

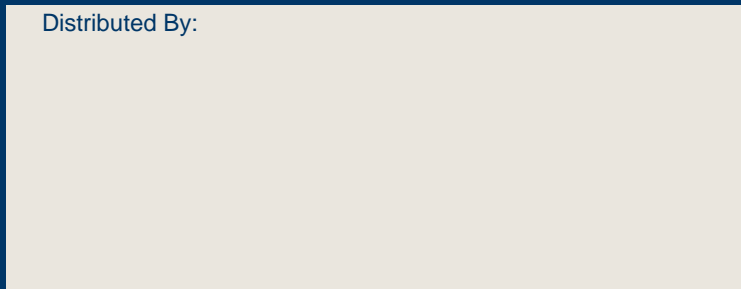


*The Right Connection™*



## Dixon Bayco Petroleum & Overfill 2009 catalog

Distributed By:



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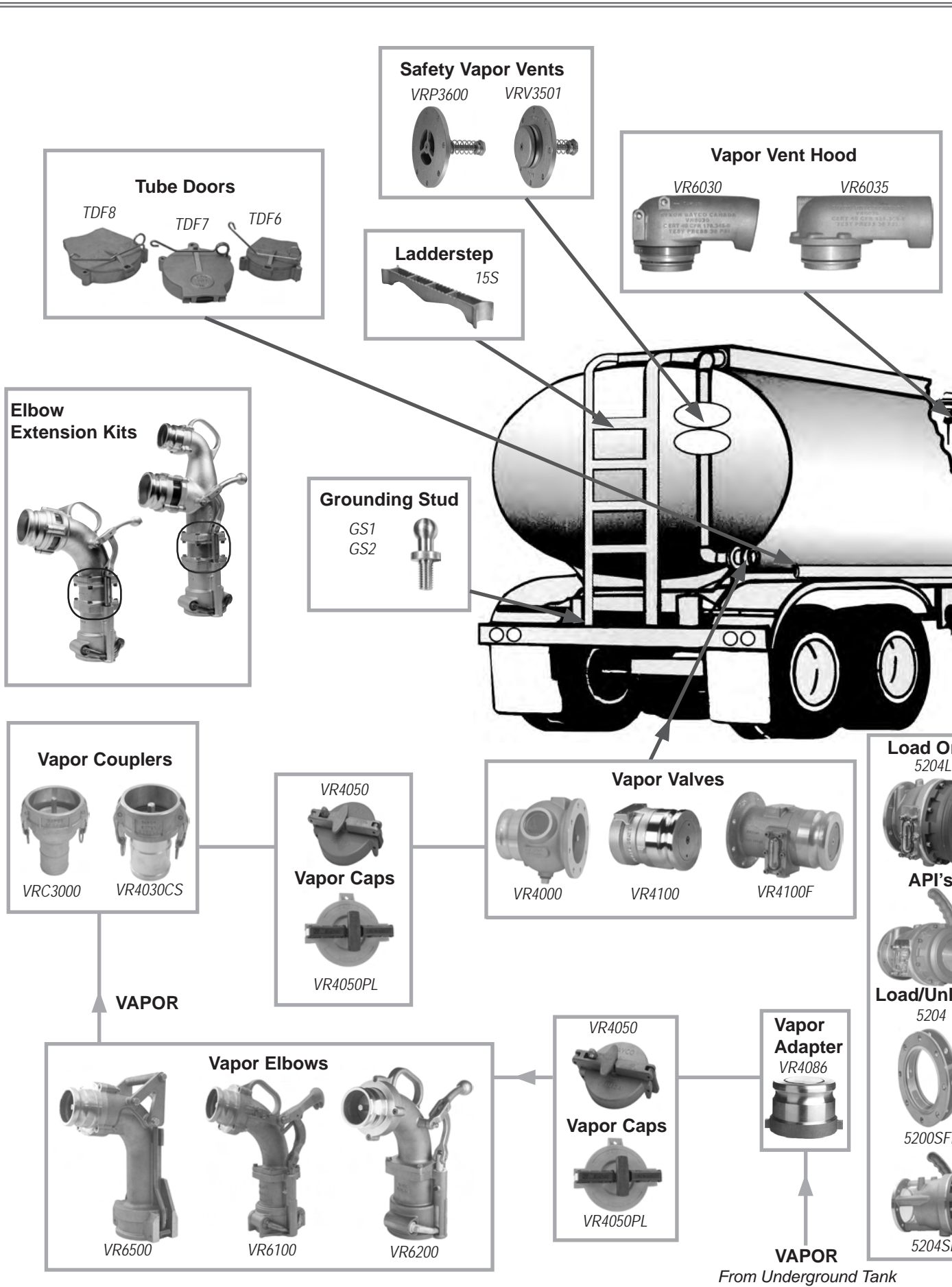
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## We Commit

- To ensure that internal and external customer needs are identified and that our products and services meet these needs.
- To fully meet and exceed the requirements of the ISO 9001 Quality Program.
- To strive for quality in each and every phase of our business.
- To exceed competitor's quality.
- To provide systems and training for all Dixon Bayco employees.
- To create an environment that will allow each employee to do it right the first time, and accept the responsibility for quality in each and every task they perform.
- That no employee will ever be called on to do anything morally, legally or ethically wrong.

## Product Changes and Corrections

Dixon Bayco has gone to considerable effort to ensure the accuracy of the information provided. Please report any irregularities found for clarification or correction. Dixon Bayco reserves the right to modify or change product specification or to withdraw product offerings at any time without prior notice.





**Flotech brand Products**



**Petroleum Tanker Products**

Dixon Bayco products are engineered for dependable, long service life and designed for easy, low cost maintenance. Where possible, modular systems are incorporated with common parts to minimize inventory of repair items.

**Air Interlocks**



**Aluminum TTMA Flanges**

TTF3AL  
TTF4AL  
FG4540  
4443



**TTMA Round Flange Gaskets**



**API Cap Assembly**



**4500 Series Drop Adapters**



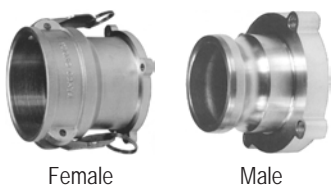
**Dust Cap**



FUEL

FUEL

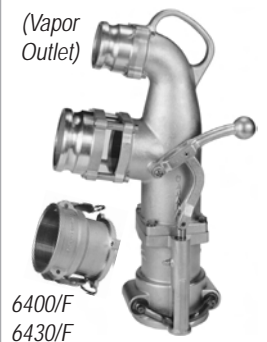
**Elbow Inlets (6000 Series)**



**Drop Elbows**



**Co-Axial Elbow (Vapor Outlet)**



FUEL

**Top Seal Adapters**



**Locking Fill Caps**



FUEL  
To Underground Tank

# Dixon Bayco Fuel Compatibility Chart

Dixon Bayco Product	Description	Fuel Product*										
		Gasoline	Diesel	ULSD	Crude Oil	E10	E20	E85	E100	B2	B20	B100
4500 Series	Two Piece API Drop Adapter With Sight Glass, Baylast™ Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
4500V Series	Two Piece API Drop Adapter With Sight Glass, Viton® Seals	✓	✓	✓	✓	N/R	N/R	N/R	N/R	✓	✓	✓
4530 & 4540	API Drop Adapter Without Sight Glass, Baylast™ Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
4530V & 4540V	API Drop Adapter Without Sight Glass, Viton® Seals	✓	✓	✓	✓	N/R	N/R	N/R	N/R	✓	✓	✓
4540SG	One Piece API Drop Adapter With Sight Glass, Baylast™ Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
4540SGV	One Piece API Drop Adapter With Sight Glass, Viton® Seals	✓	✓	✓	✓	N/R	N/R	N/R	N/R	✓	✓	✓
5200SFI & 5200SFI-3	TTMA Flanged Sight Glass With Baylast™ Seals	✓	✓	✓	N/R 2	✓	✓	✓	✓	✓	✓	N/R
5200SFIV & 5200SFIV-3	TTMA Flanged Sight Glass With Viton® Seals	✓	✓	✓	N/R 2	N/R	N/R	N/R	N/R	✓	✓	✓
5204	API Valve With Sight Glass, Baylast™ Seals	✓	✓	✓	N/R 2	✓	✓	N/R	N/R	✓	✓	N/R
5204SFI	API Valve with Inline Tube Sight Glass, Baylast™ Seals	✓	✓	✓	N/R 2	✓	✓	✓	✓	✓	✓	N/R
5204C	API Valve With Sight Glass & Removable Handle, Baylast™ Seals (Canada)	✓	✓	✓	N/R 2	✓	✓	N/R	N/R	✓	✓	N/R
5204L	API Load Only Valve With Sight Glass, Baylast™ Seals	✓	✓	✓	N/R 2	✓	✓	N/R	N/R	✓	✓	N/R
5204LNG	API Load Only Valve Without Sight Glass, Baylast™ Seals	✓	✓	✓	N/R 2	✓	✓	✓	✓	✓	✓	N/R
5204NG	API Valve Without Sight Glass, Baylast™ Seals	✓	✓	✓	N/R 2	✓	✓	✓	✓	✓	✓	N/R
5204NGC	API Valve Without Sight Glass, With Removable Handle, Baylast™ Seals (Canada)	✓	✓	✓	N/R 2	✓	✓	✓	✓	✓	✓	N/R
5204NGV	API Valve Without Sight Glass, Viton® Seals	✓	✓	✓	N/R 2	N/R	N/R	N/R	N/R	✓	✓	✓
5204NGVC	API Valve Without Sight Glass, With Removable Handle, Viton® Seals (Canada)	✓	✓	✓	N/R 2	N/R	N/R	N/R	N/R	✓	✓	✓
5204SNG	API Valve Without Sight Glass, Baylast™ Seals, Stainless Spring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
5204SNGC	API Valve Without Sight Glass, With Removable Handle, Baylast™ Seals, Stainless Spring (Canada)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
5204TNG	API Valve Without Sight Glass, Teflon® Seals	N/R 1	N/R 1	N/R 1	N/R 1	N/R	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	✓
5204TNGC	API Valve Without Sight Glass, With Removable Handle, Teflon® Seals (Canada)	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	N/R 1	✓
6000, 6200 & 6500 Series Drop Elbows	Petroleum Drop Elbows & Inlets, Buna Seals	✓	✓	✓	N/A	✓	✓	✓	✓	✓	✓	N/R
Vapor or Product Hose Couplings	Petroleum Vapor Hose Couplings, Buna Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
Vapor or Product Hose Couplings	Petroleum Vapor Hose Couplings, Viton® Seals	✓	✓	✓	✓	N/R	N/R	N/R	N/R	✓	✓	✓
VR4000 & VR4100 Series Vapor Valves	Petroleum Vapor Valves, Baylast™ Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
VR6000, VR6100, VR6200 & VR6500 Vapor Elbows	Petroleum Vapor Elbows & Inlets, Baylast™ Seals	✓	✓	✓	N/A	✓	✓	✓	✓	✓	✓	N/R
VR6030SQ & VR6035SQ	Sequential Vapor Vent Valves, Baylast™ Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/R
VR6030V, VR6030SQV & VR6035SQV	Sequential Vapor Vent Valves, Viton® Seals	✓	✓	✓	✓	N/R	N/R	N/R	N/R	✓	✓	✓
300GTTFCB & 400GTTFCB	Cork Buna TTMA gasket	✓	✓	✓	✓	✓	N/R	N/R	N/R	✓	N/R	N/R
400GTTFK	Klinger Style TTMA gasket	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40321TF, 40322TF, 40323TF	Teflon® Soft Core TTMA gasket	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FT151, FT202, FT101	FloTech Sensors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FT151S, FT201S, FT101S	FloTech Stainless Steel Sensors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Notes:**

N/A Not Applicable (This product is not used in this application)

N/R Not Recommended

N/R 1 Not Recommended cost and tendency for Teflon® to become damaged from particulate material is not justified for this application.

N/R 2 Not Recommended crude oil contains acids that are corrosive to steel parts.

\* Petroleum companies often put additives in fuels, additives can affect compatibility with fittings and seals. Please contact Dixon Bayco for more information.

Viton® GFLT is compatible with all liquids listed above and available from Dixon Bayco by special quote.

Baylast™ is a proprietary seal compound from Dixon Bayco.

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## Dixon Bayco Bottom Loading, Gasket & Seal Recommendations For Alternative Fuels

Dixon Bayco has completed several years of testing and engineering evaluation to ensure our products are compatible with all modern motor fuels in use today.

Dixon Bayco uses a proprietary seal compound that we refer to by the trade name **BAYLAST™**, **BAYLAST™** has been tested both in the lab and field with excellent results. **BAYLAST™** was developed so we could offer a single seal material compatible with the wide range of alternative fuels used today. For the past year, many Dixon Bayco products have been using **BAYLAST™** seals to ensure compatibility with alternate fuels including E100 Ethanol, E85 Ethanol, B2 Biodiesel, B20 Biodiesel, Ultra Low Sulfur Diesel, and standard refined gasoline and diesel products with excellent results. Our tests indicate that **BAYLAST™** performs well down to **-40° C/F**.

There are mechanical and temperature considerations that must be understood to determine which seal material is suitable for a specific application. A good example is Teflon®, it has a very wide chemical compatibility range but is a poor seal material for mechanical reasons. Using Viton® B, or Viton® GF is one solution to ensure compatibility, but Viton® has limitations regarding mechanical suitability for seal applications with moving joints. One critical and well known limitation to Viton® is cold temperature. Viton® will become hard at low temperatures and seals with moving parts tend to weep liquid.

On the opposing page is our fuel compatibility chart which outlines our recommendation for each Dixon Bayco product and type of fuel.

Should you have any questions or need additional technical support, please call Dixon Bayco at: 800-355-1991.

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### SuperTanker™ Program

The Supertanker™ package from Betts and Dixon Bayco has all the reliable, high performance, bottom loading equipment you want plus something you really need. A three year warranty that covers materials and workmanship on all components installed on your new tanker as shown on our supertanker selection check list below. From the "overflow system" to the manholes and every valve, vent, adapter, gravity coupler and dust cap. The only exceptions are seals and wear surfaces, where life expectancy is highly dependant on material being hauled.

And there is more with Supertanker™, you get a level of service our competitor's simply can not match. If there is a concern with your new bottom loading system, call us and we will look after it, period! We will come on-site if needed to solve any problems. And you will always have access to our experienced engineering team staffed with tanker experts. We'll even help with competitor's systems. Our goal is your satisfaction.

Call your Betts or Dixon Bayco representative today, or visit us online at [www.supertankerweb.com](http://www.supertankerweb.com). Just check off the equipment you need and tell your tank builder you want Supertanker™.

Want the World's Best Bottom Loading Package?  
Check this out...

- Betts & Dixon Bayco 3-year warranty on complete system
- genuine Betts manholes and emergency valves
- proven most reliable Flotech Overfill detection
- patented Dixon Bayco high-flow API valve
- patented Flotech, easy maintenance dual socket assembly
- highest flow vapor vents from Dixon Bayco
- genuine Betts internal valves with Teflon® seals
- system components specifically designed to work together
- complete air operated valve system
- corrosion resistant Dixon Bayco bronze interlocks
- low-weight Dixon Bayco dust caps and gravity couplers
- both Betts & Dixon Bayco are widely accepted by fleets and OEM's

Now you do not have to sacrifice the high-performance bottom loading system you really want just to get the convenience of an easy-to-specify package.

## 4" API Valves

API Valves are used for bottom loading and unloading of petroleum tankers. Valve nose shape and opening comply with American Petroleum Institute standard (API RP-1004) enabling Dixon's API valves to interchange with competitor items made to the same specification. Two styles are available: a load model without handle and, a load/unload model with a handle to allow manual opening.

- Unique flow and fluid level sight indicator are available
- Load/unload versions feature an ergonomically curved handle that opens with a short 62° stroke. Can be ordered with a fixed or removable handle.
- Chemical resistant crank seals and poppet seal (Teflon® seals optional)
- Any required maintenance is simplified, can be completely rebuilt without removing the valve from the tank
- The ALH (anodized aluminum hard coat) nose ring can be rotated to provide a fresh cam service.
- See page 7 for tank truck flange gaskets.
- Aluminum ergonomic handle
- **5204NG** approved for use in the following service: gasoline, diesel, E10 10% ethanol, E85 85% ethanol, E100 100% ethanol, B15 15% bio-diesel/diesel, B20 20% bio-diesel/diesel
- **5204NG** tested performance to **-40°F/C** with 100% ethanol, B15 15% bio-diesel and B20 20% bio-diesel
- **5204NGV** approved for use in the following service: B100 100% bio-diesel



5204



5204SFI



5204L

### API Load/Unload Valve

Part #	Description
<b>5204NG</b>	fixed handle, without sight glass, ALH nose ring, Baylast™ seal
<b>5204</b>	fixed handle, sight glass, ALH nose ring, Baylast™ seal
<b>5204C</b>	removable handle*, sight glass, ALH nose ring, Baylast™ seal
<b>5204NGC</b>	removable handle*, without sight glass, ALH nose ring, Baylast™ seal
<b>5204SNG</b>	fixed handle, without sight glass, ALH nose ring, stainless steel spring for crude oil, Baylast™ seal
<b>5204TNG</b>	fixed handle, without sight glass, ALH nose ring, Teflon® seals
<b>5204NGV</b>	fixed handle, without sight glass, Vitor® seals
<b>NEW 5204SFI</b>	fixed handle, with inline full body sight glass, ALH nose ring, Baylast™ seal

\* Removable handle for Canadian market

### API Load Only Valve

Part #	Description
<b>5204L</b>	load only API valve with sight glass, ALH nose ring
<b>5204LNG</b>	load only API valve without sight glass, ALH nose ring

## API Dust Caps



5000-25



5205

Part #	Description
<b>41450-DCAL</b>	aluminum API cap with flat gasket
<b>5000-25</b>	nylon API cap with flat gasket, pad lockable arm
<b>NEW 5205</b>	aluminum API cap with quick release arm and chain



## Gravity Drop Adapters

Gravity drop adapters attach and seal directly against openable API's and allow drop hose with standard cam and groove couplers to clamp on and transfer petroleum from the API. Dixon manufactures two styles of gravity drop adapters; a standard one-piece and a two-piece bolt together design with sight glass. Both are Dixon quality cast construction with bronze cam arms and Buna O-ring seals (Viton® O-rings available upon request).

### Standard One Piece Body

- Quality cast aluminum body with inside lip to hang on API while clamping
- Inexpensive replacement of Buna seal (Viton® seal available)
- Bronze cam arms with stainless steel pins and finger rings

Part #	Description
<b>4530</b>	API 3" drop adapter
<b>4530SG</b>	API 3" drop adapter with inline sight glass and flat gasket <span style="float: right;">NEW</span>
<b>4540</b>	API 4" drop adapter
<b>4540SG</b>	API 4" drop adapter with inline sight glass and flat gasket <span style="float: right;">NEW</span>
<b>4500-5</b>	replacement Baylast™ O-ring for 4500, 5000-24
<b>4500-7</b>	replacement Viton® O-ring for 4500 & 5000-24
<b>4433</b>	replacement Baylast™ O-ring for 4530SG & 4540SG
<b>4426</b>	replacement Viton® O-ring for 4530SG & 4540SG
<b>41440-225AL</b>	API 4" drop adapter with flat gasket
<b>31440-225AL</b>	API 3" drop adapter with flat gasket
<b>2143SEALBU</b>	Replacement flat gasket for 31440, 41440 & 41450



4540

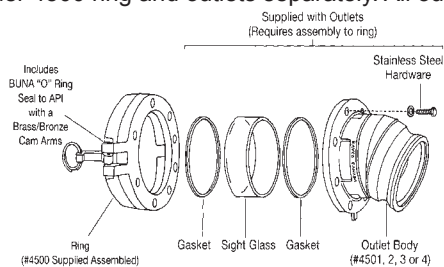


4540SG

### Two Piece Design with Sight Glass

Bayco brand two-piece gravity drop adapter system consists of a 4500 ring assembly and an outlet which contains mounting bolts, sight glass and seals. Customer assembly required (see sketch). Order ring and outlets separately.

**Note:** Order 4500 ring and outlets separately. All outlets include sight glass, seals and mounting bolts.

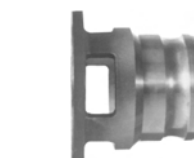


Sketch showing assembly of 2 piece drop adapter

Part #	Description
<b>4500</b>	ring only
<b>4500V</b>	with Viton® ring
<b>4501</b>	3" male x 4" TTMA flange x 22½°
<b>4501V</b>	with Viton® gaskets
<b>4502</b>	4" male x 4" TTMA flange x 22½°
<b>4502V</b>	with Viton® gaskets
<b>4503</b>	4" male x 4" TTMA flange straight
<b>4503V</b>	with Viton® gaskets
<b>4503SPECIAL</b>	4" male x 4" TTMA flange straight, no sight glass
<b>4504</b>	4" female x 4" TTMA flange x 22½° coupler
<b>4504V</b>	with Viton® gaskets



4502ASSM



4503, 4503SPECIAL



4501



4504



4501, 4502

Part #	Description
<b>4501ASSM</b>	API drop adapter outlet, 3" x 4" x 22½° adapter, sight glass, buna seals (4500 + 4501)
<b>4502ASSM</b>	API drop adapter outlet, 4" x 4" x 22½° adapter, sight glass, buna seals (4500 + 4502)
<b>4503ASSM</b>	API drop adapter outlet, 4" x 4" x 22½° adapter, sight glass, buna seals (4500 + 4503)
<b>4504ASSM</b>	API drop adapter outlet, 4" x 4" x 22½° coupler, sight glass, buna seals (4500 + 4504)

## Tank Truck Gaskets

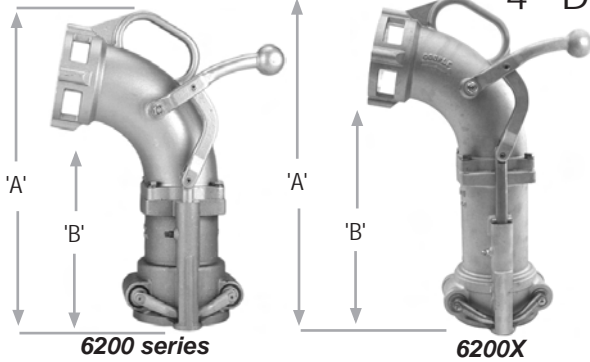
Part #	Size	Description	OD	ID	Thickness
<b>40321TF</b>	3"	Teflon® with soft fiber core	5-7/8"	3-1/2"	1/4" <span style="float: right;">NEW</span>
<b>300GTTFCB</b>	3"	Cork / Buna	5-5/8"	3-1/2"	1/8"
<b>40322TF</b>	4"	Teflon® with soft fiber core	6-7/8"	4-9/16"	1/4" <span style="float: right;">NEW</span>
<b>400GTTFCB</b>	4"	Cork / Buna	6-5/8"	4-9/16"	1/8"
<b>40323TF</b>	4"	API Sump gasket, Teflon® with soft fiber core	8-3/8"	6-9/16"	1/4" <span style="float: right;">NEW</span>



**Drop Elbows and Accessories**

Drop elbows connect to the underground tank fill collar on one end and to the tanker drop hose at the other. They allow convenient hose connection and prevent hose damage due to kinks. Bayco brand elbows are built tough for consistent positive locking using solid bronze arms with modular construction for easy, low cost maintenance. Locking mechanisms, cam arms and bottom assemblies are interchangeable.

**4" Drop Elbows**



- 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 the best bite of any elbows in the market
- lubrication fitting for locking stem, stem made of stainless steel
- modular quality cast aluminum construction
- field repair and upgrade are made simple due to modular design

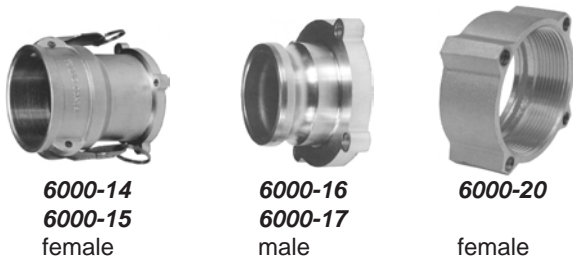
Part #	Description	'A' Overall Height	'B' Ground Clearance
<b>6200</b>	side lever standard height model	17-3/4"	10-7/8"
<b>6200A</b>	includes 4" male inlet assembled	17-3/4"	10-7/8"
<b>6200AT</b>	includes 4" male inlet and anti-spill tube assembled	17-3/4"	10-7/8"
<b>6200B</b>	includes 3" female inlet assembled	17-3/4"	10-7/8"
<b>6200C</b>	includes 3" male inlet assembled	17-3/4"	10-7/8"
<b>6200D</b>	includes 4" female inlet assembled	17-3/4"	10-7/8"
<b>6200RH</b>	side lever standard height, with right hand side lever	17-3/4"	10-7/8"
<b>6200RHA</b>	side lever standard height, with right hand side lever, 4" male inlet	17-3/4"	10-7/8"
<b>6200T</b>	side lever standard height, with anti-spill sleeve	17-3/4"	10-7/8"
<b>6200X</b>	side lever tall model	21"	13-3/4"
<b>6200XA</b>	side lever tall model with 4" male inlet installed	21"	13-3/4"
<b>6200XAT</b>	side lever tall model with anti-spill sleeve and 4" male inlet	21"	13-3/4"
<b>6200XB</b>	side lever tall model with 3" female inlet installed	21"	13-3/4"
<b>6200XC</b>	side lever tall model with 3" male inlet installed	21"	13-3/4"
<b>6200XD</b>	side lever tall model with 4" female inlet installed	21"	13-3/4"
<b>6200XT</b>	side lever tall model with anti-spill sleeve	21"	13-3/4"

**Elbow Options**

- **6000EXT:** Extension Kit (see page 11) provides extra height for deep fill boxes, kit increases elbow ground clearance by approximately 3". Can be used with all standard height 6000/6200/6500 series drop elbows.
- **6200SLK:** Safety Latch Kit (see page 11) locks the side lever of the 6200/6400 series elbows.
- **6200-17:** For standard height 6000/6200/6500 series elbows with anti spill tube kit
- **6200X-17:** Anti Spill Tube Kit for tall 6200/6500 series elbows

**Elbow Inlets**

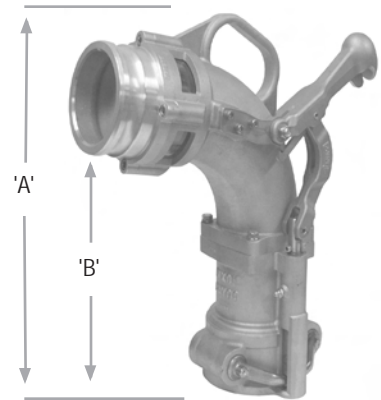
- for 6000, 6000AS, 6200, 6500 elbows
- bolt-on easy to install/replace
- aluminum bodies with bronze cam arms
- comes with stainless steel cap screws (4)



Part #	Description
<b>6000-14</b>	4" female
<b>6000-15</b>	3" female
<b>6000-16</b>	3" male
<b>6000-17</b>	4" male
<b>6000-20</b>	4" male with FNPT
<b>VR6000-6</b>	3" male adapter for vapor elbows

## Self-Locking Drop Elbows

- Strong arm design increases the strength of the locking arm components.
- Arm hinge points use a double yoke designed to increase strength. There are no side bolts or casting bosses to break.
- No need for the operator to engage or set the locking mechanism because the 6500 series automatically locks the arm onto the fill adapter when the arm is rotated into the locking position.
- Ergonomic arm design contains a lock release lever that the operator can engage or disengage by simply gripping the locking arm. Since the locking mechanism is tucked inside the locking arm it can not be accidentally released.
- Self-locking arm prevents the elbow from popping off due to a hydraulic surge when the underground storage tank overfill valve slams shut.
- Easy to service - all gaskets and repair parts are common to the product line.
- handle can be mounted to left or right side of elbow



Part #	Description	'A' Overall Height	'B' Ground Clearance
<b>6500</b>	tightfill elbow with locking handle	17-3/4"	10-7/8"
<b>6500A</b>	tightfill elbow with locking handle and 4" adapter	17-3/4"	10-7/8"
<b>6500B</b>	tightfill elbow with locking handle and 3" coupler inlet	17-3/4"	10-7/8"
<b>6500C</b>	tightfill elbow with locking handle and 3" adapter inlet	17-3/4"	10-7/8"
<b>6500D</b>	tightfill elbow with locking handle and 4" coupler	17-3/4"	10-7/8"
<b>6500X</b>	tightfill tall model elbow with locking handle	21"	13-3/4"
<b>6500XA</b>	tightfill tall model elbow with locking handle and 4" adapter	21"	13-3/4"
<b>6500XB</b>	tightfill tall model elbow with locking handle and 3" coupler inlet	21"	13-3/4"
<b>6500XC</b>	tightfill tall model elbow with locking handle and 3" adapter inlet	21"	13-3/4"
<b>6500XD</b>	tightfill tall model elbow with locking handle and 4" coupler	21"	13-3/4"
<b>6500T</b>	tightfill elbow with locking handle, anti-spill sleeve	17-3/4"	10-7/8"
<b>6500AT</b>	tightfill elbow with locking handle, anti-spill sleeve and 4" adapter	17-3/4"	10-7/8"
<b>6500BT</b>	tightfill elbow with locking handle, anti-spill sleeve and 3" coupler	17-3/4"	10-7/8"
<b>6500CT</b>	tightfill elbow with locking handle, anti-spill sleeve and 3" adapter	17-3/4"	10-7/8"
<b>6500DT</b>	tightfill elbow with locking handle, anti-spill sleeve and 4" coupler	17-3/4"	10-7/8"
<b>6500XT</b>	tightfill tall elbow with locking handle, anti-spill sleeve	21"	13-3/4"
<b>6500XAT</b>	tightfill tall elbow with locking handle, anti-spill sleeve and 4" adapter	21"	13-3/4"
<b>6500XBT</b>	tightfill tall elbow with locking handle, anti-spill sleeve and 3" coupler	21"	13-3/4"
<b>6500XCT</b>	tightfill tall elbow with locking handle, anti-spill sleeve and 3" adapter	21"	13-3/4"
<b>6500XDT</b>	tightfill tall elbow with locking handle, anti-spill sleeve and 4" coupler	21"	13-3/4"

## Straight Drop Connectors

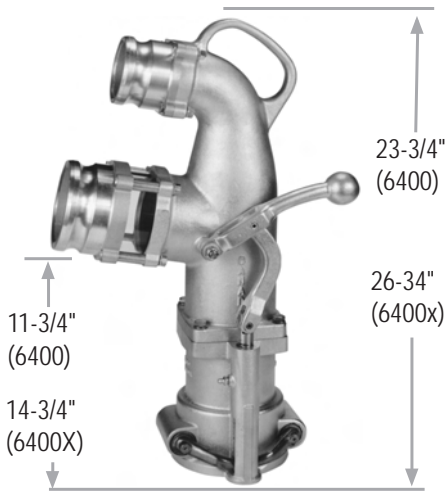
- for use with unusually deep fill boxes where standard elbows cannot be attached
- D handle operation, bottom end same as 6000
- welded construction of top section
- available with 3" or 4" male inlets

Part #	Description
<b>6303</b>	3" male inlet
<b>6304</b>	4" male inlet



## Coaxial Elbows

- for single point vapor recovery only
- 3" male vapor outlet (top)
- Comes assembled with choice of 3" or 4" male or female inlets.  
**Note:** 6400 series coaxial inlets will not fit our other elbow series, please see page 8 for inlets.
- quality cast aluminum construction with solid bronze arms
- bolt-on inlets/outlets for easy, fast replacement
- acrylic sight glass with Buna seals
- 6400EXT Kit (see page 11) raises elbow clearance an additional 3" to approximately 14¾" when extra height for deep fill boxes is required.



Part #	Description
<b>6400</b>	4" male inlet
<b>6400F</b>	4" female inlet
<b>6400L</b>	4" male inlet and safety latch
<b>6400FL</b>	4" female inlet and safety latch
<b>6430</b>	3" male inlet
<b>6430L</b>	3" male inlet and safety latch
<b>6430F</b>	3" female inlet
<b>6430FL</b>	3" female inlet and safety latch
<b>6400X</b>	tall model with 4" male inlet
<b>6400XF</b>	tall model with 4" female inlet
<b>6400XFL</b>	tall model with 4" female inlet and safety latch
<b>6400XL</b>	tall model with 4" male inlet and safety latch
<b>6430X</b>	tall model with 3" male inlet
<b>6430XF</b>	tall model with 3" female inlet
<b>6000-14C</b>	4" female for 6400 series coaxial elbow
<b>6000-15C</b>	3" female for 6400 series coaxial elbow
<b>6000-16C</b>	3" male for 6400 series coaxial elbow
<b>6000-17C</b>	4" male for 6400 series coaxial elbow

## Side Seal Drop Elbows

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



Part #	Description
<b>6000AS</b>	elbow only / no inlet
<b>6000ASA</b>	6000AS with 4" male inlet
<b>6000ASAT</b>	6000AS with 4" male inlet with anti-spill tube
<b>6000ASB</b>	6000AS with 3" female inlet
<b>6000ASC</b>	6000AS with 3" male inlet
<b>6000ASD</b>	6000AS with 4" female inlet
<b>6000ASAL</b>	6000ASA with locking ring
<b>6000ASR</b>	locking ring kit
<b>6000AST</b>	includes anti-spill sleeve

## Side Seal Adapter

- 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 elbows

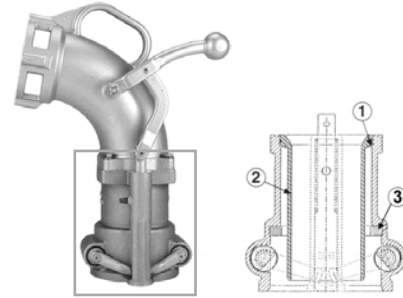


Part #	Description
<b>6000-SSA</b>	side seal adapter



## Anti Spill Sleeves

- designed for 6000, 6200 and 6500 top seal elbows
- consists of aluminum tube (1) and seal (2) which fits inside bottom assembly of elbow
- allows fuel to bypass and exit below the underground tank collar/elbow seal interface, preventing leakage or spill should problems with sealing or lock-up occur
- **6200-17** for standard height 6000/6200 series elbows
- **6200X-17** for tall 6200 series elbows
- Anti-spill tube can be purchased already assembled within elbows.



Sketch of 6200-17 sleeve includes:

1. O-ring
2. aluminum sleeve

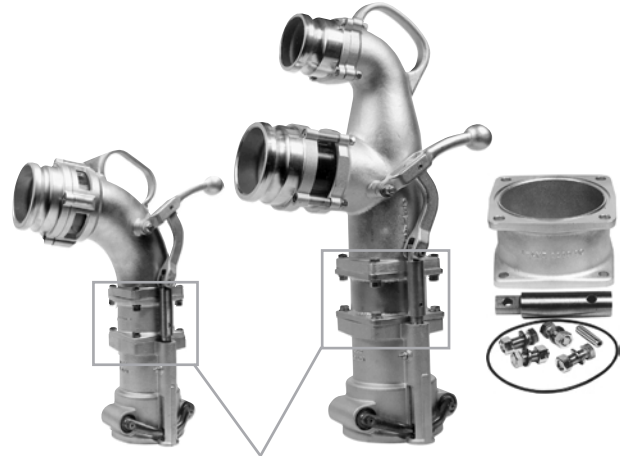
**Note:** Sleeve allows liquid to bypass main gasket/underground tank adapter interface.

Part #	Description
<b>6200-17</b>	anti-spill tube for standard height 6000/6200/6500 series elbows
<b>6200X-17</b>	anti-spill tube for tall height 6200/6500 series elbows

## Elbow Extension Kits

- Spacer kits raise Bayco brand elbow clearance by 3" for customers requiring additional height to clear deep fill boxes (for 6000/6200/6400/6500/VR6000/VR6200 standard height elbows).
- requires assembly to elbow
- kit comes with cast aluminum spacer, linking extension hardware and installation instructions

**Note:** 6400 extension kit includes replacement vapor tube, not shown in photo.



spacer kits shown assembled to elbows

Part #	Description
<b>6000EXT</b>	for 6000/6200/6400/6500/VR6000/VR6200 elbows
<b>6400EXT</b>	for 6400 co-axial elbow

## Anti-Spill Safety Latch

- prevents accidental spills by locking 6200/VR6200 series elbows or 6400 series co-axials to underground tank collar
- available as retro fit kit or assembled on elbows (pictured)
- kit includes bronze safety latch, hardware and assembly instructions
- simple, reliable locking and quick release unlocking
- requires assembly to elbows



Part #
<b>6200SLK</b>

**Vapor Recovery Products**

Bayco brand petroleum tanker vapor return products are designed for interchangeability with competitor products and built to the highest quality standards for trouble-free service. They allow transfer of underground storage tank vapor to the tanker compartments during the off loading of petroleum

**Vapor Elbows**



- for use in two point vapor recovery systems
- choice of 4 models with and without probe, poppet and adapter outlet
- one piece bronze locking arms housed in polymer bushings
- advanced design side lever locking system
- Buna seals and stainless steel hardware
- bolt on 3" male outlet included (can rotate for extended life)
- Use VR6000-6 as a replacement 3" adapter for VR6200 model
- shares a common bottom end with other vapor elbows
- lubrication fitting on locking stem

**Note:** See drop elbow (page 10) for single point vapor recovery coaxial elbow 6400.

Part #	Description
<b>VR6200</b>	vapor elbow with 3" adapter outlet, includes outlet poppet valve
<b>VR6200L</b>	VR6200 elbow with safety latch kit, includes outlet poppet valve
<b>VR6200LNP</b>	VR6200 elbow with safety latch kit, without outlet poppet valve
<b>VR6200LPNP</b>	VR6200 elbow with safety latch kit and extension kit, without outlet poppet valve
<b>VR6200NP</b>	vapor elbow with 3" adapter outlet, without outlet poppet valve
<b>VR6200NPBU</b>	vapor elbow without outlet and without outlet poppet valve
<b>VR6200NPBP</b>	vapor elbow with 3" coupler outlet and extension kit assembled, no outlet poppet valve
<b>VR6200NPDP</b>	vapor elbow with 4" adapter outlet and extension kit assembled, no outlet poppet valve
<b>VR6200NPB</b>	vapor elbow with 3" coupler outlet, no outlet poppet valve
<b>VR6200PNP</b>	vapor elbow with 3" adapter outlet, no outlet poppet valve with extension kit
<b>VR6100</b>	vapor elbow with 3" adapter outlet, push-on style, includes outlet poppet valve
<b>VR6100NP</b>	vapor elbow with 3" adapter outlet, push-on style, without outlet poppet valve
<b>VR6500</b>	vapor elbow with 3" adapter outlet, includes outlet poppet valve
<b>VR6500NP</b>	vapor elbow with 3" adapter outlet, without outlet poppet valve

*Elbow inlets can be found on page 8*

**Vapor Valves**

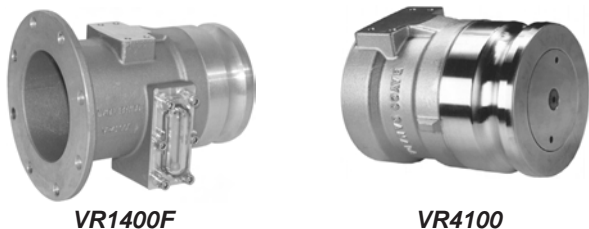


- bulb designed for maximum vapor flow (low resistance) for fast loading of tankers
- with angled acrylic sight glasses (2) and drain plug, allows viewing and drainage of fluids if in system
- quality cast aluminum construction
- 4" TTMA flange
- with air interlock mount (use air interlock 5000AIV if (required))
- see page 7 for tank truck gaskets

Part #
<b>VR4000</b>

**Vapor Return Valves**

- features easy seal replacement while on tanker
- heavy duty cast aluminum body
- 4" vapor valve
- with air interlock mount (use air interlock 5000AI if required)



Part #	Description
<b>VR4100</b>	4" vapor return valve, 4" x 4", NPT
<b>VR4100NP</b>	4" vapor return valve, 4" x 4", FNPT without poppet valve
<b>VR4100NPS</b>	4" vapor return valve, 4" x 4", without poppet and straight thread
<b>VR4100S</b>	4" vapor return valve, 4" x 4", with straight thread
<b>VR4100F</b>	4" vapor return valve, 4" x 4", TTMA flange
<b>VR4100FNG</b>	4" vapor return valve, 4" x 4", TTMA flange, no glass
<b>VR4100F-NGNP</b>	4" vapor return valve, 4" x 4", TTMA flange, no glass, no poppet

## Vapor Hose Couplers

- for use with vapor hose
- cast aluminum body
- Buna gasket
- **VR4030CS-AL** has Viton® poppet seal

Part #	Description
<b>VRC3000AL</b>	3" coupler with probe x 3" hose shank
<b>400-CVR-AL</b>	4" coupler with probe x 4" hose shank
<b>4030-CVR-AL</b>	4" coupler with probe x 3" hose shank
<b>VR4030CS-AL</b>	4" coupler with poppet and probe x 3" hose shank
<b>VR4030CS-NP</b>	4" coupler no poppet and probe x 3" hose shank
<b>4030-DAVR-AL</b>	4" coupler with poppet and probe x 3" adapter
<b>4030-DVR-AL</b>	4" coupler with probe x 3" female NPT
<b>400-DVR-AL</b>	4" coupler with probe x 4" female NPT



VRC3000AL



VR4030CS-AL

## Sequential Vapor Vents

Sequential vapor vents are used for venting tank vapors during the bottom loading and unloading of petroleum tankers. These pneumatically activated vapor vents can either be installed to open in a sequence or to open independently in either 16" or 20" tank manholes.

