring... <sup>3</sup>/<sub>16</sub>" Hot rolled angle iron  
 Skirt... 12 gauge hot rolled steel

### Certifications & Listings

Meets H-20 load rating

## 318 Series Manholes

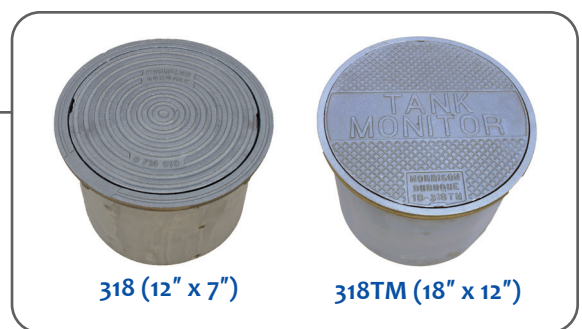
Manholes are designed for use as access ports in driveways where limited access or watertight conditions are not required.

### Features

- **318TM** has "Tank Monitor" cast into cover

Item Number	Size*	Description	Weight (lbs)
318--0100 AM	9" x 7"	Cast iron ring and cover, galvanized steel skirt	15.0
318--0200 AM	12" x 7"	Cast iron ring and cover, galvanized steel skirt	28.0
318--0400 AM	12" x 12"	Cast iron ring and cover, galvanized steel skirt	25.0
318--1100 AM	18" x 12"	Cast iron ring, steel cover, galvanized steel skirt	58.0
318--1200 AM	18" x 18"	Cast iron ring, steel cover, galvanized steel skirt	71.0
318--1300 AM	24" x 18"	Fabricated and painted steel ring, cover, and skirt	104.0
318TM-1100 AM	18" x 12"	Cast iron ring and cover, galvanized steel skirt	65.0
318TM-1200 AM	18" x 18"	Cast iron ring and cover, galvanized steel skirt	79.0

\*Size = diameter x skirt length



318 (12" x 7")

318TM (18" x 12")

### Construction Details

Cover... Cast iron (18" is steel)  
 Ring... Cast iron  
 Skirt... 22 gauge galvanized steel

### Certifications & Listings

Meets H-20 load rating



418 (12" x 7")

418TM (18" x 12")

### Construction Details

- Bolts... Stainless hex head; stainless flat head screws (18" size only)
- Gasket... Buna-N
- Cover... Steel tread plate
- Ring... Cast iron; (24" is steel)
- Skirt... 22 gauge galvanized (12"); 14 gauge (18" & 24")

### Certifications & Listings

Meets H-20 load rating

## 418 Series Limited Access Manholes

Manholes serve as access ports to below grade equipment where water resistance is required.

### Features

- Limited access
- Water-resistant
- Plain cover
- Gasket seal between cover and ring
- **418TM** has "Tank Monitor" cast into cover

Item Number	Size*	Number of Bolts	Weight (lbs)
418--0200 AM	12" x 7"	2	31.0
418--1000 AM	18" x 12"	3	66.0
418--1300 AM	24" x 18"	3	104.0
418TM-1100 AM	18" x 12"	3	72.0

\*Size = diameter x skirt length



## 418XA Series Monitoring Well Manholes

Limited access manholes provide water resistant grade-level access to underground monitoring well equipment.

### Features

- "Monitoring Well" cast into cover
- Large clean-out surface around the bolts
- Locating tab for ease of bolt alignment
- Easy to replace gaskets without tools or glue (7", 9", and 12")
- API 615 equilateral triangle cast into cover

Item Number	Size*	Weight (lbs)
418XA-0500 AM	7" x 10"	8.0
418XA-0900 AM	8" x 12"	15.0
418XA-0100 AM	9" x 7"	17.0
418XA-0400 AM	12" x 12"	30.0
418XA-1000 AM	18" x 12"	75.0

\*Size = diameter x skirt length



418XA

### Construction Details

#### 418XA

- Bolts... Stainless hex head
- Gasket... Buna-N
- Cover... Cast iron
- Ring... Cast iron
- Skirt... 22 gauge galvanized steel

### Certifications & Listings

Meets H-20 load rating

## 519 Watertight Test Well Manhole

Limited access manholes provide grade level access to underground monitoring well equipment when watertight conditions are required.

### Features

- Watertight one-piece cast ring and skirt
- Black triangle on white warning label permanently attached to cover
- "Test Well" permanently cast into cover on 12" models
- "Monitoring Well" permanently cast into cover on 9" models
- Stamp your well identification into the brass identification plate
- Easy to replace gasket installs in cover, no glue required
- Center bolt stays in the cover and includes an o-ring to keep surface water out
- Three-spoke spider provides center point for bolt to evenly tighten down the cover to the ring (spider is easily removeable)
- AMP models include black powder coated finish with white cover

Item Number	Size	Weight (lbs)
519---0100 AM	9"	32.0
519---0200 AM	12"	67.0



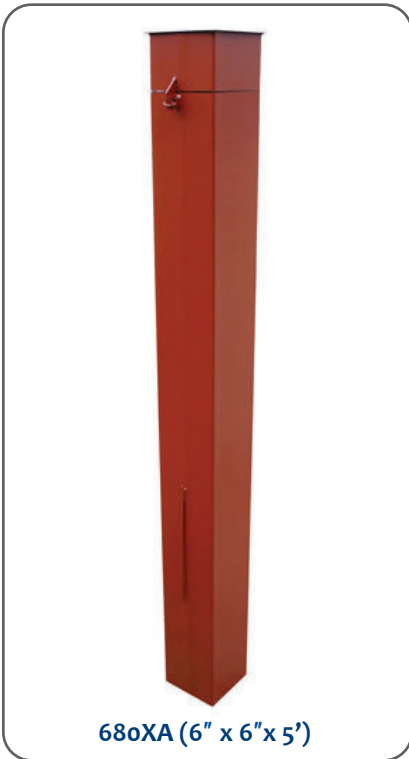
519 (12")

### Construction Details

- Body, ring, and cover... Cast iron
- Gasket and o-ring... Buna-N
- Center spoke... Brass
- Bolt... Stainless steel

### Certifications & Listings

Meets H-20 load requirements



680XA (6" x 6" x 5')

**Construction Details**

Body and cover... Steel, coated with an exterior grade primer

## 680XA Aboveground Well Protector

Aboveground well protectors provide security and weather protection for monitoring wells that extend above grade level.

**Features**

- Hinged cover can be securely locked with a #3 Masterlock®
- Three integral stabilizer rods provided to simplify positioning the unit during installation

Item Number	Size	Wall Thickness (inches)	Weight (lbs)
680XA-4050 AP	4" x 4" x 5'	0.083	23.50
680XA-6050 AP	6" x 6" x 5'	0.125	51.0
680XA-8050 AP	8" x 8" x 5'	0.188	100.0



678XA (2")

**Construction Details**

Body... Nylon (plastic)  
 Wing bolt... Brass  
 Gasket... Buna-N  
 Lock lever... Stainless steel

## 678XA Test Well Plug

The test well plug provides a watertight, tamper-proof seal for monitoring wells.

**Features**

- Fits schedule 40 and .080 wall well casing (4" requires two gaskets for .080 wall)
- Blaze orange increases visibility and is trademark of the Morrison plug
- Individually boxed
- All sizes accommodate a #3 Masterlock® padlock

Item Number	Size	Weight (lbs)
678XA-0000 AC	2"	0.50
678XA-0100 AC	4"	0.95
678XA-0200 AC	6"	1.0



## 178XA Series Test Well Cap & Adaptors

The lockable cap and adaptor are designed for installation on the outside diameter of a 2" or 4" schedule 40 or 80 PVC well casing.

### Features

- Watertight seal
- Lockable
- Easy to install
- "Test Well" cast into cap
- **178XA** serrated adaptor body cannot be removed once installed
- **178XB** threads onto threaded well screen

Item Number	Size	Weight (lbs)
178XA-0100 AC	2"	1.0
178XA-0400 AC	4"	4.60
178XB-0400 AC	4"	4.60



178XA (2")

### Construction Details

Cap... Aluminum  
 Body... Brass  
 Gasket... Buna-N

## 305XA Test Well Cap & Adaptor

The adaptor is designed to install on the outside diameter of a 4" schedule 40 or 80 PVC well casing and is secured in place with three knurled point head set screws.

