

## Petroleum Handling Equipment

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### 3" & 4" Emergency Valve Aluminum Tapered Seat Style

Betts tapered seat emergency valves are designed and manufactured to use Teflon encapsulated seals for compatibility with a wide range of products. Body is constructed of aluminum with stainless steel trim. Shear section tested per TTMA RP84 and meets 49CFR178.345-8.

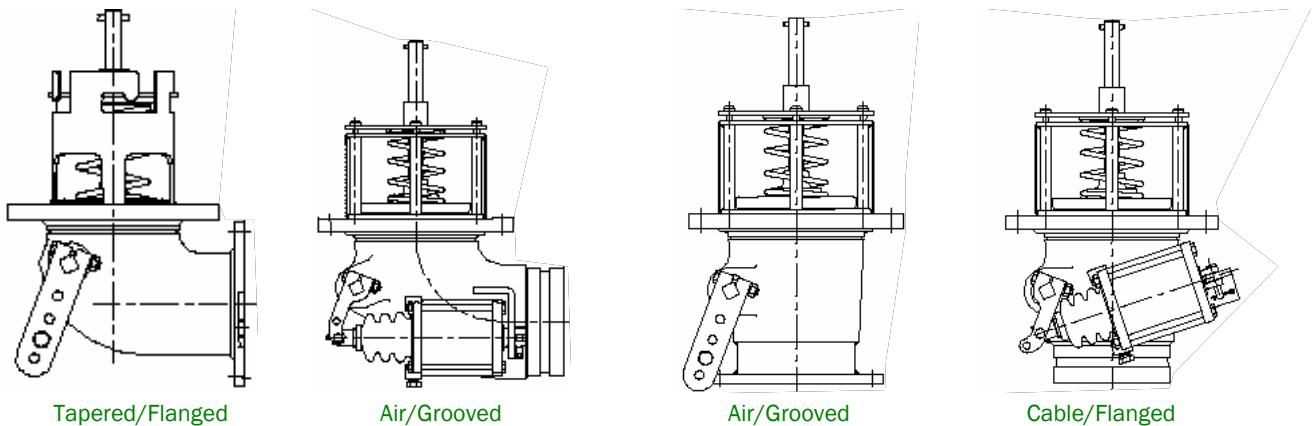
Air operated valves are provided with an external air cylinder to help prevent gasoline or other products from contaminating the air supply. The air cylinder is hard-coated aluminum with a polished stainless steel shaft. Cylinders have 1/8" NPT port for air connection and are supplied with a fusible plug installed.

Cable operated valves are supplied with a universal lever arm which provides up to 8 cable travel options to work with most operators. Lever arm is "E" Coated to provide exceptional corrosion resistance. Left-hand valves are available with air cylinder or cable lever arm on opposite side of valve.

**Air/grooved or cable/flanged by 90° elbow or straight.**

For ordering information please refer to **Appendix S-20**

For a full parts breakout on replacement parts please refer to **Appendix K-29 and K-30**



### 3" & 4" Emergency Valve Aluminum 6" X 4" High Flow

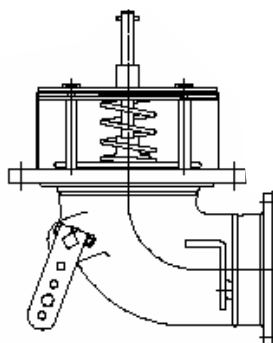
Betts High Flow Emergency valves provide increased flow rates compared to 4" emergency valves. Valves feature Teflon encapsulated seals for compatibility with a wide range of products and a special lift mechanism for smooth operation. Body is constructed of aluminum with stainless steel trim. Shear section tested per TTMA RP84 and meets 49CFR178.345-8.

Air operated valves are provided with an external air cylinder to help prevent gasoline or other products from contaminating the air supply. The air cylinder is hard-coated aluminum with a polished stainless steel shaft. Cylinders have 1/8" NPT port for air connection and are supplied with a fusible plug installed.

Available in Long-Radius and Short-Radius elbows. Use the Long-Radius for maximum flow or use the Short-Radius where clearance for piping is restricted. Left-hand valves are available with air cylinder or cable lever arm on opposite side of valve.

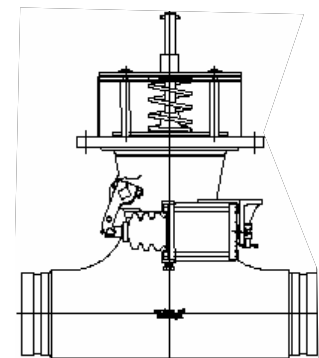
For ordering information please refer to **Appendix S-20 and S-23**

For a full parts breakout on replacement parts please refer to **Appendix K-30**



Short Radius Cable/Flanged

Air or Cable Operated  
Stainless Trim  
Teflon Encapsulated  
Seals



Tee Air/Grooved

## Emergency Valve 3", 4" & 6" Aluminum Internal Air, Tapered Seat Style

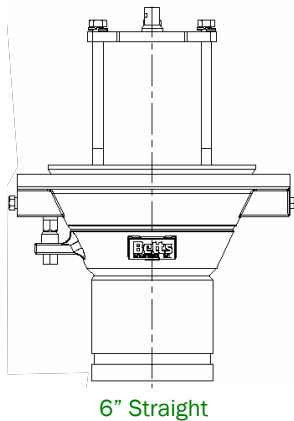
Betts internal air emergency valves are designed and manufactured to use Teflon<sup>®</sup> encapsulated seals for compatibility with a wide range of products. Body is constructed of aluminum and meets 49CFR178.345-8-shear section test per TTMA RP 84. Air inlet fitting shears with shear section to dump air pressure and insure the valve closes in case of an under-ride accident. Fusible plug installed in valve to dump air pressure in case of a fire. Internal air cylinder saves space on exterior of valve providing maximum clearance for piping. Air cylinder diameter is 4" for 6" valve and 3" for the 3" and 4" valve. Air cylinder is hard coated with hard-anodized shaft and guide. Valves have 1/8" NPT ports for air connection. Valves are equipped with a Stainless Steel jackscrew that allows for manual operation of the valve in case of an air system failure.

For ordering information please refer to **Appendix S-21 and S-22** for available models

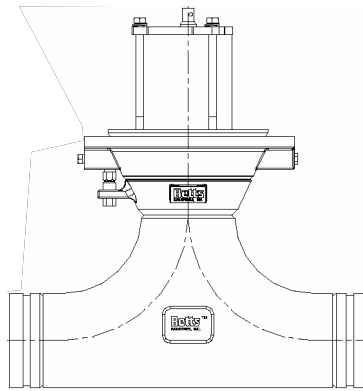
Full parts breakdowns for replacement parts available in **Appendix K-31 and K-32**. Please feel free to call one of our knowledgeable staff if you have any questions regarding any Betts Valve

4" Valves Not Pictured

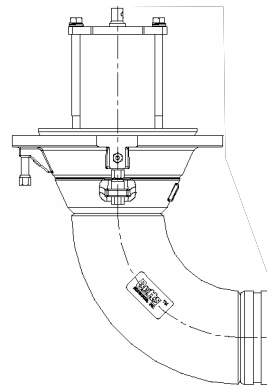
**Internal Air Cylinder  
Frangible Air Inlet  
Teflon Encapsulated  
Seals  
Hard Anodized Wear  
Parts**



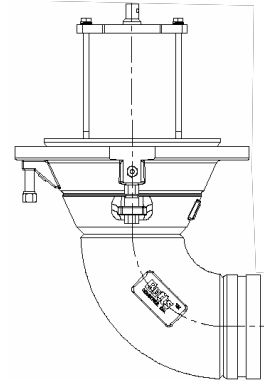
6" Straight



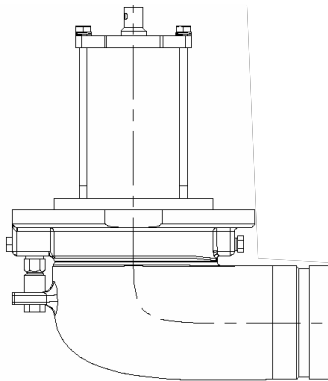
6" Tee



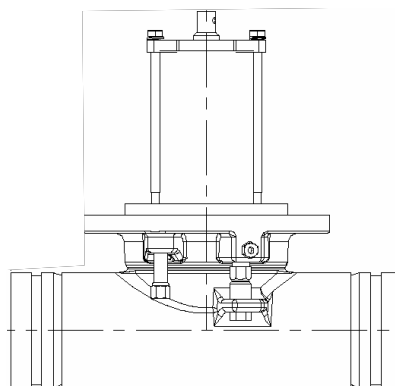
6" Elbow Long Radius



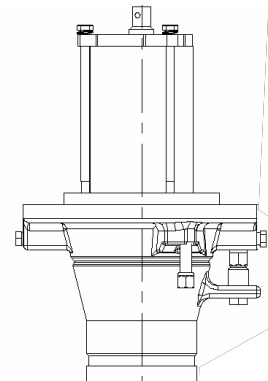
6" Elbow



3" Elbow



3" Tee



3" Straight

### 3" & 4" Betts Stainless Steel Emergency Valve

Betts Stainless Steel Emergency Valves are equipped with Teflon encapsulated O-ring seals which are compatible with a wide range of products. The tapered seat is self-cleaning to lessen the possibility of seat damage due to foreign objects. The stuffing box features two O-ring seals to provide positive sealing.