Part #	Description
<b>VR6030SQ</b>	For 16" manhole, mounting ring attachment
<b>VR6035SQ</b>	For 20" manhole, 3" TTMA flange attachment
<b>40193AL</b>	VR6035 adapter flange for Parker style vents



VR6030SQ (16")



VR6035SQ (20")



40193AL

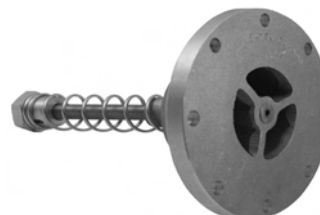
## Inbreathing and Outbreathing Vents

- Installed in vapor plumbing as a safety device to relieve pressure or vacuum build up when vapor system is blocked during loading/unloading.
- 4" TTMA flange mounting (aluminum)
- stainless steel shaft and Buna seals
- see page 7 for tank truck gaskets

Part #	Description
<b>VRP3500</b>	outbreathing vent for MC306 (opens at no greater than 1 PSI pressure)
<b>VRP3600</b>	outbreathing vent for DOT406 (opens at no less than 1 PSI pressure)
<b>VRV3501</b>	inbreathing vent (opens at 1.5" Hg vacuum)



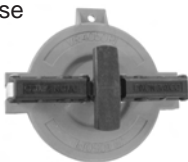
VRP3500



VRV3501

## Vapor Caps

- centered T handle for one handed ease of use and a solid locking mechanism
- strong and lightweight
- built-in locking feature
- corrosion resistant materials
- color coded safety orange for vapor service
- manufactured with a hole for a chain / lanyard



Part #	Description
<b>VR4050PL</b>	ultra lightweight nylon cap
<b>VR4050PLC</b>	ultra lightweight nylon cap with chain replacement gasket
<b>40018BN</b>	replacement gasket

- lockable push/pull cap for vapor valves
- orange colored for visibility
- aluminum or ultra lightweight nylon versions available



Part #	Description
<b>VR4050AL</b>	aluminum cap
<b>VR4050ALC</b>	aluminum cap with chain replacement gasket
<b>400-G-BU</b>	replacement gasket

### 4" Tanker Faucets

Tanker faucets are dependable valves used for tanker gravity offloading of petroleum or other products. The system consists of: a main body with handle activated flapper valve, a choice of bolt-on sight glass outlets and a reducing flange, if required.

## Faucet Systems



**4401A**  
outlet

**4400**  
main body

**4443**  
reducing  
flange

- Faucet system includes main body, choice of outlets with sight glass and reducing flange (order each separately).
- aluminum main body with 4" TTMA mounting flange and bronze handle operating internal flapper
- Body includes spring loaded flapper valve with Viton® seal and 4" square outlet flange.
- 4443 reducing flange (4" TTMA to 3" TTMA) allows main body to bolt to 3" TTMA flange.
- Bronze handle 4416 included when ordering main body.

Part #	Description
<b>4400</b>	main body (includes 4416 handle)
<b>4443</b>	reducing flange

**Note:** Order main body, outlet and reducing flange separately.

See below for available outlets.  
See page 7 for tank truck gaskets.

## Faucet Outlets



**4401**



**4401S**



**4401-1**



**4401A**

- square flanged for mounting to 4400 body
- comes with acrylic sight glass, two Buna seals and four stainless steel mounting bolts
- cast aluminum body construction
- choice of four adapters / couplers shown

Part #	Description
<b>4401</b>	4" x 22½° adapter
<b>4401A</b>	3" x 22½° adapter
<b>4401S</b>	4" straight adapter
<b>4401-1</b>	4" x 22½° coupler

## Air Interlocks



**5000AIV**



**5000AIR**

- mounts to API's, vapor valves and safety bars
- rugged solid bronze body for dependable service and superior corrosion resistance.
- choice of standard plunger end or paddle end (for bulb style vapor valve)
- adjustable stroke to accommodate length variations
- includes ¼" x 1¼" stainless steel mounting bolts

Part #	Description
<b>5000AI</b>	standard button plunger pneumatic interlock
<b>5000AIV</b>	paddle plunger pneumatic interlock, for use with VR4000 vapor valve
<b>5000AIR</b>	roller ball plunger pneumatic interlock, ideal for use on cabinet doors
<b>5000AIS</b>	standard button plunger pneumatic interlock with electronic switch, ideal for connecting to electronic overfill systems
<b>5000AIST</b>	1½" button plunger pneumatic interlock
<b>5000S</b>	electronic switch kit, for adding electronic switching to Bayco brand pneumatic interlock valves
<b>5000ST</b>	replacement 1½" large button



**5000AIS**



**5000AI**

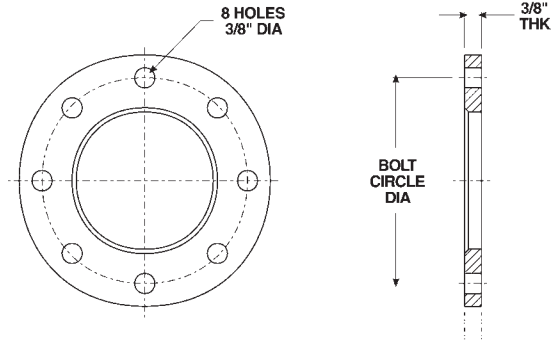


### Tanker Accessories

Illustrated and described below are Bayco brand accessories for use with petroleum tankers. All are quality built for dependable long life service.

## Aluminum TTMA Weldable Flanges

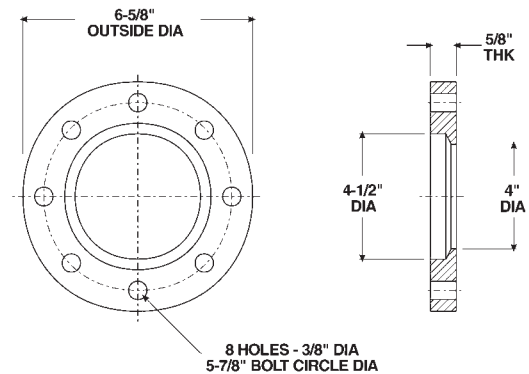
- for welding to 3" and 4" TTMA aluminum pipe
- standard 3" and 4" TTMA bolt pattern
- side A, I.D. beveled to aid welding
- side B, machined surface for gasket seal
- 3" TTF3AL bolt circle diameter is 4.875"
- 4" TTF4AL bolt circle diameter is 5.875"
- see page 7 for tank truck gaskets



Part #	Description
<b>TTF3AL</b>	3" weldable flange
<b>TTF4AL</b>	4" weldable flange

## Aluminum TTMA Butterfly Spacer

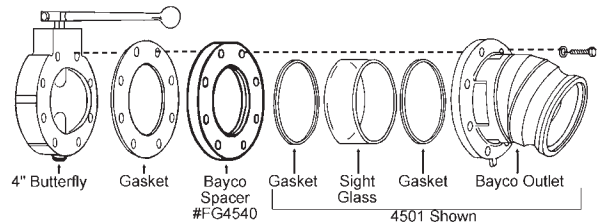
- special flange for sight glass installation
- allows Bayco brand series 4500 drop adapter outlets (with sight glass) to be used with 4" butterfly valves (not supplied by Dixon Bayco)
- all surfaces machined
- standard 4" TTMA bolt pattern
- see page 7 for tank truck gaskets.



Part #	Description
<b>FG4540</b>	4" TTMA spacer

## API Flanged Outlets with Sight Glass

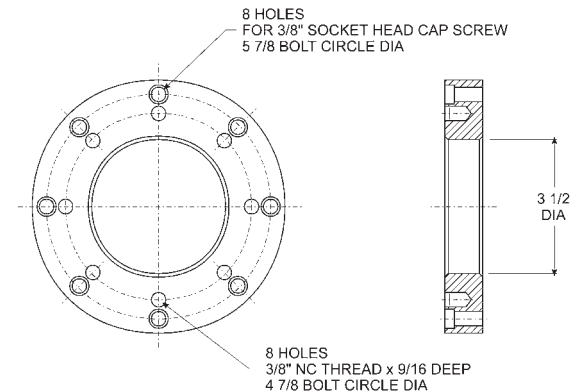
Part #	Description
<b>4501</b>	3" male x 4" TTMA flange x 22½°
<b>4502</b>	4" male x 4" TTMA flange x 22½°
<b>4503</b>	4" male x 4" TTMA flange straight
<b>4503SPECIAL</b>	4" male x 4" TTMA flange straight, no sight glass
<b>4504</b>	4" female x 4" TTMA flange x 22½° coupler



**NOTE:** Dixon Bayco does not offer 4" butterfly valves, illustration only

## Aluminum TTMA 4" to 3" Reducing Flange

- allows bolting of 4" TTMA flanged product to 3" TTMA flanged product
- 4" TTMA hole pattern (8), 3/8" socket head cap screws
- 3" TTMA blind hole pattern (8), 3/8" NC thread x 9/16" deep
- all surfaces machined
- see page 7 for tank truck gaskets



Part #
<b>4443</b>

## Tank Truck Flanged Sight Flow Indicators

Designed to be a drop in replacement for the one-piece acrylic sight glass used behind the API load head. Rugged aluminum construction is more durable than the single piece acrylic doughnut commonly used. The cast aluminum design is suited to rough over the road trucking and load rack service. Replacement sight glass is a fraction of the cost of the one-piece design. Rated for **150 PSI** hydrostatic pressure at **70°F**. Large 4-3/8" I.D. for use with tank truck flanged butterfly valves.



- strong and lightweight
- allows for visual identification of the fuel grade prior to opening the valve
- works with tank truck flanged butterfly valves found on gasoline tankers
- 1 3/4" width replaces acrylic doughnut sightglass
- Flange gaskets are no longer supplied, a retaining ring and machined lip hold the acrylic tube in place.

Part #	Description
<b>5200-SFI</b>	4" TTMA pattern flanged short sight flow indicator
<b>5200-SFI-3</b>	3" TTMA pattern flanged short sight flow indicator

See page 56 for replacement glass



- allows for visual identification of the fuel grade prior to opening the valve
- works with tank truck flanged butterfly valves found on gasoline trucks
- larger I.D. allows tank truck flanged butterfly valves to connect to either end of the **400-SFI-AL**
- 3 1/4" width

Part #	Description
<b>400-SFI-AL</b>	4" sight flow indicator

### Replacement Parts

Part #	Description
<b>4SFIPSG</b>	replacement plexiglass for 400-SFI-AL
<b>O249BU</b>	replacement Buna-N O-ring for 400-SFI-AL
<b>4SFI-G-VI</b>	Viton® plexiglass gasket for 400-SFI-AL

**Note:** For tank truck flange gaskets see page 7

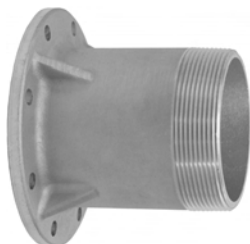
## TTMA Series Flange Adapters

The TTMA pattern bolts quickly and easily to standard 4" TTMA flanges and provides a 3" or 4" male or female NPT thread. Adapter provides a simple and easy way to convert threaded components to standard TTMA flange configuration. Made of lightweight, solid cast aluminum that is more durable than welded fabrications. Design improves flow through adapter even on the 3" reducer. Compact size reduces the overall space needed to install the adapter.

- available in 3" or 4" male or female NPT
- strong and lightweight
- solid one piece design



**TTF4AL-4MT**



**TTF4AL-4EMT**



**TTF4AL-4FT**

Part #	Description
<b>TTF3AL-3MT</b>	3" TTMA flange, 3" male NPT thread
<b>TTF4AL-3EMT</b>	4" TTMA flange, 3" male NPT extended length
<b>TTF4AL-3FT</b>	4" TTMA flange, 3" female NPT
<b>TTF4AL-3MT</b>	4" TTMA flange, 3" male NPT thread
<b>TTF4AL-4EMT</b>	4" TTMA flange, 4" male NPT extended length
<b>TTF4AL-4FT</b>	4" TTMA flange, 4" female NPT
<b>TTF4AL-4MT</b>	4" TTMA flange, 4" male NPT thread
<b>TTF4ALHC-3MT</b>	4" TTMA flange, 3" male NPT thread, hardcoated
<b>TTF4ALHC-4MT</b>	4" TTMA flange, 4" male NPT thread, hardcoated

## Dry Disconnects

Compatible with most cam and groove style dry disconnects. Rugged, reliable, and safe coupling for handling hazardous liquids. Bayco brand dry disconnects help prevent spillage from normal or accidental disconnects. Our dry disconnect is a true dry disconnect. It has a spring loaded sealing device designed to snap closed should the valve become disconnected with the poppet open, significantly limiting liquid loss. Bayco brand dry disconnect fittings can save you considerable money through compliance with environmental regulations and the cost associated with cleanup.

- EZ Boss-Lock cam arms provide high security from accidental opening due to vibration or snagging.
- heavy duty stainless steel crank and link provide longer service life.
- dry disconnect coupler has automatic closing poppet assembly
- two-piece adapter design for easy rebuilding of adapters
- stainless steel handle allows product exposure to corrosive chemicals or washdown service
- strong handle attachment prevents bending of crank assembly
- fully interchangeable with Kamvalok (OPW trademark) style fittings

### Aluminum Adapters<sup>2</sup>

Part #	OPW Part #	Description
<b>DBA11-150</b>	1611AN-AL15	1½", Buna seal, ZA/aluminum body with stainless steel internals
<b>DBA11-200</b>	1611AN-AL20	2", Buna seal, ZA/aluminum body with stainless steel internals
<b>DBA11-300</b>	1611AN-AL30	3", Buna seal, ZA/aluminum body with stainless steel internals
<b>DBA12-150</b>	1612AN-AL15	1½", Viton® seal, ZA/aluminum body with stainless steel internals
<b>DBA12-200</b>	1612AN-AL20	2", Viton® seal, ZA/aluminum body with stainless steel internals
<b>DBA12-300</b>	1612AN-AL30	3", Viton® seal, ZA/aluminum body with stainless steel internals
<b>DBA61-200</b>	1611AN-AL20	2", Buna seal, aluminum body with stainless steel internals
<b>DBA62-200</b>	1612AN-AL20	2", Viton® seal, aluminum body with stainless steel internals
<b>DBA63-150</b>	1613AN-AL15	1½", Teflon® seal, aluminum body with stainless steel internals *
<b>DBA63-200</b>	1613AN-AL20	2", Teflon® seal, aluminum body with stainless steel internals *
<b>DBA63-300</b>	1613AN-AL30	3", Teflon® seal, aluminum body with stainless steel internals *
<b>DBA64-150</b>	1614AN-AL15	1½", EPT seal, aluminum body with stainless steel internals *
<b>DBA64-200</b>	1614AN-AL20	2", EPT seal, aluminum body with stainless steel internals
<b>DBA64-300</b>	1614AN-AL30	3", EPT seal, aluminum body with stainless steel internals
<b>DBA66-200</b>	1616AN-AL20	2", Chemraz® seal <sup>1</sup> , aluminum body with stainless steel internals *
<b>DBA66-300</b>	1616AN-AL30	3", Chemraz® seal <sup>1</sup> , aluminum body with stainless steel internals *
<b>DBA69-300</b>	1619AN-AL30	3" Viton® B seal, aluminum body with stainless steel internals *
<b>DBA12-1520</b>	---	1½" x 2" Viton® seal, ZA/aluminum body with stainless steel internals*



1½" and 2" adapter

### Stainless Steel Adapters<sup>2</sup>

Part #	OPW Part #	Description
<b>DBA71-150</b>	1671AN-SS15	1½" Buna seal, stainless steel internals *
<b>DBA71-200</b>	1671AN-SS20	2" Buna seal, stainless steel internals *
<b>DBA71-300</b>	1672AN-SS30	3" Buna seal, stainless steel internals *
<b>DBA72-150</b>	1672AN-SS15	1½" Viton® seal, stainless steel internals *
<b>DBA72-200</b>	1672AN-SS20	2" Viton® seal, stainless steel internals *
<b>DBA72-300</b>	1672AN-SS30	3" Viton® seal, stainless steel internals *
<b>DBA73-150</b>	1673AN-SS15	1½" Teflon® encapsulated silicone seal, stainless steel internals *
<b>DBA73-200</b>	1673AN-SS20	2" Teflon® encapsulated silicone seal, stainless steel internals *
<b>DBA73-300</b>	1673AN-SS30	3" Teflon® encapsulated silicone seal, stainless steel internals *
<b>DBA74-150</b>	1674AN-SS15	1½" EPT seal, stainless steel internals *
<b>DBA74-200</b>	1674AN-SS20	2" EPT seal stainless steel internals
<b>DBA74-300</b>	1674AN-SS30	3" EPT seal stainless steel internals
<b>DBA76-150</b>	1676AN-SS15	1½" Chemraz® seal <sup>1</sup> , stainless steel *
<b>DBA76-200</b>	1676AN-SS20	2" Chemraz® seal <sup>1</sup> , stainless steel internals *
<b>DBA76-300</b>	1676AN-SS30	3" Chemraz® seal <sup>1</sup> , stainless steel internals *
<b>DBA77-150</b>	1677AN-SS15	1½" Teflon® encapsulated Viton® seal, stainless steel internals *
<b>DBA77-200</b>	1677AN-SS20	2" Teflon® encapsulated Viton® seal, stainless steel internals *
<b>DBAV73-2030</b>	2173AVN	2" Teflon® seal, 3" female thread



3" adapter

NEW

NEW

NEW

NEW

NEW



DBAV73-2030

<sup>1</sup> Chemraz® gasket, main seal O-ring and handle O-ring. Teflon® seals on cylinder assembly, stuffing box, and seal under poppet screw.

<sup>2</sup> A DBA style adapter is required for coupler to operate. Adapter sold separately.

\* Stainless steel corrosion resistance is comparable to 304 stainless steel

OPW and Kamvalok are registered trademarks of the Dover Corporation

**Notes:** Contact the factory for chemical compatibility, size and material selection. Special configurations can be designed for your application. Contact the factory for availability on some models.

## Dry Disconnects Aluminum Couplers<sup>2</sup>



**DBC62-200**



**DBS61-200**

Part #	OPW Part #	Description
<b>DBC61-150</b>	1711D-AL15/1761	1½" Buna seal, aluminum body / stainless steel internals *-same as 1761D-AL15
<b>DBC61-200</b>	1711D-AL20/1761	2" Buna seal, aluminum body / stainless steel internals *-same as 1761D-AL20
<b>DBC61-300</b>	1711D-AL30	3" Buna seal, aluminum body / stainless steel internals*
<b>DBC62-150</b>	1712D-AL15/1762	1½" Viton® seal, aluminum body / stainless steel internals *-same as 1762D-AL15
<b>DBC62-200</b>	1712D-AL20/1762	2" Viton® seal, aluminum body / stainless steel internals *-same as 1762D-AL20
<b>DBC62-300</b>	1712D-AL30	3" Viton® seal, aluminum body / stainless steel internals*
<b>DBC63-150</b>	1763D-AL15	1½" Teflon® and Kalrez® seals, aluminum / stainless steel internals *
<b>DBC63-200</b>	1763D-AL20	2" Teflon® and Kalrez® seals, aluminum / stainless steel internals *
<b>DBC63-300</b>	1763D-AL30	3" Teflon® and Kalrez® seals, aluminum / stainless steel internals *
<b>DBC64-150</b>	1764D-AL15	1½" EPT seal, aluminum / stainless steel internals *
<b>DBC64-200</b>	1764D-AL20	2" EPT seal, aluminum / stainless steel internals *
<b>DBC64-300</b>	1764D-AL30	3" EPT seal, aluminum / stainless steel internals *
<b>DBC66-200</b>	1766D-AL20	2" Chemraz® and Teflon® seals <sup>1</sup> , aluminum / stainless steel internals *
<b>DBC69-300</b>	1769D-AL30	3" Viton® B seal, aluminum body / stainless steel internals *
<b>DBS61-200</b>	1711ES-0200	2" Buna seal, aluminum body / stainless steel internals *, 90° swivel
<b>DBS62-200</b>	1712ES-0200	2" Viton® seal, aluminum body / stainless steel internals *, 90° swivel

## Stainless Steel Couplers<sup>2</sup>



**DBC72-200**

Part #	OPW Part #	Description
<b>DBC71-150</b>	1771D-SS15	1½" Buna seal, stainless steel *
<b>DBC71-200</b>	1771D-SS20	2" Buna seal, stainless steel *
<b>DBC71-300</b>	1771D-SS30	3" Buna seal, stainless steel * <span style="float: right;">NEW</span>
<b>DBC72-150</b>	1772D-SS15	1½" Viton® seal, stainless steel *
<b>DBC72-200</b>	1772D-SS20	2" Viton® seal, stainless steel *
<b>DBC72-300</b>	1772D-SS30	3" Viton® seal, stainless steel * <span style="float: right;">NEW</span>
<b>DBC73-150</b>	1773D-SS15	1½" Teflon® encapsulated silicone and Chemraz® seal, stainless steel *
<b>DBC73-200</b>	1773D-SS20	2" Teflon® encapsulated silicone and Chemraz® seal, stainless steel *
<b>DBC73-300</b>	1773D-SS30	3" Teflon® encapsulated silicone and Chemraz® seal, stainless steel * <span style="float: right;">NEW</span>
<b>DBC74-150</b>	1774D-SS15	1½" EPT seal, stainless steel *
<b>DBC74-200</b>	1774D-SS20	2" EPT seal, stainless steel *
<b>DBC74-300</b>	1774D-SS30	3" EPT seal, stainless steel * <span style="float: right;">NEW</span>
<b>DBC76-150</b>	1776D-SS15	1½" Chemraz® and Teflon® seals <sup>1</sup> , stainless steel *
<b>DBC76-200</b>	1776D-SS20	2" Chemraz® and Teflon® seal <sup>1</sup> , stainless steel *
<b>DBC76-300</b>	1776D-SS30	3" Chemraz® and Teflon® seal <sup>1</sup> , stainless steel * <span style="float: right;">NEW</span>
<b>DBC77-150</b>	1777D-SS15	1½" Teflon® encapsulated Viton® and Chemraz®, stainless steel *
<b>DBC77-200</b>	1777D-SS20	2" Teflon® encapsulated Viton® and Chemraz® seal, stainless steel *
<b>DBC77-150-GL</b>	1777D-SS15-GL	1½" Teflon® encap. Viton® and Chemraz® seal, stainless steel *, greaseless
<b>DBC77-200-GL</b>	1777D-SS20-GL	2" Teflon® encap. Viton® and Chemraz® seal, stainless steel *, greaseless

<sup>1</sup> Chemraz® gasket, main seal O-ring and handle O-ring. Teflon® seals on cylinder assembly, stuffing box, seal under poppet screw.

<sup>2</sup> A DBA style adapter is required for coupler to operate. Adapter sold separately.

\* Stainless steel corrosion resistance is comparable to 304 stainless steel

OPW is a registered trademark of Dover Corporation.

**Notes:** Contact the factory for chemical compatibility, size and material selection. Special configurations can be designed for your application. Contact the factory for availability on some models.

## Locking Handle Kit



Part #	Description
<b>DBCL-200</b>	locking handle kit for 1½" and 2" dry disconnects



## Bayonet Style Dry Disconnects

Bayonet dry disconnect fittings are guaranteed to be compatible with existing models. These fittings are designed and tested to provide maximum performance.

- black, hard anodized body with polished stainless steel hardware
- smooth coupling action and swivel rotation
- contact the factory for availability on some models.



**BA32-200**



**BA62-300**



**BA31-300**

### Stainless Steel Adapters

Dixon Part #	Emco™ Part #	Description
<b>BA31-200</b>	J72A-BBN0-B / J72A-ABN0-B	2" bayonet adapter, Buna seals, stainless steel body, brass poppet
<b>BA32-200</b>	J72A-BVN0-B / J72A-AVN0-B	2" bayonet adapter, Viton® seals, stainless steel body, brass poppet
<b>BA31-300</b>	J73A-BBN0-B	3" bayonet adapter, Buna seals, brass body, brass poppet
<b>BA32-300</b>	J73A-BVN0-B	3" bayonet adapter, Viton® seals, brass body, brass poppet
<b>BA61-300</b>	J73A-ANB0-B	3" bayonet adapter, Buna seals, aluminum body, aluminum poppet
<b>BA62-300</b>	J73A-AVN0-B	3" bayonet adapter, Viton® seals, aluminum body, aluminum poppet



**BS62-300**



**BSS62-200**



**BS62-200**



**BSS62-300**

### Aluminum Couplers

Dixon Part #	Emco™ Part #	Description
<b>BS61-200</b>	J72C-ABN2-B	2" bayonet coupler, aluminum with Buna seals, 90° swivel
<b>BS62-200</b>	J72C-AVN2-B	2" bayonet coupler, aluminum with Viton® seals, 90° swivel
<b>BSS61-200</b>	J72C-ABN1B	2" bayonet coupler, aluminum with Buna seals, straight swivel
<b>BSS62-200</b>	J72C-AVN1-B	2" bayonet coupler, aluminum with Viton® seals, straight swivel
<b>BS61-300</b>	J73C-ABN2-B	3" bayonet coupler, aluminum with Buna seals, 90° swivel
<b>BS62-300</b>	J73C-AVN2-B	3" bayonet coupler, aluminum with Viton® seals, 90° swivel
<b>BSS61-300</b>	J73C-ABN1-B	3" bayonet coupler, aluminum with Buna seals, straight swivel
<b>BSS62-300</b>	J73C-ABN1-B	3" bayonet coupler, aluminum with Viton® seals, straight swivel



Emco™ is a trademark of Gardner Denver Corporation

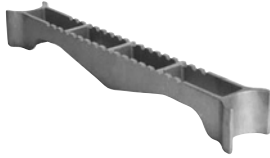
### Tube Doors



- welds to standard aluminum hose tube
- stainless steel spring
- lockable
- quality cast aluminum

Part #	Description
<b>TDF6</b>	6"
<b>TDF7</b>	7"
<b>TDF8</b>	8"

### Aluminum Ladder Step



- 13" wide, contoured for welding to 2" aluminum tube
- serrated anti-slip tread
- cast from high tensile aluminum alloy

Part #
<b>15S</b>

### 4" Aluminum Dummy Adapter



- similar to BZ4051 tank collar, but cast aluminum
- welds to aluminum cabinet for clamp mounting of drop elbows

Part #
<b>AL4051-BORE</b>

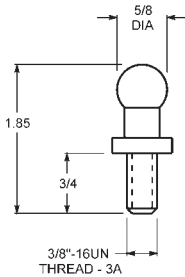
### 3" Pipe Cap



- 3" NPS female thread
- aluminum body with Buna gasket
- comes with heavy duty 12" chain and S hook
- working pressure: **150 PSI**

Part #
<b>PC30</b>

### Grounding Studs



- solid brass, stainless steel
- with 3/8"-16 UN-3A thread
- for static electric grounding and overfill protection systems

Part #	Material
<b>GS1</b>	brass
<b>GS2</b>	stainless steel

### Two Way Diverting Valves



**2WAYBV200**



**2WAYBV300**

- working pressure: **150 PSI**
- available in 2" and 3" standard and two-way flow
- female NPT outlets are standard
- optional flanges are available
- high flow rate; low pressure drop
- wetted parts are aluminum and stainless steel
- seals are FPM (Viton®) and PTFE Teflon®)
- spindle can be disassembled even when ball valve is installed

Part #	Description
<b>2WAYBV200</b>	2", 2 way diverting ball valve
<b>2WAYBV300</b>	3", 2 way diverting ball valve

## Tank Truck Equipment Fusible Pipe Caps

NPSM Thread

NPSM Size	Stainless Steel Part #	Aluminum Part #	Iron Part #
3"	<b>300-SFC-SS *</b>	<b>300-SFC-AL</b>	<b>300-SFC-MI</b>

\* Teflon® gaskets standard in stainless steel



### Pipe Caps

NPSM Thread

NPSM Size	Stainless Steel Part #	Aluminum Part #	Iron Part #
2"	<b>200-PC-SS *</b>	---	<b>200-PC-MI</b>
3"	<b>300-PC-SS *</b>	<b>300-PC-AL</b>	<b>300-PC-MI</b>
4"	<b>400-PC-SS *</b>	---	---

\* Teflon® gaskets standard in stainless steel



### Reducers

Female NPSM x Male NPT

NPSM Size	NPT Size	Stainless Steel Part #	Aluminum Part #	Iron Part #
3"	2"	<b>3020-RD-SS *</b>	<b>3020-RD-AL</b>	<b>3020-RD-MI</b>
4"	3"	<b>4030-RD-SS *</b>	<b>4030-RD-AL</b>	---

\* Teflon® gaskets standard in stainless steel



### Reducing Caps

Female NPSM x Female NPT

NPSM Size	NPT Size	Stainless Steel Part #
3"	1"	<b>3010-RC-SS *</b>

\* Teflon® gaskets standard in stainless steel



## Tank Transport Equipment - Intermodal Stainless Steel Pipe Caps

BSPP Thread

BSPP Size	Part #
3"	<b>300PCSSAP</b>

### Stainless Steel Reducers

Female BSPP x Male NPT

BSPP Size	NPT Size	Part #
3"	2"	<b>3020RDSSAP</b>

### Stainless Steel Thread Adapter

Female BSPP x Male NPT

BSPP Size	NPT Size	Part #
3"	3"	<b>3030RDSSAP</b>

### Stainless Steel Adapter

Cam and Groove Adapter x BSPP Thread

NPSM Size	BSPP Size	Part #
3"	3"	<b>300ASSAP</b>
3"	2½"	<b>3025ASSAP</b>



## Tank Transport Gaskets and Washers

Size	Buna-N Part #	Teflon® Part #	Neoprene Part #	Viton® Part #
1½"	---	<b>150GPCTF</b>	---	---
2"	<b>200GPCBU</b>	<b>200GPCTF</b>	<b>KNW25</b>	<b>KVW25</b>
3"	<b>300GPCBU</b>	<b>300GPCTF</b>	<b>KNW35</b>	<b>KVW35</b>
4"	---	<b>400GPCTF</b>	<b>KNW40</b>	---



**Note:** Some fuel additives are not compatible with certain seal materials. Please contact the Factory for fuel additive compatibility.

## Automatic Shut-Off Nozzles



- for card lock and truck refueling stations
- Venturi type automatic shut-off
- high pressure design for up to 80 GPM flow. (requires minimum 7.5 GPM for auto shut-off)
- detachable trigger ratchet
- aluminum construction with bronze trigger

Part #	Inlet Size	Spout Size
<b>1144D</b>	1¼"	1⅜"
<b>1124D</b>	1½"	1⅜"
<b>AN125 *</b>	1¼"	1⅜"
<b>AN150 *</b>	1½"	1⅜"

\* U/L Listed

## Pressure Nozzles for Bulk Delivery



with spout

- manual operation (non-automatic) for high pressures and fuel flow up to 80 GPM
- easy opening dash pot design with shockless closing
- bronze trigger with aluminum body and spout
- detachable trigger ratchet, packing gland and seal

### With Spout

Part #	Inlet Size	Spout Size
<b>114D</b>	1¼"	1¼"
<b>112D</b>	1½"	1½"



without spout

### Without Spout

Part #	Inlet Size	Spout Size
<b>114DNS</b>	1¼"	1¼"
<b>112DNS</b>	1½"	1½"

## Overwing Aircraft Nozzles



- manual operation (non-automatic) for high pressures and fuel flow up to 80 GPM
- easy opening dash pot design with shockless closing
- aluminum body
- bronze trigger with plastic guard pad to protect wing
- detachable trigger ratchet, packing gland and seal
- aluminum spout has cap with spring cord and a fine mesh stainless steel screen filter
- screw attachment for grounding cable

Part #	Inlet Size	Spout Size
<b>114DAV-06ASM</b>	1½"	1¼"
<b>114DAVR</b>	1¼"	1"
<b>114D-AV</b>	1¼"	1¼"

## Large Capacity Low Pressure/Gravity Nozzle



- rugged utility nozzle for low pressure/gravity applications
- rapid flow due to 1¼" oversize design
- aluminum body, spout and trigger
- **25 PSI** maximum pressure

Part #	Inlet Size	Spout Size
<b>1250-94</b>	1¼"	1¼"



**Note:** Some fuel additives are not compatible with certain seal materials. Please contact the Factory for fuel additive compatibility.

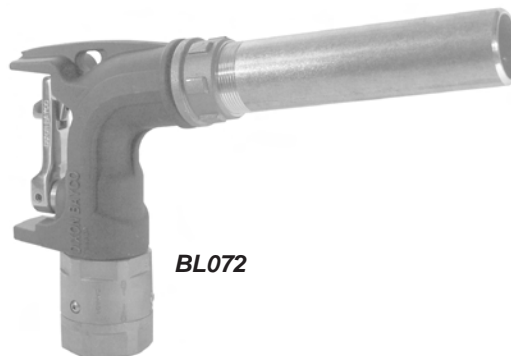
## Ball Nozzles for Bulk Delivery

The Bayco brand ball nozzle uses a 1" full port ball valve for high flow rate at a given inlet pressure. The internal flow path is computer designed to provide low pressure drop across the nozzle. Lower pressure drop permits higher flow rates at lower pressure, reducing foaming or backups.

Our unique swivel design permits low temperature operation without leakage around the O-ring seals. The swivel freely rotates even at temperatures as low as **-40°F** and pressures as high as **100 PSI**. Through-hardened chrome steel roller balls and hardened carbon steel ball race provide long service life.

- Standard nozzle uses a **3 PSI** check valve. An optional **5 PSI** check valve is available as a field replaceable kit.
- Available with Scully compatible connector or tube spout that are field replaceable

Part #	Description
<b>BL062</b>	1¼" NPT swivel inlet x quick fill outlet
<b>BL064</b>	1½" NPT swivel inlet x quick fill outlet
<b>BL066</b>	1¼" NPT swivel inlet x 1¼" NPT with spout
<b>BL066NS</b>	1¼" NPT swivel inlet x 1¼" NPT without spout
<b>BL068</b>	1½" NPT swivel inlet x 1¼" NPT with spout
<b>BL068NS</b>	1½" NPT swivel inlet x 1¼" NPT with spout
<b>BL072</b>	1½" NPT swivel inlet x 1½" NPT with spout
<b>BL072NS</b>	1½" NPT inlet x 1¼" NPT without spout
<b>1143A</b>	1¼" aluminum replacement spout
<b>1125A</b>	1½" aluminum replacement spout



**BL072**



**BL062**

### Super Ball Nozzles NEW

Part #	Description
<b>BL918</b>	1 ½" NPT inlet x 2" NPT spout outlet
<b>BL919</b>	2" NPT inlet x 1½" NPT spout outlet
<b>BL920</b>	2" NPT inlet x 2" NPT spout outlet



**BL920**

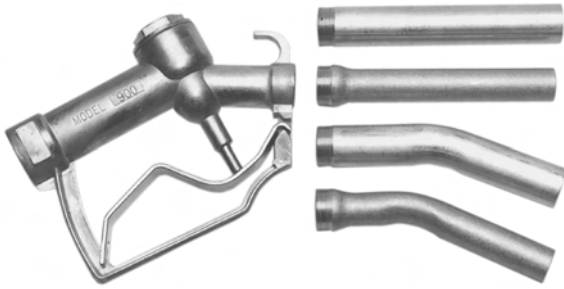
### Swivel Nut Pipe Adapters for Ball Nozzles

Nozzle connectors are manufactured from rugged cast bronze. Short body reduces overall length of nozzle. Interchangeable with other manufacturers. For home fuel oil delivery.

Part #	Inlet Size
<b>BL002</b>	1¼" male NPT
<b>BL001</b>	1½" male NPT
<b>BL005</b>	fine thread



## UL Standard Utility Nozzles



- for use with 12 volt pumps and gravity flow
- diecast metal body; choice of spouts
- for economy fuel dispensing, including construction, farm and small truck utility tanks
- U/L Listed
- **25 PSI** pressure rating

Part #	Inlet Size	Spout Size
<b>900</b>	1"	1" outlet
<b>900S</b>	1"	1" straight
<b>900B</b>	1"	1" bent
<b>900W34S</b>	1"	3/4" straight
<b>900W34B</b>	1"	3/4" bent
<b>900S34</b>	3/4"	3/4" straight
<b>900B34</b>	3/4"	3/4" bent

## Hose Swivels

For use with petroleum and home heating oil hose

- prevents twisting or kinking

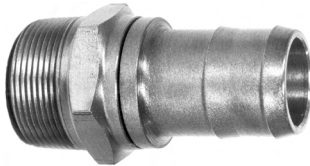
- cast bronze construction
- SWMF125 and SWMF150 are cast Bayloy

### Standard Hose Swivels



Part #	Male NPT	Female NPT
<b>SWMF125</b>	1 1/4"	1 1/4"
<b>SWMF150</b>	1 1/2"	1 1/2"
<b>SWMF200</b>	2"	2"

### Hose Shank Swivels



Part #	Male NPT	Hose Shank Size
<b>1565U</b>	1 1/2"	1 1/2"

### Check Valve Hose Swivels

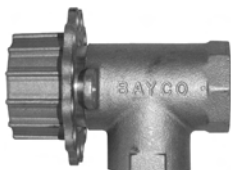


Part #	Male NPT	Female NPT
<b>1580R</b>	1 1/4"	1 1/2"

## Angle Valves

- Rotation of cap controls gravity flow from above ground gasoline storage tank.
- inlet (pipe from storage tank) x outlet (for hose and nozzle dispensing)

- lockable (lock not included)
- cast non-ferrous alloy construction



Part #	Inlet Size	Outlet Size
<b>500AV</b>	1"	1"
<b>525AV</b>	1 1/4"	1 1/4"

### Above Ground Petroleum Tank Accessories

Dixon Bayco brand accessories are rugged, reliable products which have serviced the petroleum industry for over 20 years.

## Automatic Pressure/Vacuum Relief Caps

- normally closed, stops fuel evaporation and airborne contaminants
- lockable
- relieves both pressure and vacuum buildup in fuel tanks
- Two styles available, choose for stationary or mobile fuel storage tanks as listed below.