### Features

- Lockable
- Watertight
- Cam style cap is easy on and off
- Cap is labeled "Test Well No Fill"

Item Number	Size	Weight (lbs)
305XA-0100 AC	4"	2.25



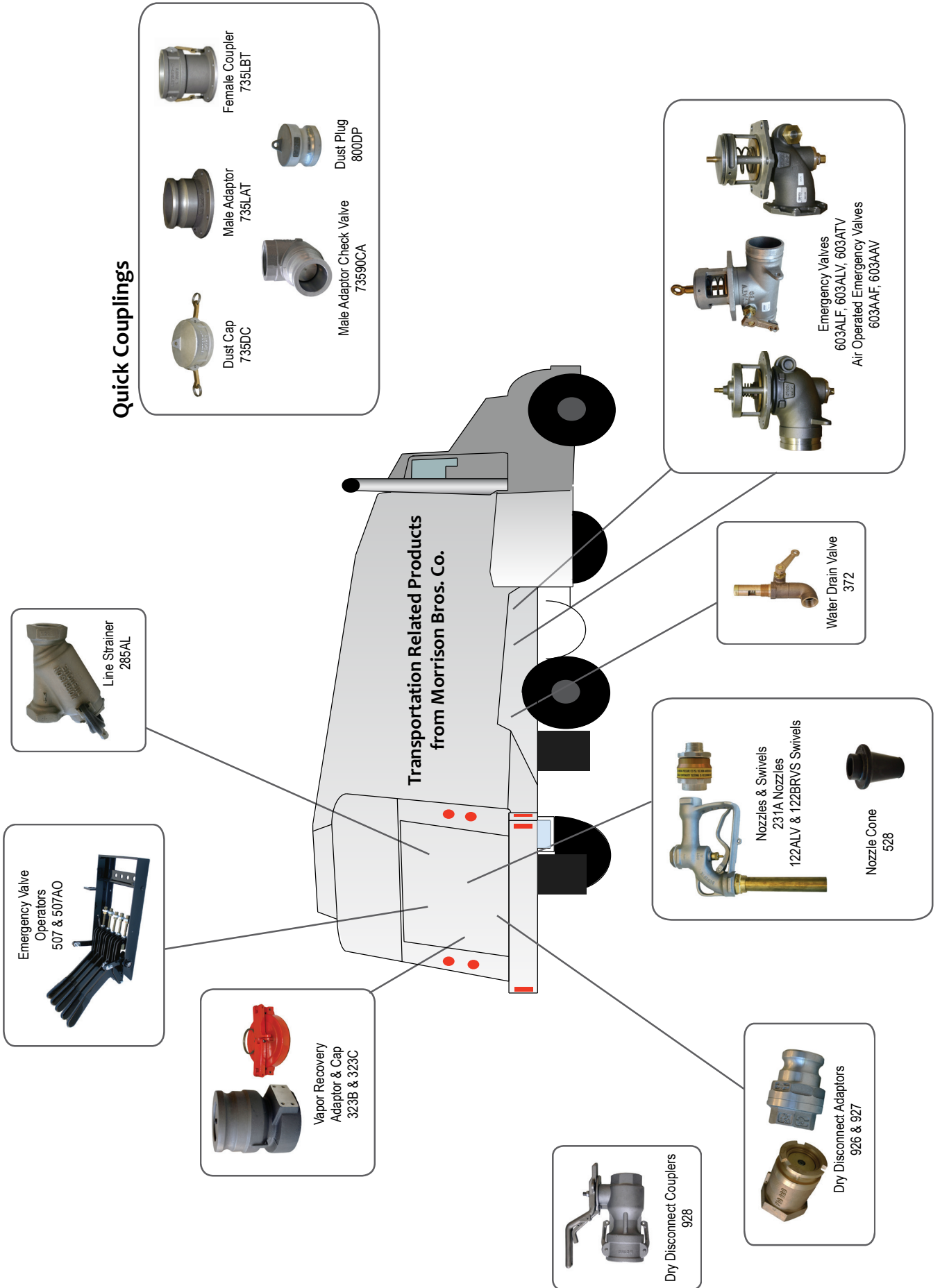
305XA

### Construction Details

Cap... Aluminum  
 Gasket... Buna-N  
 Pins... Stainless steel  
 Ring... Nickel plated steel  
 Adaptor... Aluminum









603ALF (3")

**Construction Details**

Body and cap... Aluminum  
Plunger... Brass  
Discs... Buna-N or FKM  
Spring... Stainless steel

**Options**

2", 3", and 4" inlet screen (20 mesh stainless steel)

## 603 Series Tank Truck Emergency Valves (Manually-Operated)

Tank truck emergency valves provide a safe means of flow control in the outlet of tank truck compartments. The normally-closed valves are manually opened to gravity drop product transported to underground storage tanks.

**Features**

- 90° space saving design
- Easily converted from left hand to right hand operation
- Integrated shear section breaks upon impact, closing the valve and containing the product in the tank
- 250°F fusible plate
- Optional inlet screen keeps debris out of the valve seats
- Optional plunger bail available
- Companion flanges available
- **603ALF** has flanged outlet connection
- **603ALV** has grooved connection

Item Number	Size	Disc	Weight (lbs)
603ALF0100 AV	2"	Buna-N	7.75
603ALF1300 AV	2"	FKM	7.75
603ALF0200 AV	3"	Buna-N	8.25
603ALF1400 AV	3"	FKM	8.25
603ALF0500 AV	4" x 4"	Buna-N	12.50
603ALV0100 AV	2"	Buna-N	7.75
603ALV0700 AV	2"	FKM	7.75
603ALV0300 AV	3"	Buna-N	8.25
603ALV0900 AV	3"	FKM	8.25

*\*Consult Price List for other options.*



603ALC

**Construction Details**

Body and cap... Aluminum  
Plunger... Brass  
Discs... Buna-N  
Screen... 20 mesh stainless steel

## 603ALC Tank Truck Emergency Valve (Manually-Operated)

Tank truck emergency valves provide a safe means of flow control in the outlet of tank truck compartments. The normally-closed valves are manually opened to gravity drop product transported to underground storage tanks.

**Features**

- 90° space saving design with integrated male adaptor outlet
- Integrated shear section breaks upon impact, closing the valve and containing the product in the tank
- 250°F fusible plate
- Inlet screen keeps debris out of the valve seats
- Includes plunger bail
- Male quick disconnect outlet connection
- Dust cap and chain assembly available

Item Number	Size	Weight (lbs)
603ALC0700 AV	2"	7.0

*\*Consult Price List for other options.*



## 603AA Series Tank Truck Emergency Valves (Air-Actuated)

Tank truck emergency valves provide a safe means of flow control of in the outlet of tank truck compartments. The normally-closed valves are opened and closed by compressed air.

### Features

- Field replaceable Bimba® pneumatic cylinder
- Redundant (manual override) jackscrew allows product to be released in the event of an air system failure
- Tapered seat for positive seal
- 212°F fusible port supplied
- 1/8" NPT air ports to accept common size airlines
- Mates with standard TTMA sumps
- **603AAF** has flanged outlet connection
- **603AAV** has grooved connection

Item Number	Size	Disc	Weight (lbs)
603AAF0200 AV	3"	Buna-N	6.18
603AAF1400 AV	3"	FKM	6.18
603AAV0300 AV	3"	Buna-N	7.20
603AAV0900 AV	3"	FKM	7.20

\*Consult Price List for other options.



603AAF (3")



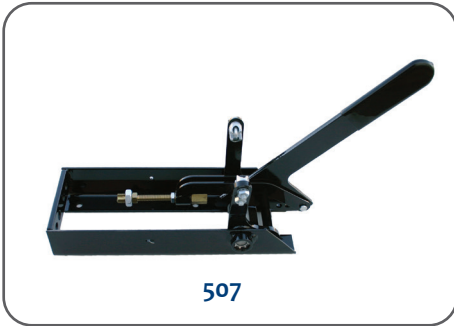
603AAV (4")

### Construction Details

Body and cap... Aluminum  
 Plunger... Brass  
 Discs... Buna-N, FKM, or  
 Fluorosilicone  
 Air cylinder sleeve seals... FKM

### Options

3" and 4" inlet screen (20 mesh stainless steel)



507

**Construction Details**

Frame and levers... Steel (powder coated black)  
Shaft... Plated steel

## 507 Tank Truck Emergency Valve Operator

The lever action mechanically operates these spring-loaded emergency valves.

**Features**

- 210°F fusible plates
- Adjustable cable positions 1<sup>5</sup>/<sub>8</sub>" or 2<sup>3</sup>/<sub>8</sub>"
- Threaded take-up for adjustment cable
- Accepts cable up to <sup>3</sup>/<sub>16</sub>" diameter
- Remote trip lever closes all open valves with a single movement from a remote location (near vehicle cab)

Item Number	Size	Weight (lbs)
507---0500 AO	5 compartment	15.0



203 (1 1/2")

**Construction Details**

Body... Brass  
Plunger... Brass  
Spring... Stainless steel  
Disc... FKM or PTFE  
Handle... Ductile iron

## 203 Threaded Emergency Valve

The 203 series valves are straight body style tank truck emergency valves.

**Features**

- Integrated shear section breaks upon impact, closing the valve containing the product in the tank

Item Number	Size	Disc	Weight (lbs)
203---0400 AV	1 1/2"	FKM	6.50



## 372 Water Drain Valve

Designed for use on tank trucks, the Morrison 372 allows water to be drained from the bottom of the tank.

### Features

- Normally closed
- Manually operated
- Quick opening
- 90° design

Item Number	Size	Discs	Weight (lbs)
372--0100 AV	1" x 1"	Buna-N	2.50
372--0200 AV	1" x 1"	FKM	2.50



372 (1")

### Construction Details

Body and plunger... Brass  
O-Ring... FKM  
Discs... Buna-N, FKM option

## 235RF Flanged Aluminum Gate Valve

The Morrison 235RF is a lightweight aluminum rising stem gate valve used to provide flow control in fuel and water systems.