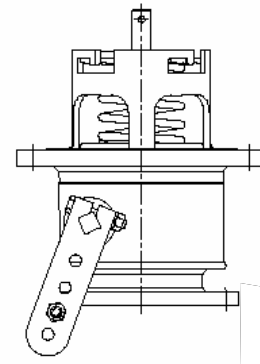
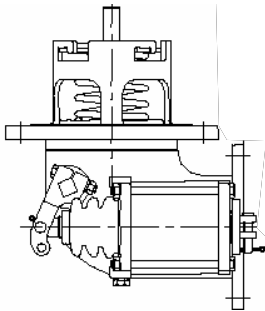
Air operated valves are provided with an external air cylinder to help prevent gasoline or other products from contaminating the air supply. The air cylinder is hard-coated aluminum with a polished stainless steel shaft. Cylinders have 1/8" NPT port for air connection and are supplied with a fusible plug installed.

**Available in a 3" or 4" Straight or 90° Elbow. Straight Valves are cable operated only.**

For ordering information please refer to [Appendix S-19](#)

For a complete parts breakdown for available replacement parts please refer to [Appendix K-27](#)

Air or Cable Operated  
Tapered Seat  
Teflon Encapsulated  
Seals



### 3" & 4" Betts Emergency Valve Aluminum Flat Seat Style

Betts flat seat style emergency valves combine Betts quality with an economical design. Valves feature aluminum construction with a specially designed seat disc to provide positive sealing. Shear section tested per TTMA RP84 and meets 49CFR178.345-8.

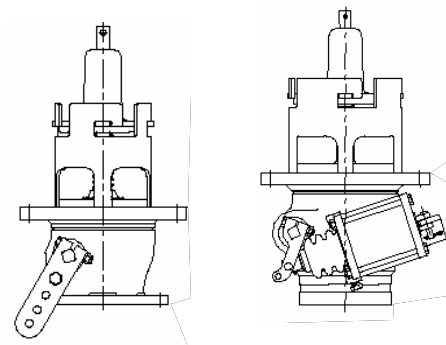
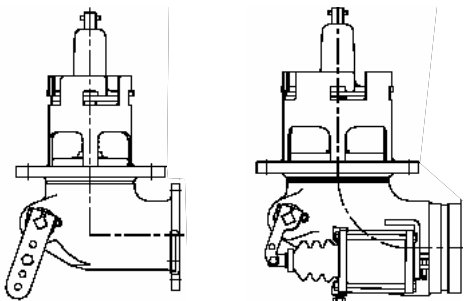
Air operated valves are provided with an external air cylinder to help prevent gasoline or other products from contaminating the air supply. The air cylinder is hard-coated aluminum with a polished stainless steel shaft. Cylinders have 1/8" NPT port for air connection and are supplied with a fusible plug installed. Cable operated valves are supplied with a universal lever arm which provides up to 8 cable travel options to work with most operators. Lever arm is "E" Coated to provide exceptional corrosion resistance. Left-hand valves are available with air cylinder or cable lever arm on opposite side of valve.

**Available cable/flanged or air/grooved by 90° elbow or straight.**

For ordering information please refer to [Appendix S-19](#)

For replacement parts please refer to [Appendix K-28](#)

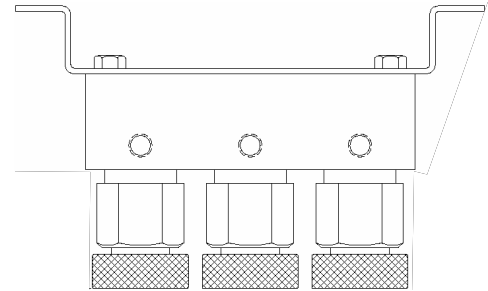
Air or Cable Operated  
Groove or Flange Outlet  
Buna Urethane or Viton  
Seals



**Betts Air Distributor**  
**Part# AD25011**

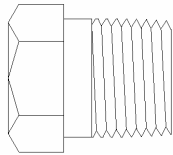
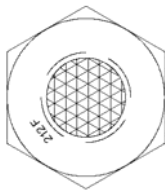
Betts Air Distributors have quick-acting 1/4 turn valves. Each valve operates independently and has long lasting composition discs. Mounting bracket furnished on all distributors. Available with up to 8 compartments.

See **Appendix K-46** for parts breakout



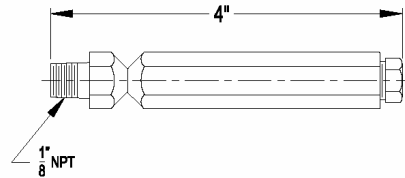
**Fusible Plug**  
**Part# FP15003BR**

Thawing of plug dumps air and closes all emergency valves and air operated valves.



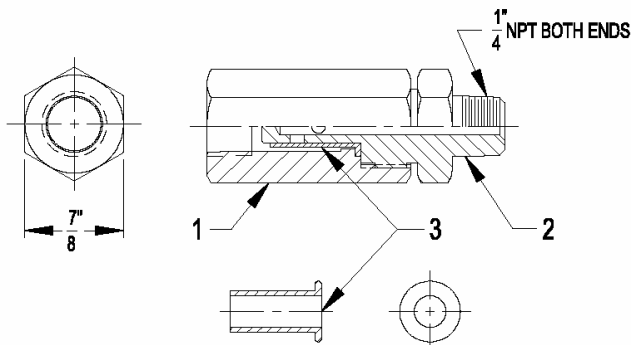
**Fusible & Frangible Plug**  
**Part# FP15017BR**

Breaking of frangible device or thawing of plug dumps air and closes all emergency valves and air operated valves.



**Check Valve**  
**Part# CK25107BR**

Used in conjunction with hand pump to check return air.



No.	Description	Req.	Part No.
1	Body	1	16896BR
2	Stem	1	16897BR
3	Sleeve	1	16007BN

**Air Cylinder**  
**Part# AC35005ALB**

Used as an external air cylinder for air operated valves. This helps prevent gasoline or other products from contaminating the air supply. The air cylinder is hard-coated aluminum with a polished stainless steel shaft. Cylinders have 1/8 inch NPT port for air connection and are supplied with a fusible plug installed.

See **Appendix R-1**

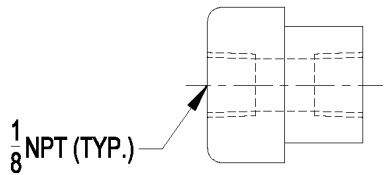
**Pressure Gauge**  
**Part# PG16349MS**

Gauge has 1/8 inch N.P.T. fitting.



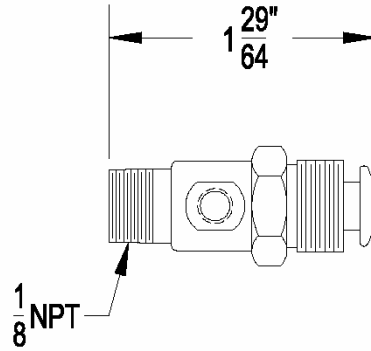
**Attach Fitting**  
**Part# 15021MS**

Used as a mounting device for the fusible and frangible plug.