#### For stationary fuel tanks

Part #	Description
<b>2000L</b>	2" male NPT, relieves vacuum at .7 Hg (.33 PSI) and pressure at 2 PSI, 20 SCFM flow
<b>2500L</b>	2½" male NPT, relieves vacuum at .7 Hg (.33 PSI), and pressure at 2 PSI, 20 SCFM flow
<b>2500RW</b>	removal wrench for PV caps



#### For mobile fuel tanks

Part #	Description
<b>200-PV-9</b>	2" male NPT, relieves vacuum relief at 1" Hg (.5 psig), and pressure at between 7.5 and 9 psig



## Standard Vent Cap

- allows venting of tank to atmosphere at all times
- aluminum body
- male NPS inlet
- does not have pressure or vacuum valves

Part #	Size
<b>2500SFV</b>	2½"



## Underground Tank Collars



#### Standard 4" Fill Adapters

Part #	NPT Size	Height	Material
<b>BZ4051</b>	4"	3½"	bronze
<b>BY4051</b>	4"	3½"	bayloy



#### Short 4" Fill Adapter

Part #	NPSM Size	Height	Material
<b>BZ4051S</b>	4"	2-3/8"	bronze

- comes with gasket seal
- often employed when soil settles around tank and shorter height is required



#### Vapor Adapters

Part #	NPT Size	Height	Material
<b>VR4086</b>	4"	3-5/8"	bronze
<b>VR4086BY</b>	4"	3-5/8"	bayloy

- popped vapor collar at station vapor outlet
- can also be used as vapor valve on tanker but does not have air interlock mount
- low profile design

## Single Action Fill Caps

- for use with underground tank fill adapter (top seal)
- lockable, push-pull operation
- choice of aluminum or bronze body
- bronze cam arms
- includes Buna gasket

Part #	Size
<b>SA4050AL</b>	4"
<b>SA4050BZ</b>	4"



## D.O.T. Push-in Fittings

**Materials:**

- Body (straights) tube, supports and grippers: brass CA360
- Forged elbows and tees: brass CA377
- O-ring: Buna-N
- Thread sealant: Loctite 516

Working Pressure: Vacuum to **150 PSI**

Working Temperature: **-40°F to 200°F**

Threads: NPTF standard

Compatible Tubing: Designed for use with SAE J844 nylon tubing meets Department of Transportation FMVSS-106

### Male Elbows

*(Tube to Male NPT)*

Tube O.D.	Male NPT	Part #
1/4"	1/8"	<b>AQ69DOT4x2</b>
1/4"	1/4"	<b>AQ69DOT4x4</b>
3/8"	1/4"	<b>AQ69DOT6x4</b>



### Swivel Male Elbows

*(Tube to Male NPT)*

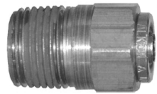
Tube O.D.	Male NPT	Part #
1/4"	1/8"	<b>AQ69DOTS4x2</b>
1/4"	1/4"	<b>AQ69DOTS4x4</b>
1/4"	3/8"	<b>AQ69DOTS4x6</b>
3/8"	1/4"	<b>AQ69DOTS6x4</b>
3/8"	3/8"	<b>AQ69DOTS6x6</b>



### Male Connectors

*(Tube to Male NPT)*

Tube O.D.	Male NPT	Part #
1/4"	1/8"	<b>AQ68DOT4x2</b>
1/4"	1/4"	<b>AQ68DOT4x4</b>
1/4"	3/8"	<b>AQ68DOT4x6</b>
3/8"	1/4"	<b>AQ68DOT6x4</b>
3/8"	3/8"	<b>AQ68DOT6x6</b>



### Swivel Male Branch Tees

*(Tube to Male NPT)*

Tube O.D.	Male NPT	Part #
1/4"	1/8"	<b>AQ71DOTS4x2</b>
1/4"	1/4"	<b>AQ71DOTS4x4</b>



### Swivel Male Branch Tees

*(Tube to Tube)*

Tube O.D.	Male NPT	Part #
1/4"	1/8"	<b>AQ72DOTS4x2</b>
1/4"	1/4"	<b>AQ72DOTS4x4</b>



### Union Tees

*(Tube to Tube)*

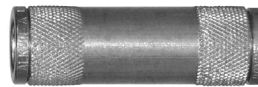
Tube O.D.	Part #
1/4"	<b>AQ64DOT4</b>
3/8"	<b>AQ64DOT6</b>



### Union Connectors

*(Tube to Tube)*

Tube O.D.	Part #
1/4"	<b>AQ62DOT4</b>
3/8"	<b>AQ62DOT6</b>



### Unions

*(Tube to Tube)*

Tube O.D.	Part #
1/4"	<b>31065600DOT</b>
3/8"	<b>31066000DOT</b>



### Union Elbows

*(Tube to Tube)*

Tube O.D.	Part #
1/4"	<b>31025600DOT</b>
3/8"	<b>31026000DOT</b>



### Union Tees

*(Tube to Tube)*

Tube O.D.	Part #
1/4"	<b>31045600DOT</b>
3/8"	<b>31046000DOT</b>



### Y Unions

*(Tube to Tube)*

Tube O.D.	Part #
1/4"	<b>31405600DOT</b>
3/8"	<b>31406000DOT</b>





## D.O.T. Push-in Fittings

### Male Elbows

(Tube to Male NPT)

Tube O.D.	Male NPT	Part #
1/4"	1/4"	<b>31095614DOT</b>
1/4"	3/8"	<b>31095618DOT</b>
3/8"	1/4"	<b>31096014DOT</b>
3/8"	3/8"	<b>31096018DOT</b>



### Y Connectors

(Tube to Male NPT)

Tube O.D.	Male NPT	Part #
1/4"	1/4"	<b>31485614DOT</b>



### Straight Male Connectors

(Tube to Male NPT)

Tube O.D.	Male NPT	Part #
1/4"	1/4"	<b>31155614DOT</b>
1/4"	3/8"	<b>31155618DOT</b>
3/8"	1/4"	<b>31156014DOT</b>
3/8"	3/8"	<b>31156018DOT</b>



### Straight Female Connectors

(Tube to Male NPT)

Tube O.D.	Male NPT	Part #
1/4"	1/4"	<b>31145614DOT</b>
3/8"	3/8"	<b>31146018DOT</b>



### Male Branch Tees

(Tube to Male NPT)

Tube O.D.	Male NPT	Part #
1/4"	1/4"	<b>31085614DOT</b>
1/4"	3/8"	<b>31085618DOT</b>
3/8"	1/4"	<b>31086014DOT</b>
3/8"	3/8"	<b>31086018DOT</b>



### Male Branch Tees

(Tube to Male NPT)

Tube O.D.	Male NPT	Part #
1/4"	1/4"	<b>31035614DOT</b>
1/4"	3/8"	<b>31035618DOT</b>
3/8"	1/4"	<b>31036014DOT</b>
3/8"	3/8"	<b>31036018DOT</b>



## D.O.T. Air Brake Tubing Rolls

- meets Department of Transportation FMVSS-106 nylon material conforming to SAE J844
- shipped in lengths of 100'
- working pressure: **150 PSI**
- temperature range: **-40°F to 200°F**

O.D.	Length	Color	Part #
1/4"	100'	Black	<b>J844-04-BL-100</b>
1/4"	100'	Blue	<b>J844-04-B-100</b>
1/4"	100'	Red	<b>J844-04-R-100</b>
3/8"	100'	Black	<b>J844-06-BL-100</b>
3/8"	100'	Blue	<b>J844-06-B-100</b>
3/8"	100'	Red	<b>J844-06-R-100</b>



## Adapter Nipples

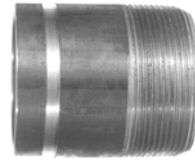
These fittings are designed to provide minimum pressure drop and uniform strength. Maximum working pressure is **1000 PSI**.



### Short Hex Style (series HN)

Size	Part #
2"	<b>A712S</b>
2-1/2"	<b>A7125S</b>
3"	<b>A713S</b>
4"	<b>A714S</b>

Note: items will be discontinued as stock is depleted



### Long Pipe Style (series AN)

Size	Part #
2"	<b>A712</b>
2-1/2"	<b>A7125</b>
3"	<b>A713</b>
4"	<b>A714</b>
5"	<b>A715</b>
6"	<b>A716</b>

## Victaulic x Weld



Size	Aluminum Part #	Carbon Steel Part #	316 Stainless Steel Part #
2"	<b>AVN2000-200</b>	<b>VN2000-200</b>	<b>VNR2000-200</b>
2-1/2"	<b>AVN2500-200</b>	<b>VN2500-200</b>	<b>VNR2500-200</b>
3"	<b>AVN3000-200</b>	<b>VN3000-200</b>	<b>VNR3000-200</b>
4"	<b>AVN4000-200</b>	<b>VN4000-200</b>	<b>VNR4000-200</b>

## Quick Release Couplings

Quick Release Couplings are specially designed for applications requiring a quick connection and/or disconnection of a pipe joint. A locking pin through the handle prevents accidental opening of the coupling. Ductile iron body with zinc plating and steel safety clip. Maximum working pressure is **300 PSI**.



Interchangeable with:  
Victaulic #78  
Grinnells #7003

Nominal Size	Pipe O.D.	Max. End Load lbs.	Approx. Weight lbs.	Part # w/ EPDM gasket	Part # w/ Buna-N gasket
1-1/2"	1.900"	850	1.5	<b>H315</b>	<b>H315BU</b>
2"	2.375"	1329	2.5	<b>H32</b>	<b>H32BU</b>
2-1/2"	2.875"	2120	4.0	<b>H325</b>	<b>H325BU</b>
3"	3.500"	2886	3.8	<b>H33</b>	<b>H33BU</b>
4"	4.500"	4771	6.0	<b>H34</b>	<b>H34BU</b>
6"	6.625"	10341	8.6	<b>H36</b>	<b>H36BU</b>

## Lightweight Flexible Couplings

Lightweight flexible couplings are designed for applications requiring moderate internal pressure or where weight is a factor. Applications include; general purpose, mining, irrigation, and compressed air where a deflection of 5% or less is required. Ductile iron body with rust inhibiting paint. **UL Listed and FM approved.**

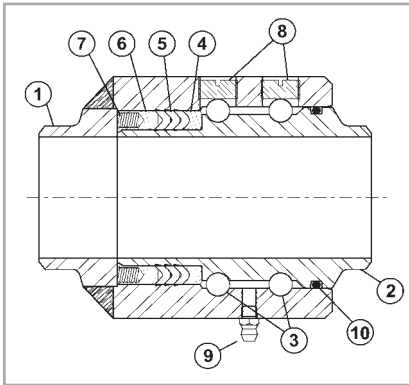


Interchangeable with:  
Victaulic #75  
Grinnells #7000

Nominal Size	Pipe O.D.	Max. PSI	Max End Load lbs.	Bolts		Approximate Weight Lbs.	Part # w/ Buna-N gasket
				Qty.	Size		
1 1/2"	1.900"	<b>500</b>	1418	2	3/8" x 1-7/8"	1.5	<b>L215BU</b>
2"	2.375"	<b>500</b>	2215	2	3/8" x 1-7/8"	1.7	<b>L02BU</b>
2 1/2"	2.875"	<b>300</b>	3246	2	3/8" x 2"	2.2	<b>L025BU</b>
3"	3.500"	<b>300</b>	4811	2	1/2" x 2-1/2"	2.8	<b>L03BU</b>
4"	4.500"	<b>300</b>	6362	2	1/2" x 2-3/4"	3.7	<b>L04BU</b>
5"	5.563"	<b>300</b>	9722	2	5/8" x 3-1/4"	5.7	<b>L05BU</b>
6"	6.625"	<b>300</b>	13789	2	5/8" x 3-1/4"	7.4	<b>L06BU</b>

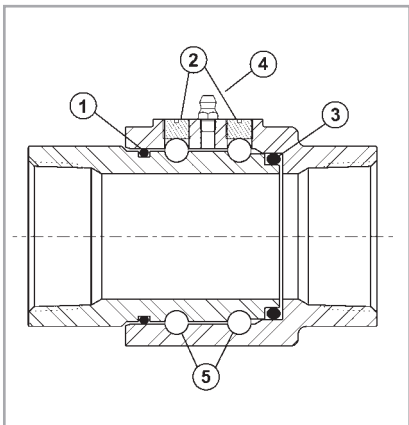
# Swivel Joints

## V-ring Type



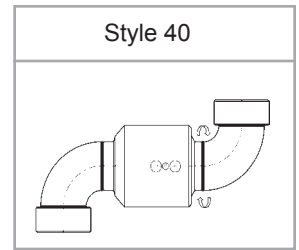
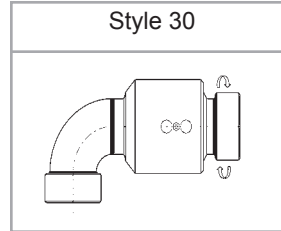
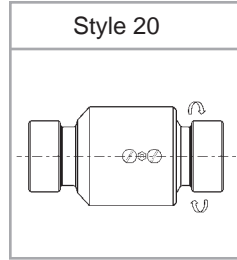
- 1) body
- 2) sleeve
- 3) ball bearings
- 4) seal retainer
- 5) V-ring (pressure) seal
- 6) spring retainer
- 7) spring
- 8) ball retainer screw
- 9) grease fitting
- 10) O-ring (dust) seal

## O-ring Type

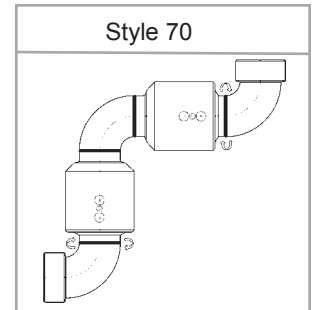
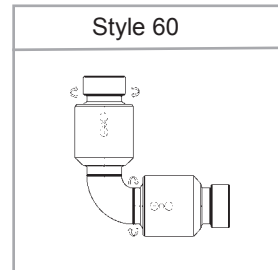
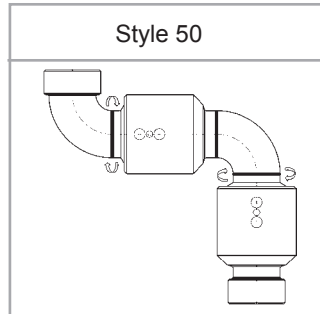


- 1) O-ring (dust) seal
- 2) ball retainer screw
- 3) O-ring (pressure) seal
- 4) grease fitting
- 5) ball bearings

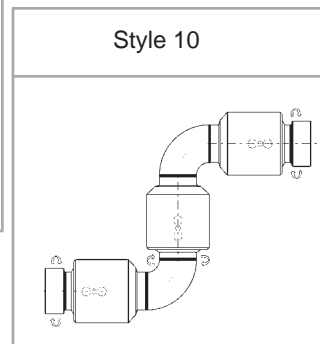
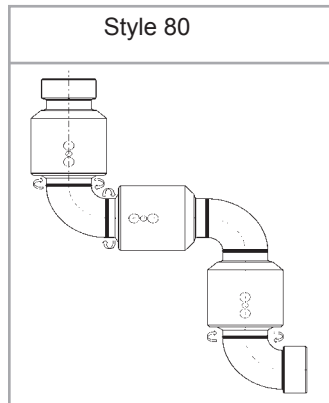
### single plane



### double plane



### triple plane

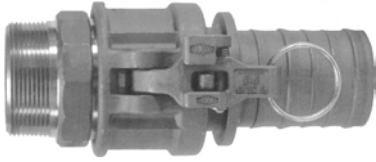


V-ring type available in carbon steel and stainless steel. O-ring type available in aluminum, brass, iron, steel and stainless steel. Sizes from 1" - 8". Pressures to 1,000 PSI.

For more information, see the Dixon Swivel Brochure

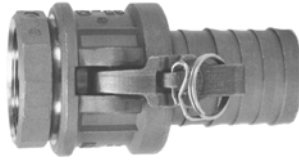
## Cam and Groove Couplings

- sizes available from ½" through 8"
- swaged connections available
- interchange with products manufactured to MIL-C-27487F
- available in aluminum, brass, malleable iron, stainless steel, plastic



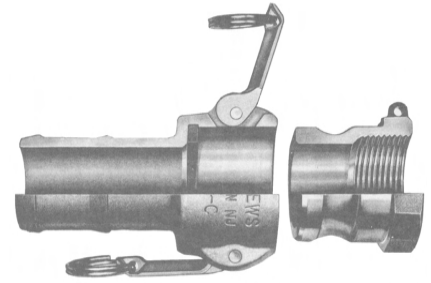
### EZ Boss-Lock

- Extremely easy to open and close without inserting clips or pins. Ideal for vibration tolerant locking.
- Resistant to accidental disconnection when dragged.



### Boss-Lock

- Cast-in lugs allow safety clips to be attached once the lugs are passed through slots in the special cam lever arms. These clips prevent the coupler from being unlocked until they are removed, providing a positive locking action.



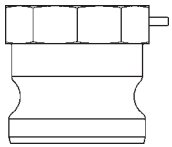
### Dixon

- Durable stainless steel cam arm pins will not rust or bind.
- Recess holds gasket firmly in place, ensuring proper placement.
- Long shank design allows proper banding thus eliminating the major cause of hose damage.

See current Dixon Price List for complete pricing and part#'s.

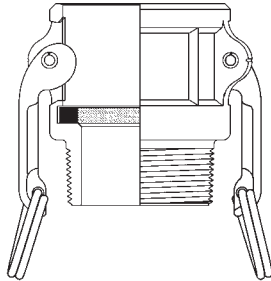
### Type A

(male adapter x female NPT)



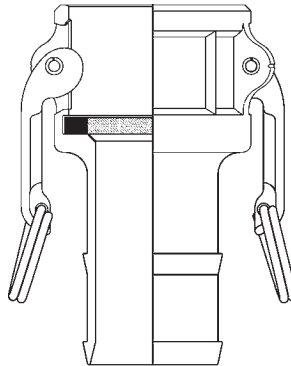
### Type B

(female coupler x male NPT)



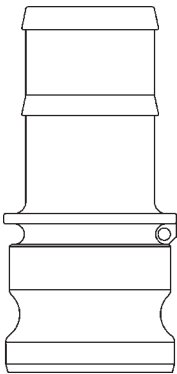
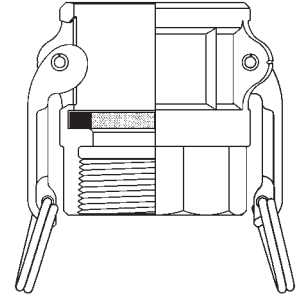
### Type C

(female coupler x hose shank)



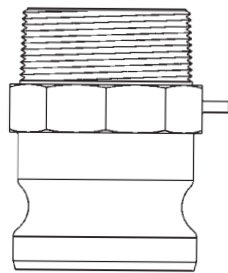
### Type D

(female coupler x female NPT)



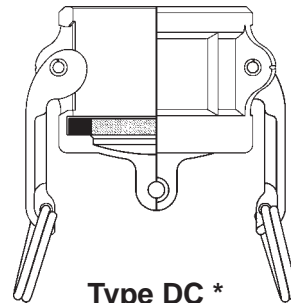
### Type E

(male adapter x hose shank)



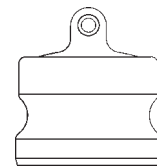
### Type F

(male adapter x male NPT)



### Type DC \*

(dust cap)



### Type DP \*

(dust plug)



\* Dust caps and dust plugs are not to be used in pressure applications for safety and environmental reasons.



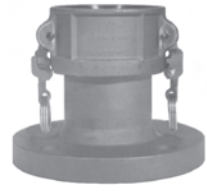
## Adapters and Couplers x 150# Flanged Drilling



Adapter x 150# ASA flange drilling



**Dixon**  
Coupler x 150# ASA flange drilling



**EZ Boss-Lock**  
Coupler x 150# ASA flange drilling

Size	Alum Part #	Iron Part #	St. Stl. Part #
1"	---	---	<b>100-AL-SS</b>
1½"	---	---	<b>150-AL-SS</b>
2"	<b>200-AL-AL</b>	---	<b>200-AL-SS</b>
3"	<b>300-AL-AL</b>	<b>300-AL-MI</b>	<b>300-AL-SS</b>
4"	<b>400-AL-AL</b>	---	<b>400-AL-SS</b>
6"	<b>600-AL-AL</b>	---	<b>600-AL-SS</b>
8"	<b>800-AL-AL*</b>	---	---

Size	Aluminum Part #	Stainless Steel Part #
1"	---	<b>100-DL-SS</b>
1½"	---	<b>150-DL-SS</b>
2"	<b>200-DL-AL</b>	<b>200-DL-SS</b>
3"	<b>300-DL-AL</b>	<b>300-DL-SS</b>
4"	<b>400-DL-AL</b>	<b>400-DL-SS</b>
6"	<b>600-DL-AL</b>	<b>600-DL-SS</b>
8"	<b>800-DL-AL*</b>	---

Size	Stainless Steel Part #
1"	<b>RDL100EZ*</b>
1½"	<b>RDL150EZ*</b>
2"	<b>RDL200EZ*</b>
3"	<b>RDL300EZ*</b>
4"	<b>RDL400EZ*</b>
6"	<b>RDL600EZ*</b>

\* welded fabrication

## Adapters and Couplers x Round Tank Truck Flange

*Flange gaskets are on page 7*

### Straight Design



Adapter x round tank truck flange



Coupler x round tank truck flange

Size	Aluminum Part #	Stainless Steel Part #
3"	<b>300-ALT-AL</b>	<b>300-ALT-SS</b>
3" x 4"	<b>3040ALT-AL</b>	---
4"	<b>400-ALT-AL</b>	<b>400-ALT-SS</b>
6"	<b>600-ALT-AL</b>	---

Size	Aluminum Part #
3"	<b>300-DLT-AL</b>
3" x 4"	<b>3040DLT-AL</b>
4"	<b>400-DLT-AL</b>
6"	<b>600-DLT-AL</b>

### Angled Design



4" angled adapter x round tank truck flange



4" angled coupler x round tank truck flange

Size	Aluminum Part #	Description
4" x 4"	<b>40022ALTAL</b>	4" adapter at a 22½° angle from a round tank truck flange

Size	Aluminum Part #	Description
4" x 4"	<b>40022DLTAL</b>	4" coupler at a 22½° angle from a round tank truck flange

## Adapters and Couplers with Straight Pipe Thread (NPSM)



Adapter

Size	Aluminum Part #
4"	<b>400-AS-AL</b>



Boss-Lock Coupler

Size	Aluminum Part #	Stainless Steel Part #
4"	<b>ADS400</b>	<b>RDS400</b>

Vegetable fiber gaskets are standard in threaded end. *Replacement fiber gasket part # 400GAGFI*

## Flange Information

### Dimensions of 150 lb. ASA

\* 1/16" raised face is included in the thickness.

Nominal Pipe Size	Flange O.D.	Thickness*	O.D. of Raised Face	Diameter of Bolt Circle	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolts
1"	4-1/2"	9/16"	2"	3-1/8"	4	5/8"	1/2"
1-1/2"	5"	11/16"	2-7/8"	3-7/8"	4	5/8"	1/2"
2"	6"	3/4"	3-5/8"	4-3/4"	4	3/4"	5/8"
2-1/2"	7"	7/8"	4-1/8"	5-1/2"	4	3/4"	5/8"
3"	7-1/2"	15/16"	5"	6"	4	3/4"	5/8"
4"	9"	15/16"	6-3/16"	7-1/2"	8	3/4"	5/8"
5"	10"	15/16"	7-5/16"	8-1/2"	8	7/8"	3/4"
6"	11"	1"	8-1/2"	9-1/2"	8	7/8"	3/4"
8"	13-1/2"	1-1/8"	10-5/8"	11-3/4"	8	7/8"	3/4"
10"	16"	1-3/16"	12-3/4"	14-1/4"	12	1"	7/8"
12"	19"	1 1/4"	15"	17"	12	1"	7/8"

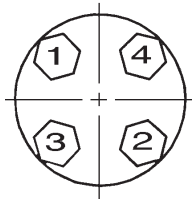
### Dimensions of Tank Truck (TTMA)

\* Listed thickness is for aluminum flanges

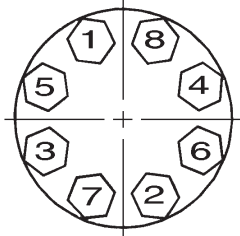
Nominal Pipe Size	Flange O.D.	Thickness*	Diameter of Bolt Circle	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolts
3"	5-5/8"	3/8"	4-7/8"	8	7/16"	3/8"
4"	6-5/8"	3/8"	5-7/8"	8	7/16"	3/8"
6"	8-7/8"	3/8"	8-1/8"	12	7/16"	3/8"

### Flange Bolt Tightening Sequence

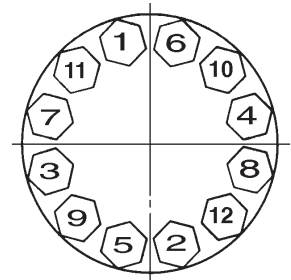
*(Use appropriate gaskets and bolts)*



4 Bolt



8 Bolt



12 Bolt

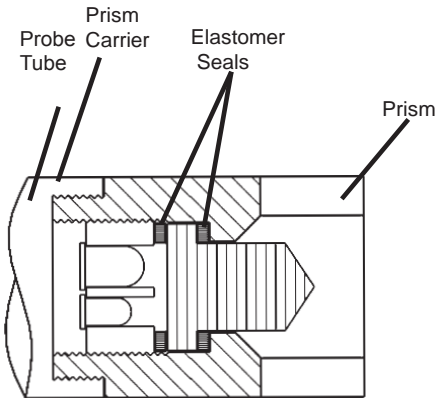


## Flotech Overfill Section

## FloTech Overfill Products

### About FloTech...

#### Knowledge and Experienced Design



Dixon electronic staff are seasoned veterans when it comes to overfill systems. Our employees have years of experience in electronics, manufacturing and most important, with the in-the-field trouble shooting of overfill terminal and tanker installation. That is why we have focused on easy, drop-in replacement features with improved probe life, and why we have included heavy duty hardware made from premium, corrosion resistant materials.

#### Trouble Free Probes and Sensors:

FloTech brand probes/sensors do not use epoxy bonded prisms as a means to seal the prism. Therefore, they are not subject to malfunction due to epoxy/prism interface separation. FloTech brand probes/sensors incorporate a double elastomer design which seals and secures the sensitive optic prism tip. The elastomer seals are flexible allowing thermal expansion and resistance to steam cleaning and petroleum chemical attack.

#### "Best in Class" Technical Support

Our goal is to provide the most reliable overfill components and systems available on the market today. Over the years the FloTech brand has earned a reputation for reliable overfill components compatible with other common systems. Don't take our word on this, ask one of our many customers!

#### Easy Installation

FloTech brand items are shipped with easy to follow installation instructions and manuals. If you need a little extra help call our **toll free technical service hot line at 877.582.3569**. In fact, call us with any overfill system questions (regardless of the brand) and we will work with you to help solve the problem.

FloTech brand components are manufactured to be installed easily, even on other systems. We designed them to be drop-in compatible with API systems being used around the world.

#### Products In Stock, Delivered On Time

FloTech brand products are stocked at locations throughout the United States and Canada. Most orders can be processed and delivered within 24 hours. We know that downtime costs you money so we do everything we can to ensure you receive your parts when you need them.

#### We Back A Great Product With An Unparalleled Warranty

FloTech brand products are covered by a three year limited warranty. The warranty is part of the total system that makes FloTech overfill detection the best choice for your operation. See limited warranty on page 97 for details.



## Checkmate Retain Overfill System 2-Wire Black and White

*Dixon Bayco is proud to introduce Checkmate with advanced automatic self-checking technology and performance enhancing features not found in any other system!*

The FloTech Checkmate has a long list of features that greatly improve reliability and provide years of trouble free service. Checkmate is compatible with the Scully brand black and white two-wire, overfill and retain system. The components are drop-in replacements and compatible with the signal format required by Scully brand on-board monitors.



### FT208 Checkmate Retain / Overfill Monitors

- easy to follow programming guide for a maximum of eight compartments "top only" or "top and bottom" service with the same monitor
- Monitor can be programmed up to 100,000 times without sending it back to the factory.
- Monitor resists oxidation of wire connections.
- Stainless steel terminal blocks resist rusting of contacts.
- Stainless steel hardware is used on all products.
- powder coated color matched components for exceptional appearance
- auxiliary input for Hobbs type switches
- power control relay output
- drop-in compatibility, see compatibility chart on pages 44 and 45
- Factory Mutual and Canadian Standards Association approved
- wide input power 12-24 VDC

# Checkmate Retain Overfill System

## 2-Wire Black and White

### Checkmate Overfill Systems (top only)

FloTech brand overfill system kits provide everything needed to install a new overfill system on your tank. One through eight compartment kits are available off the shelf. FloTech brand kits provide everything needed to make a professional installation. Systems include; 1 FT208 monitor, 1 FT151 sensor per compartment, 1 FT404 cable and 1 FT402 (20pcs.) strain reliefs. **Sockets sold separately.**

Special length probes are available. Please refer to comparison chart on pages 45 - 47 for cross references to other manufacturer's model numbers.

Overfill Products/Replacement Parts



FT2804 retain / overfill kit  
(top only)

Part #	Description
<b>FT2801</b>	Checkmate, 1 compartment system (top only)
<b>FT2802</b>	Checkmate, 2 compartment system (top only)
<b>FT2803</b>	Checkmate, 3 compartment system (top only)
<b>FT2804</b>	Checkmate, 4 compartment system (top only)
<b>FT2805</b>	Checkmate, 5 compartment system (top only)
<b>FT2806</b>	Checkmate, 6 compartment system (top only)
<b>FT2807</b>	Checkmate, 7 compartment system (top only)
<b>FT2808</b>	Checkmate, 8 compartment system (top only)
<b>FT2801-12</b>	Checkmate, 1 compartment system (top only) - 12" probes
<b>FT2802-12</b>	Checkmate, 2 compartment system (top only) - 12" probes
<b>FT2803-12</b>	Checkmate, 3 compartment system (top only) - 12" probes
<b>FT2804-12</b>	Checkmate, 4 compartment system (top only) - 12" probes
<b>FT2805-12</b>	Checkmate, 5 compartment system (top only) - 12" probes
<b>FT2806-12</b>	Checkmate, 6 compartment system (top only) - 12" probes
<b>FT2807-12</b>	Checkmate, 7 compartment system (top only) - 12" probes
<b>FT2806-12</b>	Checkmate, 8 compartment system (top only) - 12" probes

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

Systems include: 1 FT208 monitor, 1 FT151 overfill and FT152 retain sensor per compartment, 1 FT404-150 cable and 1 FT403 (30 pcs.) strain reliefs. **Sockets sold separately.**

Special length probes are available. Please refer to comparison chart on pages 45 - 47 for cross references to other manufacturer model numbers.



FT2814 retain / overfill kit  
(retain and overfill)

Part #	Description
<b>FT2811</b>	Checkmate, 1 compartment system (retain and overfill)
<b>FT2812</b>	Checkmate, 2 compartment system (retain and overfill)
<b>FT2813</b>	Checkmate, 3 compartment system (retain and overfill)
<b>FT2814</b>	Checkmate, 4 compartment system (retain and overfill)
<b>FT2815</b>	Checkmate, 5 compartment system (retain and overfill)
<b>FT2816</b>	Checkmate, 6 compartment system (retain and overfill)
<b>FT2817</b>	Checkmate, 7 compartment system (retain and overfill)
<b>FT2818</b>	Checkmate, 8 compartment system (retain and overfill)
<b>FT2811-12</b>	Checkmate, 1 compartment system (retain and overfill) - 12" probes
<b>FT2812-12</b>	Checkmate, 2 compartment system (retain and overfill) - 12" probes
<b>FT2813-12</b>	Checkmate, 3 compartment system (retain and overfill) - 12" probes
<b>FT2814-12</b>	Checkmate, 4 compartment system (retain and overfill) - 12" probes
<b>FT2815-12</b>	Checkmate, 5 compartment system (retain and overfill) - 12" probes
<b>FT2816-12</b>	Checkmate, 6 compartment system (retain and overfill) - 12" probes
<b>FT2817-12</b>	Checkmate, 7 compartment system (retain and overfill) - 12" probes
<b>FT2818-12</b>	Checkmate, 8 compartment system (retain and overfill) - 12" probes

# Checkmate Retain Overfill System

## 2-Wire Black and White

### FT150 Replacement Black and White 2-Wire 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 tip design for easy installation without gasket damage. Custom lengths available upon request. Compatible with the Scully Intellicheck system.

Part #	Description
<b>FT150</b>	replacement probe, thermo-optic, 2 wire (black and white), 7"
<b>FT150-12</b>	replacement probe, thermo-optic, 2 wire (black and white), 12"
<b>FT150-18</b>	replacement probe, thermo-optic, 2 wire (black and white), 18"
<b>FT155</b>	dummy which can be found on page 44.



FT150 probe

### 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.

Part #	Description
<b>FT151</b>	sensor, thermo-optic, 2 wire (black and white), 2" NPT housing with 7" probe
<b>FT151-12</b>	sensor, thermo-optic, 2 wire (black and white), 2" NPT housing with 12" probe
<b>FT151-18</b>	sensor, thermo-optic, 2 wire (black and white), 2" NPT housing with 18" probe



FT151 sensor

### FT152 Retain Sensor

The FT152 retain sensor is a bottom retain detection sensor. The sensor has a 1/2" NPT mounting. Sensor is shipped with a 1/2" NPT weld-on aluminum half coupling for mounting. The main sensor portion is stainless steel to prevent galling in the trailer. The wiring box is plastic to prevent corrosion and is removable to facilitate installation. The side ports come out of the same side (like the overfill sensors) to make wiring easier. The FT152 is mechanically and electrically compatible with Scully model 08819 and the Scully Intellicheck System. Our new three port housing design is compatible with previous inline and parallel dual port housings.

Part #	Description
<b>FT152</b>	Scully retain sensor, 2 wire (black and white)



FT152 retain sensor

### FT208 Checkmate Retain / Overfill Monitor

The FT208 Checkmate is compatible with the Scully brand black and white two-wire thermo-optic (thermistor) overfill and retain system. Components are drop-in replacement and compatible with the signal format required by the Scully Intellicheck brand on-board monitors. Easy to follow programming guide for a maximum of eight compartments, programmable for number of compartments, top only, top and bottom service with the same monitor.

Part #	Description
<b>FT208</b>	Checkmate monitor, programmable for top only, or top and bottom sensors, with housing
<b>FT207</b>	Checkmate replacement monitor module



FT208 monitor

## R/OM Type Retain / Overfill System Red and Black 2-Wire

These systems incorporate the preferred optic technology (red and black 2 wire) using top overfill as well as bottom retain sensors. Retain sensors inform the terminal if the compartments are empty or if product has been retained. Monitors include advanced diagnostic capabilities as well as translation abilities for all socket types (optic, thermistor or float). The system offers true load at any rack compatibility.

### Retain / Overfill System (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 off the shelf.

Systems include: 1 FT204P monitor, 1 FT202 sensor per compartment, 1 FT401 100' cable and 1 FT402 (20 pcs.) strain reliefs. **Sockets sold separately.**

Special length probes are available. Please refer to comparison chart on pages 45 - 47 for cross references to other manufacturer model numbers.



FT2104 retain / overfill kit  
(top only)

Part #	Description
<b>FT2101</b>	R/OM type, 1 compartment system (top only)
<b>FT2102</b>	R/OM type, 2 compartment system (top only)
<b>FT2103</b>	R/OM type, 3 compartment system (top only)
<b>FT2104</b>	R/OM type, 4 compartment system (top only)
<b>FT2105</b>	R/OM type, 5 compartment system (top only)
<b>FT2106</b>	R/OM type, 6 compartment system (top only)
<b>FT2101-12</b>	R/OM type, 1 compartment system (top only) - 12" probes
<b>FT2102-12</b>	R/OM type, 2 compartment system (top only) - 12" probes
<b>FT2103-12</b>	R/OM type, 3 compartment system (top only) - 12" probes
<b>FT2104-12</b>	R/OM type, 4 compartment system (top only) - 12" probes
<b>FT2105-12</b>	R/OM type, 5 compartment system (top only) - 12" probes
<b>FT2106-12</b>	R/OM type, 6 compartment system (top only) - 12" probes

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

FloTech brand overfill system kits provide everything needed to install a new API compatible retain/overfill monitor top and bottom system. One through six compartment kits are available off the shelf.

Systems include: 1 FT204P monitor, 1 FT202 sensor for each compartment, 1 FT206 retain sensor per compartment, 1 FT401 100' cable and 1 FT403 (30 pcs.) strain reliefs. **Sockets sold separately.**

Special length probes are available. Please refer to comparison chart on pages 45 - 47 for cross references to other manufacturer model numbers.



FT2004 retain / overfill kit  
(retain and overfill)

Part #	Description
<b>FT2001</b>	R/OM type, 1 compartment system (retain and overfill)
<b>FT2002</b>	R/OM type, 2 compartment system (retain and overfill)
<b>FT2003</b>	R/OM type, 3 compartment system (retain and overfill)
<b>FT2004</b>	R/OM type, 4 compartment system (retain and overfill)
<b>FT2005</b>	R/OM type, 5 compartment system (retain and overfill)
<b>FT2006</b>	R/OM type, 6 compartment system (retain and overfill)
<b>FT2001-12</b>	R/OM type, 1 compartment system (retain and overfill) - 12" probes
<b>FT2002-12</b>	R/OM type, 2 compartment system (retain and overfill) - 12" probes
<b>FT2003-12</b>	R/OM type, 3 compartment system (retain and overfill) - 12" probes
<b>FT2004-12</b>	R/OM type, 4 compartment system (retain and overfill) - 12" probes
<b>FT2005-12</b>	R/OM type, 5 compartment system (retain and overfill) - 12" probes
<b>FT2006-12</b>	R/OM type, 6 compartment system (retain and overfill) - 12" probes

# R/OM Type Retain / Overfill System

## Red and Black 2-Wire

### FT201 Replacement Probes

The FT201 is a replacement probe for the FloTech brand FT202 sensor and is compatible with Civacon's 3150 two wire optic probe. The FloTech brand FT200 series probe uses our 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. Custom lengths available upon request.

Part #	Description
<b>FT201</b>	replacement R/OM type, 2 wire (red and black) top probe, 7"
<b>FT201-12</b>	replacement R/OM type, 2 wire (red and black) top probe, 12"
<b>FT201-18</b>	replacement R/OM type, 2 wire (red and black) top probe, 18"



FT201 replacement probes

### FT202 Sensors

The FT202 sensor is a top overfill sensor and part of the FloTech brand retain/overfill monitoring system. The probe holder is cast aluminum with a 2" NPT 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.

Part #	Description
<b>FT202</b>	sensor R/OM type (red and black), top with 2" NPT housing, with 7" probe
<b>FT202-12</b>	sensor R/OM type (red and black), top with 2" NPT housing, with 12" probe
<b>FT202-18</b>	sensor R/OM type (red and black), top with 2" NPT housing, with 18" probe



FT202 sensor

### 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. Sensor comes with a 1/2" NPT weld-on aluminum half coupling for mouning. The main sensor portion is stainless steel to prevent galling in the trailer. The wiring box is plastic to prevent corrosion and is removable to facilitate installation. The side ports come out of the same side (like the overfill sensors) to make wiring easier. The FT206 is mechanically and electrically compatible with the Civacon model 1000 two wire retain sensor. Our new three port housing design is compatible with previous inline and parallel dual port housings.

Part #	Description
<b>FT206</b>	retain sensor R/OM type (red and black), 1/2" NPT sensor



FT206 retain sensor

### FT204P Retain / Overfill Monitor

The FT204P retain/overfill monitor is designed to diagnose and monitor up to six compartments. The FT204P monitor will provide API compatible optic, thermistor, and float socket outputs for a true load at any rack compatibility. The FT2004P is programmable to eliminate the need for a terminator in the probe string.

FloTech's FT203P is a replacement chassis and is compatible with Civacon 3250 and 3252 on-board monitors.

Part #	Description
<b>FT204P</b>	R/OM type onboard monitor, with housing
<b>FT203P</b>	replacement chassis, R/OM type on-board



FT204P retain/overfill monitor



# API Optic System 5-Wire

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 off the shelf.

Systems include: 1 FT103 monitor, 1 FT101 sensor per compartment, 1 FT400 100' cable and 1 FT402 (20 pcs.) strain reliefs. **Sockets sold separately.**



optic overfill kit

Part #	Description
<b>FT1001</b>	API compatible 1 compartment system (optic)
<b>FT1002</b>	API compatible 2 compartment system (optic)
<b>FT1003</b>	API compatible 3 compartment system (optic)
<b>FT1004</b>	API compatible 4 compartment system (optic)
<b>FT1005</b>	API compatible 5 compartment system (optic)
<b>FT1006</b>	API compatible 6 compartment system (optic)
<b>FT1001-12</b>	API compatible 1 compartment system (optic) - 12" probe
<b>FT1002-12</b>	API compatible 2 compartment system (optic) - 12" probe
<b>FT1003-12</b>	API compatible 3 compartment system (optic) - 12" probe
<b>FT1004-12</b>	API compatible 4 compartment system (optic) - 12" probe
<b>FT1005-12</b>	API compatible 5 compartment system (optic) - 12" probe
<b>FT1006-12</b>	API compatible 6 compartment system (optic) - 12" probe

Overfill Products/Replacement Parts

## FT100 Replacement Probes

The FT100 replacement probe is electronically and mechanically compatible with the API optic or 5 wire signal format. The FT100 sensor features a dual prism seal design which is more reliable than other designs which glue in the prism using epoxies. Custom lengths are available upon request. The FT100 is compatible with Scully #09208 and Civacon #1300.



FT100 replacement probe

Part #	Description
<b>FT100</b>	5 wire API optic probe, 7"
<b>FT100-12</b>	5 wire API optic probe, 12"
<b>FT100-18</b>	5 wire API optic probe, 18"

## FT101 Sensors

The FT101 sensor is compatible with the API optic or 5 wire signal 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.