### Features

- Lightweight design for transportation
- 125 PSI WOG rated
- TTMA flanges
- Quick rising stem
- Open/closed directional arrow cast into hand-wheel
- Valve can be left partially open to control flow rate
- Available in various manifold configurations

Item Number	Size	Weight (lbs)
235RF-0200 AVA	4"	17.0
235RF-0300 AVA	6"	35.0



235RF (4")

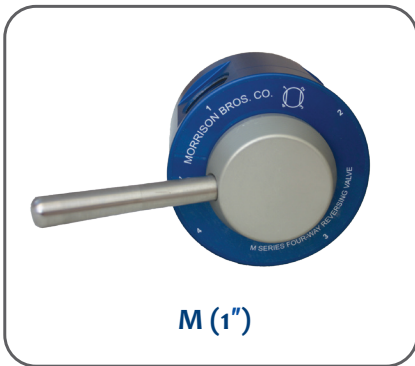
### Construction Details

Body... Anodized aluminum  
Bonnet... Anodized aluminum  
Stem... Brass  
Discs... Brass

### Certifications & Listings

Meets US Military CID-A-A-59379





## M Series Four-Way Reversing Valves

The M series is a directional flow control valve used to simplify the transfer of used oil to and from containers and lube trucks.

### Features

- Unrestricted flow
- Simplifies installations by eliminating the need for multiple valves and pumps
- Two positions—"fill tank" or "empty tank"—for easy operation
- Four threaded mounting holes ( $5/16$ "") for flush mount installation
- 200 PSI maximum working pressure

### Construction Details

Body and spool... Anodized aluminum  
 O-Ring... FKM  
 Hardware... Stainless steel

Item Number	Number of Ports	Thread Size	Weight (lbs)
M075--0100 AVAS	4	3/4" FNPT Ports	6.50
M100--0100 AVAS	4	1" FNPT Ports	6.50
M1150-0100 AVAS	4	1 1/2" FNPT Ports	6.0
M200--0100 AVAS	4	2" FNPT Ports	6.0



## 207DI Tank Car Coupling

A tank car coupling provides an offloading connection for rail cars.

### Features

- 5 1/4 -4" threads mate to rail car outlet
- Spanner wrench available
- 30° design

### Construction Details

Body... Ductile iron  
 Nut... Ductile iron  
 Wrench... Steel  
 Gasket... Buna-N

Item Number	Outlet Size	Wrench	Weight (lbs)
207DI-0300 AC	3" NPT	Yes	5.25
207DI-0700 AC	3" NPT	No	5.75



## 449SS Series Provers (Test Measure)

Test measures provide an accurate standard of comparison for verifying the metered output of liquid dispensing equipment.

### Features

- 5-gallon capacity with easy-to-read graduated neck (½ cubic inch increments)
- Calibrated to the latest OIML R-120, API and NIST handbook 105-3 standards
- Concave bottom prevents distortion

### Accessories

- Carrying cases help maintain both the integrity and cleanliness of test measures during moving and storage
- Fits either a 5-gallon or 20-liter test measure

Item Number	Capacity	Description	Weight (lbs)
449SS-0500 1M	5 gal	Test measure	18.0
449SSC1500 1K	5 gal	Test measure with case	28.0
449SSLM2000 1M	20 liter	Test measure	--
449--0300 1C	--	Carrying case	--

*\*Consult Customer Service for other options including a model for the state of Hawaii.*



449SS ( 5 gallon)

### Construction Details

All models of 449 series provers are made of 300 series stainless steel

### Certifications & Listings

Built and calibrated to the latest OIML R-120, API and NIST handbook 105-3 standards

## 449CVR Series Measurement Canada Provers

Test measures provide an accurate standard of comparison for verifying the metered output of liquid dispensing equipment.

### Features

- Equipped with a high resolution 3" neck with reducer
- 20-liter capacity
- Used with a mating vapor retention funnel to minimize vapor loss during testing

Item Number	Capacity	Description	Weight (lbs)
449CVRF000 1F	20 liter	Extra tall funnel	22.0
449CVRF020 1F	20 liter	Funnel	14.0
449CVRP200 1M	20 liter	Test measure	20.0

### NOTE

The Funnel and Prover must be used together to meet Measurement Canada Requirements.

### NOTE

This equipment has been evaluated by Measurement Canada for accuracy performance when used to perform inspection of gasoline or diesel related fuel dispensers. The evaluation of equipment includes repeatability, linearity and stability. This equipment has been evaluated and approved to be used in lieu of closed loop testing equipment to reduce vapor loss effects while testing gasoline systems.



449CVRF (20 liter)

### Construction Details

Funnel... Stainless steel with copper spout

All models of 449 series provers are made of 300 series stainless steel

### Certifications & Listings

Measurement Canada recognized for retail fuel dispenser test equipment



**449SD ( 5 gal)**

**Construction Details**

All models of 449 series provers are made of 300 series stainless steel  
 Funnel... Stainless steel

**Certifications & Listings**

Built and calibrated to the latest OIML R-120, API and NIST handbook 105-3 standards

**449SD Series  
 Provers (Test Measure for DEF)**

Test measures provide an accurate standard of comparison for verifying the metered output of Diesel Exhaust Fluid (DEF).

**Features**

- 5-gallon capacity
- Includes a DEF magnetic misfilling prevention device
- Complies with an independent laboratory study for DEF Protocol 654001.001.027.00
- Specifically labeled for DEF to avoid cross contamination with other liquids

Item Number	Size	Description	Weight (lbs)
449SD-0500 1F	--	Funnel with DEF spout	28.0
449SD-0500 1M	5 gal	Test measure	--
449SDM0500 1P	--	Misfilling device	--

*\*Consult Customer Service for other options.*



**490A**

**490 Series  
 Water Indicating Paste**

Used to find water level in gasoline, jet fuels, fuel oils, oils, and many solvents. Intersection line between white and red indicates water line in tank (12 per box).

Item Number	Size	Weight (oz)
490A--0100 1P	1 oz tube	2.0



**607S**

**607S  
 Spacer Spool**

TTMA flange-to-flange adaptor is used with API flanged couplers and adaptors.

**Features**

- 6" face to face

**Construction Details**

Body... Cast aluminum

Item Number	Size	Weight (lbs)
607S--0401 MC	4" x 4"	6.70





## Product Compatibility

Item Number and Description	≤ E-85	Biodiesel ≤ B100	R99	DEF	Ethanol (E100) & Methanol
076S/076DI Expansion relief valve	x	x	x		
078DI Expansion relief valve	x	x	x		x
122ALV Hose nozzle swivel (with FKM)	x	x	x		
128DIS Frost proof drain valve	x	x	x		x
155 Double outlet vent	x	x	x		
184 Series bushings	x	x	x		x
184S Series bushings	x	x	x	x	x
184S Series pipe plugs	x	x	x	x	x
200S Anodized farm nozzle	x	x	x		
222DEF Hose swivel	x	x	x	x	
244 Series EVR emergency vents	x	x	x		
245 Series emergency vents	x	x	x		
246ADI/246DRF Series swing check valves (without expansion relief)	x	x	x		x
272DI/272HDI Series internal emergency valves	x	x	x		x
284S Line strainers	x	x	x	x	x
285 Line strainers (with PTFE)	x	x	x		x
285DI Line strainers	x	x	x		x
305C Cap (2" and 4")	x	x	x		
305XPA1100AKEVR Tank monitor cap and adaptor kit	x		x		
318L Lightweight manholes	x	x	x	x	x
323 Adaptor (with FKM)	x	x	x		
323C/323C EVR Cap	x	x	x		
346DI/346FDI/346SS Series external emergency valves	x	x	x		x
351S Flame arrester	x		x		
352 Flame arrester	x	x	x		
354 Updraft vents	x	x	x		
354T Updraft vents	x	x	x	x	x
418LC Lightweight manholes	x	x	x	x	x
434 Dispenser pedestals	x	x	x		
446 Emergency shut-off valve	x	x	x		x
449SS Test measure provers	x	x	x		x
449SD Test measure provers			x	x	
464 Gauging tapes and plumb bobs (stainless steel models)	x	x	x	x	x
515 Series spill container	x	x	x		
515SD Remote spill container	x	x	x	x	x
516 Series spill container	x	x	x		x
517 Series spill container	x	x	x		x
518 Series spill container	x	x	x		x
539 Diffusers		x	x		
539 Passivated diffusers	x	x	x		
560/561/562/563 Series extractors	x	x	x		
602DEF Automatic nozzles			x	x	
609DEF Breakaway			x	x	