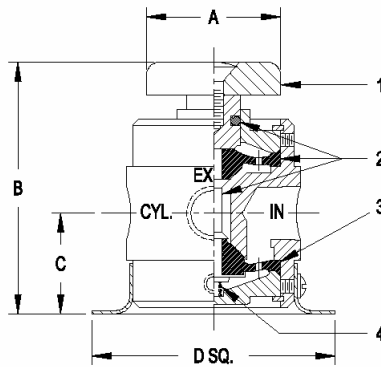
**Interference Control Valve**  
**Part# IC17128BR**

Closes all emergency valves when plunger is actuated by cabinet door or other means.



**Master Control Valve**

The Master Control Valve is a push button type on-off valve, spring loaded to the closed position. It is designed for use when the emergency valve air system is operated with air from the brake system.



Description	A	B	C	D	Material	Wt.	Assembly No.
Master Control Valve	1 1/4	2 3/8	1 5/16	2 1/4	Steel/Buna-N	.8	MC 16350 CP-B

Parts List

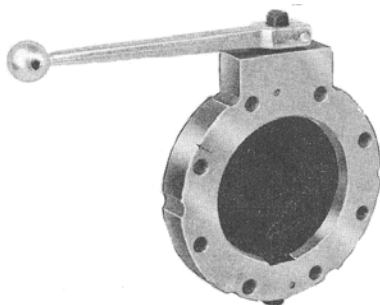
No.	Description	Req'd.	Material	Part No.
1	Knob	1	Alum.	16917AL
2	Stem & Diaphragm	1	Brass	17379BR
3	Perforated Diaphragm	1	Buna-N	17379BN
4	Spring	1	Steel	17379MS

### **Betts Wet-R-Dri Valve (TTMA Style)** **Standard and Detent**

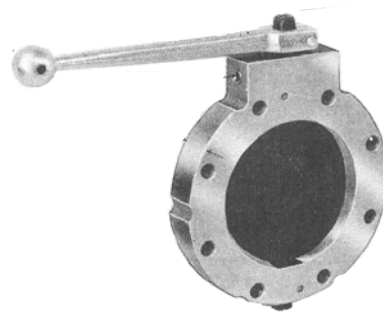
The Betts Wet-R-Dri valve is designed for handling liquid, gaseous or dry products, and is available in a variety of sizes and models. This space saving valve is lightweight, easily maintained, and has a positive stop in the open and closed position. The detent model has a detent spring and ball which assist in holding the disc in the open and closed position.

For ordering information please refer to **Appendix S-24**

For replacement parts please refer to **Appendix K-22**



Standard



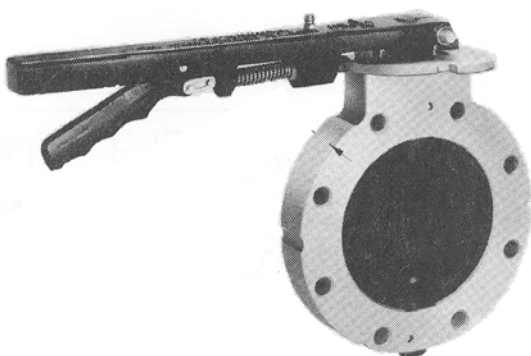
Detent

### **Betts Wet-R-Dri Valve (TTMA Style)** **Locking and Metering**

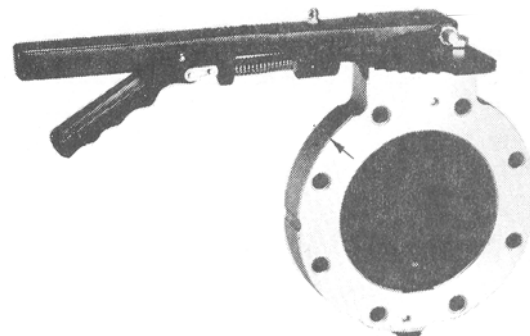
The Betts Wet-R-Dri Valve is designed for handling liquid, gaseous or dry products, and is available in a variety of sizes and models. This space saving valve is lightweight, easily maintained, and has a positive stop in the open and closed position. The Locking model has a 2 notch indexing plate which locks disc in the open or closed positions. The Metering model has a 10 notch indexing plate which allows disc to be positioned in 10 various positions.

For ordering information please refer to **Appendix S-25**

For replacement parts please refer to **Appendix K-23**



Locking



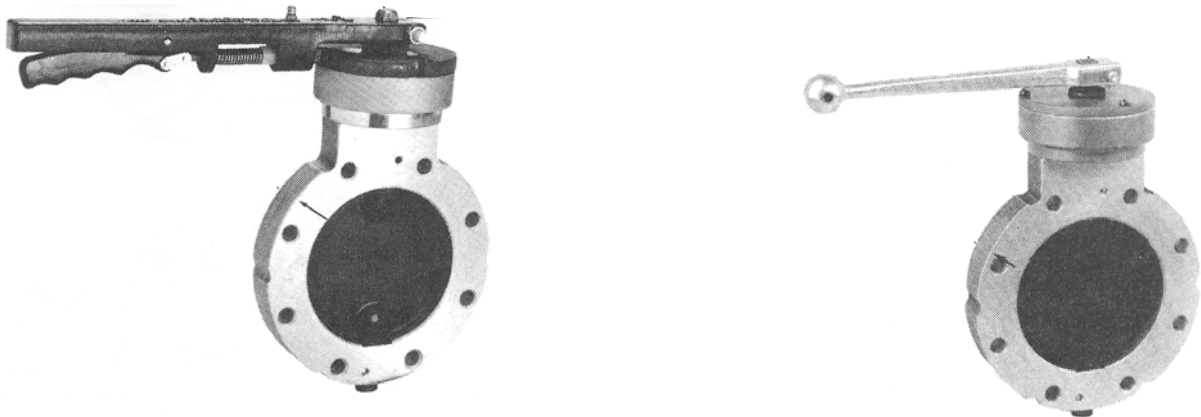
Metering

**Betts Wet-R-Dri Valve (TTMA Style)**  
**Locking Type Spring Loaded and Spring Loaded**

The Betts Wet-R-Dri Valve is designed for handling liquid, gaseous or dry products, and is available in a variety of sizes and models. This space saving valve is lightweight, easily maintained, and has a positive stop in the open and closed position. Both spring loaded valves provide an immediate and positive shut off. The locking type permits valve to be mechanically held open while the spring loaded type can be used for remote operation or as a dead man valve.

For ordering information please refer to **Appendix S-26**

For replacement parts please refer to **Appendix K-24**

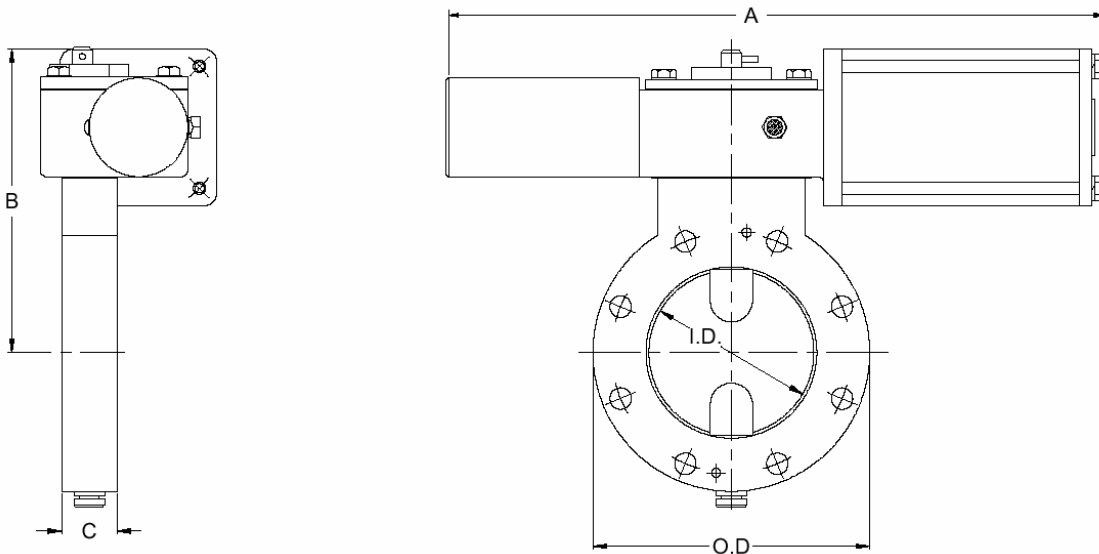


**Betts Wet-R-Dri Valve (TTMA Style)**  
**Air Operated**

The Betts Wet-R-Dri Valve is designed for handling liquid, gaseous or dry products, and is available in a variety of sizes and models. This space saving valve is lightweight, easily maintained, and has a positive stop in the open and closed position. The air operated valve is opened and closed by air. The air-spring operated valve can be sold as either an air to open, spring return valve or as an air to close spring to open valve. Please specify.