FT101 sensor

Part #	Description
<b>FT101</b>	sensor, optic, 5 wire, 2" NPT housing with 7" probe
<b>FT101-12</b>	sensor, optic, 5 wire, 2" NPT housing with 12" probe
<b>FT101-18</b>	sensor, optic, 5 wire, 2" NPT housing with 18" probe

## FT103 Monitor

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. Entity approved by CSA and FM to ensure safety. The FT102 replacement chassis is compatible with Civacon 3150 or Scully 08563 on-board monitors.



FT103 monitor

Part #	Description
<b>FT103</b>	API compatible on-board monitor, with housing
<b>FT102</b>	replacement chassis, API compatible

**Stainless Steel Probes** NEW

The FloTech Stainless Steel Probe are designed to be used with the harshest chemicals. All wetted services are 316 stainless or Teflon®. These probes are designed to thread on DOT 407 3" clean out nipple. Sensor length can be adjusted using 3/4" NPT pipe nipples.



Part #	Description
<b>FT100S</b>	stainless chemical sensor, 5 wire optic probe 7" long, no housing
<b>FT101S</b>	stainless chemical sensor, 5 wire optic probe 7" long with SS 3" NPSF housing
<b>FT150S</b>	stainless chemical sensor, 2 wire optic probe 7" long, no housing
<b>FT151S</b>	stainless chemical sensor, 2 wire optic probe 7" with stainless 3" NPSF housing
<b>FT191S</b>	stainless probe holder 3" NPSF housing

**Sockets**

Sockets allow the transfer of the electronic signal from the terminal control monitor to the tanker and return. Sockets will vary depending upon terminal equipment and regional regulations. We offer a full line of sockets for North American and international requirements.

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.

FloTech brand sockets use a patented detachable nose ring that permits replacement without disconnecting wire connections (see figure below). Please see page 47 and 48 for socket j slot and pin profile drawings.

**Aluminum Hardcoat J-Slot Wear Ring**

Part #	Description
<b>FT300</b>	optic socket API / WOGA, 6 pin and 3 J-slots
<b>FT301</b>	thermistor socket, API, 8 pin and 4 J-slots
<b>FT302</b>	float, API, J560 pin type socket
<b>FT303</b>	optic socket, 6 pin and 4 J-slots (U.S.)
<b>FT304</b>	thermistor socket, 10 pin and 4 J-slots (Canada, Europe)
<b>FT305</b>	thermistor socket, J560 pin type
<b>FT306</b>	optic socket, J560 pin type
<b>FT307</b>	optic socket, 6 pin and 4 J-slots (Canada)
<b>FT310</b>	API optic face plate assembly, 6 pin, 3-J slots
<b>FT311</b>	API thermistor face plate assembly, 8 pin, 4-J slots
<b>FT313</b>	optic pattern contact assembly with thermistor, 6 pin, 4-J slots
<b>FT314</b>	thermistor face plate assembly (Canada/Europe), 10 pin 4-J slots
<b>FT315</b>	thermistor replacement face plate, J560 type
<b>FT316</b>	optic replacement face plate, J560 type
<b>FT317</b>	optic pattern face plate assembly (Canada), 6 pin, 4-J slots
<b>FT320</b>	blue optic dust cap
<b>FT321</b>	green thermistor dust cap



*FT300 optic socket*



*FT301 thermistor socket*



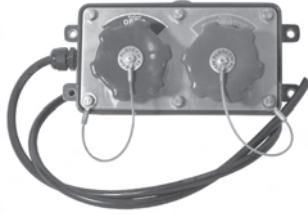
*FT302 float socket*



# Sockets

## EZ-Cept Dual Socket Assembly

The EZ-Cept Dual API Socket Assembly has many features never before offered in an API socket. The EZ-Cept provides unprecedented durability, reliability and ease of installation.



FT390

### Guaranteed for Life J-Slots

Our unique stainless steel alloy J-slot ring will probably outlast your trailer. The EZ-Cept dual socket includes the new guaranteed for life J-Slot wear ring.

### Pre-Wired and Ready To Go

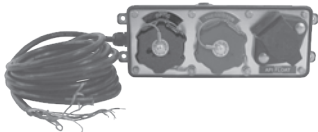
Installation is simple as the unit is provided pre-wired, tested and ready for installation. No more long hours wiring and troubleshooting your socket connections. Simply bolt to the trailer and connect to the onboard monitor.

### Ground Bolt and ID Chip Ready

The EZ-Cept is ground bolt and ID chip ready. Both ground bolt and ID chip are normally mounted inside the EZ-Cept housing to protect from the corrosive elements. Or if desired, the bolt can be mounted to the trailer frame and the wire connected to the EZ-Cept internal wire terminal.

### Corrosion Resistant

Hard powder coated housing, stainless steel hardware and contacts and our unique keep dry enclosure design keeps your trailer in service and corrosion at bay. Take a close look at FloTech EZ-Cept - we challenge you to find a better constructed API socket on the market.



FT393

### Patented

The EZ-Cept has so many innovative features it is covered by U.S. patent 6,824,423. Just another example of how FloTech is leading the way delivering reliability and innovation to our valued customers.

Overfill Products/Replacement Parts

Part #	Description
<b>FT390</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, EZ-Cept dual socket assembly
<b>FT390V</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, vertical mount, EZ-Cept dual socket assembly
<b>FT391</b>	Canadian 4 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, EZ-Cept dual socket assembly
<b>FT391V</b>	Canadian 4 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, vertical mount, EZ-Cept dual socket assembly
<b>FT390-20</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, with 20' cable
<b>FT390G</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, with grounding bolt
<b>FT390GT</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, with grounding bolt and T.I.M.
<b>FT390T</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, with T.I.M. chip
<b>FT390G-20</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, horizontal mount, with grounding bolt and 20' cable
<b>FT393</b>	3 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor, assembly with J560 float pin type socket
<b>FT395</b>	4 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor assembly with optic J560
<b>FT395G</b>	4 J-slot, 6 pin optic, and 4 J-slot, 10 pin thermistor assembly, with optic J560 and ground bolt
<b>FT395V</b>	4 J-slot, 6 pin optic, and 4 J-slot, thermistor assembly and an optic J560 with a vertical mount



## GFL (Guaranteed for Life\*) Series Stainless Steel J-Slot Wear Ring

GFL series stainless steel nose rings are now available on any configuration socket that you require. Our stainless steel J-slots outlast competitor versions because they are tougher and more corrosion resistant than any other on the market.

\* GFL socket J-slots are so tough that they are "Guaranteed for Life" against wear. U.S. patent 6,824,423



Part #	Description
<b>FT300SS</b>	optic socket API / WOGA, 6 pin and 3 J-slots GFL stainless wear ring
<b>FT301SS</b>	thermistor socket, API, 8 pin and 4 J-slots GFL stainless wear ring
<b>FT303SS</b>	optic socket, 6 pin and 4 J-slots (U.S.) GFL stainless wear ring
<b>FT304SS</b>	thermistor socket, 10 pin and 4 J-slots (Canada, Europe) GFL stain.wear ring
<b>FT307SS</b>	optic socket, 6 pin and 4 J-slots (Canada) GFL stainless wear ring
<b>FT310SS</b>	API optic face plate assembly, 6 pin, 3 J-slots GFL stainless wear ring
<b>FT311SS</b>	API thermistor face plate assembly, 8 pin, 4 J-slots GFL stainless wear ring
<b>FT313SS</b>	optic pattern face plate assembly with thermistor, 6 pin, 4-J slots GFL stainless wear ring
<b>FT314SS</b>	Thermistor face plate assembly (Canada/Europe), 10 pin, 4-J slots GFL stainless wear ring
<b>FT317SS</b>	optic pattern face plate assembly (Canada), 6 pin, 4 J-slots GFL stainless wear ring

## Trailer Identification Module Chip Reader

The model FT530 Trailer Identification Module (T.I.M.) reader is designed to read and test Scully type T.I.M. modules mounted inside API compatible overfill sockets.

- reads Scully type T.I.M. modules
- backlit LCD display
- solid aluminum construction
- interchangeable optic or thermistor J-slot screws
- 5 year battery minimum depending on use



Part #	Description
<b>FT530</b>	trailer identification module chip reader

## Cables and Glands

Cables are color matched to commonly used overfill systems and have a tough, thick outer jacket resistant to oil, UV and abrasion. For watertight cable/sensor connections apply FloTech brand strain/relief sealing glands. Two packages are available: FT402 - 20 pieces for typical top only sensor connection systems or; FT403 - 30 pieces for typical top and bottom sensor connection systems.

Part #	Description
<b>FT400</b>	5 conductor cable 100'
<b>FT400-1000</b>	5 conductor cable 1000' reel
<b>FT401</b>	7 conductor cable 100'
<b>FT401-150</b>	7 conductor cable 150'
<b>FT401-1000</b>	7 conductor cable 1000' reel
<b>FT404</b>	11 conductor cable 100'
<b>FT404-150</b>	11 conductor cable 150'
<b>FT404-1000</b>	11 conductor cable 1000' reel
<b>FT402</b>	20 strain relief fittings, 1/2" NPT - one box of 20 pieces
<b>FT403</b>	30 strain relief fittings, 1/2" NPT - one box of 30 pieces
<b>FT405-500</b>	strain relief fittings, 1/2" NPT, 500 piece box



Cables and Glands

## Optic System Tester

The FT520 optic test kit includes a Go, No/Go tester and test lead sets to test five wire optic probes, two wire optic probes, and on-board monitor socket outputs. It uses the same permissive signal verification as an optic rack monitor. Optional FT521, FT522, FT523 optic test plugs are available for an entire trailer Go, No/Go test.

Part #	Description
<b>FT520</b>	optic system tester, 4 Test lead sets and instructions case only for FT520
<b>FT520CASE</b>	optic system tester with FT521 test plug no test leads
<b>FT520WOGA</b>	optional case for FT520 WOGA
<b>FT521</b>	API optic test plug with six pins and three J-slots
<b>FT522</b>	optic test plug with six pins and two or four J-slots
<b>FT523</b>	optic test plug J-560 type



FT520 Optic System

## FT155 Dummy



FT155 dummy

Dummies send a permissive signal for any missing compartments. For example, in the United States all overfill systems are formatted assuming 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 signal in the coldest weather and is mechanically and electrically compatible with Scully and Civacon models.

Part #	Description
<b>FT155</b>	Thermistor dummy, 5 compartment



FT451 grounding ball



FT450 grounding bolt

## Grounding Ball and Bolt

When using the FloTech trailer mounted ground ball the trailer cannot be loaded unless the terminal ground is directly connected to the ground ball. Please refer to comparison chart on pages 44 and 45 for cross references to other manufacturer model numbers.

Part #	Description
<b>FT451</b>	stainless steel grounding ball
<b>FT450</b>	stainless steel grounding bolt

## API Compatible Rack Cords

- FT600 and FT620 are compatible with API thermistor and optic configurations.
- Cord is available in coiled or straight lengths.
- Cord features a heavy highly visible safety orange jacket to meet trip hazard requirements.
- Cord is bonded mechanically and has superior abrasion and oil resistance.
- Cord sets are interchangeable with Scully and Civacon, please refer to pages 45 - 47 for the cross reference chart.
- Plug body is machined from 6061 aluminum and is color coded optic blue or thermistor green.
- Button contacts are made from 316 stainless steel to prevent corrosion or galling.
- all other hardware is stainless steel
- All wiring is compatible with standard Scully color codes and wiring number configurations.
- The 9 pin conductor is shielded to be compatible with Scully VIP system.



### Model FT620 API Optic Assemblies

Part #	Scully Part #	Description
<b>FT620</b>	<b>21831</b>	plug with 30' coiled cable
<b>FT620S</b>	<i>N/A</i>	plug with 20' straight cable
<b>FT621</b>	<b>21766</b>	replacement plug body
<b>FT622</b>	<b>27211</b>	replacement 30' coiled cable
<b>FT623</b>	<b>08235</b>	plug hanger

### Model FT600 API Thermistor Assemblies

Part #	Scully Part #	Description
<b>FT600</b>	<b>21818</b>	plug with 30' coiled cable
<b>FT600S</b>	<i>N/A</i>	plug with 20' straight cable
<b>FT600SC</b>	<i>N/A</i>	plug with 20' straight cord set (Canada)
<b>FT601</b>	<b>20769</b>	replacement plug body
<b>FT601-10</b>	<b>08959</b>	replacement plug, 10 pin (Canada)
<b>FT602</b>	<b>27211</b>	replacement 30' coiled cable
<b>FT603</b>	<i>N/A</i>	plug hanger
<b>FT604</b>	<i>N/A</i>	replacement 20' straight cord



# FloTech

## Replacement Parts

Part #	Description
<b>FT9000</b>	sensor housing 2" NPT with parallel ports, complete with all hardware
<b>FT9001</b>	complete sensor housing gasket and O-ring kit
<b>FT9002</b>	complete sensor housing gasket, O-ring and hardware kit
<b>FT9003</b>	replacement on-board monitor housing
<b>FT9004</b>	replacement on-board monitor hardware kit
<b>FT9005</b>	replacement on-board bezel five wire (FT103)
<b>FT9006</b>	replacement on-board bezel two wire (FT204)
<b>FT9007</b>	replacement socket rear housing
<b>FT9008</b>	replacement socket contact block with pins FT300 Optic series
<b>FT9009</b>	replacement socket contact block with pins FT301 Thermistor series
<b>FT9010</b>	replacement socket contact block with 10 pins FT304 Thermistor series
<b>FT9011</b>	replacement sensor housing cap with screws and lock washers
<b>FT9012</b>	replacement 2" NPT sensor housing lock nut
<b>FT9013</b>	replacement socket faceplate 4J slot, no contact block or hardware
<b>FT9014</b>	replacement contact block for Thermistor rack plug, 8 pin, FT600
<b>FT9015</b>	replacement contact block for Optic rack plug, 6 pin, FT620
<b>FT9016</b>	replacement contact block for Thermistor rack plug, 10 pin, FT600C
<b>FT9017</b>	rack plug body, only Thermistor green
<b>FT9018</b>	rack plug body, only Optic blue
<b>FT9019</b>	faceplate assembly to fit small Scully Load anywhere housing
<b>FT9020</b>	socket pin, screw and crimp lug
<b>FT9021</b>	crimp connector 100 pieces per bag
<b>FT9022</b>	GE RTV 103 silicone rubber sealant 2.8 oz. tube
<b>FT9023</b>	stripping tool for cable jacket
<b>FT9024</b>	crimp tool for splice connections
<b>FT9025</b>	terminal pin, 14-16 AWG 100 pieces
<b>FT9026</b>	sensor flat gasket for 2" NPT through punched hole in man lid
<b>FT9027</b>	sensor housing probe, Viton® O-ring
<b>FT9028</b>	gasket for Scully Go Anywhere monitor face plate
<b>FT9029</b>	J560 contact block, 7 way
<b>FT9030</b>	fuse holder with ¼ Amp fuse
<b>FT9031</b>	fuse holder with ½ Amp fuse
<b>FT9032</b>	socket face plate gasket
<b>FT9033</b>	sensor housing, lower no hardware
<b>FT9034</b>	replacement socket face plate 3 J slot, no contact block or hardware
<b>FT9035</b>	program module for FT204P and FT208
<b>FT9036</b>	FT208 Benzel
<b>FT9037</b>	FT520 test lead set
<b>FT9038</b>	fuse ¼ Amp - for FT103 and FT204P
<b>FT9039</b>	fuse ½ Amp - for FT208
<b>FT9040</b>	Checkmate housing with lid
<b>FT9041</b>	replacement 3-J aluminum socket nose ring
<b>FT9042</b>	replacement 4-J aluminum socket nose ring
<b>FT9043</b>	replacement 3-J stainless socket nose ring
<b>FT9044</b>	replacement 4-J stainless socket nose ring
<b>FT9045</b>	replacement gasket, Checkmate lid
<b>FT9046</b>	bag of 10 replacement socket pins
<b>FT9047</b>	Thermistor, plug, hanger, 1 dummy
<b>FT9050</b>	Threaded half coupling ½" for retain probe
<b>FT9051</b>	replacement short contact block for FT390/393 Optic 6 pin
<b>FT9052</b>	replacement short contact block for FT390/393 Thermistor, 10 pin
<b>FT9053</b>	replacement gasket for bezel on monitors FT103/204P
<b>FT9054</b>	replacement lid frame for monitors FT103/204P
<b>FT9055</b>	replacement hardware kit for FT206/152 retain sensors
<b>FT9059</b>	replacement face plate and bezel assembly for FT204P
<b>FT9060</b>	replacement cord spring for FT600 and FT620 rack plugs
<b>FT9061</b>	replacement contact pin for FT390/393 series sockets

# Comparison Reference Chart

Listed is a cross reference between FloTech brand "Drop In" replacement parts and competitor products

Overfill Products/Replacement Parts

LIQUID LEVEL SENSORS	Flotech Part #	Cat. Pg #	Civacon Part #	Scully Part #	Description
	<b>FT100</b>	38	1300	09209	replacement probe, optic, 5-wire, 7" long
	<b>FT100-12</b>	38	1300S	09214	replacement probe, optic, 5-wire, 12" long
	<b>FT101</b>	38	1110	09208	sensor, optic, 5-wire, 2" NPT housing, 7" probe
	<b>FT101-12</b>	38	1110S	09213	sensor, optic, 5-wire, 2" NPT housing with 12" probe
	<b>FT150</b>	34	1651	09409	replacement probe, thermo-optic, 7" long, 2-wire (black & white)
	<b>FT150-12</b>	34	1650S	09414	replacement probe, thermo-optic, 12" long, 2-wire (black & white)
	<b>FT151</b>	34	1550	09408	sensor, thermo-optic, 2" NPT housing, 7" probe, 2-wire (black & white)
	<b>FT151-12</b>	34	1550S	09413	sensor, thermo-optic, 2" NPT housing, 12" probe, 2-wire (black & white)
	<b>FT152</b>	34	---	08819	retain sensor
	<b>FT155</b>	34	1900	08298	Thermistor dummy, 5 compartment
	<b>FT201</b>	37	1351	---	replacement R/OM type, 7" top probe, 2-wire (red & black)
	<b>FT201-12</b>	37	1350S	---	replacement R/OM type, 12" top probe, 2-wire (red & black)
	<b>FT202</b>	37	1051	---	top sensor R/OM type, 2" NPT housing, 7" probe, 2-wire (red & black)
	<b>FT202-12</b>	37	---	---	top sensor R/OM type, 2" NPT housing, 12" probe, 2-wire (red & black)
	<b>FT205</b>	---	1910	---	terminator
	<b>FT206</b>	37	1000	---	retain sensor R/OM type, 1/2" NPT sensor (red & black)
ON-BOARD MONITORS	Flotech Part #	Cat. Pg #	Civacon Part #	Scully Part #	Description
	<b>FT102</b>	38	3150	08563	replacement chassis, API compatible
	<b>FT103</b>	38	3100	08687	API compatible on-board monitor, with housing
	<b>FT203P</b>	37	3252	---	replacement chassis, R/OM type on-board monitor
	<b>FT204P</b>	37	3202	---	R/OM type on-board monitor, with housing
	<b>FT207</b>	35	---	09100 or 09111	Replacement module, Checkmate on-board monitor
	<b>FT208</b>	35	---	09109 or 09107	Checkmate programmable monitor for top, or top and bottom sensors
SOCKETS	Flotech Part #	Cat. Pg #	Civacon Part #	Scully Part #	Description
	<b>FT300</b>	39	4100	07974	API compatible optic socket with cap (6 pin, 3 J-slots)
	<b>FT301</b>	39	4400	07720	API compatible thermistor socket with cap (8 pin, 2/4 J-slots)
	<b>FT302</b>	39	4600	08116	API compatible float socket
	<b>FT303</b>	39	4200	07976	optic pattern with thermistor J-slots, and cap (6 pin, 2/4 J-slots)
	<b>FT304</b>	39	4401	07716	Canadian / European thermistor socket with cap (10 pin, 4 J-slots)
	<b>FT305</b>	39	4500	07681	Thermistor socket, J560 type
	<b>FT306</b>	39	4300	08199	optic socket, J560 type
	<b>FT310</b>	39	4110	21790	API optic face plate assembly with cap
	<b>FT311</b>	39	4410	20770	API thermistor face plate assembly with cap
	<b>FT314</b>	39	---	20768	Canadian / European thermistor replacement face plate with cap
	<b>FT320</b>	39	4150	08575	blue optic dust cap
	<b>FT321</b>	39	4450	08574	green thermistor dust cap
	<b>FT390</b>	40	---	09060	EZ-Cept dual socket assembly
	<b>FT395</b>	40	---	---	EZ-Cept dual socket assembly

# Comparison Reference Chart

HARDWARE SYSTEM TESTERS	Flotech Part #	Cat. Pg #	Civacon Part #	Scully Part #	Description
	<i>FT400</i>	41	---	22056	5 conductor cable 100'
	<i>FT401</i>	41	---	27382	7 conductor cable 100'
	<i>FT402</i>	41	---	---	20 strain relief fittings, 1/2" NPT
	<i>FT403</i>	41	---	---	30 strain relief fittings, 1/2" NPT
	<i>FT451</i>	41	---	08274	stainless steel grounding ball
	<i>FT450</i>	42	GS1000	08560	stainless steel grounding bolt
	<i>FT520</i>	41	---	---	optic system tester
	<i>FT600</i>	42	---	08156	API Thermistor "GREEN" plug with 30' coiled cord
	<i>FT620</i>	42	---	08159	API Optic "BLUE" plug with 30' coiled cord

*Listed is a cross reference between FloTech brand "Drop In" replacement parts and competitor products*

API RACK CORDS	Flotech Part #	Cat. Pg #	Civacon Part #	Scully Part #	Description
	<i>FT620</i>	42	---	21831	plug with 30' coiled cable
	<i>FT620S</i>	42	---	N/A	plug with 20' straight cable
	<i>FT621</i>	42	---	21766	eplacement plug body
	<i>FT622</i>	42	---	27211	replacement 30' coiled cable
	<i>FT623</i>	42	---	08235	plug hanger
	<i>FT600</i>	42	---	21818	plug with 30' coiled cable
	<i>FT600S</i>	42	---	N/A	plug with 20' straight cable
	<i>FT600SC</i>	42	---	N/A	plug with 20' straight cord set (Canada)
	<i>FT601</i>	42	---	20769	replacement plug body
	<i>FT601-10</i>	42	---	08959	replacement plug, 10 pin (Canada)
	<i>FT602</i>	42	---	27211	replacement 30' coiled cable
	<i>FT603</i>	42	---	N/A	plug hanger
	<i>FT604</i>	42	---	N/A	replacement 20' straight cord

ON-BOARD SYSTEMS	Flotech Part #	Cat. Pg #	Civacon Part #	Scully Part #	Description
	<i>FT1004</i>	38	2004	08305	API compatible 4 compartment system
	<i>FT1005</i>	38	2005	08306	API compatible 5 compartment system
	<i>FT2004</i>	36	3024	---	R/OM type, 4 compartment system
	<i>FT2005</i>	36	3025	---	R/OM type, 5 compartment system
	<i>FT2104</i>	36	3034	---	R/OM type, 4 compartment system (top only)
	<i>FT2105</i>	36	3035	---	R/OM type, 5 compartment system (top only)
	<i>FT2801</i>	34	---	08251	Checkmate system, one compartment, top only
	<i>FT2802</i>	34	---	08352	Checkmate system, two compartment, top only
	<i>FT2803</i>	34	---	08353	Checkmate system, three compartment, top only
	<i>FT2804</i>	34	---	08354	Checkmate system, four compartment, top only
	<i>FT2805</i>	34	---	08355	Checkmate system, five compartment, top only
	<i>FT2806</i>	34	---	08356	Checkmate system, six compartment, top only
	<i>FT2807</i>	34	---	08380	Checkmate system, seven compartment, top only
	<i>FT2808</i>	34	---	08381	Checkmate system, eight compartment, top only
	<i>FT2811</i>	34	---	08361	Checkmate system, one compartment, top and bottom sensors
	<i>FT2812</i>	34	---	08362	Checkmate system, two compartment, top and bottom sensors
	<i>FT2813</i>	34	---	08363	Checkmate system, three compartment, top and bottom sensors
	<i>FT2814</i>	34	---	08364	Checkmate system, four compartment, top and bottom sensors
	<i>FT2815</i>	34	---	08365	Checkmate system, five compartment, top and bottom sensors
	<i>FT2816</i>	34	---	08366	Checkmate system, six compartment, top and bottom sensors
	<i>FT2817</i>	34	---	08382	Checkmate system, seven compartment, top and bottom sensors
	<i>FT2818</i>	34	---	08383	Checkmate system, eight compartment, top and bottom sensors

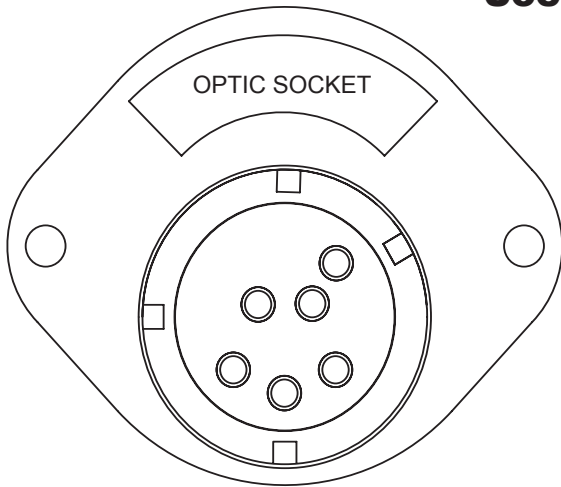
*Civacon and R/OM are registered trademarks of Civacon/Dover Corporation*

*Intellicheck is a registered trademark of Scully Signal Company*

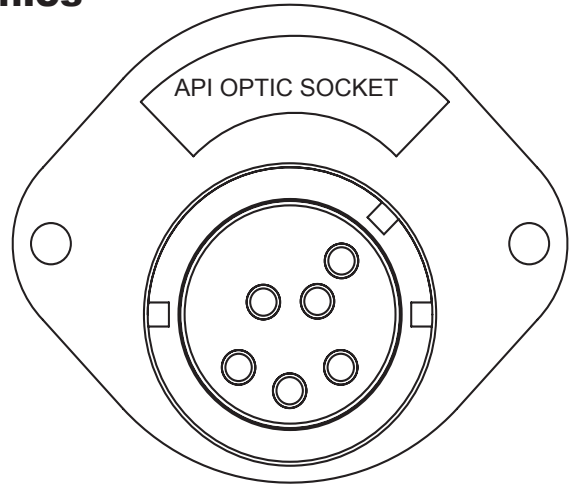
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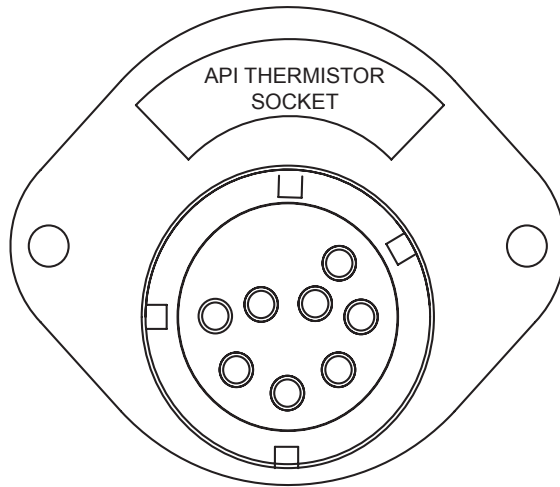
## Socket Profiles



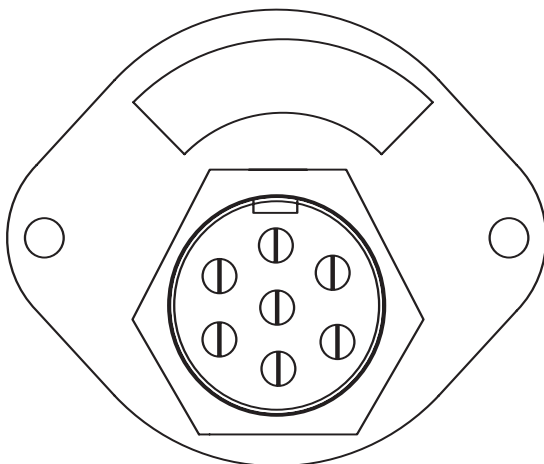
**FT303** optic socket (USA)  
**FT313** replacement faceplate  
**FT307** optic socket (Eastern Canada)  
**FT317** replacement faceplate



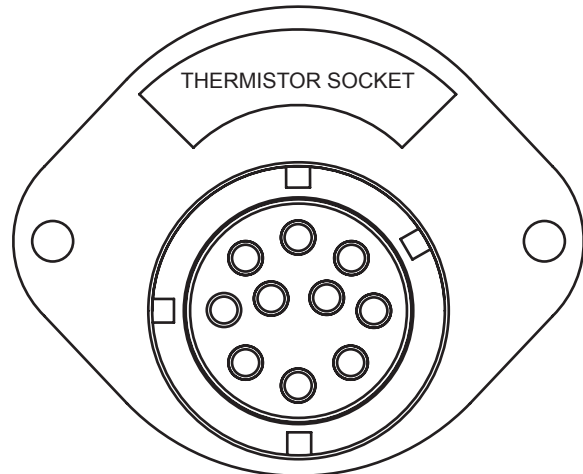
**FT300** API optic socket  
**FT310** replacement faceplate



**FT301** API thermistor socket USA  
**FT311** replacement faceplate Assembly

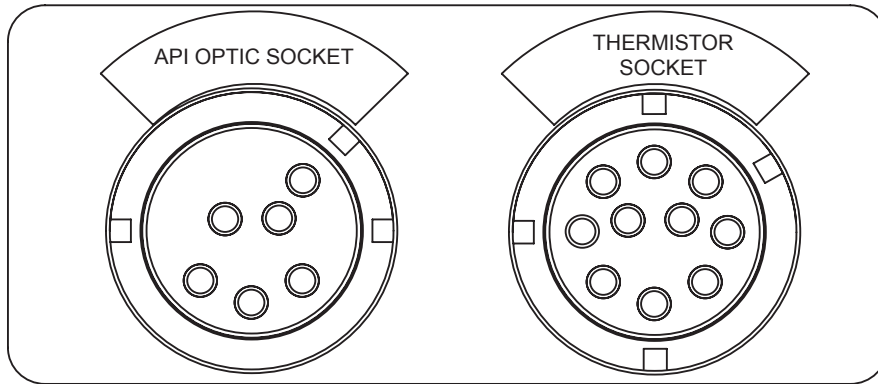


**FT302** float J560 socket  
**FT312** replacement faceplate float J560 socket  
**FT305** Thermistor J560 socket  
**FT315** replacement faceplate Thermistor J560 socket  
**FT306** optic J560 socket (Western Canada)  
**FT316** replacement optic J560 socket

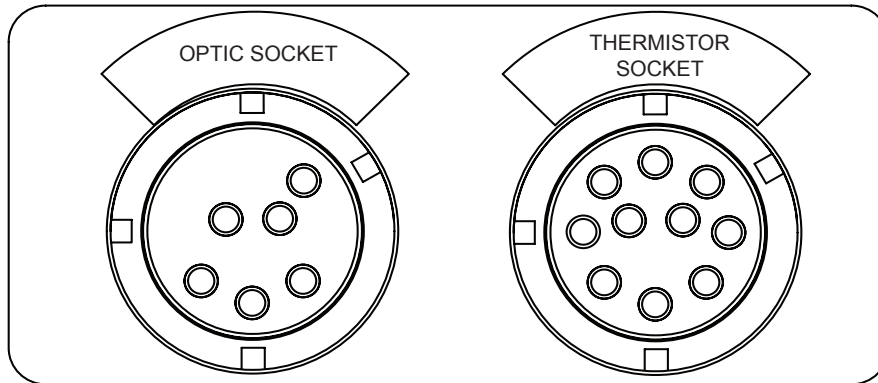


**FT304** thermistor socket (Canada)  
**FT314** replacement faceplate

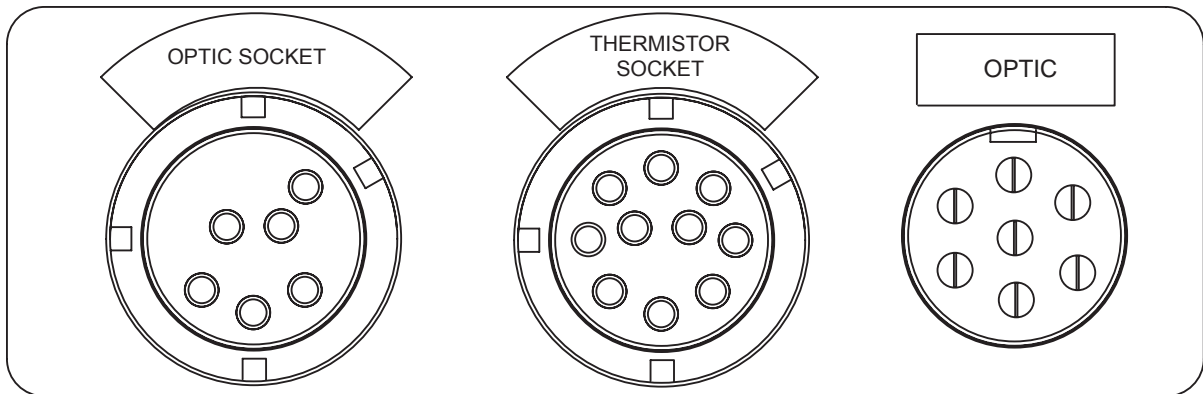
## Socket Profiles



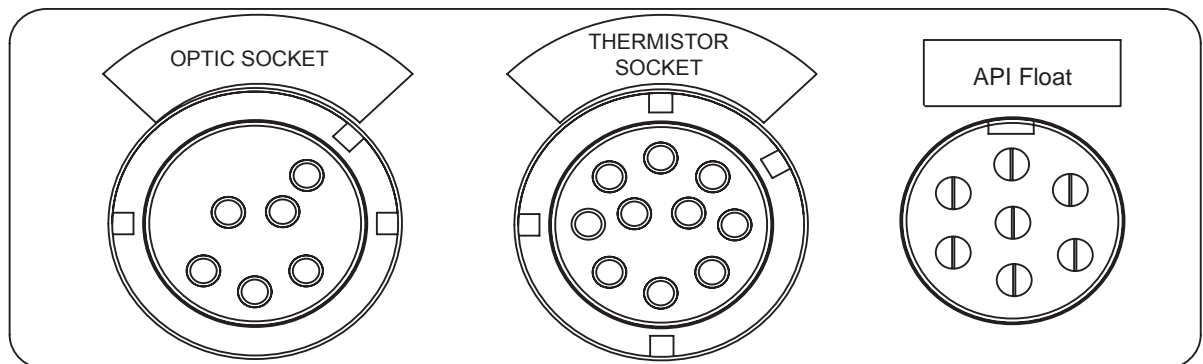
**FT390** dual socket



**FT391** dual socket (Canada)



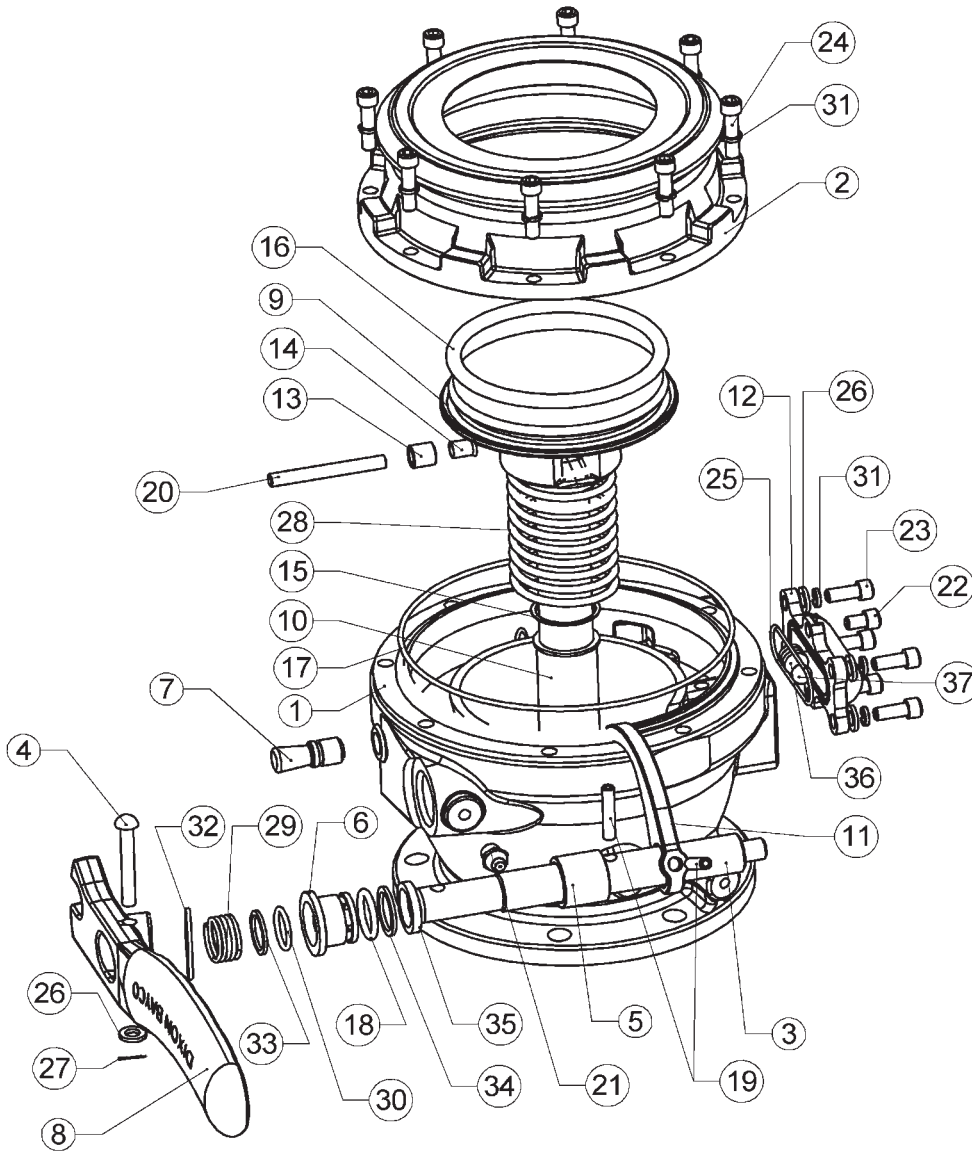
**FT395** triple socket (Canada)



**FT393** triple socket



## 5204 Series, API Bottom Load Valves



### Repair Kit

Part #	Description	Includes Item #
<b>5204K2</b>	complete rebuild kit: Baylast™ O-rings, bearings	6,10, 13, 14, 16A, 17A, 18A, 25A, 30, 35
<b>5204KV2</b>	complete rebuild kit: Viton® poppet O-ring, Baylast™ O-rings, bearings	6,10, 13, 14, 16B, 17A, 18A, 25A, 30, 35
<b>5204K3</b>	replacement anodized nose ring with Baylast™ gasket, screws and lock washers	2, 17A, 24, 31
<b>5204K5</b>	replacement detachable handle assembly (for 5204C & 5204NGC)	not illustrated
<b>5204K6</b>	Teflon® encapsulated seal kit, poppet O-ring, nose O-ring, shaft O-ring, and sight glass O-ring	16C, 17B, 18B, 25B
<b>5204K7</b>	replacement fixed handle assembly	4, 8A, 24, 26, 2t, 32
<b>5204K8</b>	sight glass repair kit	12, 25A, 36, 37
<b>5204K9</b>	sight glass cover kit (to convert units with sight glass to non-sight glass)	not illustrated
<b>5204K11</b>	nose ring replacement 8 hex bolts & 8 washers kit	24, 31
<b>5204K12</b>	sight glass replacement hardware, 6 hex bolts, 6 lock washers & 4 washers kit	23, 26, 31
<b>5204K13</b>	replacement full body sight glass, seals and retainer kit	38, 39, 40