## Product Compatibility

Item Number and Description	≤ E-85	Biodiesel ≤ B100	R99	DEF	Ethanol (E100) & Methanol
610/610X Hose retriever	X	X	X	X	X
635 Offset adaptor	X	X	X		X
636DEF Shear valve			X	X	
646 Wafer check valve	X	X	X		X
691BSS Series locking ball valves	X	X	X	X	X
691FS Flanged Ball Valve	X	X	X	X	X
710SS Series (¾"-2") Solenoid valves for anti-siphon protection	X	X	X	X	X
710SS Series (3") Solenoid valves for anti-siphon protection	X	X	X		
715 Remote fill box	X* with SS component	X	X		
715S Remote fill box	X	X	X	X	X* with SS component
718 Liquid level gauge (models with gasoline float)	X	X	X		
73590CA Check valve adaptor	X	X	X		
748 Series pressure vacuum vents	X	X	X		
749 Series pressure vacuum vents	X	X	X		
749T Pressure vacuum vent	X	X	X	X	X
800DCS Dust caps	X	X	X	X	X
818 Clock gauge	X	X	X		
818FT/818T Clock gauge	X	X	X	X	X
910 Anti-siphon valve	X	X	X		
912 Anti-siphon valve	X	X	X	X	X
918 Clock gauge with alarm	X	X	X		
918AC/S/D/Q/SB Overfill alarm	X	X	X	X	X
918FT/918T Clock gauge with alarm	X	X	X	X	X
918TCP Overfill alarm	X	X	X		
918TCPS Tank alarm	X	X	X	X	X
922 Combination vent/overfill alarm	X	X	X		
924S Adjustable level sensor	X	X	X	X	
925S Multi-level sensor	X	X	X	X	
927 Dry disconnect adaptor (2" only)	X	X	X		
927S Dry disconnect adaptor	X	X	X		X
928S Dry disconnect coupler	X	X	X		X
934 Single poppet foot valve with expansion relief	X	X	X		X
948A Pressure vacuum vent	X	X	X		
958 In-line check valve (½"-1")	X	X	X	X	X
1218 Electronic tank gauge	X	X	X		
1518/1519 Mechanical tank top gauge	X	X	X		
1618/1619 Mechanical vertical tank gauge	X	X	X		
9095AA Overfill prevention valve	X	X	X		
9095AM Overfill prevention valve	X	X	X		X
9095C Overfill prevention valve	X	X	X		
9095DS Overfill prevention valve		X	X		
9095SS Overfill prevention valve †		X	X	X	
9095SA Overfill prevention valve †		X	X		
9095X Overfill prevention valve	X	X	X		

† Cannot be used with a drop tube.  
Do not select these valves if your fuel requires a drop tube.





## EVR Approved Products

Item Number	Size & Description
184--0000 1B	1½" x ¾" x ¾" Double tapped bushing
184--0110 1B	1½" x ½" x ½" Double tapped bushing
184--0120 1B	1¼" x 1" x 1" Double tapped bushing
184--0130 1B	1½" x 1" x 1" Double tapped bushing
184--0100 1B	2" x ¾" x ¾" Double tapped bushing
184--0200 1B	2" x ½" x ½" Double tapped bushing
184--0300 1B	2" x ¾" x ¾" Double tapped bushing
184--0400 1B	2" x 1" x 1" Double tapped bushing
184--0500 1B	2" x 1¼" x 1¼" Double tapped bushing
184--0600 1B	2" x 1½" x 1½" Double tapped bushing
184--0800 1B	2½" x 1¼" x 1¼" Double tapped bushing
184--0900 1B	2½" x 1½" x 1½" Double tapped bushing
184--1000 1B	2½" x 2" x 2" Double tapped bushing
184--1100 1B	3" x 1" x 1" Double tapped bushing
184--1200 1B	3" x 1¼" x 1¼" Double tapped bushing
184--1300 1B	3" x 1½" x 1½" Double tapped bushing
184--1400 MB	3" x 2" x 2" Double tapped bushing
184--1500 1B	3" x 2½" x 2½" Double tapped bushing
184--2200 MB	4" x 1" x 1" Double tapped bushing
184--2300 MB	4" x 1¼" x 1¼" Double tapped bushing
184--2400 MB	4" x 1½" x 1½" Double tapped bushing
184--2500 MB	4" x 2" x 2" Double tapped bushing
184--2600 1B	4" x 2½" x 2½" Double tapped bushing
184--2700 MB	4" x 3" x 3" Double tapped bushing
184S--0200 MB	2" x ½" x ½" Double tapped bushing, stainless steel
184S--0300 MB	2" x ¾" x ¾" Double tapped bushing, stainless steel
184S--0400 MB	2" x 1" x 1" Double tapped bushing, stainless steel
184S--0500 MB	2" x 1½" x 1½" Double tapped bushing, stainless steel
184S--2100 MB	4" x ¾" x ¾" Double tapped bushing, stainless steel
184S--2200 MB	4" x 1" x 1" Double tapped bushing, stainless steel
184S--2400 MB	4" x 1½" x 1½" Double tapped bushing, stainless steel
184S--2500 MB	4" x 2" x 2" Double tapped bushing, stainless steel
184S--2700 MB	4" x 3" x 3" Double tapped bushing, stainless steel
244O--0400AVEVR	6" 16oz./sq.in. Emergency vent, female thread
244O--0600AVEVR	8" 8oz./sq.in. Emergency vent, female thread
244O--0700AVEVR	8" 16oz./sq.in. Emergency vent, female thread
244OS-0170AVEVR	4" 16oz./sq.in. Emergency vent, female thread, with screen
244OS-0900AVEVR	5" 16oz./sq.in. Emergency vent, female thread, with screen
244OS-0200AVEVR	6" 8oz./sq.in. Emergency vent, female thread, with screen
244OS-0400AVEVR	6" 16oz./sq.in. Emergency vent, female thread, with screen
244OS-0600AVEVR	8" 8oz./sq.in. Emergency vent, female thread, with screen
244OS-0700AVEVR	8" 16oz./sq.in. Emergency vent, female thread, with screen
244OMA0030AVEVR	2" 16oz./sq.in. Emergency vent, male thread
244OM-0060AVEVR	3" 16oz./sq.in. Emergency vent, male thread
244OM-0170AVEVR	4" 16oz./sq.in. Emergency vent, male thread

Item Number	Size & Description
244OM-0900AVEVR	5" 16oz./sq.in. Emergency vent, male thread
244OM-0200AVEVR	6" 8oz./sq.in. Emergency vent, male thread
244OM-0400AVEVR	6" 16oz./sq.in. Emergency vent, male thread
244OM-0600AVEVR	8" 8oz./sq.in. Emergency vent, male thread
244OM-0700AVEVR	8" 16oz./sq.in. Emergency vent, male thread
244OMAS030AVEVR	2" 16oz./sq.in. Emergency vent, male thread, with screen
244OMS0060AVEVR	3" 16oz./sq.in. Emergency vent, male thread, with screen
244OMS0170AVEVR	4" 16oz./sq.in. Emergency vent, male thread, with screen
244OMS0900AVEVR	5" 16oz./sq.in. Emergency vent, male thread, with screen
244OMS0200AVEVR	6" 8oz./sq.in. Emergency vent, male thread, with screen
244OMS0400AVEVR	6" 16oz./sq.in. Emergency vent, male thread, with screen
244OMS0600AVEVR	8" 8oz./sq.in. Emergency vent, male thread, with screen
244OMS0700AVEVR	8" 16oz./sq.in. Emergency vent, male thread, with screen
244OF-0170AVEVR	4" 16oz./sq.in. Emergency vent, flanged
244OF-0050AVEVR	6" 8oz./sq.in. Emergency vent, flanged
244OF-0075AVEVR	6" 16oz./sq.in. Emergency vent, flanged
244OF-0100AVEVR	8" 8oz./sq.in. Emergency vent, flanged
244OF-0200AVEVR	8" 16oz./sq.in. Emergency vent, flanged
244OF-0400AVEVR	10" 8oz./sq.in. Emergency vent, flanged
244OF-0500AVEVR	10" 16oz./sq.in. Emergency vent, flanged
305---0000AAEVR	2" Adaptor, brass
305C--2000ACEVR	2" Cap, aluminum (anodized)
305GSP2000AKEVR	2" Cap/adaptor kit, anodized aluminum/brass
305---0000AAEVR	2" Monitoring adaptor, brass
305XP-2200ACEVR	2" Monitoring cap with ¾" hole & ¾" cable connector
305XP-2400ACEVR	2" Monitoring cap with ½" hole & ½" cable connector
305XPA2200AKEVR	2" Monitoring cap/adaptor kit with ¾" hole & cable connector
305XPA2400AKEVR	2" Monitoring cap/adaptor kit with ½" hole & cable connector
305---0200AAEVR	4" Monitoring adaptor, brass
305XP-0200ACEVR	4" Monitoring cap with ¾" hole & ¾" cable connector
305XP-0100ACEVR	4" Monitoring cap with ¾" hole
305XP-1100ACEVR	4" Monitoring cap with ½" hole
305XP-1200ACEVR	4" Monitoring cap with ½" hole & ½" cable connector
305XPA0100AKEVR	4" Monitoring cap/adaptor kit with ¾" hole
305XPA1100AKEVR	4" Monitoring cap/adaptor kit with ½" hole
305XPA0200AKEVR	4" Monitoring cap/adaptor kit with ¾" hole & cable connector
305XPA1200AKEVR	4" Monitoring cap/adaptor kit with ½" hole & cable connector
323---0300AAEVR	4" x 3" Vapor adaptor, aluminum (4" vapor, 3" riser thd.)
323---0400AAEVR	4" x 4" Vapor adaptor, aluminum
323C--0100ACEVR	4" Vapor recovery cap
419---02041TEVR	2" x 4' Aluminum drop tube
419---02061TEVR	2" x 6' Aluminum drop tube
419---02121TEVR	2" x 12' Aluminum drop tube
419---03101TEVR	3" x 10' Aluminum drop tube