For ordering information please refer to **Appendix S-27**

For replacement parts please refer to **Appendix K-25 & K-26**





**Flow Control Valve Assembly**

**Part# PHIA1996**

2" female inlet X 2" grooved outlet, Viton O-ring and poppet seal, automatic flow control, control pumping rate from nozzle, combination valve to meet Weights and Measures requirements, air operated.



**Philly Air Inner Body**

**Part# PHIA1997**

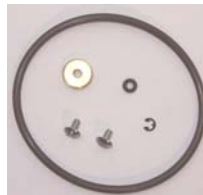
A 1997 air conversion kit.



**Philly Seal Kit For Check Valve**

**Part# PHIA1999**

Repair kit for flow control valve including o-rings and bushings.



**Philly Air Valve For Check Valve**

**Part# PHIA2000**

Replacement air switch for flow control valve. Inlet is 1-1/2" female swivel and outlet is NC1 brass connector.



**Philly Nozzle Swivels**

Extruded aluminum body, Stainless Steel ball bearings, three nylon bearing strips, felt dust seal, single seal O-ring, field repairable (kit# 10319), and weighs just 14 ounces.



**Philly Nozzle Parts**



Part#	Description
<b>PHI10243-501</b>	Philly 1-1-2" X Philly Thread (Old)
<b>PHI10243-504</b>	Philly 1-1/4" Male X Female Swivel
<b>PHI12043-507</b>	Philly 1-1/2" X Scully Swivel
<b>PHI12043-509</b>	Philly 1-1/2" Male Thread X Nozzle Thread
<b>PHI12043-512</b>	Philly 1-1/4" Outlet Swivel

Part#	Description
<b>PHI3142</b>	Control Rod O-Ring
<b>PHI3145</b>	Rod Bushing O-Ring
<b>PHI3217</b>	Control Rod
<b>PHI3220</b>	Shaft Bushing
<b>PHI3224</b>	Ball Seat
<b>PHI3225</b>	Nozzle Ball
<b>PHI3226</b>	Ball Retainer
<b>PHI3227</b>	Retaining Spring Washer
<b>PHI3228</b>	Retainer Washer
<b>PHI3265</b>	Check Valve O-Ring

**Philly Complete Nozzle Repair Kit**

**Part# PHI3416**

Includes all seals and hardware including latch and check valve to repair Philly nozzle.



**Philly Nozzle Check Valve**

**Part# PHI3502**

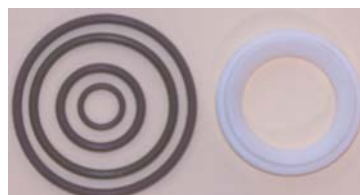
Check valve and o-ring for outlet of Philly nozzle.



**Philly Seal Kit**

**Part# PHI3415**

O-ring kit to repair Philly nozzle.



**Philly Swivel Repair Kit**

**Part# PHI10319**

Includes all parts to repair any Philly swivel.



**Philly 1-1/2" X 1-1/4" Swivel Nozzle**

**Part# PHI2000-14**

Philly ball valve type nozzle  
1-1/2" swivel inlet x 1-1/4" swivel outlet.



**Philly 1-1/2" X NC-1 Nozzle**

**Part# PHI2000**

Philly ball valve type nozzle.  
1-1/2" swivel inlet by NC-1 fast-fill connector.



**Philly Nozzle Latch Assembly**

**Part# PHI3603**

Replacement latch for all ball valve type nozzles.



**Philly 1-1/2" X 1-1/4" Nozzle**

**Part# PHI2000-4**

Philly ball valve type nozzle  
1-1/2" swivel inlet x 1-1/4" fixed outlet.



**Philly Latch Replacement Kit**

**Part# PHI3604**

Includes all parts to install new style latch assembly on all types of ball valve nozzles.



**Time Saving Fill 6" Nozzle Tube**

**Part# TSF100**

6" x 1-1/4" steel speed-fill tube for connecting to bar type fills.



**Time Saving Fill Cap Magnet**

**Part# TSF1000M**

Plastic coated magnet used for unlocking lockable type house fill caps.

**6" Bar Fill Tube with "X" Adapter**

**Part# TSF100X**

6" steel bar fill tube with Scully-type adapter installed.



**Time Saving Fill 7-1/4" Nozzle Tube Assembly**

**Part# TSF101**

Steel tube for speed fill adapters.



**Time Saving Fill 1-1/4" Aluminum Fill Tube**

**Part# TSF98**

Aluminum tapered fill tube with 1-1/4" male threads.



**Bar Type O-Ring**

**Part# TSF700**

Sealing Buna O-ring for bar type fill adapters.



**Philfair Tube O-Rings**

**Part# TSF700P**

Buna O-ring for sealing Philfair adapters.



**Scully Buna O-Ring**

**Part# TSF700X**

Buna O-ring for sealing on Scully type fast fill adapters.



**Time Saving Fill Large Rubber Plug**

**Part# TSF713**

Rubber plug to fit on 1-3/8" fill tube.



**Time Saving Fill Small Rubber Plug**

**Part# TSF712**

Rubber plug to fit on 1-1/8" fill tube.



**Miscellaneous Time Saving Fill Parts**

Part#	Description
TSF2125FLCC	1-1/4" Bar type adaptor
TSF2125FX	1-1/4" Female straight X fill fitting
TSF2150MX	1-1/2" Male straight X fill fitting
TSF2150FX45	1-1/2" Female 45° X fill fitting
TSF2150FX	1-1/2" Female straight X fill fitting
TSF2150FX45	1-1/2" Female 45° X fill fitting
TSF2150M	X adaptor
TSF2150MX45	1-1/2" Male 45° X fill fitting
TSF2150MX	1-1/2" ale straight X fill fitting
TSF2200F	Female fill bar adaptor
TSF2200FX45	2" Female 45° X fill fitting
TSF2200FX	2" Female straight X fill fitting
TSF2200MX45	2" Male 45° X fill fitting
TSF2200M	Male fill bar adaptor
TSF2200M45	Bar adaptor
TSF2200MX	2" Male straight X fill fitting
TSF2200MX45	2" Male 45° X fill fitting
TSF3200MLC	2" Male insert only
TSF706	Fill bar cap
TSF706L	Locking bar fill cap
TSF706X	Standard X fill cap



**Time Saving Fill Aluminum Fill Tube with Fast Fill Adapter**

Part# **TSF98X**

Tapered aluminum fill tube with fast fill adapter installed.



**Time Saving Fill 1-1/4" Brass Connector**

Part# **TSF99X125**

1-1/4" brass connector for fast fill adapters.



**Time Saving Fill with Metric Brass Connector**

Part# **TSF99X150M**

1-1/2" fine thread brass connector for installation in ball valve type nozzles.



**Time Saving Fill "X" Connector X Bar Fill**

Part# **TSF99XTSF**

Speed fill x fast fill adapting connector.



**Buyers Tie Down Bar, Clevis Pin and Yoke**

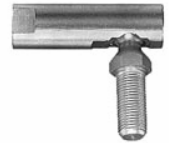
DBL stocks all pieces necessary for tie downs on retail petroleum trucks. Below are some of our most popular selections.



Part#	Description
<b>BUYB2126H</b>	Tie Down Bar
<b>BUYTR6211512</b>	12" 5/8-11" Tie Down Bar
<b>BUYB27087ANC</b>	5/8"-11 Clevis Yoke
<b>BUYB2708-1/210C</b>	Clevis Pin

**Buyers Ball Joints**

Stocking ball joints for valve rod and various other applications.



Part#	Description
<b>BUYBJ52</b>	1/4"-28 Ball Joint
<b>BUYBJ62</b>	5/16"-24 Ball Joint
<b>BUYBJ72</b>	3/8"-24 Ball Joint

**Time Saving Fill Underground Parts**

Stocking all parts necessary for repairing any brand of underground fill tube.



**Dixon Air Panel Parts**

Stocking air panel parts for retail petroleum and other applications.