## 5204 Series, API Bottom Load Valves

## Bill of Materials

## Qty of Components per Unit

	Description	Part#	5204	5204NG	5204TNG	5204SNG	5204NGV	5204C	5204NGC	5204L	5204LNG
1	body - pipe end	-	1	1	1	1	1	1	1	1	1
2	nose ring	use kit 5204K3	1	1	1	1	1	1	1	1	1
3	shaft	390812	1	1	1	1	1	1	1	N/A	N/A
4	handle pin	111559	1	1	1	1	1	N/A	N/A	N/A	N/A
5	shaft spacer	390813	1	1	1	1	1	1	1	N/A	N/A
6	shaft bearing	111557	1	1	1	1	1	1	1	N/A	N/A
7	stop pin	5204-SP	1	1	1	1	1	1	1	N/A	N/A
8A	fixed handle	use kit 5204K7	1	1	1	1	1	N/A	N/A	N/A	N/A
8B	removeable handle	use kit 5204K5	N/A	N/A	N/A	N/A	N/A	1	1	N/A	N/A
9A	poppet (Load/Unload versions)	341755	1	1	1	1	1	1	1	N/A	N/A
9B	poppet (Load only versions)	341756	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	1
10	poppet bearing	111558	1	1	1	1	1	1	1	1	1
11	cam	111550	1	1	1	1	1	1	1	N/A	N/A
12	sight glass	use kit 5204K8	1	N/A	N/A	N/A	N/A	1	N/A	1	N/A
13	poppet roller	390815	1	1	1	1	1	1	1	N/A	N/A
14	poppet roller bearing	111556	1	1	1	1	1	1	1	N/A	N/A
15	retaining ring	111560	1	1	1	1	1	1	1	1	1
16A	Baylast™ poppet O-ring	5204K1	1	1	N/A	1	N/A	1	1	1	1
16B	Viton® poppet O-ring	5204KV1	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A
16C	Teflon® encapsulated poppet O-ring	use kit 5204K6	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
17A	nose ring O-ring	111554	1	1	N/A	1	1	1	1	1	1
17B	Teflon® nose O-ring	use kit 5204K6	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
18A	shaft O-ring	111552	1	1	N/A	1	1	1	1	N/A	N/A
18B	Teflon® shaft O-ring	use kit 5204K6	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
19	shaft and cam roll pin	6000-12	2	2	2	2	2	2	2	N/A	N/A
20	pin roller	111566	1	1	1	1	1	1	1	N/A	N/A
21	grease fitting	111561	1	1	1	1	1	1	1	N/A	N/A
23	sight glass screw	use kit 5204K12	6	N/A	N/A	N/A	N/A	6	N/A	6	N/A
24	nose ring screw	use kit 5204K11	8	8	8	8	8	8	8	8	8
25A	Baylast™ sight glass O-ring	use kit 5204K8	1	N/A	N/A	N/A	N/A	1	N/A	1	N/A
25B	Teflon® sight glass O-ring	use kit 5204K6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	washer	111562	5	1	1	1	1	4	N/A	4	N/A
27	cotter pin	111563	1	1	1	1	1	N/A	N/A	N/A	N/A
28A	main spring-steel	111564	1	1	N/A	N/A	1	1	1	1	1
28B	main spring- stainless steel	111542	N/A	N/A	1	1	N/A	N/A	N/A	N/A	N/A
29	handle spring	111565	1	1	1	1	1	1	1	N/A	N/A
30	dust seal O-ring	111553	1	1	1	1	1	1	1	N/A	N/A
31	lock washer 1/4"	111569	14	8	8	8	8	14	8	14	8
32	handle shaft spring washer	111573	1	1	1	1	1	1	1	N/A	N/A
33	handle shaft washer	111574	1	1	1	1	1	1	1	N/A	N/A
34	back-up ring	111579	1	1	1	1	1	1	1	N/A	N/A
35	u-cup seal	111580	1	1	1	1	1	1	1	N/A	N/A
36	flow indicator	use kit 5204K8	1	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A
37	float ball	use kit 5204K8	1	N/A	N/A	N/A	N/A	1	N/A	1	N/A
*38	retaining ring	use kit 5204K13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
*39	SFI sight glass	use kit 5204K13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
*40	SFI sight glass O-ring (Baylast™)	use kit 5204K13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

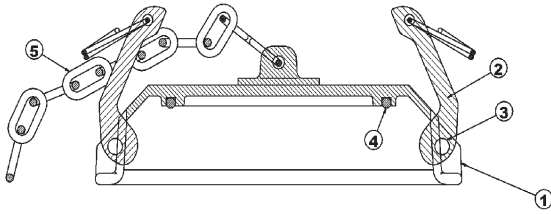
\* - not illustrated, parts for 5204-SFI

N/A = "Not Applicable"

## 5000-24 API Dust Cap

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam arm and ring	<b>ACAR34BZ</b>	2
3	cam arm pin	<b>L519-18</b>	2
4A	Baylast™ O-ring (standard)	<b>4500-5</b>	1
4B	Viton® O-ring (optional)	<b>4500-7</b>	1
5	replacement 18" chain & "S" hook	<b>5205-RK4</b>	1



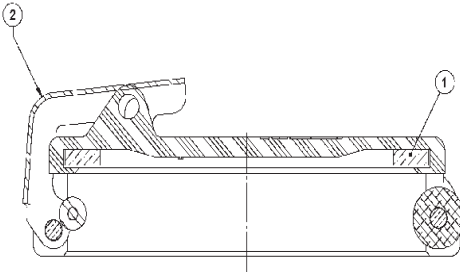
### Repair Kit

Part #	Description	Item #
<b>4500RK</b>	replacement cam arms, pins and Baylast™ O-ring seal (standard)	2, 3, 4A
<b>4500RK-V</b>	replacement cam arms, pins and Viton® O-ring seal (optional)	2, 3, 4B
<b>5205-RK4</b>	replacement 18" chain & "S" hook	5

## 5000-25 API Dust Cap

### Bill of Materials

Item #	Description	Part #	Qty
1	gasket	<b>5000-25RK1</b>	1
2	cam arm sub assembly	<b>401775STBR</b>	1

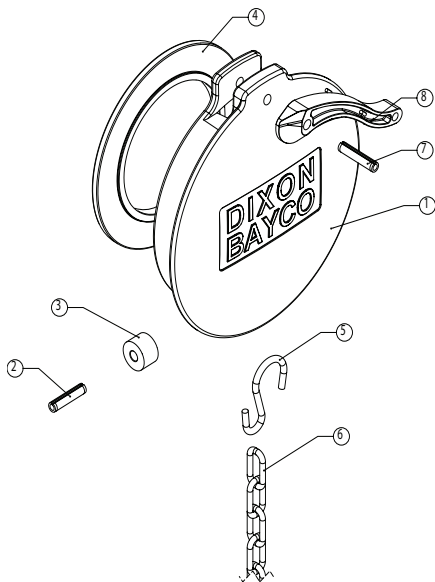


### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	slotted pin	use kit <b>5205-RK3</b>	1
3	roller	use kit <b>5205-RK3</b>	1
4	gasket	<b>5205-RK1</b>	1
5	"S" hook	use kit <b>5205-RK4</b>	1
6	18" chain	use kit <b>5205-RK4</b>	1
7	spring pin	use kit <b>5205-RK2</b>	1
8	plastic cam arm	use kit <b>5205-RK2</b>	1

### Repair Kit

Part #	Description	Item #
<b>5205-RK2</b>	replacement cam arm & pin	7, 8
<b>5205-RK3</b>	replacement roller & pin	2, 3
<b>5205-RK4</b>	replacement chain & "S" hook	5, 6



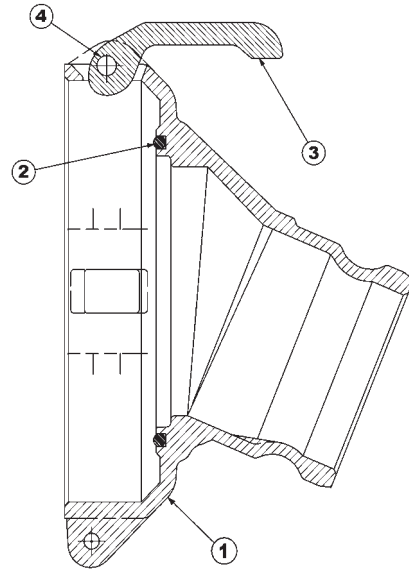
## 4530 and 4540 Series Gravity Drop Adapter

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2A	Baylast™ O-ring (standard)	<b>4500-5</b>	1
2B	Viton® O-ring (standard)	<b>4500-7</b>	1
3	cam arm and ring	<b>ACAR34BZ</b>	2
4	cam pin	<b>L519-12</b>	2
-	replacement 18" chain & "S" hook	<b>5205-RK4</b>	1

### Repair Kit

Part #	Description	Includes Item #'s
<b>4500RK</b>	cam arms, rings, pins & Baylast™ O-ring (standard)	2A, 3, 4
<b>4500RK-V</b>	cam arms, rings, pins & Viton® O-ring (standard)	2B, 3, 4
<b>5205-RK4</b>	18" security chain	-



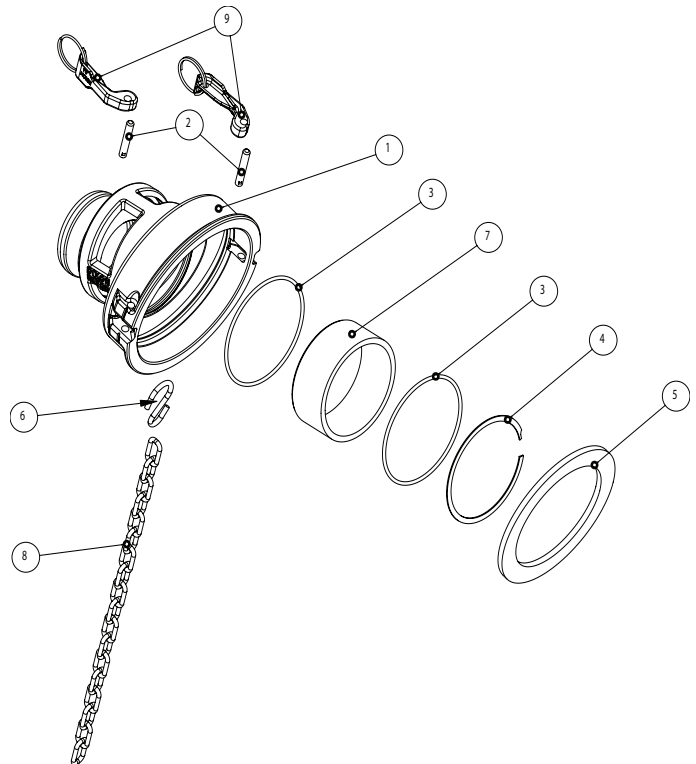
## 4530SG & 4540SG (With Sight Glass) Gravity Drop Adapters

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam arm pin	<b>L519-15</b>	2
3	Baylast™ O-ring	<b>112052</b>	2
4	retaining ring	<b>112053</b>	1
5	Baylast™ main gasket	<b>4540SG-RK2</b>	1
6	"S" hook	use kit <b>5205-RK4</b>	1
7	sight glass	use kit <b>4540SG-RK1</b>	1
8	18" chain	use kit <b>5205-RK4</b>	1
9	cam arm and ring	<b>ACAR34BZ</b>	2

### Repair Kit

Part #	Description	Includes Item #
<b>4540SG-RK1</b>	sight glass repair kit (fits 3" & 4")	3, 4, 7
<b>4540SG-RK2</b>	Baylast™ main gasket (fits 3" & 4")	5
<b>4540SG-RK2-V</b>	Viton® main gasket (fits 3" & 4")	5
<b>4540SG-RK3</b>	replacement cam arms and pins (fits 3" & 4")	2, 9
<b>5205-RK4</b>	replacement chain & "S" hook	6, 8



## 4500 Series 2 Piece Gravity Drop Adapters

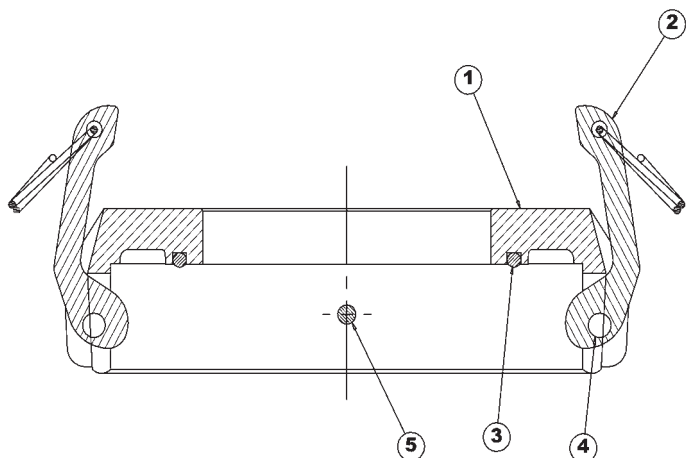
### 4500 Main Body Inlet

#### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam arm and ring	<b>ACAR34BZ</b>	2
3A	Baylast™ O-ring (standard)	<b>4500-5</b>	1
3B	Viton® O-ring (optional)	<b>4500-7</b>	1
4	cam arm pin	<b>L519-12</b>	2
5	rivet	<b>390564</b>	1

#### Repair Kits

Part #	Description	Includes Item #
<b>4500RK</b>	replacement cam arms, rings, pins & Baylast™ O-ring (standard)	2, 3A, 4
<b>4500RK-V</b>	replacement cam arms, rings, pins & Viton® O-ring (optional)	2, 3B, 4

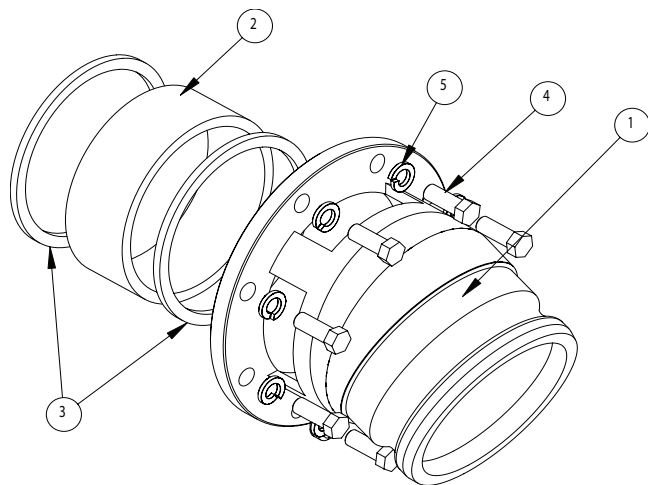


## 4500 Series Drop Adapter Outlets

### 4501, 4502, 4503 & 4504

#### Bill of Materials

Item #	Description	Part #	Qty
1	body	<b>341220</b>	1
2	sight glass	<b>4502-5</b>	2
3A	Baylast™ gasket	<b>4433</b>	2
3B	Viton® gasket	<b>4426</b>	1
4	stainless bolt	see below	8
5	stainless washer	<b>4427</b>	8
not illustrated	coupler gasket for 4504	<b>WASHER.375-SS</b>	1
not illustrated	cam arm and ring for 4504	<b>400-G-BU</b>	2
not illustrated	cam arm pin for 4504	<b>ACAR34BZ</b>	2

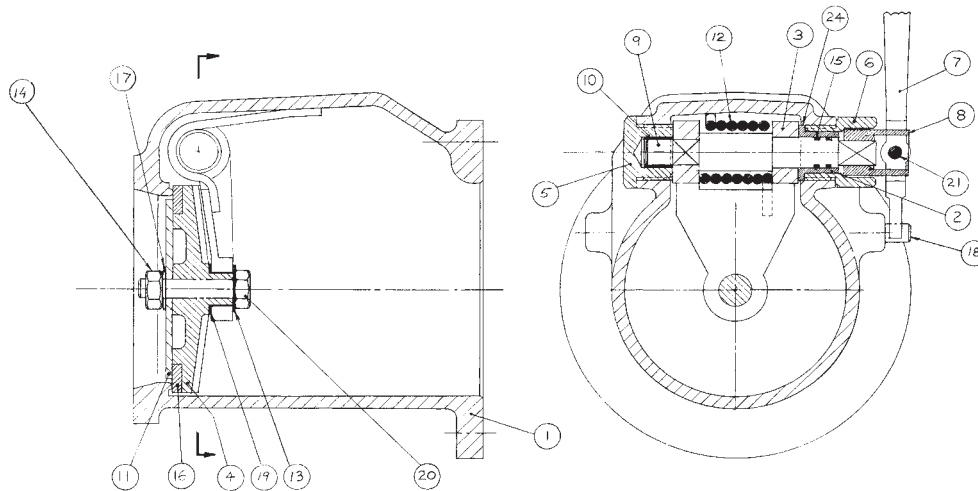


#### Repair Kit

Part #	Description	Includes Item #
<b>4400SGK</b>	replacement sight glass and Baylast™ gaskets for 4501 & 4504	2, 3A
<b>4400SGK-V</b>	replacement sight glass and Viton® gaskets for 4501 & 4504	2, 3B
<b>4502SGK</b>	replacement sight glass and Baylast™ gaskets for 4502 & 4503	2, 3A
<b>4502SGK-V</b>	replacement sight glass and Viton® gaskets for 4502 & 4503	2, 3B



## 4400 Series Faucet Valves



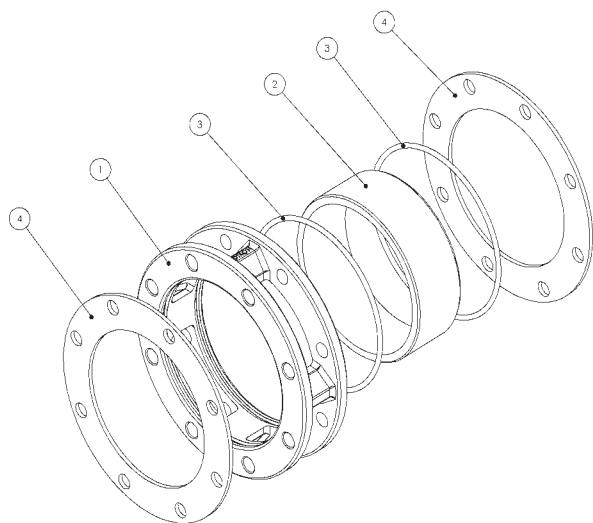
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	bushing	use kit <b>4419</b>	1
3	bronze left arm	use kit <b>4410</b>	1
4	seal housing	use kit <b>4410</b>	1
5	bronze plug lug	use kit <b>4420</b>	1
6	bronze sleeve shaft	use kit <b>4419</b>	1
7	bronze handle	use kit <b>4416</b>	1
8	handle sleeve	use kit <b>4416</b>	1
9	shaft	use kit <b>4421</b>	1
10	bushing	use kit <b>4420</b>	1
11	washer	use kit <b>4410</b>	1
12	spring	<b>4430</b>	1
13	washer	use kit <b>4410</b>	1
14	nut hex	use kit <b>4410</b>	1
15	Viton® O-ring	use kit <b>4421</b>	2
16	Viton® seal	<b>4412</b>	1
17	washer	use kit <b>4410</b>	1
18	dowel pin	<b>110142</b>	1
19	wave spring	use kit <b>4410</b>	1
20	bolt	use kit <b>4410</b>	1
21	stainless steel handle pin	use kit <b>4416</b>	1

### Repair Kits

Part #	Description	Includes Item #
<b>4410</b>	replacement flapper assembly	3, 4, 11, 13, 14, 16, 17, 19, 20
<b>4416</b>	replacement handle assembly	7, 8, 21
<b>4419</b>	replacement shaft sleeve assembly	2, 6
<b>4420</b>	replacement plug shaft assembly	5, 10
<b>4421</b>	replacement shaft assembly	9, 15
<b>4400SGK</b>	replacement sight glass and Buna gaskets for 4401, 4401A, 4401S & 4401-1	not illustrated
<b>4400SGK-V</b>	replacement sight glass and Viton® gaskets for 4401, 4401A, 4401S & 4401-1	not illustrated
<b>400-G-BU</b>	replacement Buna coupler gasket for 4401-1	not illustrated
<b>400-G-VI</b>	replacement Viton® coupler gasket for 4401-1	not illustrated
<b>ACAR34BZ</b>	replacement cam arm and ring for 4401-1 (2 required)	not illustrated
<b>L519-19</b>	replacement cam arm pin for 4401-1 (2 required)	not illustrated

## 5200-SFI Series, Sight Glass



### Bill of Materials

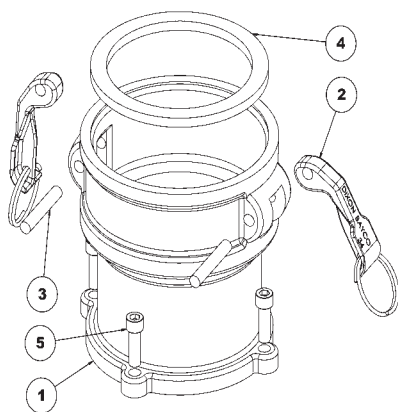
Item #	Description	Part #	Qty
1	body	-	1
2	sight glass	use kits as listed below	1
3A	3" Baylast™ O-ring (3" std)	use kits as listed below	1
3B	3" Viton® O-ring (3" optional)	use kits as listed below	1
3C	4" Baylast™ O-ring (4" std)	use kits as listed below	1
3D	4" Viton® O-ring (4" optional)	use kits as listed below	1
4A	3" retainer ring	use kits as listed below	1
4B	4" retaining ring	use kits as listed below	1

### Repair Kits

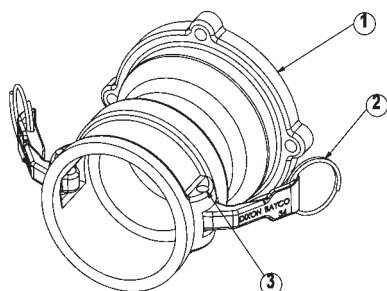
Part #	Description	Includes Item #
<b>5200-SFI-3-RK1</b>	3" replacement sight glass, Baylast™ O-ring and retainer ring kit	2, 3A, 4A
<b>5200-SFI-3V-RK1</b>	3" replacement sight glass, Viton® O-ring and retainer ring kit	2, 3B, 4A
<b>5200-SFI-RK1</b>	4" replacement sight glass, Baylast™ O-ring and retainer ring kit	2, 3C, 4B
<b>5200-SFIV-RK1</b>	4" replacement sight glass, Viton® O-ring and retainer ring kit	2, 3D, 4B

## Drop Elbow Inlets

Fits 6000, 6200 & 6500 Series Elbows  
6000-14 & 6000-15 Female Coupler Inlets



6000-14



6000-15

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam arm & ring	<b>ACAR34BZ</b>	2
3A	4" cam arm pin	<b>L519-12</b>	2
3B	3" cam arm pin	<b>L519-19</b>	2
4A	4" gasket (6000-14)	<b>400-G-BU</b>	1
4B	3" gasket (6000-15)	<b>300-G-BU</b>	1
5	hex screw	use kit <b>6000NPHK</b>	4
6	lock washer	use kit <b>6000NPHK</b>	4

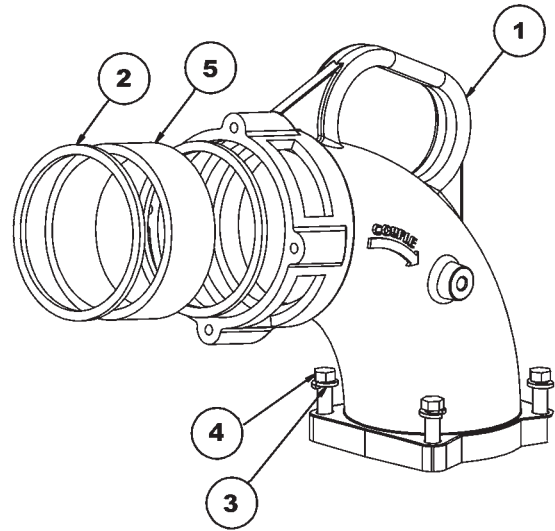
### Repair Kits

Part #	Description	Includes Item #
<b>6000NPHK</b>	replacement hex screws and lockwashers	5, 6

## Top "D" Handle Elbow Fits 6000 Elbow Only

### Bill of Materials

Item #	Description	Part #	Qty
1	body	<b>6200-1</b>	1
2A	Baylast™ gasket	<b>4433</b>	2
2B	Viton® gasket (optional)	<b>4426</b>	2
3	lock washer	use kit <b>6000EHK</b>	4
4	bolt	use kit <b>6000EHK</b>	4
5	sight glass	use kit <b>6200SGK</b>	1



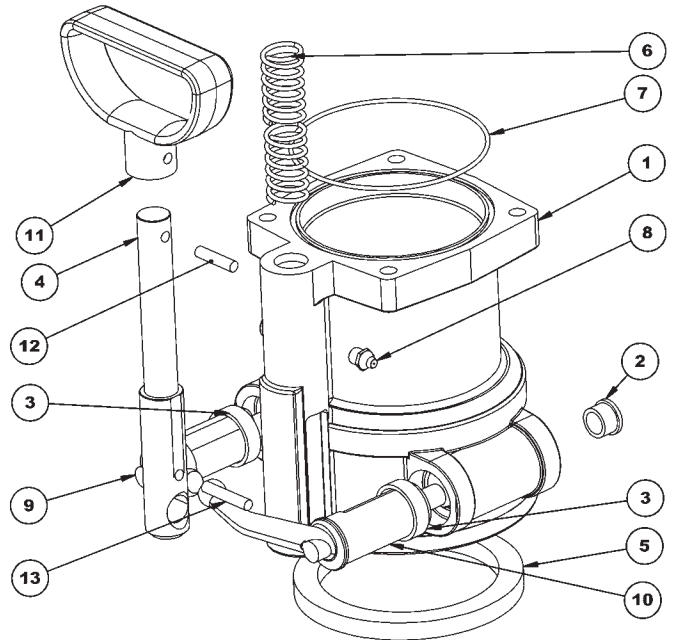
### Repair Kits

Part #	Description	Includes Item #
<b>6200SGK</b>	replacement sight glass and Baylast™ seal	2, 5
<b>6000EHK</b>	replacement bolts and washers	3, 4

## Bottom Unit, for "D" Handle Elbows Fits 6000, 6303 & 6304

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	small bushing	use kit <b>6200BK</b>	2
3	large bushing	use kit <b>6200BK</b>	2
4	handle stem	<b>6000-7</b>	1
5	main gasket	<b>6000-9</b>	1
6	spring	<b>112012</b>	1
7	O-ring	<b>AS156</b>	1
8	grease nipple	<b>NIPPLE/1</b>	1
9	right arm	use kit <b>6200ARK</b>	1
10	left arm	use kit <b>6200ARK</b>	1
11	handle	<b>6000-8</b>	1
12	handle pin	<b>6000-13</b>	1
13	pin	<b>6000-12</b>	1

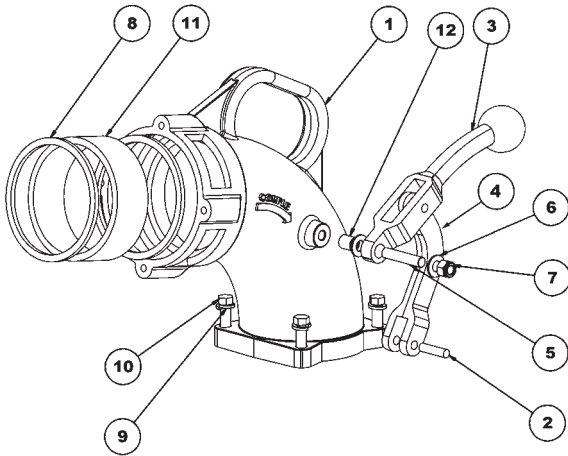


### Repair Kits

Part #	Description	Includes Item #
<b>6030</b>	complete replacement bottom unit	All
<b>6200ARK</b>	replacement L & R arms, main gasket, O-rings, small & large bushings	2, 3, 5, 7, 9, 10
<b>6200BK</b>	replacement (2) small & (2) large bushings	2, 3

## Top Side Lever Elbow

Fits 6200 Elbow Only



### Bill of Materials

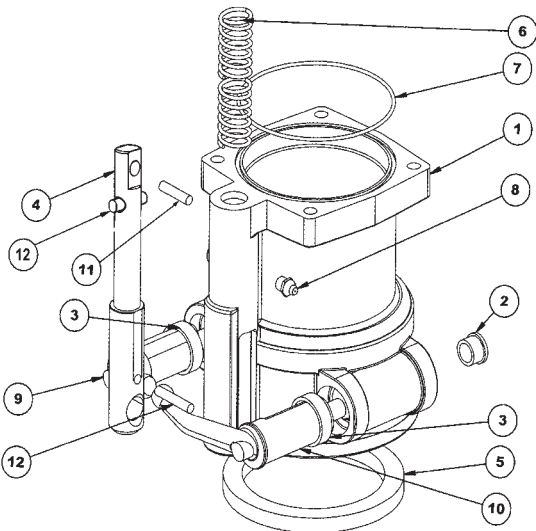
Item #	Description	Part #	Qty
1	body	<b>6200-1</b>	1
2	pin	<b>PIN5/16X 1 1/4-P</b>	2
3	handle	use kit <b>6200-15ASSM</b>	1
4	handle linkage	use kit <b>6200-15ASSM</b>	1
5	stud	use kit <b>6200SHK</b>	1
6	washer	use kit <b>6200SHK</b>	2
7	hex nut	use kit <b>6200SHK</b>	1
8A	Baylast™ gasket	<b>4433</b>	2
8B	Viton® gasket (optional)	<b>4426</b>	2
9	lock washer	use kit <b>6000EHK</b>	4
10	bolt	use kit <b>6000EHK</b>	4
11	sight glass	use kit <b>6200SGK</b>	1
12	bushing	use kit <b>6200SHK</b>	1

### Repair Kits

Part #	Description	Includes Item #
<b>6200SGK</b>	replacement sight glass and Baylast™ seals	8, 11
<b>6000EHK</b>	replacement bolts and washers	9, 10
<b>6200-15ASSM</b>	replacement handle, lever and pin	2, 3, 4
<b>6200SHK</b>	replacement pivot stud, bushing, washer & lock nut	5, 6, 7, 12

## Bottom Unit, for Side Lever Elbows

Fits 6200, 6400 & 6500 Standard & Tall Elbows



### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	small bushing	use kit <b>6200BK</b>	2
3	large bushing	use kit <b>6200BK</b>	2
4A	handle stem (standard)	<b>6200-7</b>	1
4B	handle stem (tall)	<b>6200-7X</b>	1
5	main gasket	<b>6000-9</b>	1
6	spring	<b>112012</b>	1
7	O-ring	<b>AS156</b>	1
8	grease nipple	<b>NIPPLE/1</b>	1
9	right arm	use kit <b>6200ARK</b>	1
10	left arm	use kit <b>6200ARK</b>	1
11	pin	<b>PIN5/16X 1 1/4-P</b>	1

### Repair Kits

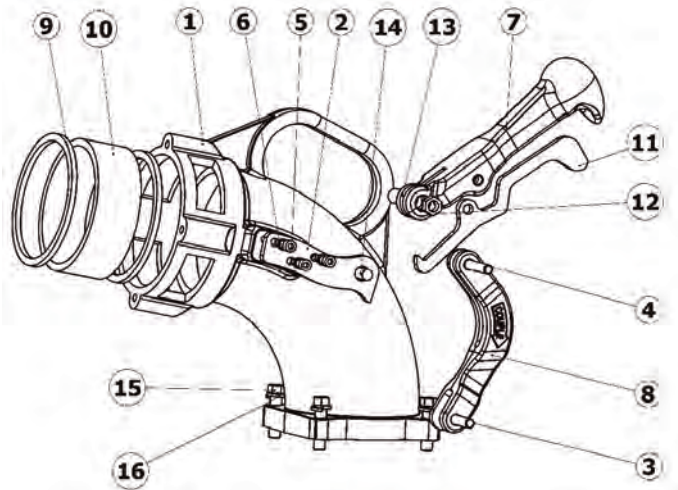
Part #	Description	Includes Item #
<b>6230</b>	complete "standard" replacement bottom unit	all
<b>6230X</b>	complete "tall" replacement bottom unit	all
<b>6200ARK</b>	replacement L & R arms, main gasket, O-rings, small & large bushings	2, 3, 5, 7, 9, 10
<b>6200BK</b>	replacement small & large bushings	2, 3

## Top Side Lever Elbow

Fits 6500 Elbow Only

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	mounting plate	use kit <b>6500AHK</b>	1
3	lower lever pin	<b>111728</b>	1
4	upper lever pin	<b>111727</b>	1
5	plate screw	<b>111732</b>	3
6	washer	<b>111569</b>	3
7	handle	use kit <b>6500-RK1</b>	1
8	linkage	use kit <b>6500-RK1</b>	1
9A	Baylast™ gasket	<b>4433</b>	2
9B	Viton® gasket (optional)	<b>4426</b>	2
10	sight glass	use kit <b>6200SGK</b>	1
11	locking latch	use kit <b>6500-RK1</b>	1
12	lock nut	<b>111730</b>	1
13	bushing	<b>390841</b>	1
14	screw	<b>111729</b>	1
15	bolt	use kit <b>6000EHK</b>	4
16	lock washer	use kit <b>6000EHK</b>	4



### Repair Kits

Part #	Description	Includes Item #
<b>6200SGK</b>	replacement sight glass and Baylast™ seals	9A, 10
<b>6000EHK</b>	replacement bolts and washers	15, 16
<b>6500-RK1</b>	replacement handle, linkage, lock latch, nut, bushing and pins	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
<b>6500AHK</b>	replacement mounting plate, screws and lock washers	2, 5, 6, 14
<b>6200SHK</b>	replacement pivot stud, bushing, washer & lock nut	5, 6, 7, 8, 11, 12, 13, 14

## 6303 and 6304 Series Straight Drop Fitting

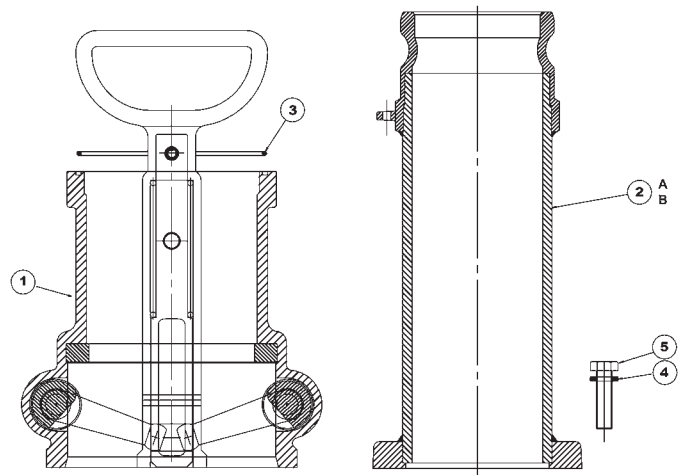
6303 (3" inlet), 6304 (4" inlet)

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2A	4" straight adapter	<b>6304-1</b>	1
2B	3" straight adapter	<b>6300-3</b>	1
3	washer	<b>AS156</b>	1
4	lock washer	use kit <b>6000EHK</b>	4
5	bolt	use kit <b>6000EHK</b>	4

### Elbow Hardware Kit

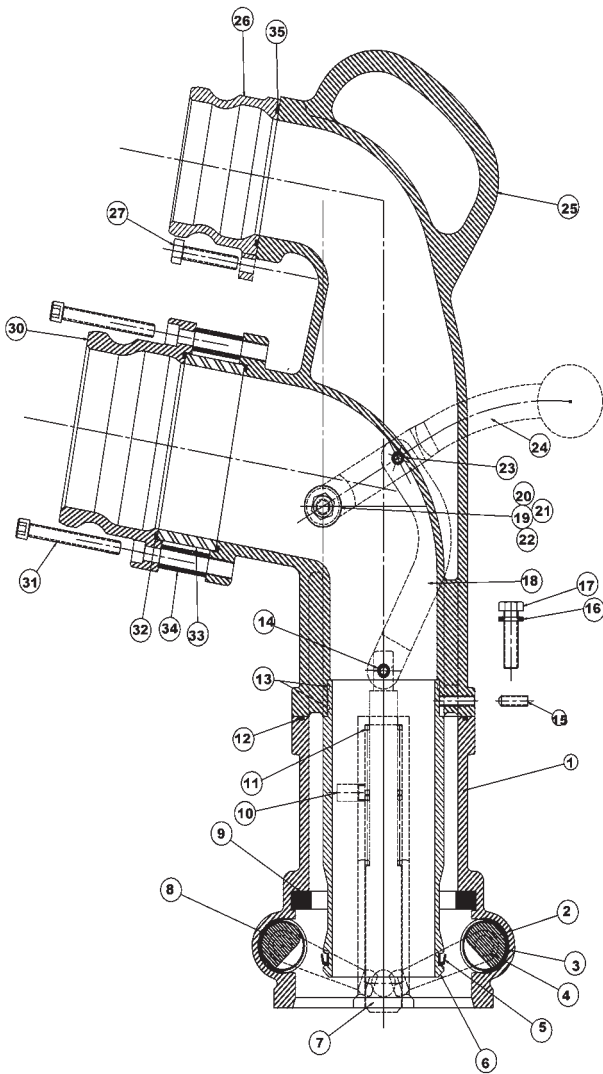
Part #	Description	Includes Item #s
<b>6000EHK</b>	lock washer, bolt	4, 5





# 6400 Series Co-axial Drop Elbow with 3" Male Vapor Outlet

6400 (4" male inlet), 6400F (4" female inlet), 6430 (3" male inlet), 6430F (3" female inlet)



## Bill of Materials

Item #	Description	Part #	Qty
1	bottom body	-	1
2	right arm	use kit <b>6400ARK</b>	1
3	large bushing	use kit <b>6200BK</b>	2
4	small bushing	use kit <b>6200BK</b>	2
5	tube U cup seal	<b>U-CUP-2/75</b>	1
6	tube	use kit <b>6400DTK</b>	1
7	lever stem (standard)	<b>6200-7</b>	1
7A	lever stem (tall)	<b>6200-7X</b>	1
8	left arm	use kit <b>6400ARK</b>	1
9	main gasket	<b>6000-9</b>	1
10	grease nipple	<b>NIPPLE/1</b>	1
11	stem spring	<b>112012</b>	1
12	O-ring	<b>AS156</b>	1
13	tube O-ring	<b>O-RING#39</b>	2
14	stem pin	<b>PIN5/16X 1 1/4-P</b>	1
15	set screw	<b>SC3/8NCX1/2</b>	1
16	lock washer	use kit <b>6000EHK</b>	4
17	bolt	use kit <b>6000EHK</b>	4
18	linkage	use kit <b>6200-15ASSM</b>	1
19	pivot stud	use kit <b>6200SHK</b>	1
20	pivot bushing	use kit <b>6200SHK</b>	1
21	washer	use kit <b>6200SHK</b>	2
22	pivot lock nut	use kit <b>6200SHK</b>	1
23	handle pin	<b>PIN5/16X 1 1/4-P</b>	1
24	handle	use kit <b>6200-15ASSM</b>	1
25	top co-axial elbow body	-	1
26	3" vapor adapter outlet	<b>6400-4</b>	1
27	vapor adapter bolt	<b>4432</b>	4
30A	4" adapter fuel inlet (6400)	use kit <b>6000-17C</b>	1
30B	4" coupler fuel inlet (6400F)	use kit <b>6000-14C</b>	1
30C	3" adapter fuel inlet (6430)	use kit <b>6000-16C</b>	1
30D	3" coupler fuel inlet (6430F)	use kit <b>6000-15C</b>	1
31A	inlet bolt	<b>SC5/16-18X2.5P</b>	4
31B	inlet bolt lock washer	<b>111723</b>	4
32	inlet O-ring	<b>AS156</b>	2
33	sight glass	use kit <b>6400SGK</b>	1
34	inlet bolt spacer	<b>6544CA-1</b>	4
35	vapor adapter O-ring	<b>110601</b>	1

## Repair Kits

Part #	Description	Includes Item #
<b>6230</b>	complete "standard" replacement bottom unit	1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 14
<b>6230X</b>	complete "tall" replacement bottom unit	1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 14
<b>6400ARK</b>	replacement L & R arms, main gasket, O-rings, small & large bushings	2, 3, 4, 5, 8, 9, 12, 13
<b>6200BK</b>	replacement small & large bushings	3, 4
<b>6400SGK</b>	replacement sight glass and seal	32, 33
<b>6200-15ASSM</b>	replacement handle, lever and pin	18, 23, 24
<b>6000EHK</b>	replacement bolts and washers	16, 17
<b>6400DTK</b>	replacement tube, O-ring & U cup seal	5, 6, 13
<b>6200SHK</b>	replacement pivot stud, bushing, washer & lock nut	19, 20, 21, 22

## Inlet Adapter & Coupler Kits

Part #	Description	Includes Item #
<b>6000-14C</b>	4" coupler inlet kit	30B, 31A, 31B
<b>6000-15C</b>	3" coupler inlet kit	30D, 31A, 31B
<b>6000-16C</b>	4" adapter inlet kit	30A, 31A, 31B
<b>6000-17C</b>	3" adapter inlet kit	30C, 31A, 31B