Item Number	Size & Description
419--03121TEVR	3" x 12' Aluminum drop tube
419A--02041TEVR	2" x 4' Anodized aluminum drop tube
419A--02061TEVR	2" x 6' Anodized aluminum drop tube
419A--02121TEVR	2" x 12' Anodized aluminum drop tube
419A--03101TEVR	3" x 10' Anodized aluminum drop tube
419A--03121TEVR	3" x 12' Anodized aluminum drop tube
516O--0400ACEVR	4" 5 Gallon direct fill spill container, 4" offset female thread
516MO-0400ACEVR	4" 5 Gallon direct fill spill container, 4" offset male thread
539AS-0200ADEV	2" AST diffuser, slip-on
539AS-0300ADEV	3" AST diffuser, slip-on
539ASA0200ADEV	2" AST diffuser, slip-on (passivated)
539ASA0300ADEV	3" AST diffuser, slip-on (passivated)
539AT-0200ADEV	2" AST diffuser, threaded
539AT-0300ADEV	3" AST diffuser, threaded
539ATA0200ADEV	2" AST diffuser, threaded (passivated)
539ATA0300ADEV	3" AST diffuser, threaded (passivated)
560--0101 MBE	4" x 4" x 2" x 2" Extractor body
561--0101 MBE	4" x 4" x 2" Extractor body
562--0101 MBE	4" x 4" x 3" x 2" Extractor body
563--0101 MBE	4" X 4" X 3" Extractor body
735DC-2000ACEVR	2" Cap, aluminum
735DC-2500ACEVR	2½" Cap, aluminum
735DC-3000ACEVR	3" Cap, aluminum
735DC-4000ACEVR	4" Cap, aluminum
735DCA2000ACEVR	2" Cap, aluminum (anodized)
735DCA2500ACEVR	2½" Cap, aluminum (anodized)
735DCA3000ACEVR	3" Cap, aluminum (anodized)
735DCA4000ACEVR	4" Cap, aluminum (anodized)
818--0100AGEVR	2" Clock gauge, with standard float
818--0400AGEVR	2" Clock gauge, with drop tube float
818F--0100AGEVR	2" Clock gauge, female thread, with standard float
818F--0400AGEVR	2" Clock gauge, female thread, with drop tube float
818MEF0100AGEVR	2" Clock gauge, female thread, metric, with standard float
818MEF0400AGEVR	2" Clock gauge, female thread, metric, with drop tube float
818MET0100AGEVR	2" Clock gauge, metric, with standard float
818MET0400AGEVR	2" Clock gauge, metric, with drop tube float
818C--0100AGEVR	2" Gauge without custom face, with standard float
818C--0400AGEVR	2" Gauge without custom face, with drop tube float
818CF-0100AGEVR	2" Gauge w/o custom face, female thread, w/ standard float
818CF-0400AGEVR	2" Gauge w/o custom face, female thread, w/ drop tube float
918--0000AGEVR	2" Clock gauge without alarm, with standard float
918--2000AGEVR	2" Clock gauge without alarm, with drop tube float
918F--0000AGEVR	2" Clock gauge w/o alarm, female thread, w/ standard float
918F--2000AGEVR	2" Clock gauge w/o alarm, female thread, w/ drop tube float

Item Number	Size & Description
918MEF0000AGEVR	2" Clock gauge without alarm, female thread, metric with standard float
918MEF2000AGEVR	2" Clock gauge without alarm, female, metric, with drop tube float
918MET0000AGEVR	2" Clock gauge without alarm, metric, with standard float
918MET2000AGEVR	2" Clock gauge without alarm, metric, with drop tube float
918C--0000AGEVR	2" Clock gauge w/o custom face, w/o alarm, standard float
918C--2000AGEVR	2" Clock gauge w/o custom face, w/o alarm, drop tube float
918CF-0000AGEVR	2" Clock gauge w/o custom face, w/o alarm, female thread
918CF-2000AGEVR	2" Clock gauge w/o custom face, w/o alarm, female thread, drop tube float
927---0200AAEVR	2" Thread (2.5" cam-and-groove) dry disconnect adaptor (anodized aluminum)
927---0300AAEVR	3" Thread (4" cam-and-groove) dry disconnect adaptor (anodized aluminum)
927---0400AAEVR	4" Thread (4" cam-and-groove) dry disconnect adaptor (anodized aluminum)
928---0150ACEVR	1½" Thread (2" cam-and-groove) dry disc. coupler, alum.
928---0200ACEVR	2" Thread (2½" cam-and-groove) dry disc. coupler, alum.
928---0300ACEVR	3" Thread (4" cam-and-groove) dry disc. coupler, alum.
9095A-9200AVEVR	2" OPV base model, less top connection
9095A-9300AVEVR	3" OPV base model, less top connection
9095A-5200AVEVR	2" Direct fill OPV with 2" dry disconnect x 4" female thread adaptor
9095A-3200AVEVR	2" Remote fill OPV with 2" x 4" female thread bushing
9095A-4200AVEVR	2" Remote fill OPV with 3" x 4" female thread bushing
9095A-3300AVEVR	3" Remote fill OPV with 3" x 6" female thread bushing
9095AV9200AVEVR	2" OPV nickel plated base model, less top connection
9095AV9300AVEVR	3" OPV nickel plated base model, less top connection
9095AV5200AVEVR	2" Direct fill OPV nickel plated with 2" dry disc. x 4" female thread adaptor
9095AV3200AVEVR	2" Remote fill OPV nickel plated with 2" x 4" female thread bushing
9095AV4200AVEVR	2" Remote fill OPV nickel plated with 3" x 4" female thread bushing
9095AV3300AVEVR	3" Remote fill OPV nickel plated with 3" x 6" female thread bushing
9095AA9300AVEVR	3" OPV anodized aluminum base model, less top connection
9095AA3300AVEVR	3" Remote fill OPV anodized aluminum with 3" x 6" female thread bushing
9095C-9100AVEVR	2" OPV base model (for low profile tanks)
9095C-9200AVEVR	2" OPV base model
9095C-5200AVEVR	2" Direct fill OPV with 2" dry disconnect x 4" female thread adaptor
9095C-3200AVEVR	2" Remote fill OPV with 2" x 4" female thread bushing
9095CA3200AVEVR	2" Remote fill OPV with 2" x 4" female thread bushing (fuels with S.G. less than 0.72)
9095CA9200AVEVR	2" OPV base model (fuels with S.G. less than 0.72)
9095CA5200AVEVR	2" Direct fill OPV with 2" dry disconnect x 4" female thread adaptor (fuels with S.G. less than 0.72)



## C.A.R.B. Approved Products

All of our products listed below have been tested and approved by the California Air Resources Board (CARB). The number following the product description is the C.A.R.B. approval number.

Item Number	Description	C.A.R.B. #
305	4" Top seal adaptor	89-12
305C	4" Top seal cap	89-12
305L Series	Top seal adaptor	89-12
317	2" Float vent valves	90-09
323	4" Vapor recovery adaptors	91-12
323C	4" Vapor recovery cap	89-12
354	1½" and 2" Updraft vent	89-12
405	4" Side seal adaptor	89-12
405C	4" Side seal cap	89-12
419	3" and 4" Drop tubes	95-19
560	Extractor fitting	90-09
561	Extractor fitting	90-09
562	Extractor fitting	90-09
563	Extractor fitting	95-43
578	4" Extractor pipe cap	89-12
749CRB0500 AV	Pressure/vacuum vent (8 oz./sq. in.)	95-14-A
749CRB0600 AV	Pressure/vacuum vent (3" water column)	95-15-A
749CRBS0500 AV	Pressure/vacuum vent (8 oz./sq. in.)	96-20
749CRBS0600 AV	Pressure/vacuum vent (3" water column)	96-19

## UL 2583 Listed Products

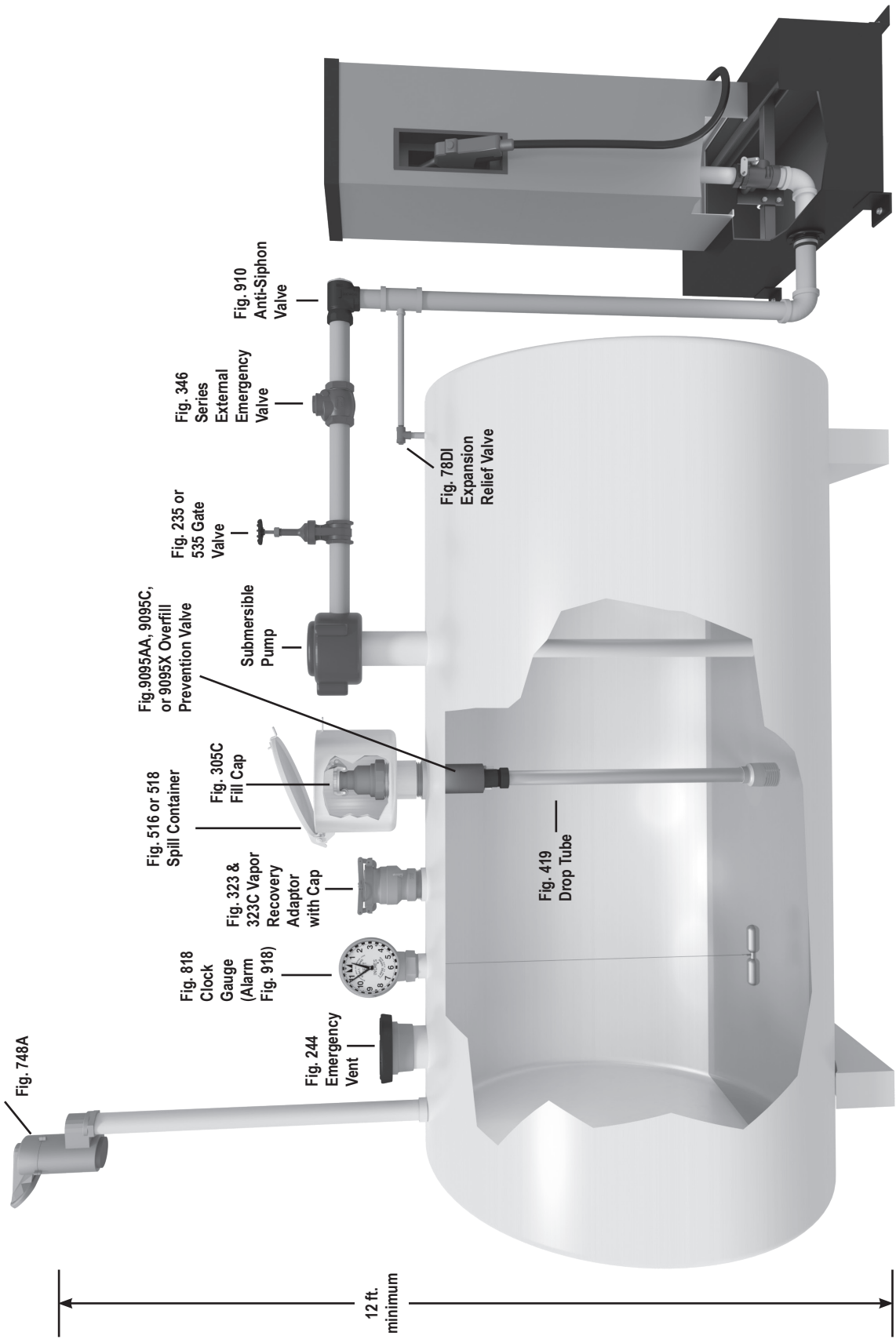
UL 2583 was released in 2011 and becomes effective December 30, 2013. This listing covers requirements for mechanical type accessories that are typically intended for attachment to fuel storage tanks or their connecting pipes in fueling system applications.