Part#	Description
<b>DIXFO0-02AMB</b>	1/4" Mini-Filter
<b>DIXGRP-95-754</b>	Filter and Oil Bracket
<b>DIXL00-02AMB</b>	1/4" Mini-Oiler
<b>DIXR00-02R</b>	1/4" Mini-Regulator

Part#	Description
<b>TSF802</b>	2" Aluminum Venting Head
<b>TSF804</b>	48" Whistle Tube Assembly Complete
<b>TSF805</b>	Vacuum Breaker For Underground 500B's
<b>TSF807</b>	Thumb Screw For Venting Head
<b>TSF808</b>	Shoe For Vent Head
<b>TSF809</b>	Rubber Gasket For Vent Head

**Philly Rod Stop**  
Part# **PHI1953**

Brass cable rod stop for engine actuator.



**Six Way Fill Box Wrench**  
Part# **MIS4349**

Cast iron fill box wrench to remove caps from most underground fill boxes.



**Air Switch Plates**

Engraved plastic plate indicating operation of air valve.



**Philly 1" Air Actuator**  
Part# **PHIA2001**

Air actuator with one inch stroke used to speed up engine on retail petroleum trucks.



**Dixon Bayco Vapor Gasket**  
Part# **BAY400-G-BU**



**Time Saving Fill Underground Fill Tube With Insert**

Aluminum underground fill tube with sliding whistle tube with fast fill or speed fill insert.



Part#	Size
<b>TSF500A20</b>	20"
<b>TSF500A48</b>	48"
<b>TSF500A69</b>	69"

**Dixon Bayco Old Style API Handle**  
Part# **BAY5201-16**

Aluminum handle for old style openable API adapter.



**Dixon Bayco API Cap**  
Part# **BAY5000-24**

Aluminum dust cap for API adapters.

**Dixon Bayco Drop Adapter**

Quality cast aluminum body with inside lip to hang on API while clamping, inexpensive replacement of Buna O-ring, and bronze cam arms with stainless steel pins & finger rings.



Part#	Size
<b>BAY4530</b>	3"
<b>BAY4540</b>	4"

**Dixon Bayco 4" TTMA Sight Glass**  
Part# **DIX400-SFI-ALS**

4" TTMA sight glass with aluminum frame and clear polymer tube.

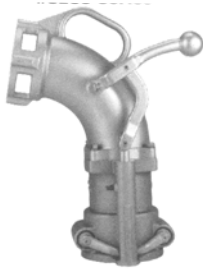


**Dixon Bayco 4" Elbow Mounting Adapter**  
Part# **BAYAL4051BORE**

4" Aluminum blind adapter for mounting elbows in cabinets.



**Dixon Bayco 4" Drop Elbows  
6000 and 6200 Series**



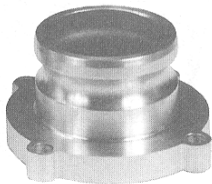
Comes with acrylic sight glass and Buna seals for sight glass, bolt on inlets for easy replacement, solid bronze locking arms housed in polymer bushings provide for the best bite of any elbows in the market, lubrication fitting for locking stem (stem made of stainless steel), modular quality cast aluminum construction and field repair and upgrade are made simple due to modular design. **Available in many different configurations. Kits available include an extension kit, safety latch kit, and an anti spill tube kit.**

For ordering information please refer to [Appendix S-37](#)

Replacement parts for 4" Drop Elbows found in [Appendix I1](#)

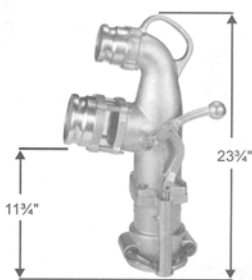


**Dixon Bayco 3" & 4" Elbow Inlets  
For 6000, 6000AS, and 6200 elbows.**



Bolt on, easy to install and replace, aluminum bodies with bronze cam arms, and comes with four stainless steel cap screws.

For ordering information please refer to [Appendix S-37](#)



**Dixon Bayco Coaxial Elbows  
6400 Series**

For single point vapor recovery only, 3" male vapor outlet (top), comes assembled with choice of 3" or 4" male or female inlets (inlets made special for coaxial only), quality cast aluminum construction with solid bronze arms, bolt on inlets/outlets for easy and fast replacement, and acrylic sight glass with Buna seals.

For ordering information please refer to [Appendix S-37](#)

**Dixon Bayco Side Seal Drop Elbows  
6000 Series**

For use with special 4" side seal style fill collars only, modular, easy repair and bolt on construction, comes with acrylic sight glass, Buna seals, and bronze arms. Choice of 3" or 4" inlets and available with anti-spill sleeve and locking ring is required.



**Dixon Bayco Side Seal Adapter  
6000 Series**

Allows conventional top seal elbows to be used with side seal style fill collars.

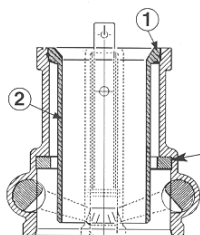
Bottom connects to side seal collar/ top section accepts standard 4" top seal elbow.



**Dixon Bayco Anti-Spill Sleeves  
Designed for 6000 and 6200**

1. O-ring
2. Aluminum sleeve

Allows fuel to bypass and exit below the underground tank collar/ seal interface, preventing leakage or spill should problems with sealing or lock-up occur.

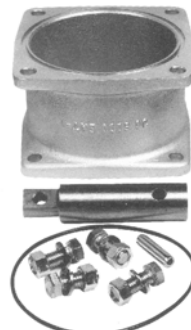


**Dixon Bayco Elbow Extension Kits  
For 6000, 6200, & 6400**

Kit comes with cast aluminum spacer, linking extension hardware, and installation instructions.

**Dixon Bayco Anti-Spill Safety Latch Kit**

For 6000 & 6200 Series  
Not pictured



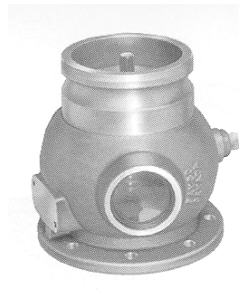
**Dixon Bayco Vapor Valve**  
**Part# VR4000**

Designed for maximum vapor flow, two acrylic sight glasses, quality cast aluminum construction, 4" TTMA flange, and drain plugs that allow viewing of drainage of fluid through sight glasses.



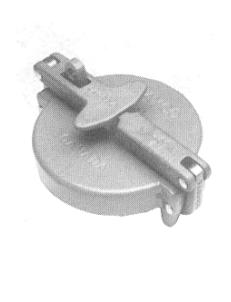
**Dixon Bayco Vapor Valve**  
**Part# VR4100**

Features easy seal replacement while on tanker, heavy duty cast aluminum body, 4" female NPT, and with an air interlock mount. Available as a special order without poppet (VR4100NP).



**Dixon Bayco Vapor Cap**  
**Part# VR4050AL**

Lockable push/pull cap for vapor valves (VR4000 & VR4100) or vapor adapter (VR4086). Aluminum cap and arms with bronze locking cam and Buna gasket. Painted orange.



**Dixon Bayco Air Interlock**  
**Part# 5000AI (top)**  
**Part# 5000AIV (bottom)**

Mount to API's, vapor valves, and safety bars. Rugged solid bronze body for dependable service and corrosion resistance. Adjustable stroke and choice of standard piston or paddle end.



**Dixon Bayco 3" Fusible Pipe Caps**  
**NPSM Thread**

Available in stainless, aluminum, or malleable iron. Teflon gaskets standard in stainless steel.



**Dixon Bayco Pipe Caps**  
**NPSM Thread**

Available in 2", 3", or 4" size and in stainless, aluminum, or malleable iron. Teflon gaskets standard in stainless steel.



**Dixon Bayco Reducers**  
**Female NPSM X Male NPT**

Available in 3" X 2" or 4" X 3" and in Stainless, aluminum, or malleable iron. Teflon standard in stainless steel.



**Dixon Bayco Reducing Caps**  
**3" FNPSM X 1" FNPT**

Available in 3" X 1" stainless steel.



**Dixon Bayco Tank Transport Equipment - Intermodal**

**3" Stainless Steel Pipe Cap**  
BSPP Thread



**3" X 2" Stainless Reducers**  
Female BSPP x Male NPT



**Stainless Thread Adapter**  
3" x 2" or 3" x 3"  
Female BSPP x Male NPT



**Stainless Adapter**  
3" or 3" x 2-1/2"  
Cam & Groove Adapter x BSPP Thread



**Dixon Bayco 4" Twin Lever Fill Cap**

**Part# 400TFLC2BR**

For use with underground tank fill adaptor, bronze body with lockable bronze levers, and includes Buna gasket.