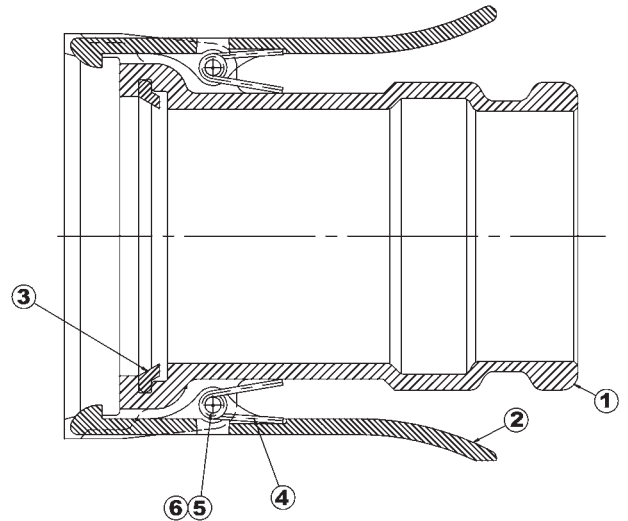
## 6000-SSA Series 4" Side Seal Adapter

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	coupler arm	use kit <b>6000SSHK</b>	2
3	lip seal	<b>L2373</b>	1
4	spring	<b>L2312</b>	2
5	pin	<b>L2311</b>	2
6	retaining ring	<b>TRUARC-5100-25</b>	4

### Repair Kit

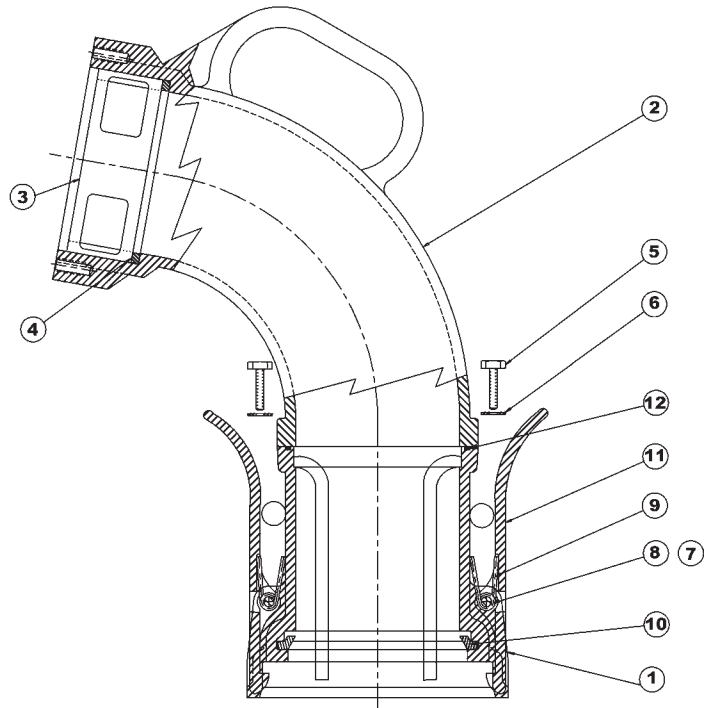
Part #	Description	Includes Item #s
<b>6200SSHK</b>	replacement arms, springs, pins & retaining rings	2, 4, 5, 6



## 6000AS Series Side Seal Elbow

### Bill of Materials

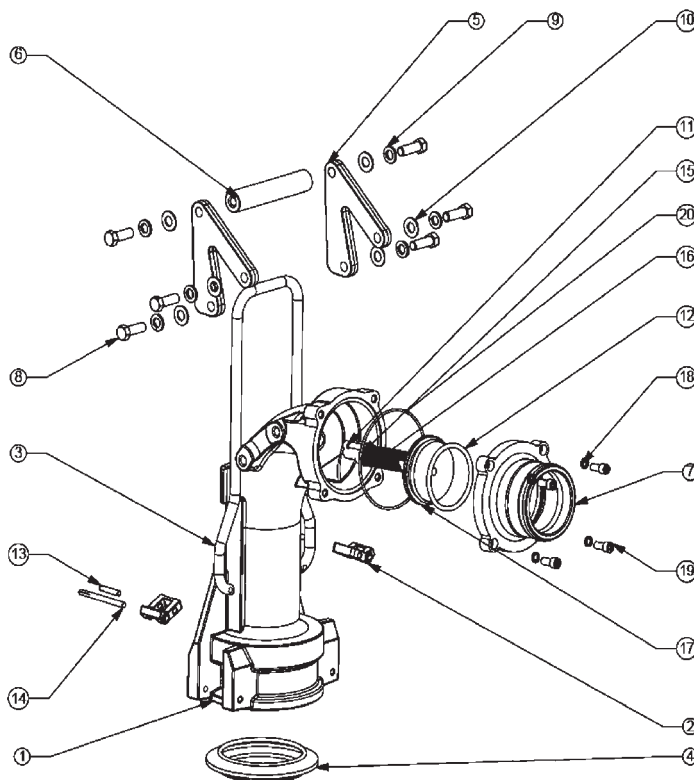
Item #	Description	Part #	Qty
1	bottom body	-	1
2	top body	-	1
3	sight glass	use kit <b>6200SGK</b>	1
4A	Baylast™ seal	<b>4433</b>	2
4B	Viton® seal	<b>4426</b>	2
5	bolt	use kit <b>6000EHK</b>	4
6	lock washer	use kit <b>6000EHK</b>	4
7	retaining ring	<b>TRUARC-5100-25</b>	4
8	pin	<b>L2311</b>	2
9	spring	<b>L2312</b>	2
10	lip seal	<b>L2373</b>	1
11	arm	use kit <b>6000SSHK</b>	2
12	O-ring	<b>AS156</b>	1



### Repair Kits

Part #	Description	Includes Item #s
<b>6000ASK</b>	replacement lip seal and body O-ring	10, 12
<b>6030AS</b>	complete replacement bottom unit	1, 7, 8, 9, 10, 11, 12
<b>6200SGK</b>	replacement sight glass & Baylast™ seals	3, 4
<b>6000EHK</b>	replacement lock washers and bolts	5, 6
<b>6000SSHK</b>	replacement arms, springs, pins & retaining rings	7, 8, 9, 11
<b>6000ASR</b>	arm lock ring	not illustrated

## VR6100 Series Vapor Elbows



### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam	use kit <b>VR6100CAK</b>	2
3	handle	<b>112138</b>	1
4	seal	<b>112140</b>	1
5	side plate	use kit <b>VR6100SPK</b>	2
6	bar	use kit <b>VR6100SPK</b>	1
7	outlet adapter & O-ring	<b>VR6000-6</b>	1
8	side plate bolt	use kit <b>VR6100SPHK</b>	6
9	side plate lock washer	use kit <b>VR6100SPHK</b>	6
10	side plate flat washer	use kit <b>VR6100SPHK</b>	6
11	poppet bushing	<b>VR6000-3</b>	1
12	Viton® poppet seal	<b>O-RING-AS-334</b>	1
13	grooved pin .25X1.25 SS	use kit <b>VR6100CAK</b>	2
14	groove pin .25X3 SS	use kit <b>VR6100CAK</b>	2
15	poppet valve "stand off"	<b>VR6000-5</b>	1
16	poppet spring	<b>L1110-L2287</b>	1
17	poppet valve	<b>VR6000-4</b>	1
18	outlet lock washer	use kit <b>6000NPHK</b>	4
19	outlet adapter bolt	use kit <b>6000NPHK</b>	4
20	outlet O-ring	<b>110319</b>	1

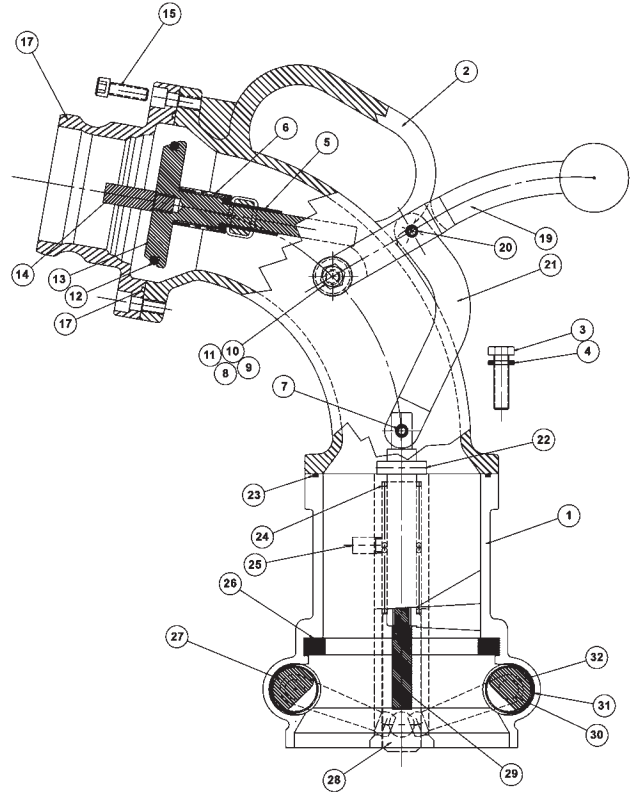
### Repair Kit

Part #	Description	Includes Item #s
<b>VR6100SPHK</b>	replacement bolt and washer kit for side plates	8, 9, 10
<b>VR6100SPK</b>	replacement side plates, bar, bolts & washers kit	5, 6, 8, 9, 10
<b>VR6100CAK</b>	replacement (2) cam and pin kit	2, 13, 14
<b>6000NPHK</b>	adapter hardware kit (4) bolts & lock washers	18, 19

## VR6200 Series Vapor Elbows

### Bill of Materials

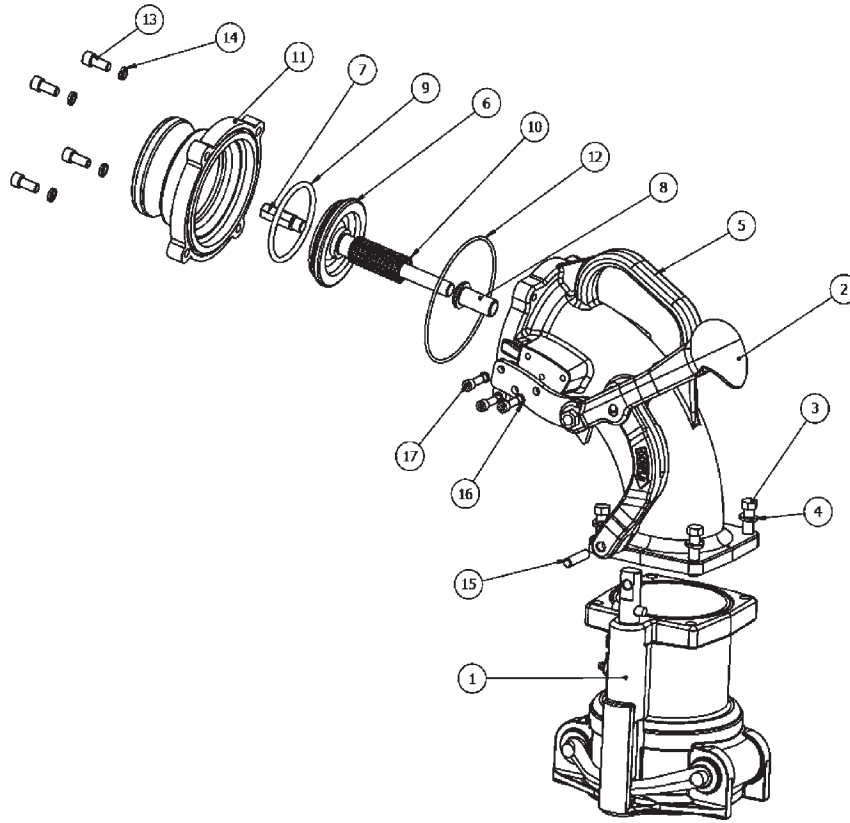
Item #	Description	Part #	Qty
1	bottom body	-	1
2	top elbow body	-	1
3	bolt	use kit <b>6000EHK</b>	4
4	lock washer	use kit <b>6000EHK</b>	4
5	poppet bushing (VR6200)	<b>VR6000-3</b>	1
6	poppet spring (VR6200)	<b>L1110-L2287</b>	1
7	stem pin	<b>PIN5/16X 1 1/4-P</b>	1
8	pivot stud	use kit <b>6200SHK</b>	1
9	pivot bushing	use kit <b>6200SHK</b>	1
10	pivot washer	use kit <b>6200SHK</b>	2
11	pivot lock nut	use kit <b>6200SHK</b>	1
12	Viton® poppet seal (VR6200)	<b>O-RING-AS-334</b>	1
13	poppet valve (VR6200)	<b>VR6000-4</b>	1
14	poppet valve "stand off" (VR6200)	<b>VR6000-5</b>	1
15	outlet adapter bolt	use kit <b>6000NPHK</b>	4
16	outlet adapters & O-ring	<b>VR6000-6</b>	1
17	outlet O-ring	<b>110319</b>	1
18	lock washer	use kit <b>6000NPHK</b>	4
19	handle	use kit <b>6200-15ASSM</b>	1
20	handle pin	<b>PIN5/16X 1 1/4-P</b>	1
21	handle linkage	use kit <b>6200-15ASSM</b>	1
22	stem pin	<b>PIN 5/16x 1 1/4P</b>	1
23	body O-ring	<b>AS156</b>	1
24	stem spring	<b>112012</b>	1
25	grease nipple	<b>NIPPLE/1</b>	1
26	main seal gasket	<b>6000-9</b>	1
27	left arm	<b>VR6000-9</b>	1
28	stem	<b>6200-7</b>	1
29	probe	<b>VR6000-7</b>	1
30	small bushing	use kit <b>6200BK</b>	2
31	large bushing	use kit <b>6200BK</b>	2
32	right arm	<b>VR6000-8</b>	1



### Repair Kits

Part #	Description	Includes Item #s
<b>VR6230</b>	complete replacement bottom unit	1, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33
<b>6200BK</b>	replacement small (2) & large (2) bushing kit	31, 32
<b>6000EHK</b>	replacement body lock washers and bolts	4, 5
<b>6200SHK</b>	replacement pivot stud, bushing, washers & lock nut	9, 10, 11, 12
<b>6000NPHK</b>	adapter kit bolts (4) & lock washers	16, 19
<b>6200-15ASSM</b>	replacement handle, linkage and pin	20, 21, 22

## VR6500 Series Vapor Elbows



### Bill of Materials

Item #	Description	Part #	Qty
1	complete bottom body	<b>VR6230</b>	1
2	handle assembly	use kit <b>VR6500RK1</b>	1
3	body bolt	use kit <b>6000EHK</b>	4
4	body lock washer	use kit <b>6000EHK</b>	4
5	elbow body	-	1
6	poppet valve	<b>VR6000-4</b>	1
7	poppet valve stand off	<b>VR6000-5</b>	1
8	poppet bushing	<b>VR6000-3</b>	1
9	Viton® O-ring	<b>O-RING-AS-334</b>	1
10	poppet spring	<b>L1110-L2287</b>	1
11	outlet adapter & O-ring	<b>VR6000-6</b>	1
12	outlet O-ring	<b>110319</b>	1
13	outlet adapter bolt	use kit <b>6000NPHK</b>	4
14	outlet lock washer	use kit <b>6000NPHK</b>	4
15	lower lever pin	<b>111728</b>	1
16	side plate lock washer	<b>111569</b>	3
17	side plate bolt	<b>111732</b>	3

### Repair Kit

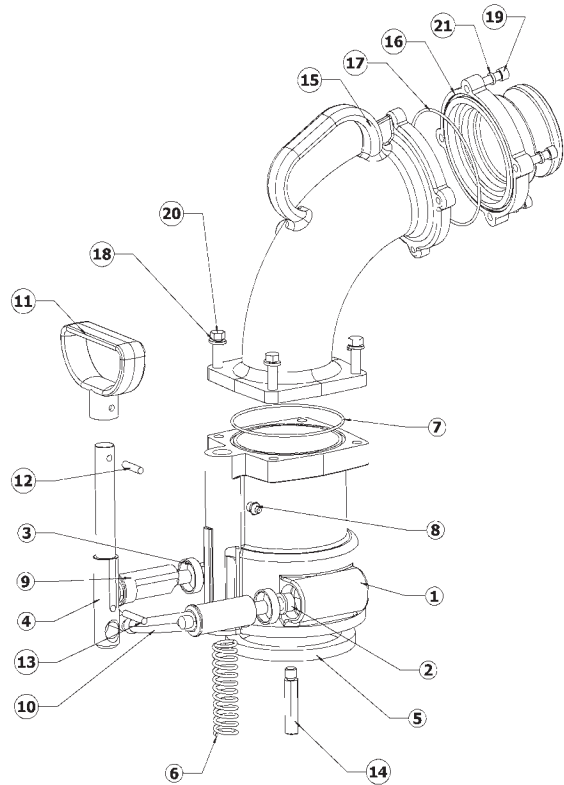
Part #	Description	Includes Item #s
<b>VR65000RK1</b>	replacement handle, linkage, mounting plate, bolt, nut, bushing and pins	2
<b>6000EHK</b>	replacement (4) body bolts and washers	3, 4
<b>6000NPHK</b>	adapter hardware kit (4) bolts & lock washers	13, 14



## VR6000NP Series Vapor Elbow

### Bill of Materials

Item #	Description	Part #	Qty
1	bottom body	-	1
2	small bushing	use kit <b>6200BK</b>	2
3	large bushing	use kit <b>6200BK</b>	2
4	handle stem	<b>390842</b>	1
5	main seal gasket	<b>6000-9</b>	1
6	spring	<b>112012</b>	1
7	O-ring	<b>AS156</b>	1
8	grease nipple	<b>NIPPLE/1</b>	1
9	right arm	<b>VR6000-8</b>	1
10	left arm	<b>VR6000-9</b>	1
11	D-handle	<b>6000-8</b>	1
12	D-handle pin	<b>6000-13</b>	1
13	spring pin	<b>6000-12</b>	1
14	probe	<b>VR6000-7</b>	1
15	elbow body	-	1
16	outlet adapter & O-ring	<b>VR6000-6</b>	1
17	outlet O-ring (only)	<b>110319</b>	1
18	body lock washer	use kit <b>6200EHK</b>	4
19	outlet adapter bolt	use kit <b>6000NPHK</b>	4
20	body hex bolt	use kit <b>6200EHK</b>	4
21	outlet adapter lock washer	use kit <b>6000NPHK</b>	4



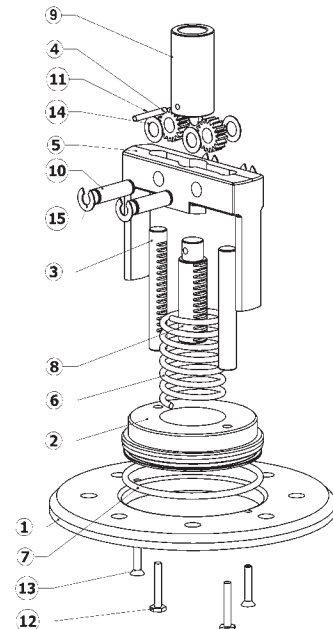
### Repair Kits

Part #	Description	Includes Item #s
<b>6200BK</b>	replacement small (2) & large (2) large bushing kit	2, 3
<b>6000EHK</b>	replacement body lock washers and bolts	18, 20
<b>6000NPHK</b>	adapter kit bolts (4) & lock washers	19, 21
<b>400637</b>	complete replacement bottom unit	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

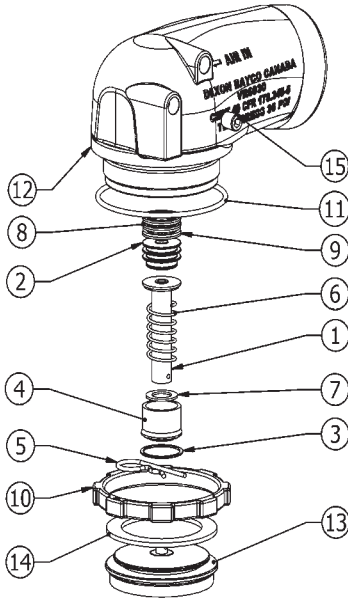
## VR6050N Series 5" Inward Opening Vapor Vent

### Bill of Materials

Item #	Description	Part #	Qty
1	flange	<b>VR6050-1</b>	1
2	seal plate	<b>VR6050-4</b>	1
3	rack	<b>VR6050-7</b>	2
4	spur gear	<b>VR6050-2</b>	2
5	bridge	<b>VR6050-3</b>	1
6	spring	<b>111233</b>	1
7	O-ring	<b>VR6050-8</b>	1
8	push rod	<b>VR6050-6</b>	1
9	swivel	<b>390795</b>	1
10	pin	<b>390817</b>	2
11	pin slotted	<b>111929</b>	1
12	screw	<b>VR6050-10</b>	2
13	screw	<b>111450</b>	2
14	washer	<b>111309</b>	4
15	retaining ring	<b>111581</b>	4



## VR6030SQ Series



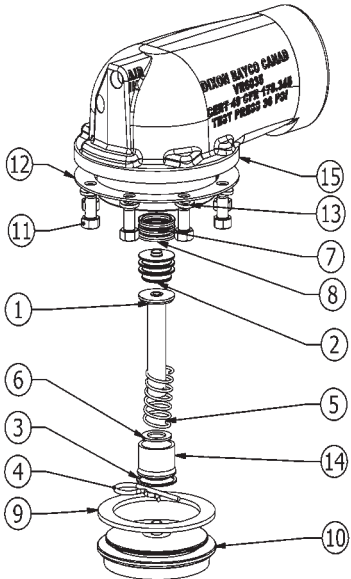
### Bill of Materials

Item #	Description	Part #	Qty
1	stem	<b>400636</b>	1
2	piston	use kit <b>VR6030RK2</b>	1
3	retaining ring	<b>111681</b>	1
4	bearing	<b>390822</b>	1
5	hitch pin	<b>111680</b>	1
6	spring	<b>111679</b>	1
7	bearing seal washer	<b>111683</b>	1
8	top lip seal	<b>111686</b>	2
9	bottom lip seal	<b>111687</b>	1
10A	mounting ring	<b>390826</b>	1
10B	mounting ring set screw	<b>111693</b>	1
11	O-ring	<b>111692</b>	1
12	body	-	1
13	poppet	<b>341643</b>	1
14A	Baylast™ poppet gasket	<b>VR6030RK3</b>	1
14B	Viton® poppet gasket	<b>VR6030RKV3</b>	1
15	pipe plug	<b>111694</b>	1

### VR6030 Repair Kits

Part #	Description	Includes Item #
<b>VR6030RK1</b>	replacement seal kit (with Baylast™ poppet seal)	2, 3, 5, 8, 9, 11, 14A
<b>VR6030RKV1</b>	replacement seal kit (with Viton® poppet seal)	2, 3, 5, 8, 9, 11, 14B
<b>VR6030RK2</b>	replacement piston assembly	2, 8, 9
<b>VR6030RK3</b>	replacement Baylast™ poppet gasket	14
<b>VR6030RKV3</b>	replacement Viton® poppet gasket	14

## VR6035Q Series



### Bill of Materials

Item #	Description	Part #	Qty
1	stem assembly	<b>400636</b>	1
2	piston	use kit <b>VR6030RK2</b>	1
3	retaining ring	<b>111681</b>	1
4	cotter pin	<b>111680</b>	1
5	spring	<b>111679</b>	1
6	bearing seal washer	<b>111683</b>	1
7	lip seal	<b>111686</b>	2
8	lip seal	<b>111687</b>	1
9A	Baylast™ poppet gasket	<b>VR6035RK3</b>	1
9B	Viton® poppet gasket	<b>VR6035RKV3</b>	1
10	poppet	<b>341641</b>	1
11	hex bolt	use kit <b>VR6035RK4</b>	8
12	body gasket	<b>111689</b>	1
13	lock washer	use kit <b>VR6035RK4</b>	8
14	stem bearing	<b>390822</b>	1
15	body	-	1

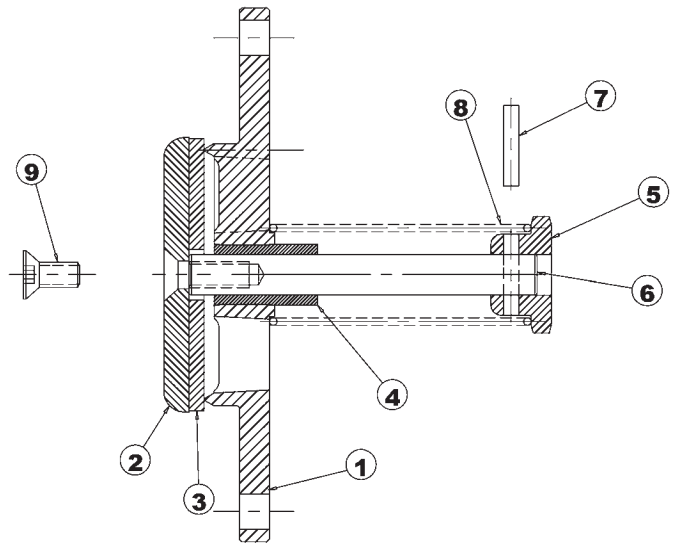
### VR6035 Repair Kits

Part #	Description	Includes Item #
<b>VR6035RK1</b>	replacement seal kit (with Baylast™ poppet seal)	2, 3, 4, 7, 8, 9A, 12
<b>VR6035RKV1</b>	replacement seal kit (with Viton® poppet seal)	2, 3, 4, 7, 8, 9B, 12
<b>VR6035RK2</b>	replacement piston assembly	2, 7, 8
<b>VR6035RK3</b>	replacement Baylast™ poppet gasket	9A
<b>VR6035RKV3</b>	replacement Viton® poppet gasket	9B
<b>VR6035RK4</b>	replacement (8) bolts & lock washers	11, 13

## VRP3500 and VRP3600 Series Outbreathing Vent

### Bill of Materials

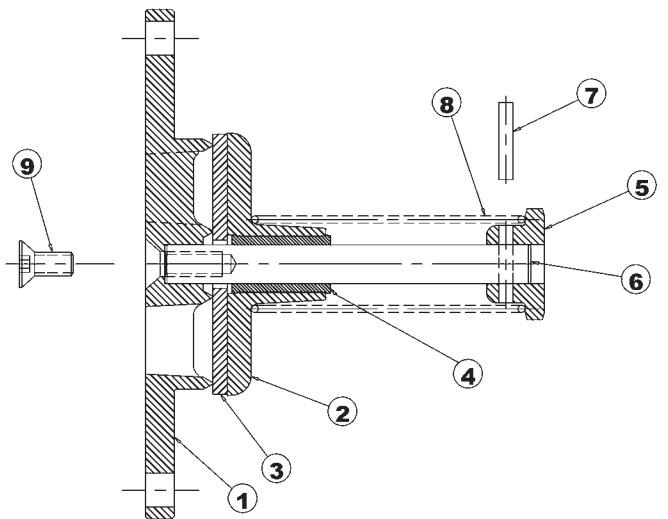
Item #	Description	Part #	Qty
1	body	-	1
2	gasket base	<b>VRP3500-2</b>	1
3	gasket	<b>VRV3501-3</b>	1
4	bushing	<b>VRP3500-4</b>	1
5	spring retainer	<b>VRV3501-5</b>	1
6A	shaft for VRP3500	<b>VRP3501-6</b>	1
6B	shaft for VRP3600	<b>390552</b>	1
7	shaft pin	<b>110717</b>	1
8	spring	<b>SPRG-L4506</b>	1
9	screw	<b>SC5-16NCx.75FSS</b>	1



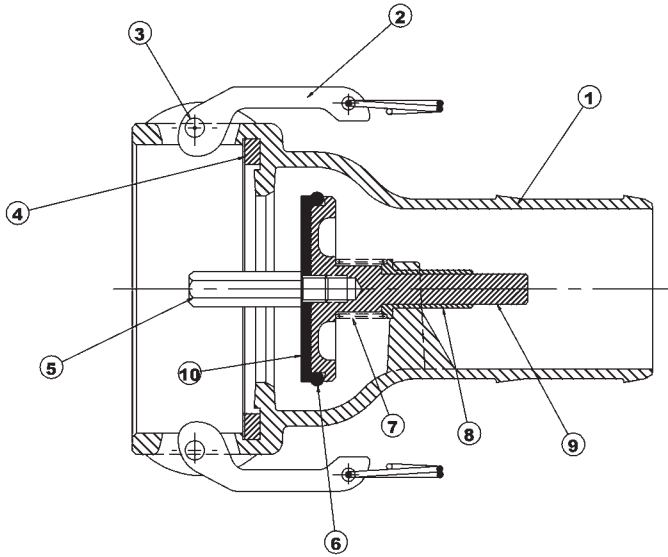
## VRV3501 Series Inbreathing Vent

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	gasket base	<b>VRV3501-2</b>	1
3	gasket	<b>VRV3501-3</b>	1
4	bushing	<b>VRV3501-4</b>	1
5	spring retainer	<b>VRV3501-5</b>	1
6	shaft	<b>VRV3501-6</b>	1
7	pin	<b>110717</b>	1
8	spring	<b>SPRG-L4506</b>	1
9	screw	<b>SC5-16NCx.75FSS</b>	1



## VR4030CS-AL Vapor Hose Coupler (4" x 3" with poppet)



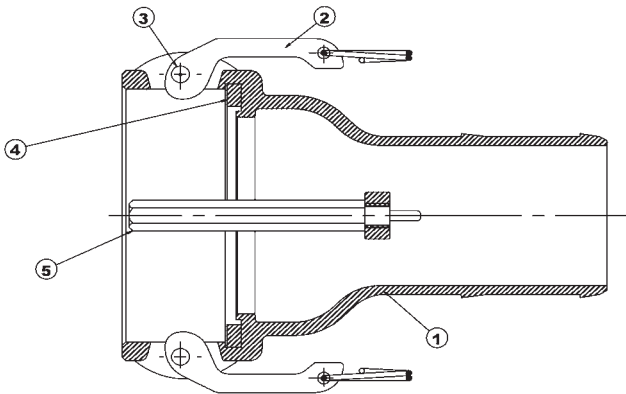
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam arm and ring	<b>ACAR34BZ</b>	2
3	cam pin	<b>L519-19</b>	2
4	Buna coupler gasket	<b>400-G-BU</b>	1
5	probe	<b>VR6000-7</b>	1
6	Viton® valve O-ring	<b>O-RING-AS-334</b>	1
7	spring	<b>SPRG/L4238</b>	1
8	bushing	<b>VR6000-3</b>	1
9	valve	<b>VR4030CS-1</b>	1
10	valve plate	<b>VR4030CS-4</b>	1

### Arm and Seal Repair Kit

Part #	Description	Includes Item #s
<b>VAC4030RK</b>	replacement cam arms, rings, pins, coupler gasket and valve O-ring	2, 4, 6

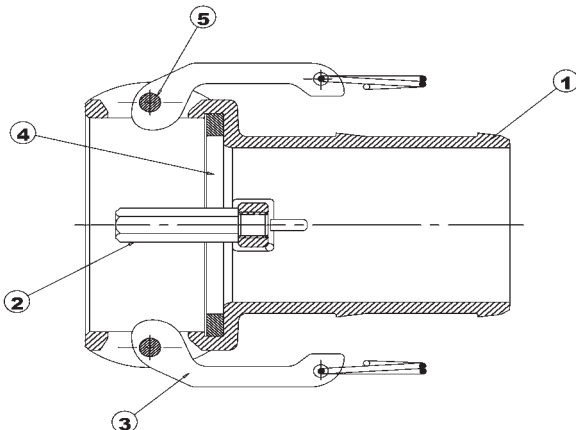
## VR4030CS-NP Vapor Hose Coupler (4" x 3" without poppet)



### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	cam arm and ring	<b>ACAR34BZ</b>	2
3	cam arm pin	<b>L519-19</b>	2
4	Buna coupler gasket	<b>400-G-BU</b>	1
5	probe	<b>VR4030CS-3</b>	1

## VRC3000AL Vapor Hose Coupler (3" x 3")



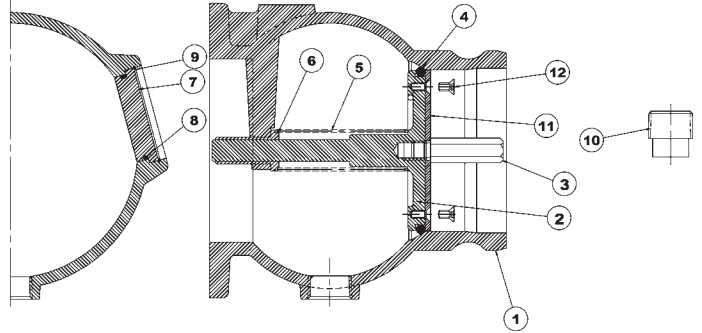
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	probe	<b>L4217</b>	1
3	cam arm and ring	<b>ACAR34BZ</b>	2
4	Buna coupler gasket	<b>300-G-BU</b>	1
5	cam arm pin	<b>L519-19</b>	2

## VR4000 Series Vapor Hose Valve

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	valve	<b>VR4000-2</b>	1
3	valve standoff	<b>VR4000-3</b>	1
4	valve O-ring	<b>O-RING-AS339-V</b>	1
5	spring	<b>SPRG/L4432</b>	1
6	bushing	<b>VR6000-3</b>	1
7	sight glass	<b>VR4000-4</b>	2
8	sight glass O-ring	<b>O-RING#132</b>	2
9	retaining ring	<b>RING-VH-225</b>	2
10	plug	<b>110748</b>	1
11	valve plate	<b>VR4000-5</b>	1
12	valve plate screws	<b>SC1024375-SS</b>	2



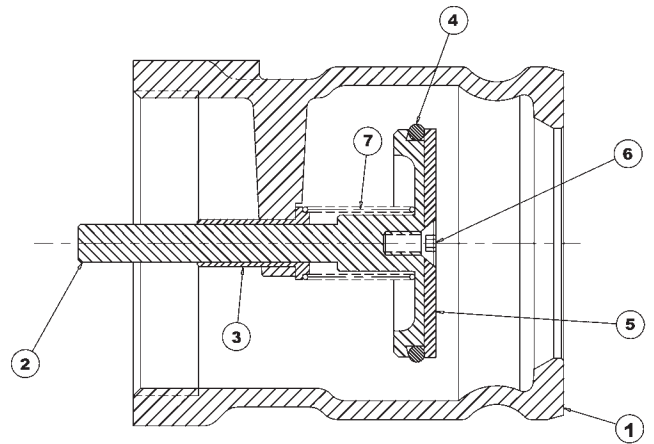
## VR4100 Series 4" Vapor Hose Valve

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	valve	<b>VR4100-2</b>	1
3	bushing	<b>VR6000-3</b>	1
4	Viton® O-ring	<b>O-RING-AS-334</b>	1
5	Valve plate	<b>VR4100-3</b>	1
6	screw	<b>SC5/16NCX.75FSS</b>	1
7	valve spring	<b>SPRING-L5123</b>	1

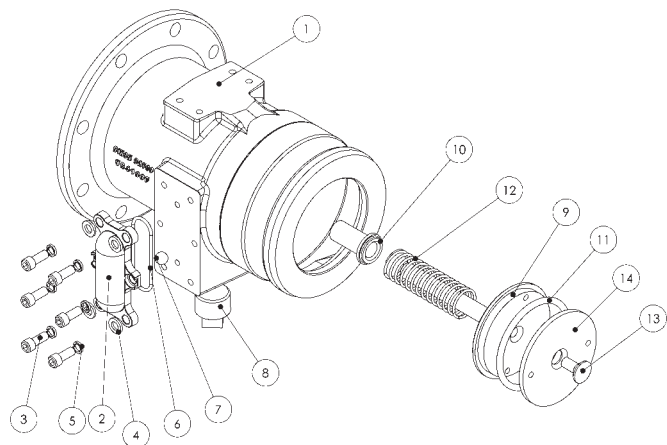
### Repair Kit

Part #	Description	Includes Item #s
<b>VR4100RK1</b>	complete kit: valve, bushing, O-ring, valve plate, screw, and spring	2, 3, 4, 5, 6, 7





## VR4100F Series Vapor Hose Valve



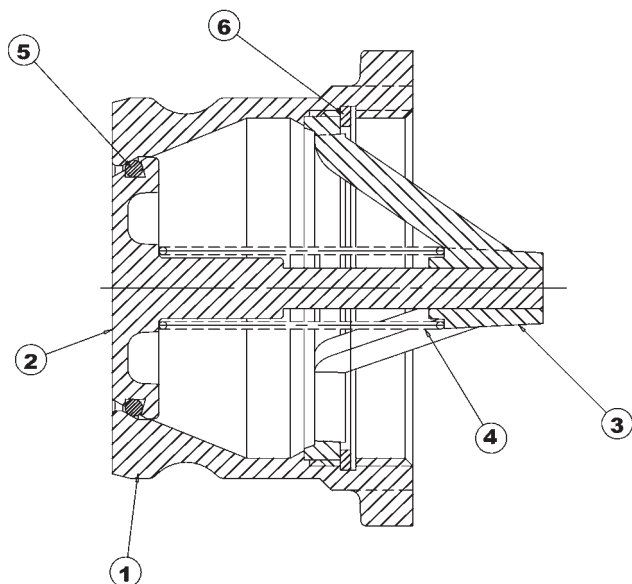
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	sight glass	<b>111575</b>	1
3	sight glass bolts	<b>111570</b>	6
4	sight glass washer	<b>111562</b>	4
5	sight glass lock washer	<b>111569</b>	6
6	sight glass O-ring	<b>111733</b>	1
7	sight glass float ball	<b>111572</b>	1
8	¾" body plug	<b>112044</b>	1
9	valve	<b>VR4100-2</b>	1
10	bushing	<b>VR6000-3</b>	1
11	Viton® valve O-ring	<b>O-RING-AS-334</b>	1
12	valve spring	<b>SPRING-L5123</b>	1
13	screw	<b>SC5116NCX.75FSS</b>	1
14	valve plate	<b>VR4100-3</b>	1

### Repair Kit

Part #	Description	Includes Item #s
<b>5204K8</b>	Sight glass, O-ring, float ball	2, 6, 7
<b>5204K12</b>	Hex bolts (6), lock washers (6), washers (4) kit	3, 5

## VR4086 Series Vapor Adapter



### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	valve	<b>340331</b>	1
3	valve spider	<b>340304</b>	1
4	spring	<b>110892</b>	1
5	Viton® O-ring	<b>O-RING-AS334</b>	1
6	body gasket	<b>G400AS</b>	1

## TDF Series Tube Doors

### Repair Kits

Part #	Description
<b>TDF68RK</b>	6" & 8" repair kit, includes stainless steel spring, bushings and pin
<b>TDF7RK</b>	7" repair kit, includes stainless steel spring, bushings, pin and washer
<b>SPRG-A4630</b>	replacement stainless steel spring only



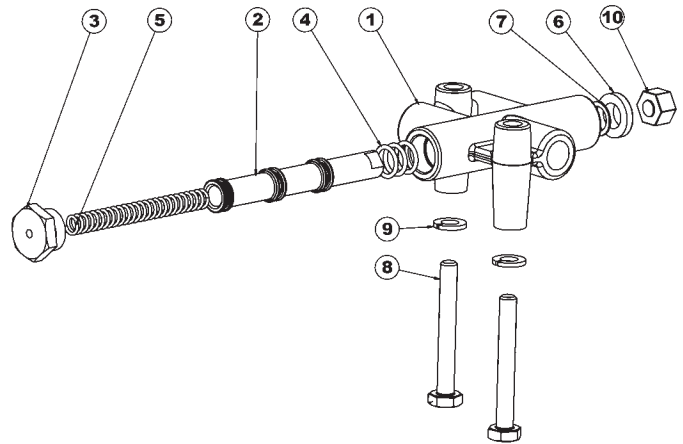
## 5000AIR Series Piston End Air Interlock Valve