Item Number	Description
244 Series	Emergency vents (10 inch 2.5oz vent is UL Listed, but NOT Listed to UL 2583)
245 Series	Lightweight emergency vents
948A--0200 AV	2" Pressure vacuum vent (2½"-6" WC pressure)



# Aboveground Fuel Storage - Pressure System

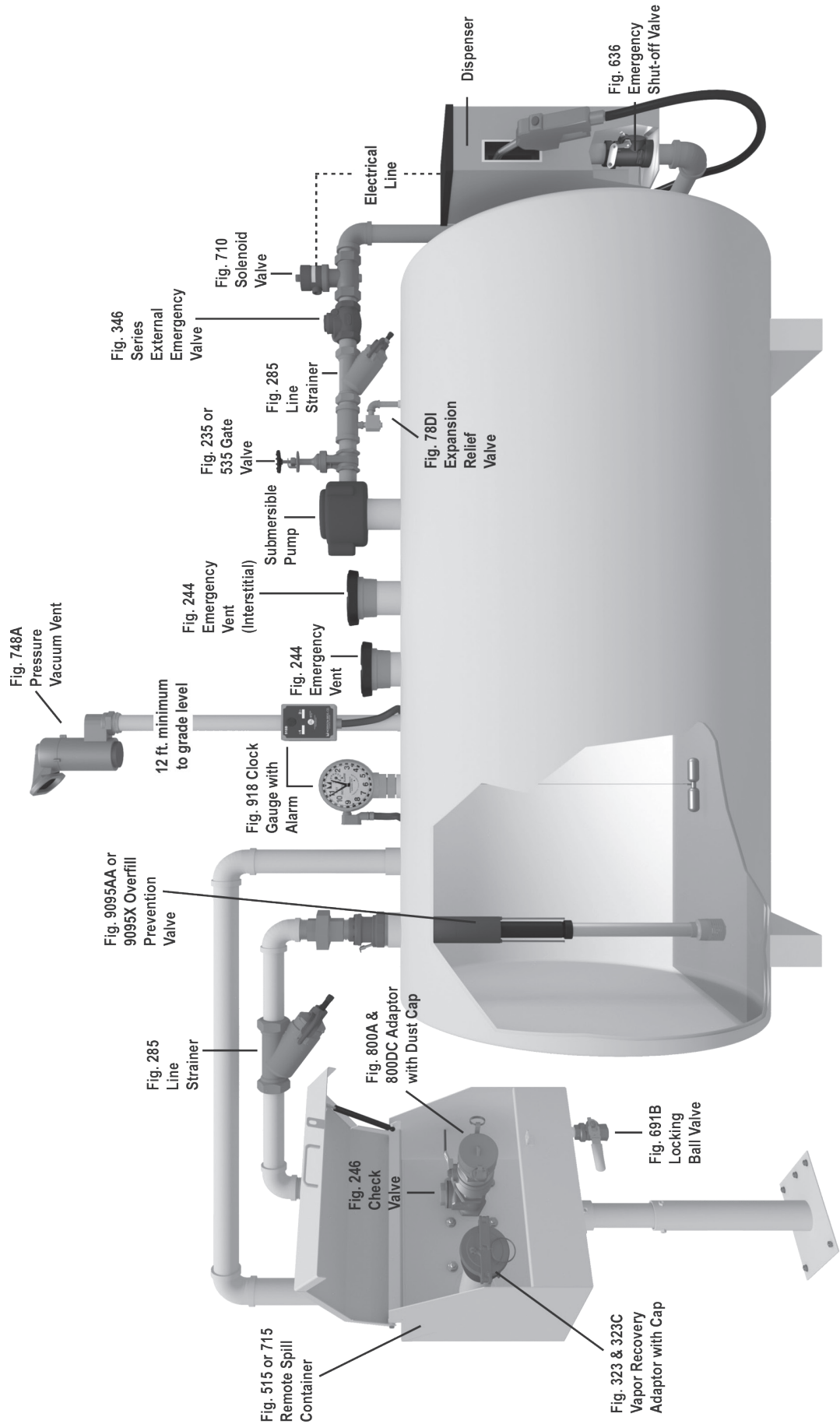
Horizontal cylindrical tank with top fill and remote dispenser





# Aboveground Fuel Storage - Pressure System

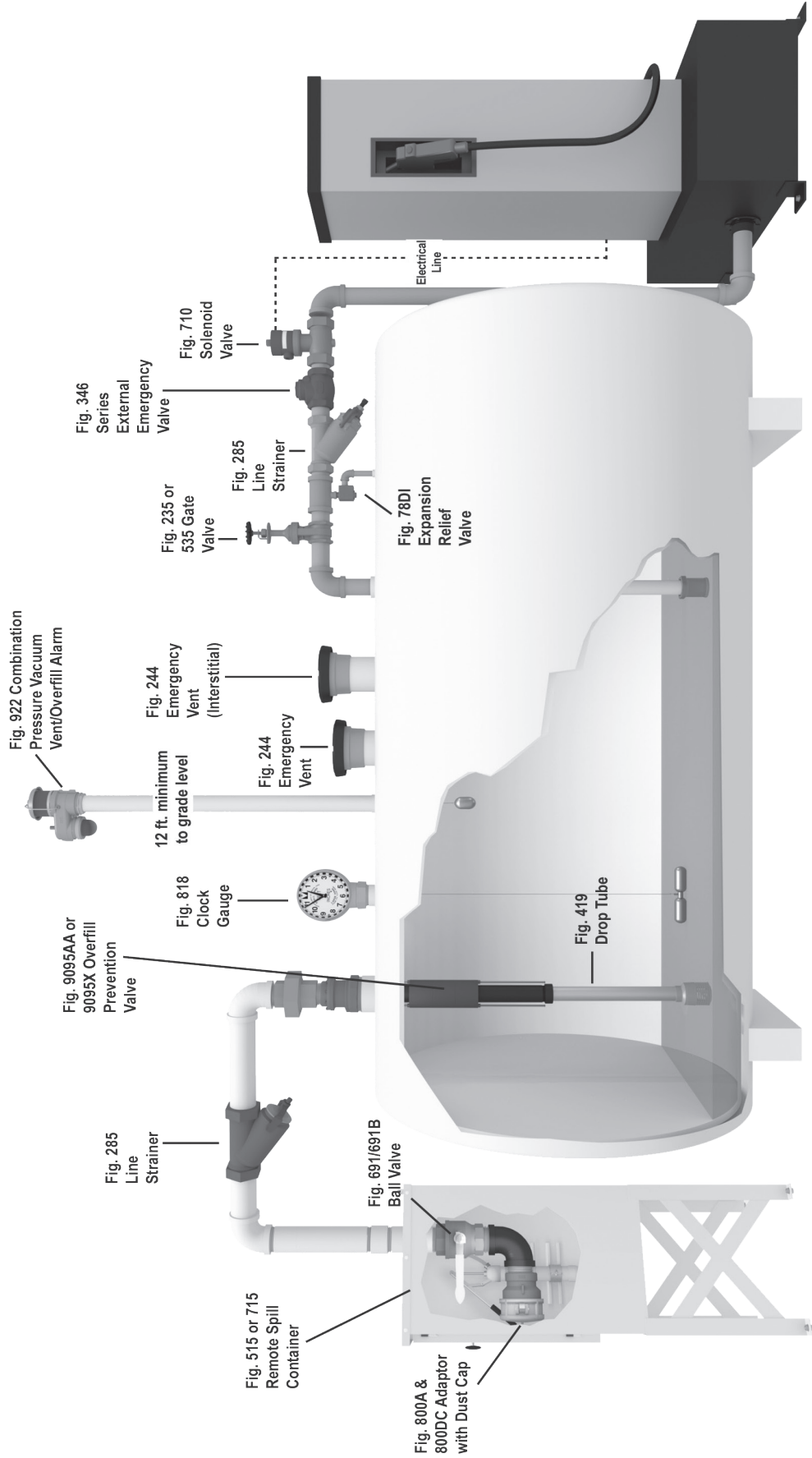
Horizontal double-wall tank with remote fill and side mounted dispenser