**Dixon Bayco 4" Single Action Fill Cap**

**Part# SA4050(AL) or (BZ)**

For use with underground tank fill adaptor, lockable, push/pull action, bronze cam arms, includes Buna gasket. **Available in aluminum or bronze.**



**Dixon Bayco 4" Vapor Cap**

**Part# VR4050AL**

Special locking cap for underground tank vapor outlet VR4086 and tanker vapor valves VR4100 and VR4000.





**Emco Wheaton API Adaptor****Part# F5000**

All running surfaces are bushed for smooth operation, hard anodized replaceable nose ring (can be rotated without draining line), conforms to API RP1004, lightweight die cast aluminum, Viton seals are standard for compatibility with high octane fuels and additives, hydrodynamic design, all internal parts are stainless steel, top mounting for hose interlock, and mounting flange meets 4" TTMA specification.



For replacement parts please see parts breakout in [Appendix J-1](#).

**Emco Wheaton API Adaptor, Openable with Liquid Indicator****Part# F5002**

All running surfaces are bushed for smooth operation, hard anodized replaceable nose ring, flat bottom, product sight glass, two stage fixed aluminum lever conforms to API RP1004, lightweight die cast aluminum, Viton seals are standard for compatibility with high octane fuels and additives, hydrodynamic design, all internal parts are stainless steel, top mounting for hose interlock, dry line ready, and mounting flange meets 4" TTMA specification.

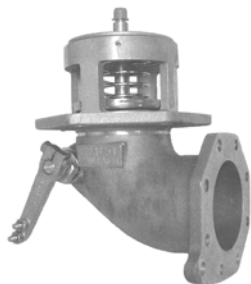
For replacement parts please see parts breakout in [Appendix J-2](#).

**Emco Wheaton 4" Vapor Drop Elbow****Part# F77**

The industry's lightest 4" x 4" vapor drop elbow, low pressure drop ensures high product flow rates, available with or without internal poppet assembly, simple and reliable cam design, easy and quick to rebuild, two piece construction allows change of hose connection size and style, and **most parts are interchangeable with F298 and F523**.



For replacement parts please see parts breakout in [Appendix P-1](#).

**Emco Wheaton 3" Emergency Valve****Part# F241 & F242**

Manufactured to DOT 406 regulations, openable from above and below valve, conical spring for maximum flow, concentric plunger prevents leakage, stainless steel trim available for chemical applications, TTMA flanges, cable guide cast in outlet flange, standard seal is Buna (others available), optional air cylinder kit (**part# 24000202**), and other options available (screen, fuse plate, and support).

For replacement parts please see parts breakout in [Appendix K-37 thru K-39](#).

**Emco Wheaton Product Drop Elbow Co-Axial for Product and Vapor****Part# F298**

Lightweight aluminum, excellent flow rate, sight glass (protected by aluminum which prevents damage during storage), can be subjected to pump off pressure (versus gravity unloading) to 25 psi, product connection (3" or 4" cam & groove) is located between vapor connection (3" cam & groove) reduces stress on adaptor, piping, and connection to tank, no vapor emission or product leak, quick and easy to rebuild, interlock available, and **most parts interchangeable with F523 and F77**.



For replacement parts please see parts breakout in [Appendix I-2](#).



**Emco Wheaton API Adaptor Opener**  
**Part# F456**

API hose coupler specifically designed for use with API adapters when discharging product. **Suitable for all API valves manufactured to API RP1004.** One piece aluminum, 4" NPT female thread to accept NPT hose or can be reduced to 3", brass cams reduce wear on API hose and eliminate corrosion, Buna seal fitted as standard, and **suitable for API RP1004 adapters.**

For replacement parts please see parts breakout in **Appendix J-3.**

**Emco Wheaton API Gravity Drop Adapter**  
**Part# F459**

API hose coupler specifically designed for use with API adapters when discharging product. **Suitable for all API valves manufactured to API RP1004.** High quality lightweight die cast body, brass cams reduce wear on API hose and eliminate corrosion, internal shoulder to grip adapter nose and support weight of product hose, 19" stainless steel chain supplied as standard for attachment to API adapter, Buna seal standard, and 3" & 4" cam and groove variants available.

For replacement parts please see parts breakout in **Appendix J-4 and J-5.**



**Emco Wheaton 4" API Dust Cap**  
**Part# F499**

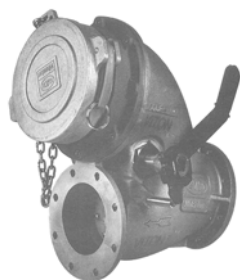
Durable, easy to use aluminum dust cap **suitable for all API valves manufactured to API RP1004.** **Suitable for F5000, F5001, F5002, & F552 series API valves,** protects poppet face of API, high quality die cast body and component materials to international standards are used for durability and performance, radial cam and lug design, glass filled nylon cams reduce wear and eliminate corrosion, Buna seal standard, and heavy duty 19" stainless steel chain.

For replacement parts please see parts breakout in **Appendix J-6.**

**Emco Wheaton 4" Product Drop Elbow**  
**Part# F523**

Industry's lightest 4" x4" product drop elbow, excellent flow rate, simple and reliable cam design has a minimum number of moving parts, easy and quick to rebuild, two piece construction allows change of connector size and style, sight glass is protected by aluminum body to prevent damage when stored, and **most parts interchangeable with F298 and F77.**

For replacement parts please see parts breakout in **Appendix I-3.**



**Emco Wheaton API Adapter "Y" Valve**  
**Part# F552**

Specifically designed for high speed unloading with the **highest flow rate in the industry.** Designed and built in accordance with API RP1004, product loading accomplished via API head and product unloading accomplished via bottom faucet configuration, two piece aluminum body, faucet body moves out of product flow providing unrestricted unloading, 4" TTMA piping connection and faucet outlet, handle is ductile iron with baked on coating to eliminate corrosion, and standard dust cap (F499).

For replacement parts please see parts breakout in **Appendix J-8 and J-9.**

**Emco Wheaton Cam Kit For Cap**

**Part# EMC619696**

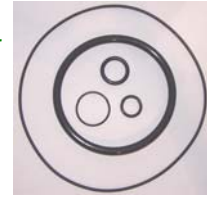
Replacement cam kit for Emco Wheaton API cap and drop adapter.



**Civacon Repair Kit for 861 API**

**Part# GASCIV861ORK**

Repair containing all seal o-rings for number 861 Openable API adapter.



**Civacon 861 Aluminum Handle Kit**

**Part# MISCIV861HRK-AL**

Aluminum handle kit to retro fit 861 Openable API adapter.



**Civacon 3" Valve Mounting Clamp**

**Part# MISCIV865K-3**

Steel clamp mounts on vapor pipe and drilled and tapped to accept air interlock valve. Available for 3" or 4" pipe.



**TTMA Acrylic Sight Glass**

Solid acrylic sight glass machined to 3" or 4" TTMA pattern.



**Civacon Plastic Handle for 861**

**Part# MISCIVC10009M**

Plastic replacement handle for 861 Openable API adapter.



**Rebuilt Veeder Root Register Only On Exchange**

**Part# PMP31007**

Factory rebuilt mechanical register for use on fuel delivery trucks.



**Rebuilt Veeder Root Register/Printer on Exchange**

**Part# PMP31012**

Factory rebuilt register and printer combination printer as used on retail fuel delivery trucks.

**Parts Breakout Appendix E-19**



**Rebuilt Veeder Root Printer On Exchange**

**Part# PMP31004**

Factory rebuilt mechanical printer for use on retail fuel delivery trucks.



**Veeder Root Rebuilt Five Wheel Preset Exchange**

**Part# PMP7889RX**

Factory rebuilt five wheel mechanical preset as used on retail delivery trucks.



**Veeder Root New Style Register Bezel**

**Part# PMPV/RBEZEL**

Clear replacement bezel for new style mechanical register.