### Bill of Materials

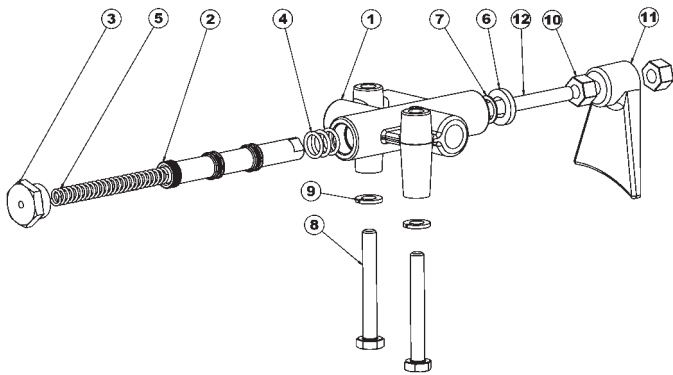
Item #	Description	Part #	Qty
1	body	-	1
2	piston	use kit <b>5000AISK</b>	1
3	end plug	use kit <b>5000AISK</b>	1
4	Buna O-ring	use kit <b>5000AISK</b>	3
5	spring	use kit <b>5000AISK</b>	1
6	urethane wiper	use kit <b>5000AISK</b>	1
7	retaining ring	<b>RING-WH-50</b>	1
8	mounting bolts	use kit <b>5000AISK</b>	2
9	lock washer	use kit <b>5000AISK</b>	2
10	roller ball assembly	<b>5000AIRRK1</b>	1

### Repair Kit

Part #	Description	Includes Item #s
<b>5000AIHK</b>	replacement mounting bolts and lock washers	8, 9
<b>5000AISK</b>	replacement piston & seal kit	2, 3, 4, 5, 6
<b>5000AIRRK1</b>	replacement roller ball	6, 7, 10



## 5000AIV Series Paddle End Air Interlock Valve



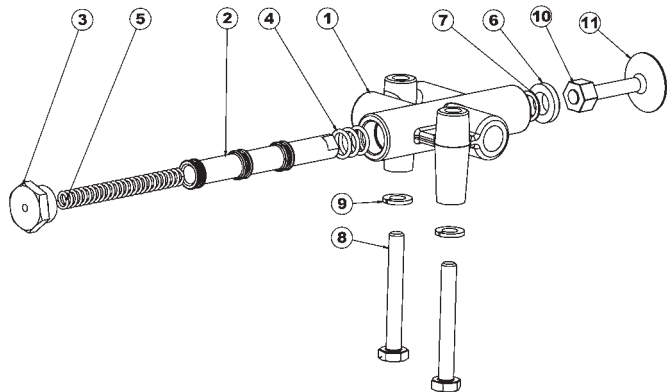
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	piston	use kit <b>5000AISK</b>	1
3	end plug	use kit <b>5000AISK</b>	1
4	Buna O-ring	use kit <b>5000AISK</b>	3
5	spring	use kit <b>5000AISK</b>	1
6	urethane wiper	use kit <b>5000AISK</b>	1
7	retaining ring	<b>RING-WH-50</b>	1
8	mounting bolt	use kit <b>5000AIHK</b>	2
9	lock washer	use kit <b>5000AIHK</b>	2
10	paddle nut	<b>500-7E</b>	2
11	paddle plunger	<b>5000AI-2</b>	1
12	paddle plunger stud	<b>5000AI-5</b>	1

### Repair Kits

Part #	Description	Includes Item #s
<b>5000AIHK</b>	mounting bolt, lock washer	8, 9
<b>5000AISK</b>	piston, end plug, spring, O-ring, rod wiper	2, 3, 4, 5, 6

## 5000AI Series Plunger End Air Interlock Valve 5000AI, 5000AIS & AIST



### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	piston	use kit <b>5000AISK</b>	1
3A	end plug	use kit <b>5000AISK</b>	1
3B	electronic switch kit	<b>5000S</b>	1
4	Buna O-ring	use kit <b>5000AISK</b>	3
5	spring	use kit <b>5000AISK</b>	1
6	urethane wiper	use kit <b>5000AISK</b>	1
7	retaining ring	<b>RING-WH-50</b>	1
8	mounting bolt	use kit <b>5000AISK</b>	2
9	lock washer	use kit <b>5000AISK</b>	2
10	plunger nut	<b>NUT.25HX-SS</b>	1
11A	paddle plunger	use kit <b>5000AIRK1</b>	1
11B	paddle plunger stud	use kit <b>5000ST</b>	1

### Repair Kits

Part #	Description	Includes Item #s
<b>5000AIHK</b>	mounting bolt, lock washer	8, 9
<b>5000AISK</b>	piston, end plug, spring, O-ring, rod wiper	2, 3, 4, 5, 6
<b>5000AIRK1</b>	plunger end, nut	10, 11A
<b>5000ST</b>	replacement 1 1/2" plunger button & nut	10, 11B
<b>5000S</b>	electronic switch attachment kit	3B

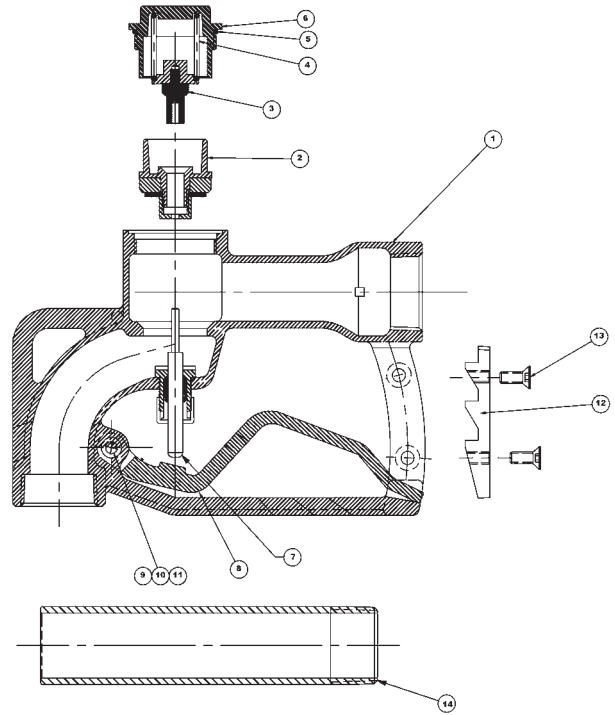
## 112D and 112DNS (1½") Bulk Delivery Nozzles

### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	main poppet assembly	use kit <b>112DSK</b>	1
3	secondary poppet assembly	use kit <b>112DSK</b>	1
4	poppet spring	<b>SPRG-L368</b>	1
5	Buna cap O-ring	<b>O-RING#132</b>	1
6	bronze cap	<b>112DAL-9</b>	1
7	valve stem assembly	use kit <b>112DSK</b>	1
8	trigger	use kit <b>114/2D-TK</b>	1
9	trigger bushing	<b>114DAL-10</b>	1
10	trigger pin	<b>PIN-L389-SS</b>	1
11	trigger cotter pin	<b>110746</b>	1
12	ratchet plate	<b>340164</b>	1
13	ratchet plate screws	<b>110798</b>	2
14	spout	<b>1125A</b>	1

### Repair Kit

Part #	Description	Includes Item #s
<b>112DSK</b>	main poppet, 2nd poppet, cap O-ring, valve stem	2, 3, 5, 7
<b>1143A</b>	1¼" aluminum spout	14
<b>1125A</b>	1½" aluminum spout	14
<b>114DSK</b>	main poppet, 2nd poppet, cap O-ring, valve stem	2, 3, 5, 7
<b>114/2D-TK</b>	trigger, pin, cotter pin	8, 10, 11



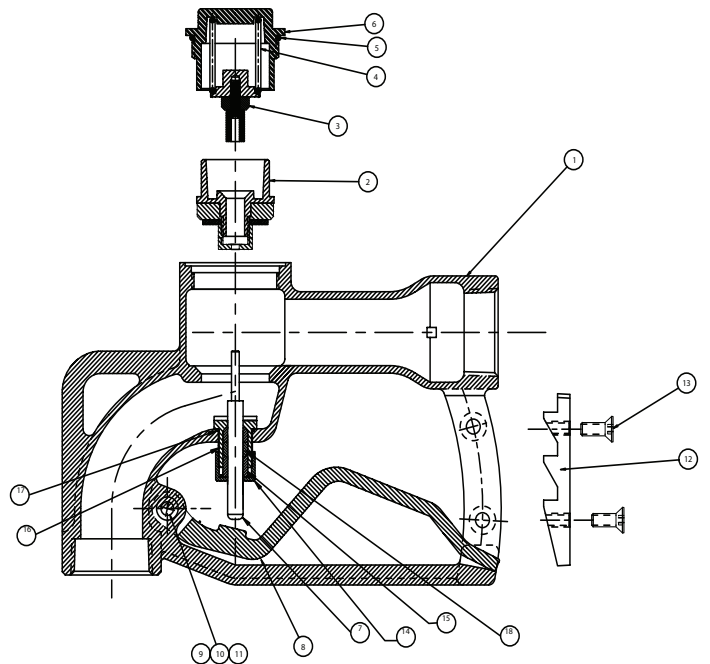
## 114D and 114DNS (1¼") Bulk Delivery Nozzles

### Bill of Materials

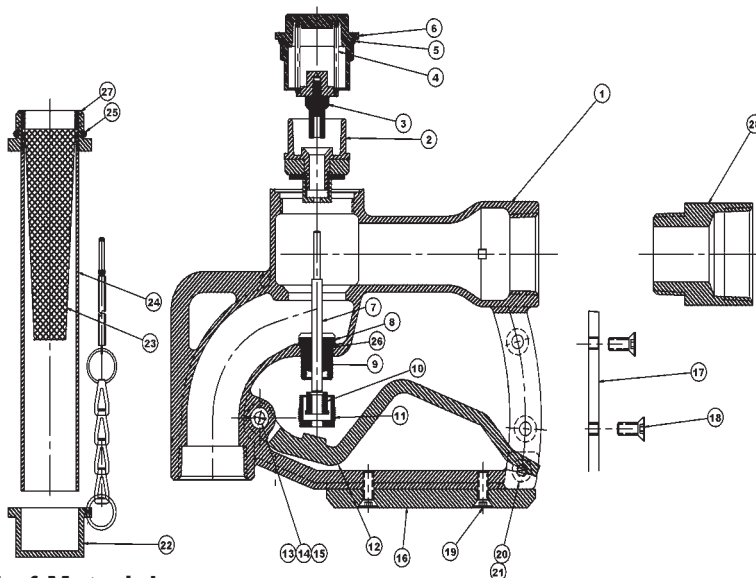
Item #	Description	Part #	Qty
1	body	-	1
2	main poppet assembly	use kit <b>114DSK</b>	1
3	secondary poppet assembly	use kit <b>114DSK</b>	1
4	poppet spring	<b>SPRG-L368</b>	1
5	Buna cap O-ring	<b>O-RING-AS-129</b>	1
6	bronze cap	<b>114DAL-2</b>	1
7	valve stem assembly	use kit <b>114DSK</b>	1
8	trigger	use kit <b>114/2D-TK</b>	1
9	trigger bushing	<b>114DAL-10</b>	1
10	trigger pin	<b>PIN-L389-SS</b>	1
11	trigger cotter pin	<b>110746</b>	1
12	ratchet plate	<b>340164</b>	1
13	ratchet plate screws	<b>110798</b>	2
14	aluminum spout	<b>1143A</b>	1
15	sleeve stem packing	<b>SLVL358-1</b>	1
16	valve stem guide & O-ring	use kit <b>114DSK</b>	1
17	valve stem O-ring	<b>O-RING-AS016</b>	1
18	valve stem packing	<b>STEMPACK-L360</b>	2
19	valve stem nut	<b>NUTL357-1</b>	1

### Repair Kit

Part #	Description	Includes Item #s
<b>114DSK</b>	main & secondary poppets, cap O-ring, valve stem assembly & packing, sleeve stem packing and nut	2, 3, 5, 7, 15, 16, 17, 18, 19
<b>114/2D-TK</b>	replacement trigger, pin, bushing & cotter pin	8, 9, 10, 11
<b>1143A</b>	replacement aluminum spout	14
<b>1143B</b>	optional brass spout	replaces 14
<b>114DAL-AV-19</b>	optional blank plate to replace ratchet plate, if ratchet not desired	replaces 12



# 114DAV Over Wing, Aviation Nozzles



## Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	main poppet assembly	use kit <b>114DAV-SK</b>	1
3	second poppet assembly	use kit <b>114DAV-SK</b>	1
4	poppet spring	<b>90SPRG-L368</b>	1
5	Buna cap O-ring	<b>O-RING-AS-129</b>	1
6	bronze cap	<b>114DAL-4</b>	1
7	valve stem	<b>114DAL-3</b>	1
8	valve stem guide & O-ring	use kit <b>114DAV-SK</b>	1
9	valve stem packing	<b>STEMPACK-L360</b>	2
10	sleeve stem packing	<b>SLV358-1</b>	1
11	valve stem nut	<b>NUTL357-1</b>	1
12	trigger	use kit <b>114/2D-TK</b>	1
13	trigger bushing	<b>114DAL-10</b>	1
14	trigger pin	<b>PIN-L389-SS</b>	1
15	cotter pin	<b>110746</b>	1
16	base plate	<b>110088</b>	1
17	trigger spacer	<b>114DAL-AV-19</b>	1
18	trigger spacer screws	<b>110798</b>	2
19	base plate screws	<b>100AV-15</b>	2
20	ground screw	<b>407119</b>	1
21	ground screw lock washer	<b>100AV-17</b>	1
22	spout cap	<b>114DAL-AV-22</b>	1
23A	1" spout filter screen (114DAVR)	<b>100AV-12</b>	1
23B	1 1/4" spout filter screen	<b>114DAL-AV-20</b>	1
24A	1" spout	use kit <b>114DAL-AV-25</b>	1
24B	1 1/4" spout	use kit <b>114DAL-AV-16</b>	1
25A	1" spout O-ring	use kit <b>114DAL-AV-25</b>	1
25B	1 1/4" spout O-ring	use kit <b>114DAL-AV-16</b>	1
26	valve stem guide O-ring	<b>O-RING-AS016</b>	1
27A	1" spout adapter	use kit <b>114DAL-AV-25</b>	1
27B	1 1/4" spout adapter	use kit <b>114DAL-AV-15</b>	1
28	1 1/2" inlet expander	<b>340165</b>	1

## Repair Kit

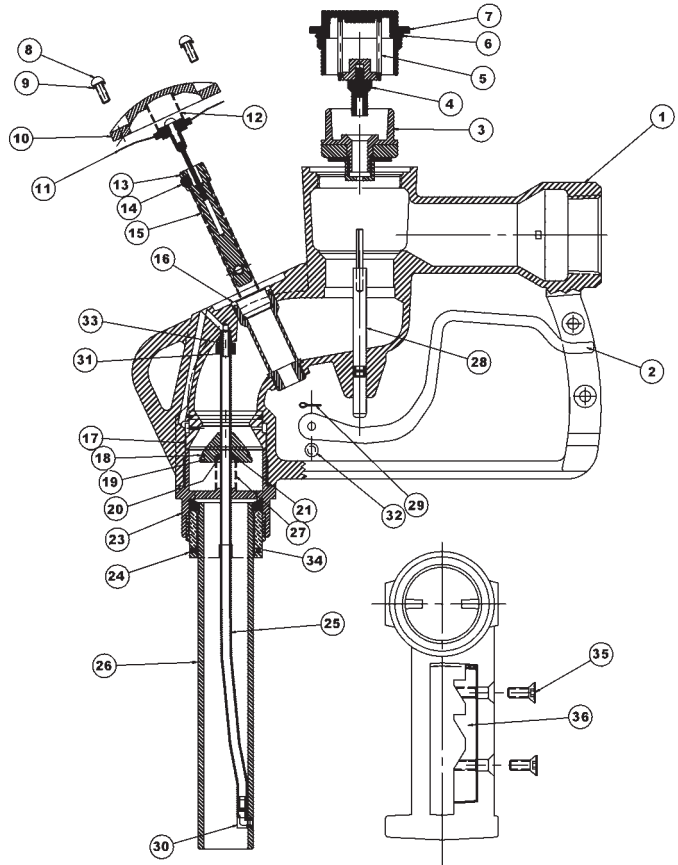
Part #	Description	Includes Item #s
<b>114DSK</b>	main & secondary poppets, cap O-ring, valve stem assembly & packing, sleeve stem packing and nut	2, 3, 5, 7, 8, 9, 10, 11, 26
<b>114/2D-TK</b>	replacement trigger, pin, bushing & cotter pin	12, 13, 14, 15
<b>1143A</b>	replacement aluminum spout	24A
<b>1143B</b>	optional brass spout	replaces 24B
<b>114DAL-AV-19</b>	optional blank plate to replace ratchet plate, if ratchet not desired	replaces 17



# 1124D (1½") and 1144D (¼") Series AN125, AN150 (UL Listed) Automatic Shut-off Bulk Delivery Nozzles

## Bill of Materials

Item #	Description	Qty
1	body	1
2	trigger	1
3	poppet assembly	1
4	second poppet assembly	1
5	poppet spring	1
6	cap O-ring	1
7	cap	1
8	cover screw	4
9	cover washer	4
10	cover	1
11	diaphragm assembly	1
12	diaphragm spring	1
13	release shaft	1
14	release balls	3
15	release spring	1
16	release guide	1
17	venturi	1
18	cone O-ring	1
19	valve cone	1
20	cone washer	1
21	cone inner O-ring	1
23	adapter	1
24	O-ring	1
25	vacuum tube	1
26	spout	1
27	cone spring	1
28	valve stem assembly	1
29	cotter pin	1
30	tube nipple	1
31	nipple	1
32	clevis pin	1
33	ear clamp	1
34	set screws	1
35	ratchet screws	2
36	ratchet	2



## Repair Kits

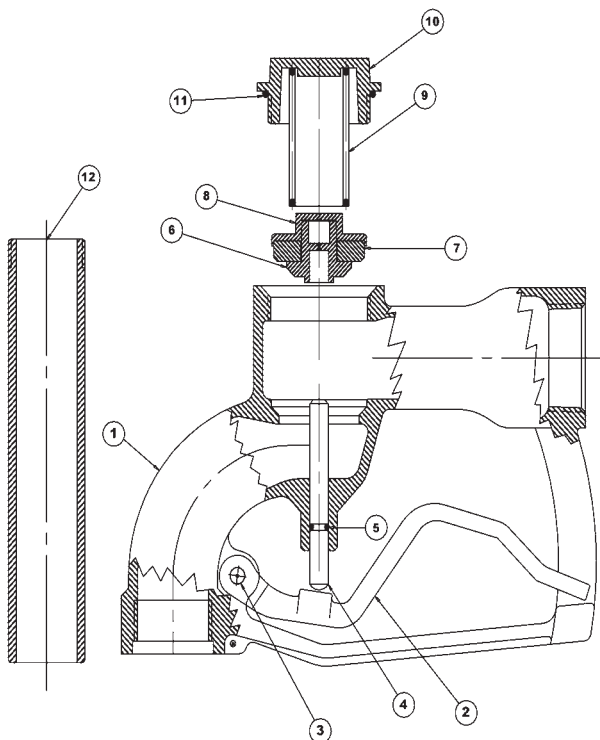
Part #	Description	Includes Item #s
<b>AN-RK1</b>	replacement "break away" spout kit for AN125 & AN150 ONLY. spout, spout ring, O-ring and plastic vacuum tube elbow	not illustrated
<b>AN-RK2</b>	replacement ratchet kit, ratchet and screws	35, 36
<b>AN-RK3</b>	replacement trigger kit, trigger, pin and cotter pin	2, 29, 32

**Important Note:** Only the parts listed in the above repair kits can be replaced while in the field

**Safety Note:** Improper servicing of your automatic nozzle can cause the nozzle to not function properly, which could cause property damage, injury or death.

**Do not disassemble the nozzle or the warranty will be void.** Return nozzles for repair to your Dixon Bayco distributor. Anti-tamper compound has been placed at strategic locations to detect disassembly.

## 1250-94 Series Gravity Nozzle



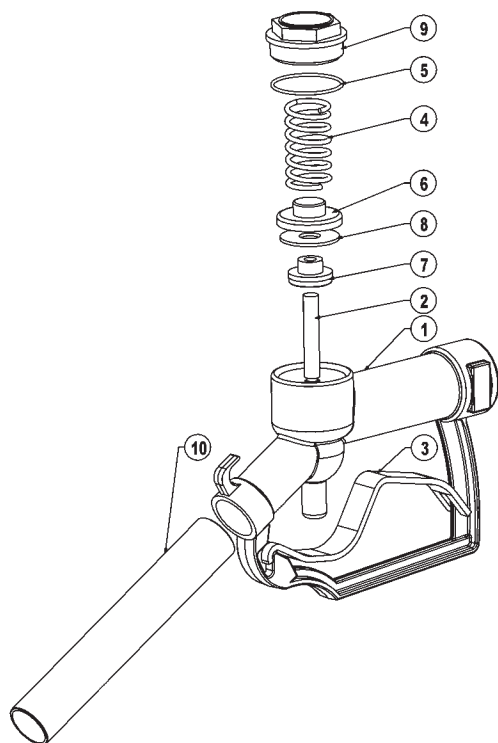
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	trigger	use kit <b>1250TK</b>	1
3	trigger pin	use kit <b>1250TK</b>	1
4	valve stem plunger	use kit <b>1250SK</b>	1
5	plunger O-ring	<b>500-7A2</b>	1
6	valve base	use kit <b>1250SK</b>	1
7	valve seal	use kit <b>1250SK</b>	1
8	valve plate	use kit <b>1250SK</b>	1
9	valve spring	<b>SPRG-L368</b>	1
10	aluminum cap	<b>1250-2</b>	1
11	Buna O-ring cap	<b>O-Ring#132</b>	1
12	aluminum spout	<b>1250-3</b>	1

### Repair Kits

Part #	Description	Includes Item #s
<b>1250TK</b>	trigger, pin	2, 3
<b>1250SK</b>	plunger, O-rings, valve seal, valve base, valve plate	4, 5, 6, 7, 8, 11

## 900 Series Utility Nozzle



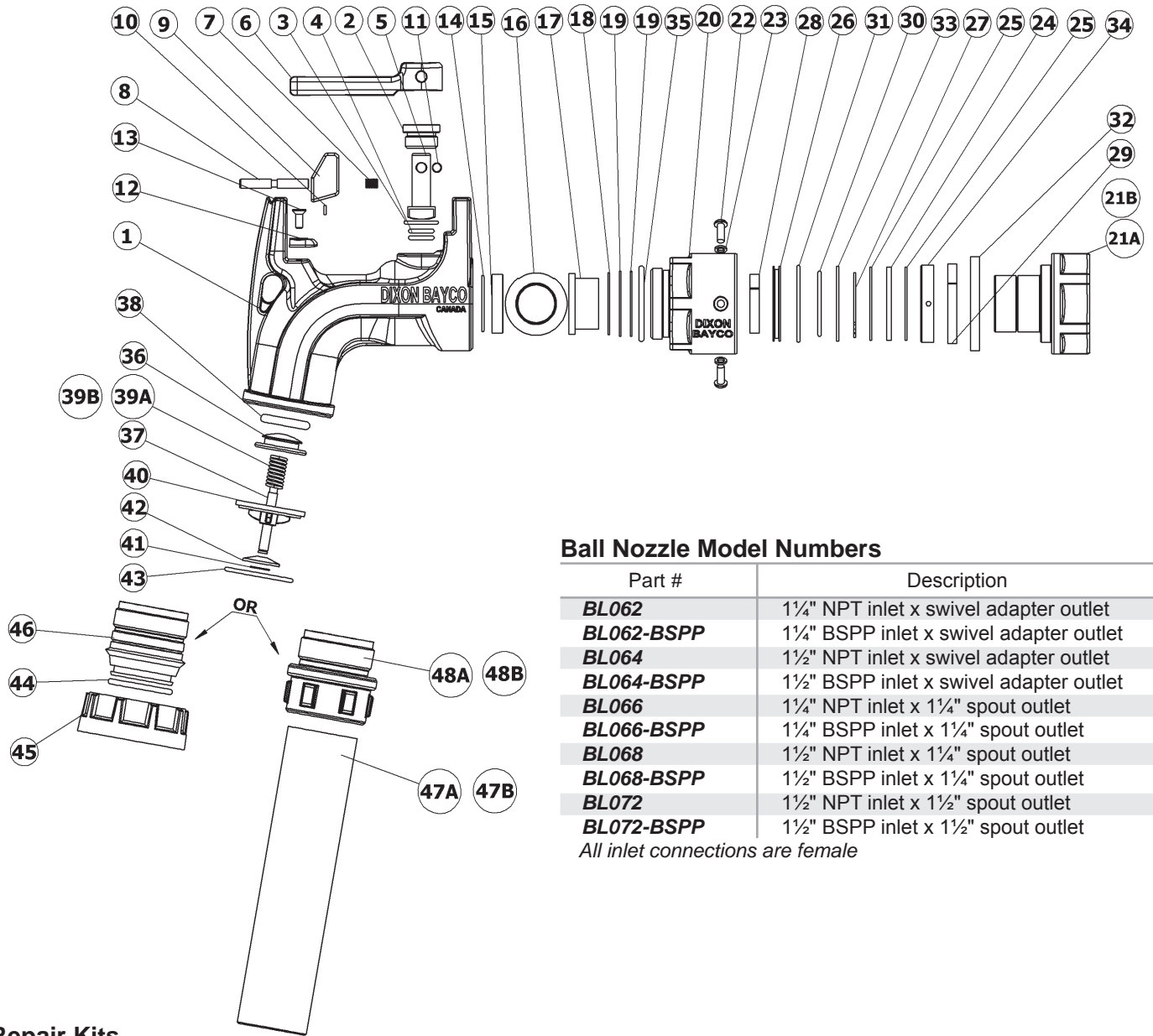
### Bill of Materials

Item #	Description	Part #	Qty
1	body	-	1
2	plunger	use kit <b>900SK</b>	1
3	trigger	<b>900TK</b>	1
4	valve spring	<b>SPRG-972</b>	1
5	cap O-ring	<b>112099</b>	1
6	holder valve gasket	use kit <b>900SK</b>	1
7	holder button gasket	use kit <b>900SK</b>	1
8	valve seal	use kit <b>900SK</b>	1
9	cap	<b>875-3</b>	1
10A	1" spout	<b>875-4</b>	1
10B	3/4" spout	<b>234-80-4</b>	1
10C	1" bent spout	<b>875-5</b>	1
10D	3/4" bent spout	<b>234-80-5</b>	1
not illustrated	3/4" FNPT inlet reducer	<b>900RB</b>	1

### Repair Kits

Part #	Description	Includes Item #
<b>900TK</b>	trigger	3
<b>900SK</b>	plunger assembly, valve assembly, cap O-ring	2, 4, 5, 6, 7, 8, 9

## BL Ball Nozzles



### Ball Nozzle Model Numbers

Part #	Description
<b>BL062</b>	1/4" NPT inlet x swivel adapter outlet
<b>BL062-BSPP</b>	1/4" BSPP inlet x swivel adapter outlet
<b>BL064</b>	1/2" NPT inlet x swivel adapter outlet
<b>BL064-BSPP</b>	1/2" BSPP inlet x swivel adapter outlet
<b>BL066</b>	1/4" NPT inlet x 1/4" spout outlet
<b>BL066-BSPP</b>	1/4" BSPP inlet x 1/4" spout outlet
<b>BL068</b>	1/2" NPT inlet x 1/4" spout outlet
<b>BL068-BSPP</b>	1/2" BSPP inlet x 1/4" spout outlet
<b>BL072</b>	1/2" NPT inlet x 1/2" spout outlet
<b>BL072-BSPP</b>	1/2" BSPP inlet x 1/2" spout outlet

*All inlet connections are female*

### Repair Kits

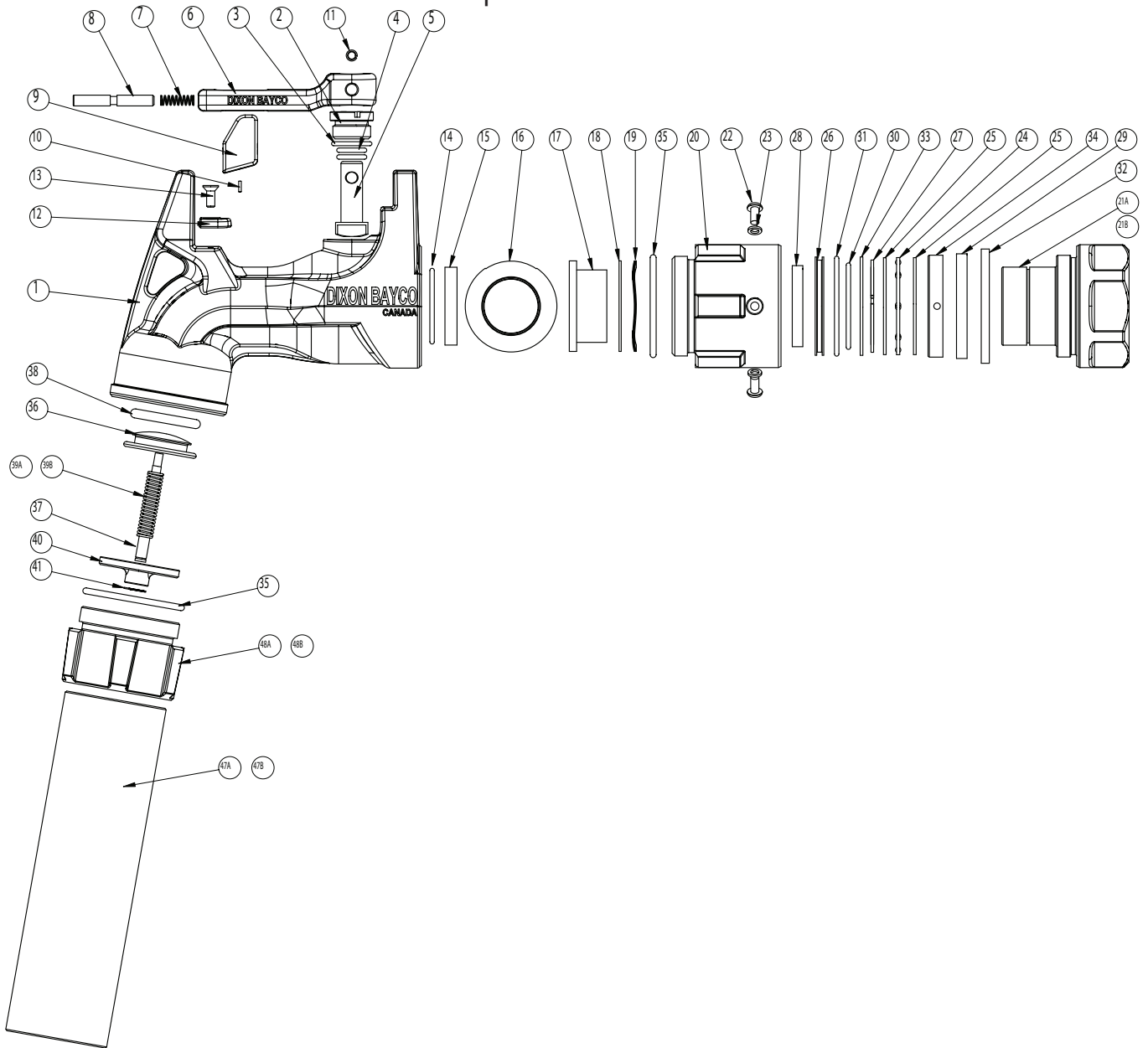
Part #	Description	Includes Item #s
<b>SWMF-RK1</b>	inlet swivel grease nipple kit	not illustrated
<b>SWMF-RK2</b>	inlet swivel seal and wear kit	26, 28, 29, 30, 31, 32
<b>SWMF-RK3</b>	complete inlet swivel rebuild kit	22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34
<b>SWMF-RK4</b>	1/4" FNPT replacement inlet swivel	20, 21A/B, 22(33), 23(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35
<b>SWMF-RK5</b>	1/2" FNPT replacement inlet swivel	20, 21A/B, 22(33), 23(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 36
<b>SWMF-RK6</b>	1/2" BSPP replacement inlet swivel	20, 21A/B, 22(33), 23(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 37
<b>BL005</b>	replacement swivel outlet	43, 44, 45, 46
<b>BL-RK4</b>	ball valve shaft seal kit	2, 3, 4, 5
<b>BL-RK10</b>	complete ball nozzle seal kit	3, 4, 14, 15, 17, 35, 38, 43, 44
<b>BL-RK11</b>	optional check valve 5 PSI spring kit	39B, 43
<b>BL-RK12</b>	standard check valve 3 PSI cartridge kit	36, 37, 38, 39a, 40, 41, 42, 43
<b>BL-RK13</b>	replacement trigger kit	6, 7, 8, 9, 10, 11, 12, 13(2)

## BL Ball Nozzles

## Bill of Materials

Item #	Description	Part #	Qty
1	body	---	1
2	bronze guide shaft	use kit <b>BL-RK4</b>	1
3	O-ring	use kit <b>BL-RK4</b> or <b>BL-RK10</b>	1
4	O-ring	use kit <b>BL-RK4</b> or <b>BL-RK10</b>	2
5	shaft lever	use kit <b>BL-RK4</b>	1
6	lever	use kit <b>BL-RK13</b>	1
7	compression spring	use kit <b>BL-RK13</b>	1
8	shaft latch	use kit <b>BL-RK13</b>	1
9	latch	use kit <b>BL-RK13</b>	1
10	screw	use kit <b>BL-RK13</b>	1
11	pin	use kit <b>BL-RK13</b>	1
12	lever plate	use kit <b>BL-RK13</b>	1
13	screw	use kit <b>BL-RK13</b>	2
14	O-ring	use kit <b>BL-RK10</b>	1
15	seal	use kit <b>BL-RK10</b>	1
16	ball	<b>BL062-2</b>	1
17	ball seat	use kit <b>BL-RK10</b>	1
18	washer	<b>111719</b>	1
19	wave spring	<b>110902</b>	2
20	swivel body	use kit <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
21A	swivel inlet 1¼" NPT	use kit <b>SWMF-RK4</b>	1
21B	swivel inlet 1½" NPT	use kit <b>SWMF-RK5</b>	1
21C	swivel inlet 1½" BSPP	use kit <b>SWMF-RK6</b>	1
22	screw	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	3
23	lock washer	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	3
24	thrust bearing	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
25	thrust washer	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	2
26	O-ring holder	use kit <b>SWMF-RK2</b> , <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
27	retaining ring	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
28	font bearing	use kit <b>SWMF-RK2</b> , <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
29	rear bearing	use kit <b>SWMF-RK2</b> , <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
30	O-ring	use kit <b>SWMF-RK2</b> , <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
31	O-ring	use kit <b>SWMF-RK2</b> , <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
32	dust seal	use kit <b>SWMF-RK2</b> , <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
33	support washer	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
34	support ring	use kit <b>SWMF-RK3</b> , <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
35	O-ring	use kit <b>SWMF-RK4</b> , <b>SWMF-RK5</b> or <b>SWMF-RK6</b>	1
36	poppet	use kit <b>BL-RK12</b>	1
37	stem	use kit <b>BL-RK12</b>	1
38	O-ring	use kit <b>BL-RK10</b> or <b>BL-RK12</b>	1
39A	compression spring (3 PSI)	use kit <b>BL-RK12</b>	1
39B	compression spring (5 PSI)	use kit <b>BL-RK11</b>	1
40	bridge	use kit <b>BL-RK12</b>	1
41	retaining ring	use kit <b>BL-RK12</b>	1
42	washer	use kit <b>5005</b> , <b>BL-RK10</b> , <b>BL-RK11</b> or <b>BL-RK12</b>	1
43	O-ring	use kit <b>BL005</b> , <b>BL-RK10</b> or <b>BL-RK12</b>	1
44	O-ring	use kit <b>BL005</b>	1
45	swivel nut	use kit <b>BL005</b>	1
46	swivel adapter	use kit <b>BL005</b>	1
47A	spout 1¼"	<b>1143A</b>	1
47B	spout 1½"	<b>1125A</b>	1
48A	spout adapter 1¼" NPT	<b>341703</b>	1
48B	spout adapter 1½" NPT	<b>BL007</b>	1

## BL Super Ball Nozzles



### Repair Kits

Part #	Description	Includes Item #s
<b>SWMF-RK1</b>	inlet swivel grease nipple kit	not illustrated
<b>SWMF-RK22</b>	inlet swivel seal and wear kit	26, 28, 29, 30, 31, 32
<b>SWMF-RK32</b>	complete inlet swivel rebuild kit	22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34
<b>SWMF-RK42</b>	2" FNPT replacement inlet swivel	20, 21A/B, 22(33), 23(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35
<b>SWMF-RK52</b>	1½" NPT replacement inlet swivel	20, 21A/B, 22(33), 23(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 36
<b>BL-RK42</b>	ball valve shaft seal kit	2, 3, 4, 5
<b>BL-RK102</b>	complete ball nozzle seal kit	3, 4, 14, 15, 17, 35, 38
<b>BL-RK112</b>	optional check valve 5 PSI spring kit	39B
<b>BL-RK122</b>	standard check valve 3 PSI cartridge kit	35, 36, 37, 38, 39a, 40, 41
<b>BL-RK13</b>	replacement trigger kit	6, 7, 8, 9, 10, 11, 12, 13(2)



## BL Super Ball Nozzles

## Bill of Materials

Item #	Description	Part #	Qty
1	body	---	1
2	bronze guide shaft	use kit <b>BL-RK4</b>	1
3	O-ring	use kit <b>BL-RK4</b> or <b>BL-RK102</b>	2
4	O-ring	use kit <b>BL-RK4</b> or <b>BL-RK102</b>	1
5	shaft lever	use kit <b>BL-RK4</b>	1
6	lever	use kit <b>BL-RK13</b>	1
7	compression spring	use kit <b>BL-RK13</b>	1
8	shaft latch	use kit <b>BL-RK13</b>	1
9	latch	use kit <b>BL-RK13</b>	2
10	screw	use kit <b>BL-RK13</b>	1
11	pin	use kit <b>BL-RK13</b>	1
12	lever plate	use kit <b>BL-RK13</b>	2
13	screw	use kit <b>BL-RK13</b>	1
14	O-ring	use kit <b>BL-RK102</b>	1
15	seal	use kit <b>BL-RK102</b>	1
16	ball	<b>112091</b>	1
17	ball seat	use kit <b>BL-RK102</b>	1
18	washer	<b>112092</b>	1
19	wave spring	<b>112090</b>	1
20	swivel body	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
21	swivel inlet	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
22	screw	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
23	lock washer	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
24	thrust bearing	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	2
25	thrust washer	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	3
26	O-ring holder	use kit <b>SWMF-RK22</b> , <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
27	retaining ring	use kit <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	3
28	front bearing	use kit <b>SWMF-RK22</b> , <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
29	rear bearing	use kit <b>SWMF-RK22</b> , <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
30	O-ring	use kit <b>SWMF-RK22</b> , <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
31	O-ring	use kit <b>SWMF-RK22</b> , <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
32	dust seal	use kit <b>SWMF-RK22</b> , <b>SWMF-RK32</b> , <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	2
33	support washer	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
34	support ring	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
35	O-ring	use kit <b>SWMF-RK42</b> or <b>SWMF-RK52</b>	1
36	poppet	use kit <b>BL-RK122</b>	1
37	stem	use kit <b>BL-RK122</b>	1
38	O-ring	use kit <b>BL-RK102</b> or <b>BL-RK122</b>	1
39	compression spring	use kit <b>BL-RK112</b> or <b>BL-RK122</b>	1
40	bridge	use kit <b>BL-RK122</b>	1
41	retaining ring	use kit <b>BL-RK122</b>	1
47A/47B	spout	<b>391137</b> (2") / <b>1125A</b> (1½")	1
48A/48B	spout adapter	<b>341780</b> (NPT) / <b>341781</b> (BSPP)	

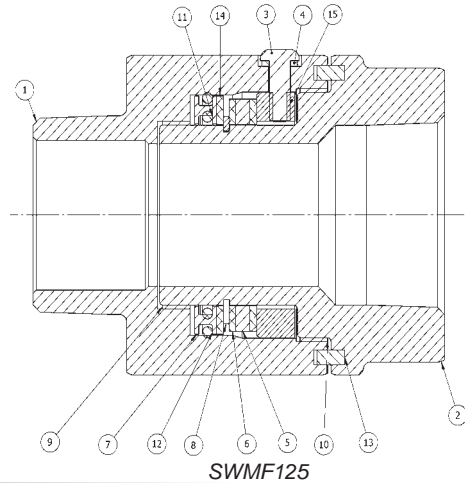
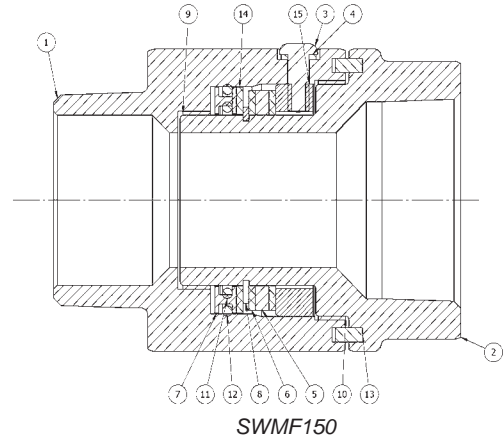
## SWMF125 & SWMF150 Swivels