# Aboveground Fuel Storage - Suction System

Horizontal double-wall tank with remote fill and remote pump

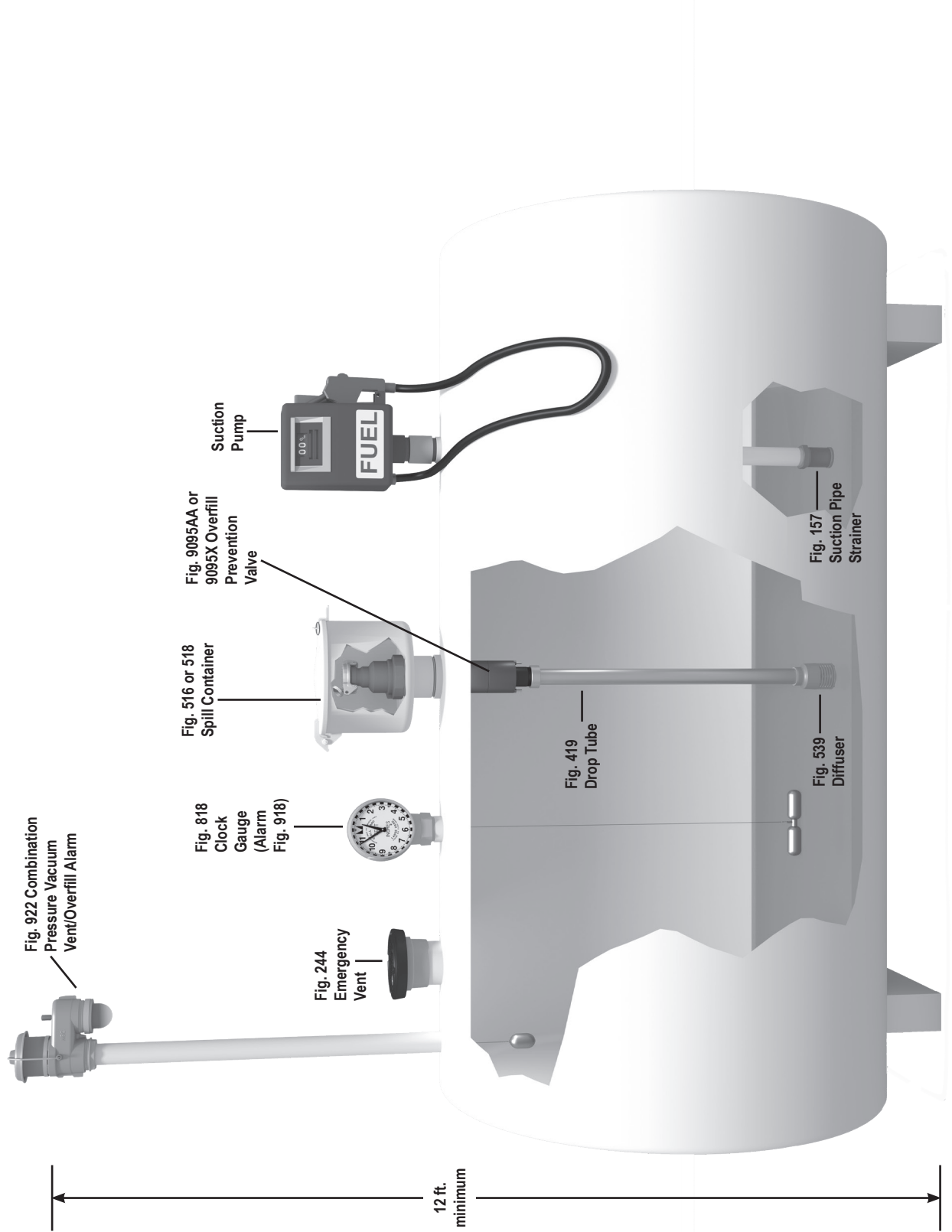






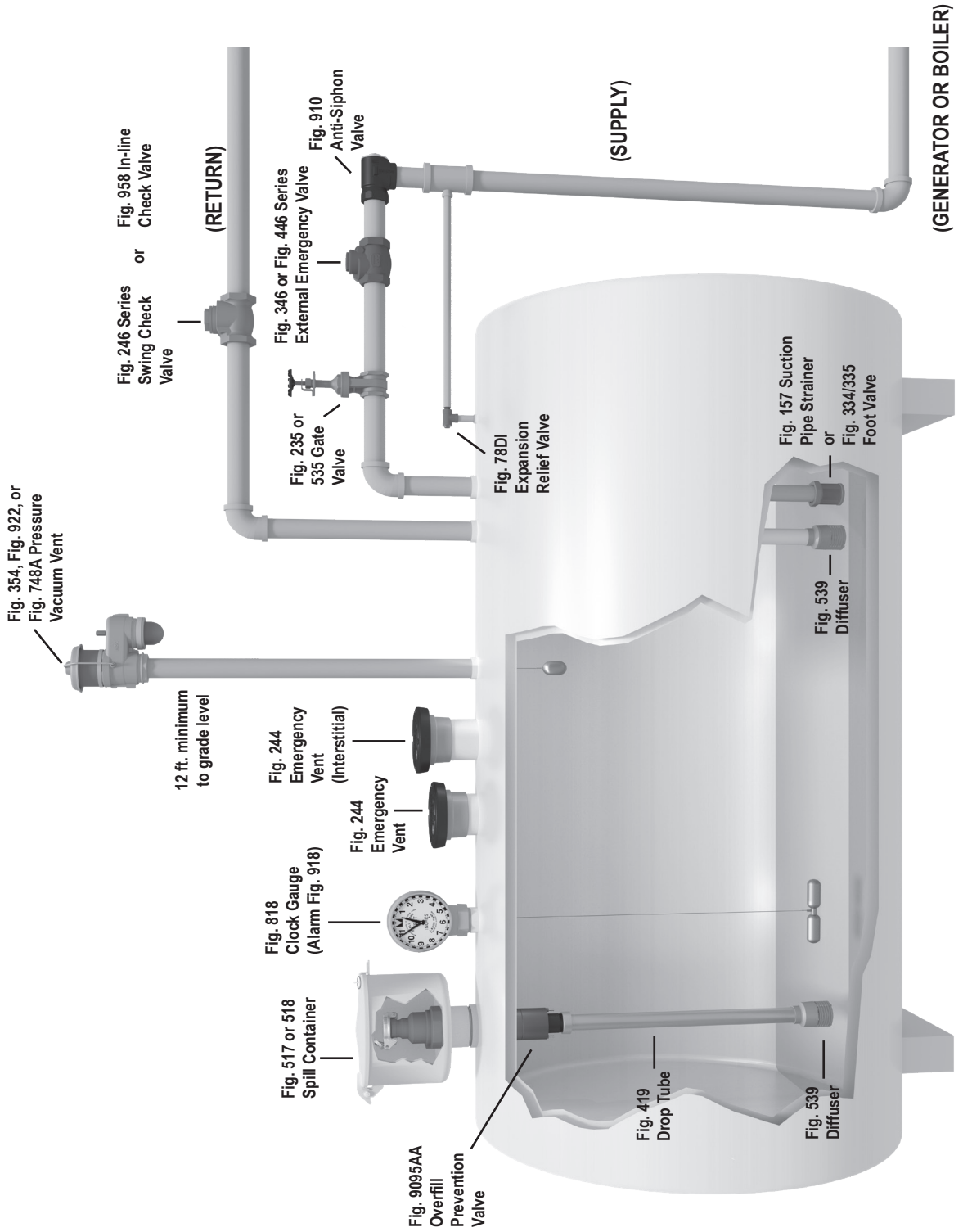
# Aboveground Fuel Storage - Suction System

Horizontal cylindrical tank with top fill and top mounted pump





# Emergency Generator or Fuel Oil Suction System







**FILLING PRODUCTS**

- 1 Ball Valves/Block Valves**
  - 691
  - 691BSS
  - 691A
  - 284S
  - 285
  - 286
- 2 Overfill Prevention Valves**
  - 9095S (2")
  - 9095AA (3")
  - 9095AA (2")
  - 9095X (2")
  - 9095X (2")
  - 9095X (2")
- 3 Spill Containment**
  - 515
  - 715 (on four leg stand)
- 4 Line Strainers**
  - 284S
  - 285
  - 286
- 5 Drop Tubes**
  - 419
  - 419A
- 6 Diffusers**
  - 539
- 7 Caps & Adaptors**
  - 305
  - 305GSP
  - 323/323C
  - 912
  - 927
  - 928