**Veeder Root New Style Totalizer**

**Part# PMPV/RTOT**

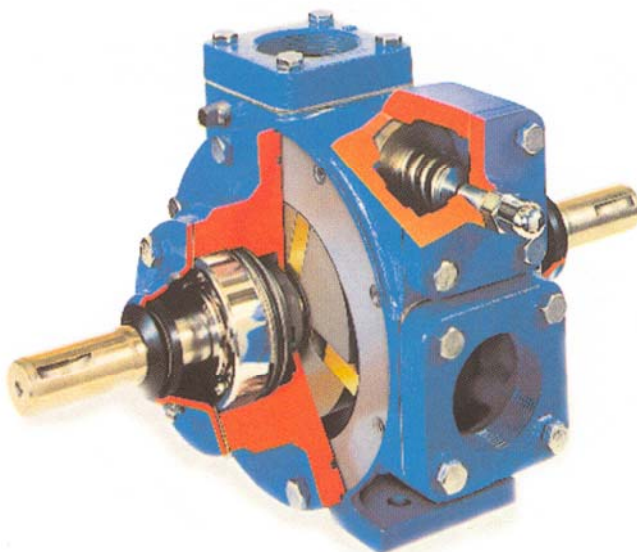
Replacement totalizer for new style mechanical register.



## Blackmer TXD Series Pumps

Part#	Description
<b>BLA031425</b>	Pump Head
<b>BLA041431</b>	Bearing Cover Head
<b>BLA091619</b>	Vanes
<b>BLA121607</b>	Push Rod
<b>BLA221665</b>	Dual Rotor
<b>BLA317815</b>	Grease Fitting
<b>BLA331601</b>	Seal Assembly
<b>BLA331918</b>	Grease Seal
<b>BLA341601</b>	Shaft Cover
<b>BLA381403</b>	Flanged Gasket
<b>BLA383940</b>	Bearing Cover Gasket
<b>BLA531603</b>	Bypass Gasket
<b>BLA651603</b>	2-1/2" X 2" Flange
<b>BLA651611</b>	2-1/2" Flange
<b>BLA701480</b>	Dirt Shield
<b>BLA701947</b>	Head Seal Ring
<b>BLA701992</b>	Grease Relief Fitting
<b>BLA740057</b>	Strainer
<b>BLA740058</b>	T-Strainer
<b>BLA871180</b>	Air Diaphragm Kit
<b>BLA891696</b>	Air Bypass
<b>BLA898951</b>	Pump Kit
<b>BLA903156</b>	Bearing
<b>BLATXD2-1/2AV</b>	Blackmer Pump With Air Bypass

Example of replacement parts. For a full breakdown on parts and different size pumps, please refer to **Appendix F-19 thru F-24**



### Reliability

Durable pumps for fast and quiet operation. Sliding-vane design provides sustained performance and trouble free operation.

### Unique Features

Adjustable relief valve protects pump from excessive pressure. Optional air operated diaphragm relief valve offers easy hose and nozzle handling. T-Type strainers are available to protect pumping systems from damage caused by welding slag and foreign matter in the piping and tanks.

### Sizing Options

Available in 1.5, 2, 2.5, 3, and 4 inch port sizes with flow rates from 10 to 500 U.S. gallons (2 to 113 m<sup>3</sup>/H) and pressures up to 125 PSI (8.6 bar).

### Applications

Fuel oil delivery truck, fleet refueling, lube oil, aviation refuelers, transports of petrochemical, gasoline, solvents, and many more.

## FloTech Retain/Overfill Systems

### Retain/Overfill Systems (top only)

FloTech brand overfill system kits provide everything needed to install a new API compatible overfill system on your tank. One through six compartment kits are available. FloTech brand kits provide everything needed to make a professional installation.

Systems include: one monitor, one sensor per compartment, 100' cable, and strain reliefs. Sockets sold separately. Special length probes are available upon request.



### Retain/Overfill Systems (retain and overfill)

FloTech brand overfill system kits provide everything needed to install a new API compatible retain/overfill system on your tank. One through six compartment kits are available. FloTech brand kits provide everything needed to make a professional installation.

Systems include: one monitor, one sensor for each compartment, one retain sensor per compartment, 100' cable, and strain reliefs. Sockets sold separately. Special length probes are available upon request.



### FT201 Replacement Probes

The FT201 is a replacement probe for the FloTech brand FT202 sensor. **Is compatible with Civacon's 3150 two wire optic probe.** The FloTech FT200 series probe uses unique dual elastomer seal prism design to prevent fouling. Other sensor designs use epoxy which crack allowing fuel to leak into the optic path ultimately causing signal malfunction. Standard probe lengths are 7", 12" and 18" with custom lengths available upon request.



### FT202 Sensors

The FT202 is a top overfill sensor and part of the FloTech brand retain/overfill monitoring system. The holder is cast aluminum with a 2" NPY mounting thread, heavy duty stainless steel hardware, and Viton seals. **The FT202 is mechanically and electrically compatible with the Civacon model 1050 two wire top sensor.** The sensor is installed by threading it into a 2" NPT tapped hole or mounting it in a 2-3/8" hole secured by a gasket and metal locking nut. Standard probe lengths are 7", 12" and 18".



### FT206 Retain Sensor

The FT206 retain sensor is a bottom retain detection sensor and part of the FloTech brand retain/overfill monitoring system. The sensor has a 1/2" NPT mounting with built in shear groove protection. Sensor comes with a 1/2" weld on aluminum half coupling for mounting. **The FT206 is mechanically and electronically compatible with the Civacon model 1000 two wire retain sensor.**



### FT204 Retain/Overfill Monitors

The FT204 retain/overfill monitor is designed to diagnose and monitor up to six compartments. The FT204 monitor will provide API compatible optic, thermistor, and float socket, outputs for a true load at any rack compatibility .

FloTech's FT203 is a replacement chassis and is compatible with Civacon models 3250 and 3252 on-board monitors.



### FloTech API Optic System

FloTech series FT100 and FT101 sensors are compatible with Scully brand 5 wire optic sensors. FloTech API compatible overfill systems feature long service life and resistance to harsh environments typical on petroleum cargo tanks. Long service life and compatibility make FloTech the ideal choice for demanding cargo applications

#### Optic Overfill Kits

FloTech brand overfill system kits provide everything needed to install a new API compatible overfill system on your tank. One through six compartment kits are available. FloTech brand kits provide everything needed to make a professional installation.

Systems include: one monitor, one sensor per compartment, 100' cable, and strain reliefs. Sockets sold separately. Special length probes are available upon request.



#### FT100 Replacement Probes



The FT100 replacement probe is electronically and mechanically compatible with the API optic or 5 wire signal format. The FloTech brand fail-safe sensor technology ensures the reliable and safe operation necessary in the petroleum industry. All FloTech brand sensors feature a dual prism seal design which is more reliable than other designs which glue in the prism using epoxies. Standard probe lengths include 7", 12", and 18" with custom lengths available upon request. The FT100 is compatible with Scully #09208 and Civacon #1300.

#### FT101 Sensors

The FT101 sensor is compatible with the API optic or 5 wire sensor format. Our probe holder is cast aluminum with a 2" NPT mounting thread, heavy duty stainless steel hardware, and Viton seals. Install in a 2" NPT tapped hole or 2-3/8" hole using the provided gasket and locking nut.



#### FT103 Monitors



The FT103 API compatible monitor works with the FloTech API compatible sensor models FT101/100. This six channel monitor will provide API compatible optic, thermistor, and float socket outputs for a true load at any rack compatibility. FloTech brand outputs are entity approved by CSA and FM to ensure safety. The FT102 replacement chassis is compatible with Civacon model 3150 or Scully 086560 on board monitors.

#### Thermo-Optic Kits

FloTech offers a complete upgrade kit of probes and dummies for 4 and 5 compartment old style "Green or Silver Tip" thermistor systems. Get an "Instant Permissive" in the coldest weather and reduce your waiting time. FloTech digital/optic technology will provide long reliability over standard thermistor sensors.



For a reference comparison chart and replacement parts please refer to [Appendix G-1 & G-2](#)

### **Scully™ Compatible 2 Wire Thermo Optic Sensors**

FloTech series FT150, FT151, and FT152 sensors are compatible with Scully brand two wire optic overfill and retain sensors. These sensors are drop in replacements and compatible with the signal format required by Scully brand on-board monitors.

The FT150 and FT151 sensors are also compatible with early green tip thermistor sensors. FloTech FT150 sensors provide "instant permissive" with no warm-up time when used to upgrade a tank with a straight thermistor overfill system. All sensors and the thermistor dummy must be upgraded to a new FloTech electronic style



#### **FT150 Replacement Two Wire Black and White Optic Probes**

The FT150 thermo-optic 2 wire probe is electronically and mechanically compatible for drop in replacement of commonly used 2 wire probes with black and white wires. The FT150 provides the fast response and reliability of optic technology in a thermistor application. All FloTech brand probes come with a unique dual elastomer seal for prisms and a smooth tapered design for easy installation without gasket damage. Standard lengths are 7", 12", and 18" with custom lengths available upon request. **Compatible with Scully Intellicheck system.**

#### **FT151 Thermo-Optic Sensors**

The FT151 thermo-optic sensor contains the FT150 probe and a 2" NPT housing. Our probe holder is cast aluminum with a 2" NPT mounting thread, heavy duty stainless steel hardware, and Viton probe seal. Install in a 2" NPT tapped hole or 2-3/8" hole using the gasket and locking nut provided. All screws and rings are heavy duty stainless steel for easy assembly and long life. **Compatible with Scully Intellicheck monitors.**



#### **FT152 Retain Sensor**

The FT152 retain sensor is a bottom retain detection sensor. The sensor has a 1/2" NPT mounting with built-in shear groove protection and is shipped with a 1/2" NPT weld-on aluminum half coupling for mounting. **The FT152 is also mechanically and electronically compatible with Scully model 08819 and the Scully Intellicheck system.**



#### **FT155 Dummy**

Dummies send a permissive signal for any missing compartments. For example, in the United States all overfill protection systems are formatted using a six compartment thermistor trailer. Therefore, the terminal controller must receive six permissive sensor signals to allow loading. One dummy can send up to five signals. Consequently a one to five compartment trailer will contain one FT155 dummy (wired to socket). In Canada, where eight channel systems are mandated, two FT155 dummies are needed with one to three compartment trailers and one FT155 for four to seven compartments. The FloTech FT155 thermistor dummy provides instant permissive in the coldest weather **and is mechanically and electrically compatible with Scully and Civacon models.**

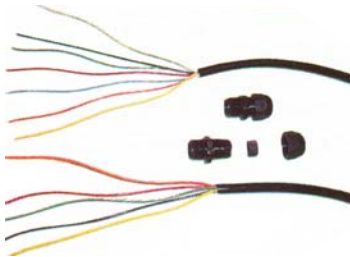


### FloTech Sockets

FloTech brand sockets are mechanically and electronically compatible with the API RP1004 Rel. 2003 Bottom Loading Specification. Optic and thermistor socket face plates are hard coated aluminum alloy to prevent J-slot wear. All hardware and contact buttons are stainless steel to prevent corrosion. FloTech brand sockets are standard color coded to permit easy identification (optic sockets are blue, thermistors are green, and float are red). Colored caps are included for optic and thermistor models. **There are over 15 different models available. For answers to any question please contact DBL.**



### FloTech Cables & Glands



FloTech brand cables are color matched to commonly used overfill systems and have a tough, thick outer jacket which resists oil, U/V and abrasion. Both five conductor (FT400) and seven conductor (FT401) cables are available in 100' lengths. For watertight cable/sensor connections apply FloTech brand strain/relief sealing glands. Two packages are available: FT402 contains 20 pieces for typical top only sensor connection systems or, FT403 contains 30 pieces for typical top and bottom sensor connection systems.

#### Scully Groundhog Ball

**Part# OFM08274**  
Steel grounding ball designed to wire into sensor box for top loading applications.



#### Scully Groundhog Bolt

**Part# OFM08560**  
Steel grounding bolt designed to be installed in truck frame for bottom loading applications.



#### Scully Viton O-ring

**Part# TSF700XV**  
O-ring for Scully overfill protection housing.



#### Dixon Bayco Brass Grounding Stud

**Part# BAYGS1**  
Brass grounding ball designed to ground truck or trailer and protect against static electricity.





**Clay and Bailey Fill Caps**

**Fillcap 94 Series**

Lockable, water tight fillcap consisting of a cast iron lid, gasket and brass base. The lid has a threaded cap for a tight seal, and is suitable for fillports on storage tanks. Brass Lid Available. Sizes: 2", 3", and 4"



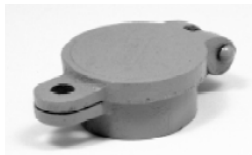
**Fillcap 232 Series**

Lockable, heavy duty fillcap. Loose fitting lid and base are made of cast iron. Sizes: 2", 2-1/2", 3", and 4"



**Fillcap 232-1/2 Series**

Light weight, lockable fillcap. Loose fitting lid and base are made of cast iron. Available in 2" size only.



**Fillcap 233 Series**

A lightweight, durable male thread fillcap. Cast iron material with a lockable lid. Available embossed with customer name in lots of 500 or more. Sizes: 2" and 3"



**Fillcap 234 Series**

A lightweight, durable male thread fillcap. Cast iron material with a lockable lid. Top has a screened opening in cover for venting. Available in 2" only.



**Fillcap 235 Series**

A lightweight, durable male thread fillcap. Cast iron material with a lockable lid. Available embossed with customer name in lots of 500 or more. Sizes: 2" and 2-1/2"



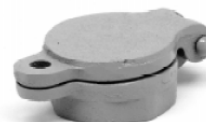
**Fillcap 254 Series**

Lockable, watertight fillcap made of all cast iron. Lid is lockable in any position, suitable for fill ports on storage tanks. Brass lid available. Sizes: 2", 3", and 4"



**Fillcap 500 Series**

Lightweight female threaded fillcap. Loose fitting hinged lid is lockable and fits on a 2" pipe. Cast iron lid and collar construction. Available embossed with customer name in lots of 500. Sizes: 2" and 2-1/2"



**88 P/V Fillcap**

A new concept in venting small AST's. This 2" Pressure/Vacuum Relief Fillcap incorporates several outstanding design features including a lockable cap as standard, scallop style lid for "sure grip" tightening and a large warning label minimizes the chances of accidental opening under pressure. The special pressure and vacuum relief system provides safety from product leakage, provides relief when filling or dispensing of product and minimizes fuel evaporation. The fillcap is set to relief pressure at 3 psi and vacuum at 0.5 oz. pressure.



**Emergency Vent 370 Series**

Eliminates the need for pipe nipple on installation. Hole patterns conforms to ANSI B16.5 specifications. Machined base and top with Buna N "O" Ring provides vapor tight seal. Air flow at 2.5 psi is 448,054 SCFH for the 8" and 672,108 SCFH for the 10", both with screens. Sizes: 8" and 10"



**Emergency Vent 365 Series**

Heavy duty cast iron top and base for durability, (aluminum base available). Machined top and base with a Buna-N "O" Ring provide a vapor tight seal. Air flow at 2.5psi is 43,770 SCFH with screen. The screen minimizes the chances of vandalism and theft. 3" NPT male threads are standard. Available in 3" only.



**Emergency Vent 354 Series**

A spring loaded pressure relief vent made of brass and contains a brass screen and gasket to insure a tight seal. Air flow at 2.5 psi with screen is 17,707 SCFH, and 19,218 SCFH without screen. Available in 2" only.



**Emergency Vent 369 Series**

Male thread, "mushroom" style top design emergency vent made of heavy duty cast iron, (aluminum base available). Top acts as weather deflector and minimizes the chance of theft or vandalism. Machined top & base with Buna N "O" Ring provides a vapor tight seal. Sizes: 4", 6", and 8"



Clay and Bailey introduces the solutions to the problem of AST Emergency Vents passing regulatory agencies pressure decay tests on above ground storage tanks. This emergency vent offers excellent owner benefits and avoids repeated tests due to vapor leakage. Weather resistant paint used to enhance installation appearance. Offers large gasket and O-ring surface for sealing and specially machined base for a tight seal. Sizes: 4" Male and Female Thread, 6" Male and Female Thread, and 8" Male and Female Thread and Flanged.



## Clay and Bailey



DBL is an authorized Clay and Bailey distributor and offers their full line of products. Besides fillcaps and vents, Clay and Bailey offers Overfill Protection products, manholes, trailer vents and manholes, PEI Equipment, and much, much more.

For more details on any of the products that Clay and Bailey offer, please call DBL today.



**Clay & Bailey Mfg. Co.**

# Calibrations

DLB has fulltime staff that are dedicated to the repairing, modifying, and calibrating of fuel delivery truck tanks and trailers.

Whether it be parts or service, DBL is your one stop location to keep your equipment up and running.



Calibration Tank