**DISPENSING PRODUCTS**

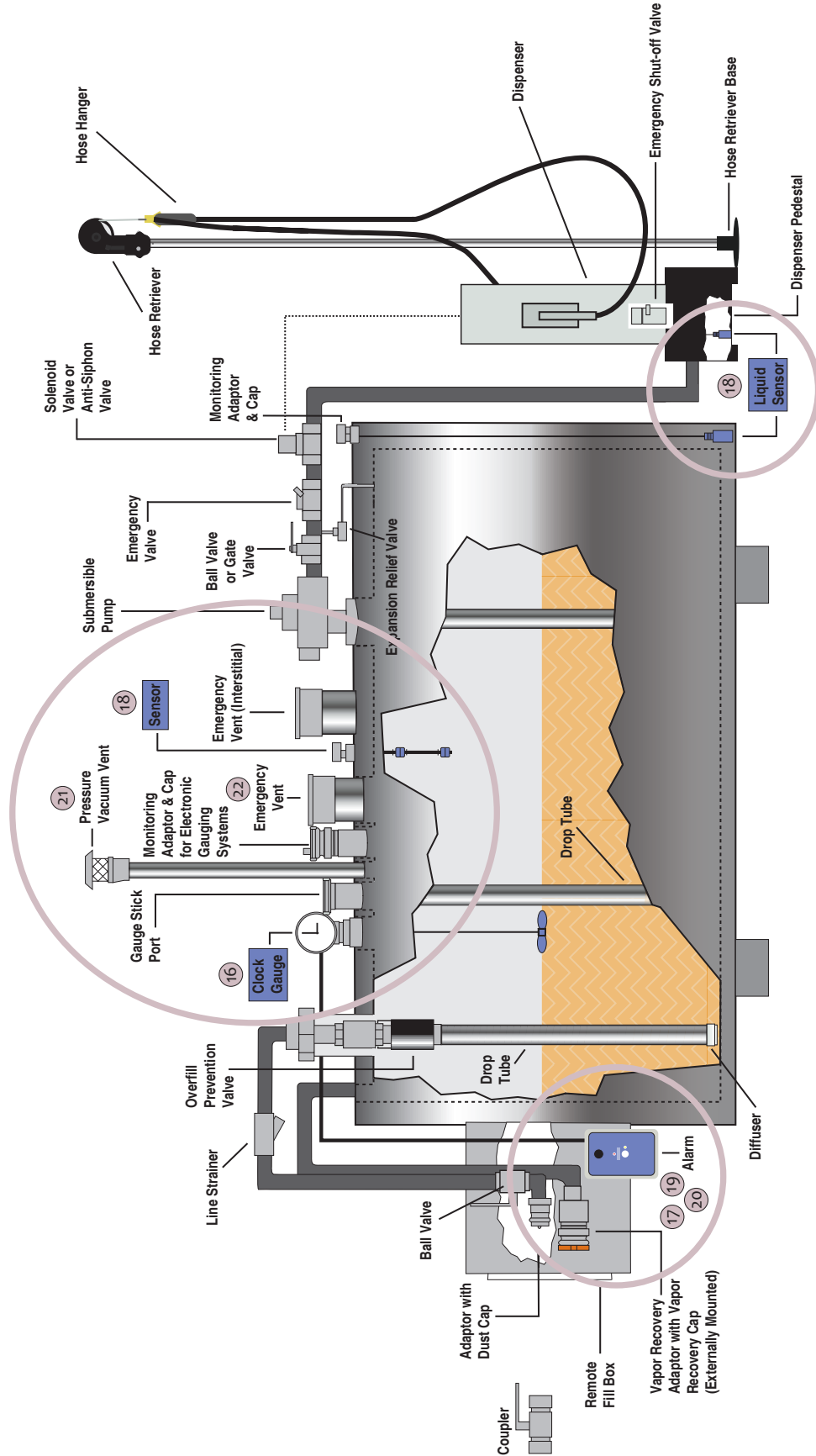
- 8 Ball Valves/Block Valves**
  - 691
  - 691BSS
  - 691A
- 9 Emergency Valves**
  - 346DI
  - 346FDI
  - 346SS
  - 446
- 10 Expansion Relief Valves**
  - 78DI
- 11 Dispenser Pedestals**
  - 434
- 12 Gate Valves/Block Valves**
  - 234DI
  - 235
  - 235B
  - 235DI
  - 535
  - 536B
- 13 Anti-Siphon/Solenoid Valves**
  - 910
  - 912
  - 710
  - 711NC
- 14 Emergency Shut-Off Valves**
  - 636DEF
  - 636F
- 15 Hose Retriever**
  - 610
  - 611
  - 610B

Other options: 434S & 435 models.

Other options: 515SD and 715 stainless steel models.



# VENTING AND GAUGING





**VENTING AND GAUGING PRODUCTS**

**16 Mechanical Clock Gauges and Alarms**



818

918C

918DP

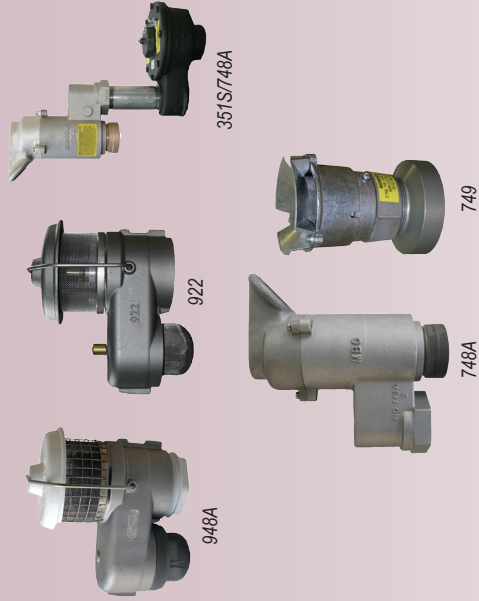
**19 Battery Powered Tank Alarms**



918S/D/Q

918SE/DB/QB

**21 Pressure Vacuum Vents/Flame Arresters**



948A

922

351S/748A

749

748A

**20 AC Powered Tank Alarms**



918AC

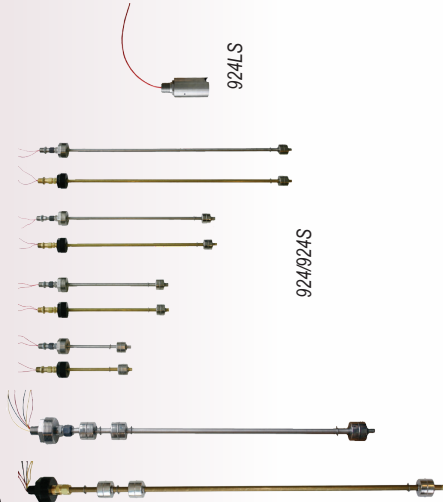
**17 Electronic Tank Gauge**



1218C

1218S

**18 Sensors**



925/925S

924/924S

924LS

**22 a. Emergency Vents**



244O

244OM

244OF

**22 b. Open Air Vents/Flame Arresters**



155

354

351S





# TANK DIAGRAMS

Fig. 922 Combination or Vent/Overfill Alarm or 351 Flame Arrester/Pressure Vacuum Vent or Vacuum Vent

Fig. 1218S Tank Level Sensor

Fig. 2440 Series Emergency Vents

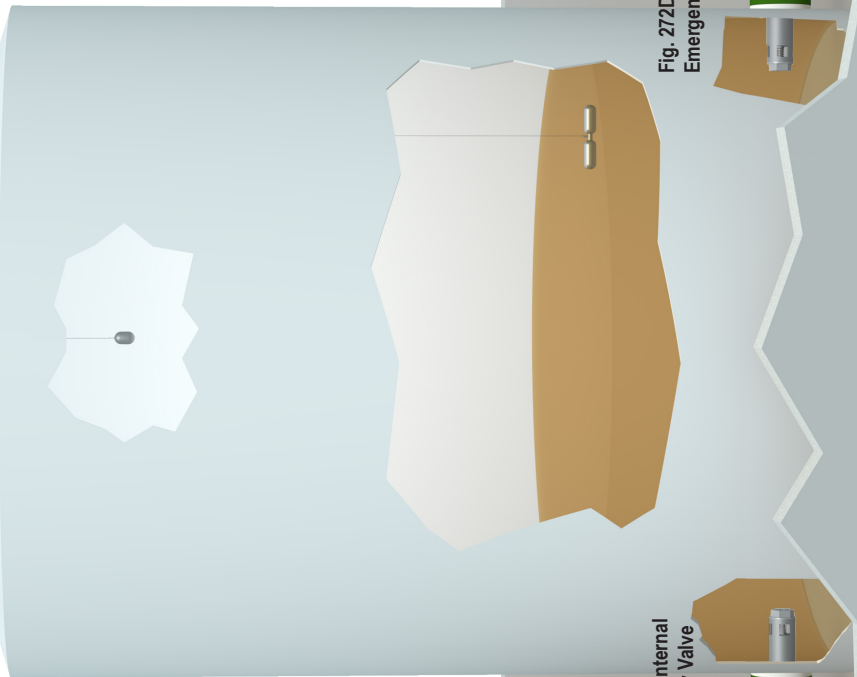


Fig. 272DI Internal Emergency Valve

Fig. 534BDI Gate Valve with Expansion Relief

Fig. 534BDI Gate Valve with Expansion Relief

Fig. 272DI Internal Emergency Valve

Fig. 246DRF Swing Check Valve

Fig. 285FDI Bottom Clean-Out Line Strainer

Fig. 715 AST Remote Fill Box or 515 Remote Spill Container