### Bill of Materials

Item #	Description	Part #	Qty
1	female body	-	1
2	male body	-	1
3	screw	use kit <b>SWMF-RK3</b>	1
4	lock washer	use kit <b>SWMF-RK3</b>	1
5	thrust bearing	use kit <b>SWMF-RK3</b>	1
6	thrust washer	use kit <b>SWMF-RK3</b>	2
7	O-ring holder	use kit <b>SWMF-RK2</b> or <b>SWMF-RK3</b>	1
8	retaining ring	use kit <b>SWMF-RK3</b>	1
9	front bearing	use kit <b>SWMF-RK2</b> or <b>SWMF-RK3</b>	1
10	rear bearing	use kit <b>SWMF-RK2</b> or <b>SWMF-RK3</b>	1
11	O-ring	use kit <b>SWMF-RK2</b> or <b>SWMF-RK3</b>	1
12	O-ring	use kit <b>SWMF-RK2</b> or <b>SWMF-RK3</b>	1
13	felt ring	use kit <b>SWMF-RK2</b> or <b>SWMF-RK3</b>	1
14	support washer	use kit <b>SWMF-RK3</b>	1
15	support ring	use kit <b>SWMF-RK3</b>	1

### Repair Kits

Part #	Description	Includes Item #'s
<b>SWMF-RK1</b>	swivel grease nipple kit	---
<b>SWMF-RK2</b>	swivel seal and wear kit	7, 9, 10, 11, 12, 13
<b>SWMF-RK3</b>	complete swivel rebuild kit	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15



## Hose Shank and Check Valve Swivels

### Repair Kits

Part #	Description
<b>1200SK</b>	replacement seal kit & retaining ring for 1280, 1265, & 1580R
<b>1500SK</b>	replacement seal kit & retaining ring for 1565U & 1580U
<b>1570RK</b>	replacement seal kit & retaining ring for 1570



Check Valve NPT Swivel

- 1280** - 1/4" MNPT x 1/4" FNPT
- 1580U** - 1/2" MNPT x 1/2" FNPT
- 1580R** - 1/4" MNPT x 1/2" FNPT



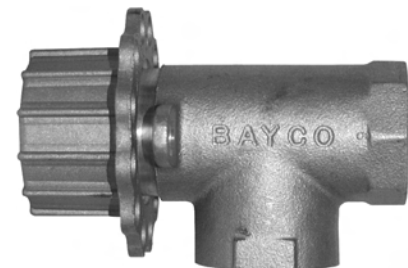
Hose x MNPT Swivel

- 1265** - 1/4" MNPT x 1/4" Hose shank
- 1565U** - 1/2" MNPT x 1/2" Hose shank
- 1570** - 1/2" MNPT x 1 3/8" Hose shank

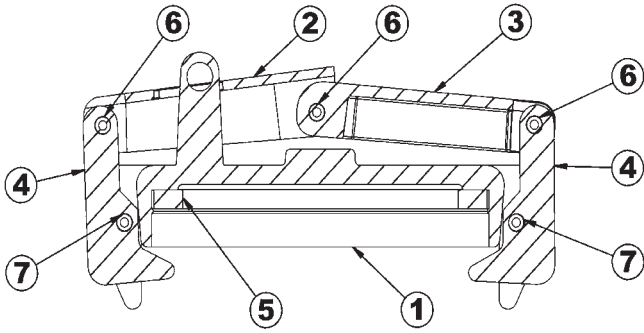
## 500AV & 525AV Angle Valves

### Repair Kit

Part #	Description
<b>500K</b>	replacement stem guide assembly, plunger assembly, O-ring, & cotter pin



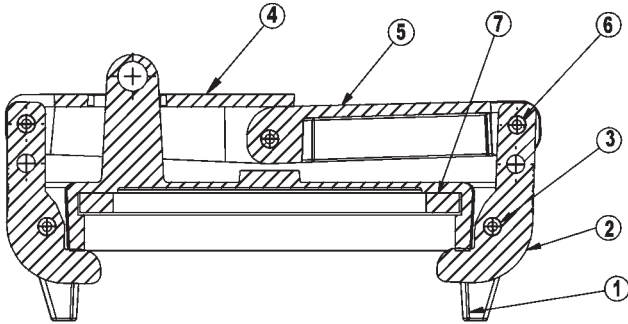
### SA4050AL Cap



#### Bill of Materials

Item #	Description	Part #	Qty
1	cap body	---	1
2	top large lever	<b>4050AL</b>	2
3	minor lever	<b>4062AL</b>	2
4	cam arm	<b>4063</b>	1
5	gasket	<b>400-G-BU</b>	1
6	lever pin	<b>4066</b>	3
7	cam arm pin	<b>4068</b>	1

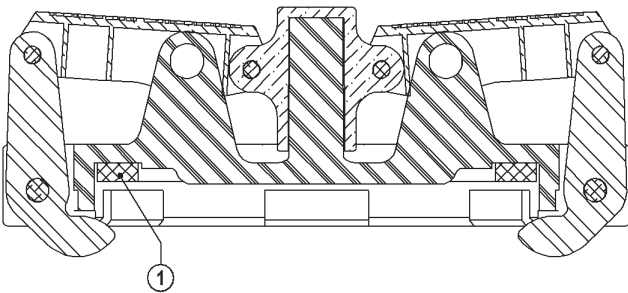
### 4" Vapor Cap 4050AL



#### Bill of Materials

Item #	Description	Part #	Qty
1	cap body	---	1
2	cam arm	<b>VR4075</b>	2
3	arm pin	<b>4068</b>	2
4	top large lever	<b>VR4077</b>	1
5	minor lever	<b>VR4076</b>	1
6	lever pin	<b>4066</b>	3
7	Buna gasket	<b>400-G-BU</b>	1

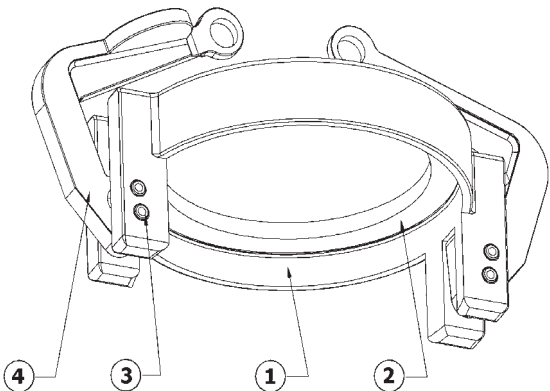
### VR4050PL Series 4" Vapor Cap (Nylon)



#### Bill of Materials

Item #	Description	Part #	Qty
1	gasket	<b>VR4050PLRK1</b>	1

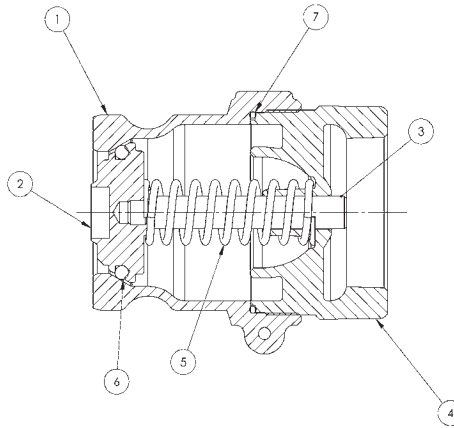
### TL4070BZ Series Bronze Cap



#### Bill of Materials

Item #	Description	Part #	Qty
1	cap body	---	1
2	Buna gasket	<b>400-G-BU</b>	1
3	arm pin	<b>4068</b>	4
4	arm (lever)	<b>4071</b>	2

## DBA Cam & Groove Dry Disconnects Aluminum & Stainless Adapters



**1½" aluminum adapter(DBA6x), zinc adapter (DBA1x)  
Bill of Materials  
DBA1x-150, DBA6x-150 & DBA12-1520**

Item #	Description	Part #	Qty
1A	aluminum adapter body (DBA6x-150)	<b>40129AL</b>	1
1B	zinc adapter body (DBA1x-150)	<b>40129ZA</b>	1
2	poppet	<b>40130AL</b>	1
3A	stem (for DBA1x-150)	<b>40133BR</b>	1
3B	stem (for DBA6x-150)	<b>40133SS-001</b>	1
4	thread end body	<b>40131AL</b>	1
5	poppet spring	<b>40132SS</b>	1
6A	poppet O-ring Buna	use kit <b>DBAK1-150</b>	1
6B	poppet O-ring Viton®	use kit <b>DBAK2-150</b>	1
6C	poppet O-ring Teflon®/Silicone	use kit <b>DBAK3-150</b>	1
6D	poppet O-ring EPDM	use kit <b>DBAK4-150</b>	1
6E	poppet O-ring Chemraz®	use kit <b>DBAK6-150</b>	1
6F	poppet O-ring Teflon®/Viton®	use kit <b>DBAK7-150</b>	1
7A	body O-ring Buna	use kit <b>DBAK1-150</b>	1
7B	body O-ring Viton®	use kit <b>DBAK2-150</b>	1
7C	body O-ring Teflon®	use kit <b>DBAK3-150, DBAK6-150 or DBAK7-150</b>	1
7D	body O-ring EPDM	use kit <b>DBAK4-150</b>	1

**1½" stainless adapter,  
Bill of Materials DBA7x-150**

Item #	Description	Part #	Qty
1	stainless adapter body	<b>40129SS</b>	1
2	poppet	<b>40130SS</b>	1
3	stem	<b>40133SS-002</b>	1
4	thread end body	<b>40131SS</b>	1
5	poppet spring	<b>40132SS</b>	1
6A	poppet O-ring Buna	use kit <b>DBAK1-150</b>	1
6B	poppet O-ring Viton®	use kit <b>DBAK2-150</b>	1
6C	poppet O-ring Teflon®/Silicone	use kit <b>DBAK3-150</b>	1
6D	poppet O-ring EPDM	use kit <b>DBAK4-150</b>	1
6E	poppet O-ring Chemraz®	use kit <b>DBAK6-150</b>	1
6F	poppet O-ring Teflon®/Viton®	use kit <b>DBAK7-150</b>	1
7A	body O-ring Buna	use kit <b>DBAK1-150</b>	1
7B	body O-ring Viton®	use kit <b>DBAK2-150</b>	1
7C	body O-ring Teflon®	use kit <b>DBAK3-150, DBAK6-150 or DBAK7-150</b>	1
7D	body O-ring EPDM	use kit <b>DBAK4-150</b>	1

**2" aluminum adapter(DBA6x), zinc adapter (DBA1x)  
Bill of Materials  
DBA1x-200, DBA6x-200**

Item #	Description	Part #	Qty
1A	aluminum adapter body (DBA6x-200)	<b>40001AL</b>	1
1B	zinc adapter Body (DBA1x-200)	<b>40001ZA</b>	1
2	poppet	<b>40002AL</b>	1
3A	stem (for DBA1x-200)	<b>40005BR</b>	1
3B	stem (for DBA6x-200)	<b>40005SS-001</b>	1
4	thread end body	<b>40003AL</b>	1
5	poppet spring	<b>40004SS</b>	1
6A	poppet O-ring Buna	use kit <b>DBAK1-200</b>	1
6B	poppet O-ring Viton®	use kit <b>DBAK2-200</b>	1
6C	poppet O-ring Teflon®/Silicone	use kit <b>DBAK3-200</b>	1
6D	poppet O-ring EPDM	use kit <b>DBAK4-200</b>	1
6E	poppet O-ring Chemraz®	use kit <b>DBAK6-200</b>	1
6F	poppet O-ring Teflon®/Viton®	use kit <b>DBAK7-200</b>	1
7A	body O-ring Buna	use kit <b>DBAK1-200</b>	1
7B	body O-ring Viton®	use kit <b>DBAK2-200</b>	1
7C	body O-ring Teflon®	use kit <b>DBAK3-200, DBAK6-200 or DBAK7-200</b>	1
7D	body O-ring EPDM	use kit <b>DBAK4-200</b>	1

**2" stainless adapter,  
Bill of Materials DBA7x-200**

Item #	Description	Part #	Qty
1	stainless adapter body	<b>40001SS</b>	1
2	poppet	<b>40002SS</b>	1
3	stem	<b>40005SS-002</b>	1
4	thread end body	<b>40003SS</b>	1
5	poppet spring	<b>40004SS</b>	1
6A	poppet O-ring Buna®	use kit <b>DBAK1-200</b>	1
6B	poppet O-ring Viton®	use kit <b>DBAK2-200</b>	1
6C	poppet O-ring Teflon®/Silicone	use kit <b>DBAK3-200</b>	1
6D	poppet O-ring EPDM	use kit <b>DBAK4-200</b>	1
6E	poppet O-ring Chemraz®	use kit <b>DBAK6-200</b>	1
6F	poppet O-ring Teflon®/Viton®	use kit <b>DBAK7-200</b>	1
7A	body O-ring Buna	use kit <b>DBAK1-200</b>	1
7B	body O-ring Viton®	use kit <b>DBAK2-200</b>	1
7C	body O-ring Teflon®	use kit <b>DBAK3-200, DBAK6-200 or DBAK7-200</b>	1
7D	body O-ring EPDM	use kit <b>DBAK4-200</b>	1

## DBA Cam & Groove Dry Disconnects Aluminum & Stainless Adapters

**3" aluminum adapter(DBA6x), zinc adapter(DBA1x)**

**Bill of Materials**

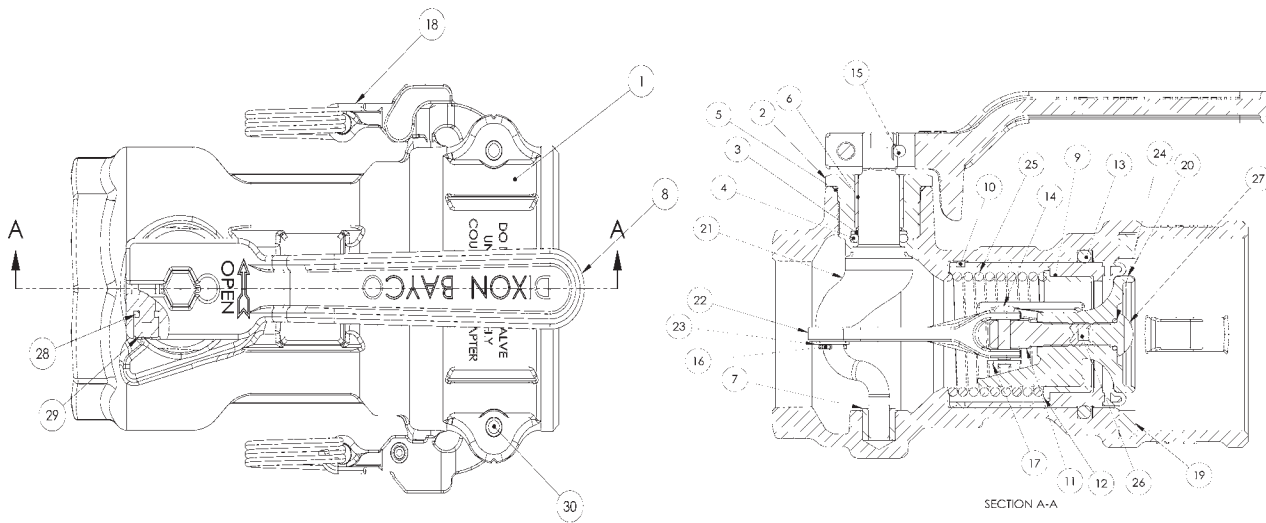
**DBA1x-300, DBA6x-300**

Item #	Description	Part #	Qty
1A	aluminum adapter body	<b>40129AL</b>	1
1B	zinc adapter body	<b>40129ZA</b>	
2	poppet	<b>40130AL</b>	1
3A	stem (for DBA1x-150)	<b>40133BR</b>	
3B	stem (for DBA6x-150)	<b>40133SS-001</b>	1
4	thread end body	<b>40131AL</b>	1
5	poppet spring	<b>40132SS</b>	1
6A	poppet O-ring Buna	use kit <b>DBAK1-150</b>	1
6B	poppet O-ring Viton®	use kit <b>DBAK2-150</b>	1
6C	poppet O-ring Teflon®/Silicone	use kit <b>DBAK3-150</b>	1
6D	poppet O-ring EPDM	use kit <b>DBAK4-150</b>	1
6E	poppet O-ring Chemraz®	use kit <b>DBAK6-150</b>	1
6F	poppet O-ring Teflon®/Viton®	use kit <b>DBAK7-150</b>	1
7A	body O-ring Buna	use kit <b>DBAK1-150</b>	1
7B	body O-ring Viton®	use kit <b>DBAK2-150</b>	1
7C	body O-ring Teflon®	use kit <b>DBAK3-150,</b> <b>DBAK6-150 or</b> <b>DBAK7-150</b>	1
7D	body O-ring EPDM	use kit <b>DBAK4-150</b>	1
7E	body O-ring Viton® "B"	use kit <b>DBAK9-300</b>	1

**Repair Kits**

Part #	Description	Includes Item #
<b>DBAK1-150</b>	1 ½" replacement Buna seals	6A, 7A
<b>DBAK2-150</b>	1 ½" replacement Viton® seals	6B, 7B
<b>DBAK3-150</b>	1 ½" replacement Teflon®/Silicone® seals	6C, 7C
<b>DBAK4-150</b>	1 ½" replacement EPDM seals	6D, 7D
<b>DBAK6-150</b>	1 ½" replacement Teflon®/Chemrez® seals	6E, 7C
<b>DBAK7-150</b>	1 ½" replacement Teflon®/Viton® seals	6F, 7C
<b>DBAK1-200</b>	2" replacement Buna seals	6A, 7A
<b>DBAK2-200</b>	2" replacement Viton® seals	6B, 7B
<b>DBAK3-200</b>	2" replacement Teflon®/Silicone® seals	6C, 7C
<b>DBAK4-200</b>	2" replacement EPDM seals	6D, 7D
<b>DBAK6-200</b>	2" replacement Teflon®/Chemrez® seals	6E, 7C
<b>DBAK7-200</b>	2" replacement Teflon®/Viton® seals	6F, 7C
<b>DBAK1-300</b>	3" replacement Buna seals	6A, 7A
<b>DBAK2-300</b>	3" replacement Viton® seals	6B, 7B
<b>DBAK3-300</b>	3" replacement Teflon®/Silicone® seals	6C, 7C
<b>DBAK4-300</b>	3" replacement EPDM seals	6D, 7D
<b>DBAK6-300</b>	3" replacement Teflon®/Chemrez® seals	6E, 7C
<b>DBAK7-300</b>	3" replacement Teflon®/Viton® seals	6F, 7C
<b>DBAK9-300</b>	3" replacement Viton® "B" seals	6G, 7E

## DBC Cam & Groove Dry Disconnects Aluminum & Stainless Couplers



**Bill of materials and repair kits can be found on pages:**

- DBC6x-150** see page 85
- DBC7x-150** see page 86
- DBC6x-200** see page 87
- DBC7x-200** see page 87
- DBC6x-300** see page 90
- DBC7x-300** see page 91
- DBS6x-200** see pages 93



# DBC Cam & Groove Dry Disconnects

## 1½" Aluminum Couplers

### 1½" aluminum coupler, Bill of Materials DBC6x-150

Item #	Description	Part #	Qty
1	body	-	1
2	stuffing box	40074SS	1
3	back up ring	40075TF	1
4A	crank shaft O-ring Buna (for DBC61-150)	40076BN	1
4B	crank shaft O-ring Viton® (for DBC62-150)	40076VI	1
4C	crank shaft O-ring Chemraz® (for DBC63-150)	40076CR	1
4D	crank shaft O-ring EPDM (for DBC64-150)	40076EP	1
5	stuffing box Teflon® O-ring	40077TF	1
6	large crank shaft bearing	40078FG	1
7	small crank shaft bearing	40079SS	1
8	lever (handle)	40080SS	1
9A	seal cylinder (for DBC61-150)	40117ALBN	1
9B	seal cylinder (for DBC62-150)	40117ALVI	1
9C	seal cylinder (for DBC63-150)	40169SS	1
9D	seal cylinder (for DBC64-150)	40117ALEP	1
10	Teflon® button	40082TF	6
11	yoke	40118SS	1
12	Teflon® bushing	40119TF	1
13A	body O-ring Buna (for DBC61-150)	40120BN	1
13B	body O-ring Viton® (for DBC62-150)	40120VI	1
13C	body O-ring Teflon®/Silicone® (for DBC63-150)	40120TS	1
13D	body O-ring EPDM (for DBC64-150)	40120EP	1
14	link rivet	40086SS	1
15	groove pin	40087SS	1
16	crank shaft cotter pin	40088SS	1
17	link cotter pin	40088SS	1
18	"EZ Boss lock" cam arm	40089SS	2
19A	cam gasket Buna (for DBC61-150)	200-G-BU	1
19B	cam gasket Viton® (for DBC62-150)	200-G-VI	1
19C	cam gasket Teflon®/Silicone® (for DBC63-150)	200-G-TES	1
19D	cam gasket EPDM (for DBC64-150)	200-G-EPR	1
20	poppet	40114SS	1
21	crank shaft	40115SS	1
22	link arm	40116SS	1
23	link washer	40094SS	1
24	poppet screw Teflon® O-ring	40122TF	1
25	cylinder spring	DBCxx-150RK8	1
26	set screw	40124SS	1
27	poppet screw (round head)	40125SS	1
28	lock washer	40099SS	1
29	socket head cap screw	40100SS	1
30	cam arm spring pin	40101SS	2
31	nose seal (for DBC63-150)	40171TF	1

### Repair Kits

Part #	Description	Includes Item #
<b>DBCx1-150RK1 (Buna-N)</b>	replacement seal kit, Buna crank shaft O-ring, Teflon® stuffing box O-ring, Buna body O-ring, Buna cam gasket, Teflon® O-ring (for DBC61-150)	4A, 5, 13A, 19A, 24
<b>DBCx2-150RK1 (Viton®)</b>	replacement seal kit, Viton® crank shaft O-ring, Teflon® stuffing box O-ring, Viton® body O-ring, Viton® cam gasket, Teflon® O-ring (for DBC62-150)	4B, 5, 13B, 19B, 24
<b>DBCx3-150RK1 (Teflon® &amp; Chemrez®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Teflon®/Silicone® body O-ring, Teflon®/Silicone® cam gasket, Teflon O-ring (for DBC63-150)	4C, 5, 13C, 19C, 24
<b>DBCx4-150RK1 (EPDM)</b>	replacement seal kit, EPDM crank shaft O-ring, Teflon® stuffing box O-ring, EPDM body O-ring, EPDM cam gasket, Teflon® O-ring (for DBC64-150)	4D, 5, 13D, 19D, 24
<b>DBC61-150RK2</b>	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBC61-150)	9A, 10, 12
<b>DBC62-150RK2</b>	replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBC62-150)	9B, 10, 12
<b>DBCx3-150RK2</b>	replacement Teflon® nose seal, Teflon® buttons & Teflon® bushing (for DBC63-150)	10, 12, 31
<b>DBC64-150RK2</b>	replacement EPDM seal cylinder, Teflon® buttons & Teflon® bushing (for DBC64-150)	9D, 10, 12
<b>DBCxx-150RK4</b>	replacement link kit, link rivet, cotter pins, link washer, link arm & yoke (for all 1½" aluminum)	11, 14, 16, 22, 23
<b>DBCxx-150RK5</b>	replacement stuffing box kit, stuffing box, Teflon® O-ring & large crank shaft bearing. (for all 1½" aluminum)	2, 5, 6
<b>DBCxx-150RK6</b>	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 1½" aluminum)	8, 15, 28, 29
<b>DBCxx-150RK7</b>	replacement crank shaft kit, crank shaft, cotter pin & washer (for all 1½" aluminum)	16, 21, 23
<b>DBCxx-150RK8</b>	main cylinder spring	25
<b>DBCxx-150RK9</b>	replacement poppet kit, poppet, round head screw, set screw & Teflon® washer (for all 1½" aluminum)	20, 24, 26, 27
<b>DBCL-200</b>	optional add on padlockable lever kit, (handle) (for all 1½")	not illustrated

# DBC Cam & Groove Dry Disconnects

## 1½" Stainless Couplers

### 1½" stainless coupler

#### Bill of Materials DBC7x-150

Item #	Description	Part #	Qty
1	body	-	1
2	stuffing box	40074SS	1
3	back up ring	40075TF	1
4A	crank shaft O-ring Buna (for DBC71-150)	40076BN	1
4B	crank shaft O-ring Viton® (for DBC72-150)	40076VI	1
4C	crank shaft O-ring Chemraz® (for DBC73-150, DBC76-150 & DBC77-150)	40076CR	1
4D	crank shaft O-ring EPDM(for DBC74-150)	40076EP	1
5	stuffing box Teflon® O-ring	40077TF	1
6	large crank shaft bearing	40078FG	1
7	small crank shaft bearing	40079SS	1
8	lever (handle)	40080SS	1
9A	seal cylinder (for DBC71-150)	40117SSBN	1
9B	seal cylinder (for DBC72-150)	40117SSVI	1
9C	seal cylinder (for DBC73-150, DBC76-150 & DBC77-150)	40169SS	1
9D	seal cylinder (for DBC74-150)	40117SSEP	1
10	Teflon® button	40082TF	6
11	yoke	40118SS	1
12	Teflon® bushing	40119TF	1
13A	body O-ring Buna (for DBC71-150)	40120BN	1
13B	body O-ring Viton® (for DBC72-150)	40120VI	1
13C	body O-ring Teflon®/Silicone® (for DBC73-150)	40120TS	1
13D	body O-ring EPDM (for DBC74-150)	40120EP	1
13E	body O-ring Chemraz® (for DBC76-150)	40120CR	1
13F	body O-ring Teflon®/Viton® (for DBC77-150)	40120TV	1
14	link rivet	40086SS	1
15	groove pin	40087SS	1
16	crank shaft cotter pin	40088SS	1
17	link cotter pin	40088SS	1
18	"EZ Boss lock" cam arm	40089SS	2
19A	cam gasket Buna (for DBC71-150)	200-G-BU	1
19B	cam gasket Viton® (for DBC72-150)	200-G-VI	1
19C	cam gasket Teflon®/Silicone® (for DBC73-150)	200-G-TES	1
19D	cam gasket EPDM (for DBC74-150)	200-G-EPR	1
19E	cam gasket Teflon®/Viton® (for DBC76-150 & DBC77-150)	200-G-TFVI	1
20	poppet	40114SS	1
21	crank shaft	40115SS	1
22	link arm	40116SS	1
23	link washer	40094SS	1
24	poppet screw Teflon® O-ring	40122TF	1
25	cylinder spring	DBCxx-150RK8	1
26	set screw	40124SS	1
27	poppet screw (round head)	40125SS	1
28	lock washer	40099SS	1
29	socket head cap screw	40100SS	1
30	cam arm spring pin	40101SS	2
31	nose seal (for DBC73-150, DBC76-150 & DBC77-150)	40171TF	1

### Repair Kits

Part #	Description	Includes Item #
<b>DBCx1-150RK1 (Buna-N)</b>	replacement seal kit, Buna crank shaft O-ring, Teflon® stuffing box O-ring, Buna body O-ring, Buna cam gasket, Teflon® O-ring (for DBC61-150)	4A, 5, 13A, 19A, 24
<b>DBCx2-150RK1 (Viton®)</b>	replacement seal kit, Viton® crank shaft O-ring, Teflon® stuffing box O-ring, Viton® body O-ring, Viton® cam gasket, Teflon® O-ring (for DBC62-150)	4B, 5, 13B, 19B, 24
<b>DBCx3-150RK1 (Teflon® &amp; Chemrez®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Teflon®/Silicone body O-ring, Teflon®/Silicone cam gasket, Teflon® O-ring. (for DBC63-150)	4C, 5, 13C, 19C, 24
<b>DBCx4-150RK1 (EPDM)</b>	replacement seal kit, EPDM crank shaft O-ring, Teflon® stuffing box O-ring, EPDM body O-ring, EPDM cam gasket, Teflon® O-ring (for DBC64-150)	4D, 5, 13D, 19D, 24
<b>DBC61-150RK2</b>	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBC61-150)	9A, 10, 12
<b>DBC62-150RK2</b>	replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBC62-150)	9B, 10, 12
<b>DBCx3-150RK2</b>	replacement Teflon® nose seal, Teflon® buttons & Teflon® bushing (for DBC63-150)	10, 12, 31
<b>DBC64-150RK2</b>	replacement EPDM seal cylinder, Teflon® buttons & Teflon® bushing (for DBC64-150)	9D, 10, 12
<b>DBCxx-150RK4</b>	replacement link kit, link rivet, cotter pins, link washer, link arm & yoke (for all 1½" aluminum)	11, 14, 16, 22, 23
<b>DBCxx-150RK5</b>	replacement stuffing box kit, stuffing box, Teflon® O-ring & large crank shaft bearing. (for all 1½" aluminum)	2, 5, 6
<b>DBCxx-150RK6</b>	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 1½" aluminum)	8, 15, 28, 29
<b>DBCxx-150RK7</b>	replacement crank shaft kit, crank shaft, cotter pin & washer (for all 1½" aluminum)	16, 21, 23
<b>DBCxx-150RK8</b>	main cylinder spring	25
<b>DBCxx-150RK9</b>	replacement poppet kit, poppet, round head screw, set screw & Teflon® washer (for all 1½" aluminum)	20, 24, 26, 27
<b>DBCL-200</b>	optional add on padlockable lever kit, (handle) (for all 1½")	not illustrated

## DBC Cam & Groove Dry Disconnects 2" Aluminum Couplers

### 2" aluminum coupler

#### Bill of Materials DBC6x-200

Item #	Description	Part #	Qty
1	body	-	1
2	stuffing box	40074SS	1
3	back up ring	40075TF	1
4A	crank shaft O-ring Buna (for DBC61-200)	40076BN	1
4B	crank shaft O-ring Viton® (for DBC62-200)	40076VI	1
4C	crank shaft O-ring Chemraz® (for DBC63-200 & DBC66-200)	40076CR 40076EP	1 1
4D	crank shaft O-ring EPDM (for DBC64-200)	40077TF	1
5	stuffing box Teflon® O-ring	40078FG	1
6	large crank shaft bearing	40079SS	1
7	small crank shaft bearing	40080SS	1
8	lever (handle)	40081ALBN	1
9A	seal cylinder (for DBC61-200)	40081ALVI	1
9B	seal cylinder (for DBC62-200)	40168SS	1
9C	seal cylinder (for DBC63-200 & DBC66-200)	40081ALEP	1
9D	seal cylinder (for DBC64-200)	40082TF	6
10	Teflon® button	40083SS	1
11	yoke	40084TF	1
12	Teflon® bushing	40085BN	1
13A	body O-ring Buna (for DBC61-200)	40085VI	1
13B	body O-ring Viton® (for DBC62-200)	40085TS	1
13C	body O-ring Teflon®/Silicone (for DBC63-200)	40085EP	1
13D	body O-ring EPDM (for DBC64-200)		
13E	body O-ring Chemraz® (for DBC66-200)	40085CR	1
14	link rivet	40086SS	1
15	groove pin	40087SS	1
16	crank shaft cotter pin	40088SS	1
17	link cotter pin	40088SS	1
18	"EZ Boss lock" cam arm	40089SS	2
19A	cam gasket Buna (for DBC61-200)	250-G-BU	1
19B	cam gasket Viton® (for DBC62-200)	250-G-VI	1
19C	cam gasket Teflon®/Silicone (for DBC63-200)	250-G-TES 250-G-EPR	1 1
19D	cam gasket EPDM (for DBC64-200)		
19E	cam gasket Teflon®/Viton® (for DBC66-200)	250-G-TFVI 40091SS	1 1
20	poppet		
21	crank shaft	40092SS	1
22	link arm	40093SS	1
23	link washer	40094SS	1
24	poppet screw Teflon® O-ring	40095TF	1
25	cylinder spring	DBCxx-200RK8	1
26	set screw	40097SS	1
27	poppet screw (round head)	40098SS	1
28	lock washer	40099SS	1
29	socket head cap screw	40100SS	1
30	cam arm spring pin	40101SS	2
31	nose seal (for DBC63-200 & DBC66-200)	40170TF	1

#### Repair Kits

Part #	Description	Includes Item #
<b>DBCx1-200RK1 (Buna-N)</b>	replacement seal kit, Buna crank shaft O-ring, Teflon® stuffing box O-ring, Buna body O-ring, Buna cam gasket, Teflon® O-ring (for DBC61-200)	4A, 5, 13A, 19A, 24
<b>DBCx2-200RK1 (Viton®)</b>	replacement seal kit, Viton® crank shaft O-ring, Teflon® stuffing box O-ring, Viton® body O-ring, Viton® cam gasket, Teflon® O-ring (for DBC62-200)	4B, 5, 13B, 19B, 24
<b>DBCx3-200RK1 (Teflon®/Siicone &amp; Chemraz®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Teflon®/Silicone body O-ring, Teflon®/Silicone cam gasket, Teflon® O-ring (for DBC63-200)	4C, 5, 13C, 19C, 24
<b>DBCx4-200RK1 (EPDM)</b>	replacement seal kit, EPDM crank shaft O-ring, Teflon® stuffing box O-ring, EPDM body O-ring, EPR cam gasket, Teflon® O-ring (for DBC64-200)	4D, 5, 13D, 19D, 24
<b>DBCx6-200RK1 (Chemraz® &amp; Teflon®/Viton®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Chemrez® body O-ring, Teflon®/Viton® cam gasket, Teflon® O-ring (for DBC66-200)	4C, 5, 13E, 19E, 24
<b>DBC61-200RK2</b>	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBC61-200)	9A, 10, 12
<b>DBC62-200RK2</b>	Replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBC62-200)	9B, 10, 12
<b>DBCx3-200RK2</b>	replacement Teflon® nose seal, Teflon® buttons & Teflon® bushing (for DBC63-200 & DBC66-200)	10, 12, 31
<b>DBC64-200RK2</b>	replacement EPDM seal cylinder, Teflon® buttons & Teflon® bushing (for DBC64-200)	9D, 10, 12
<b>DBCxx-200RK4</b>	replacement link kit, link rivet, cotter pins, link washer, link arm & yoke (for all 2" aluminum)	11, 14, 16, 22, 23
<b>DBCxx-200RK5</b>	replacement stuffing box kit, stuffing box, Teflon® O-ring & large crank shaft bearing (for all 2" aluminum)	2, 5, 6
<b>DBCxx-200RK6</b>	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 2" aluminum)	8, 15, 28, 29
<b>DBCxx-200RK7</b>	replacement crank shaft kit, crank shaft, cotter pin & washer (for all 2" aluminum)	16, 21, 23
<b>DBCxx-200RK8</b>	main cylinder spring	25
<b>DBCxx-200RK9</b>	replacement poppet kit, poppet, round head screw, set screw & Teflon® O-Ring (for all 2" aluminum)	20, 24, 26, 27
<b>DBCL-200</b>	optional add on padlockable lever kit, (handle) (for all 2")	not illustrated



## DBC Cam & Groove Dry Disconnects 2" Stainless Couplers

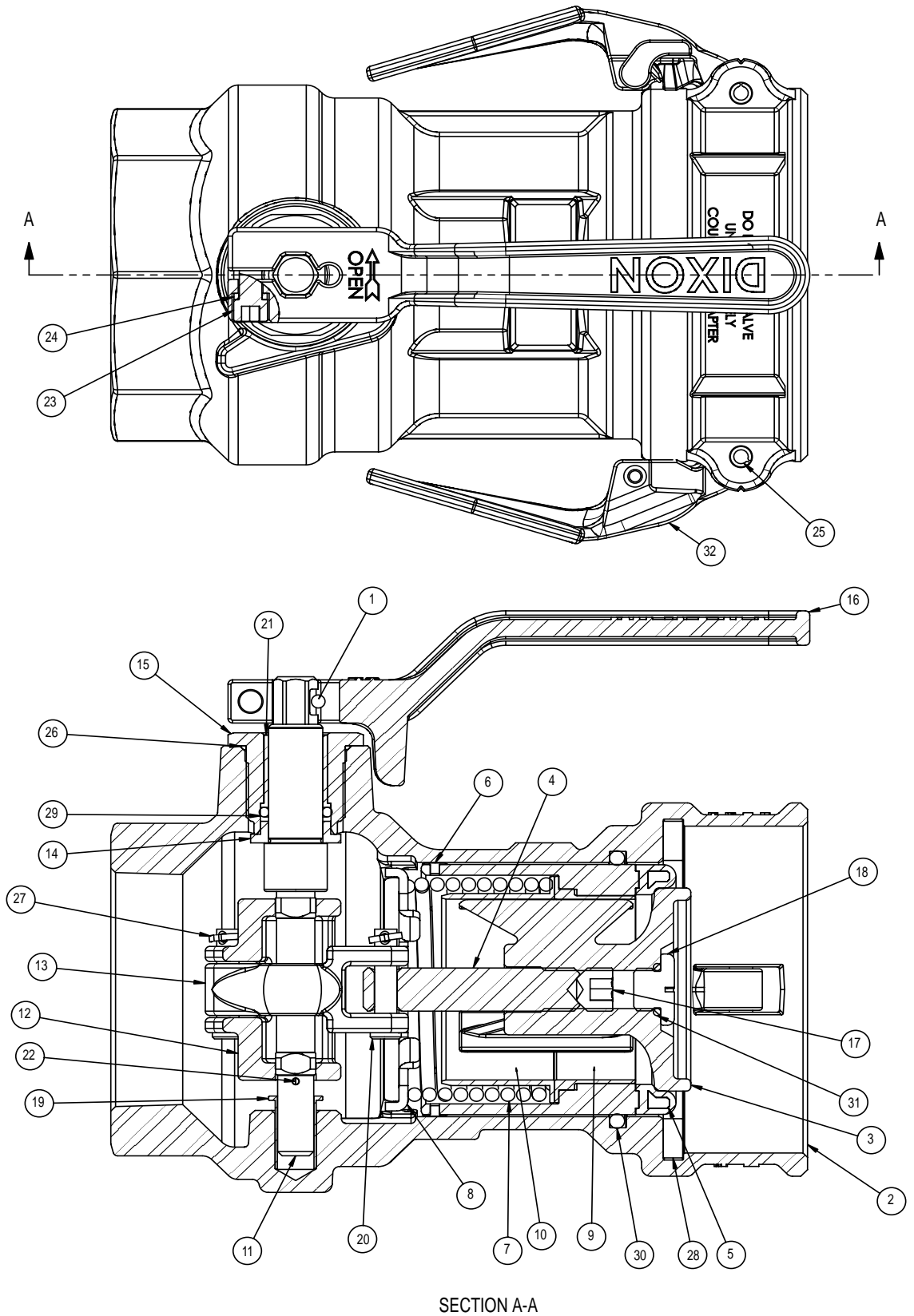
**2" stainless coupler  
Bill of Materials DBC7x-200**

Item #	Description	Part #	Qty
1	body	-	1
2	stuffing box	40074SS	1
3	back up ring	40075TF	1
4A	crank shaft O-ring Buna (for DBC71-200)	40076BN	1
4B	crank shaft O-ring Viton® (for DBC72-200)	40076VI	1
4C	crank shaft O-ring Chemraz® (for DBC73-200, DBC77-200 & DBC76-200)	40076CR	1
4D	crank shaft O-ring EPDM (for DBC74-200)	40076EP	1
5	stuffing box Teflon® O-ring	40077TF	1
6	large crank shaft bearing	40078FG	1
7	small crank shaft bearing	40079SS	1
8	lever (handle)	40080SS	1
9A	seal cylinder (for DBC71-200)	40081SSBN	1
9B	seal cylinder (for DBC72-200)	40081SSVI	1
9C	seal cylinder (for DBC73-200, DBC76-200 & DBC77-200)	40168SS	1
9D	seal cylinder (for DBC74-200)	40081SSEP	6
10	Teflon® button	40082TF	1
11	yoke	40083SS	1
12	Teflon® bushing	40084TF	1
13A	body O-ring Buna (for DBC71-200)	40085BN	1
13B	body O-ring Viton® (for DBC72-200)	40085VI	1
13C	body O-ring Teflon®/Silicone (for DBC73-200)	40085TS	1
13D	body O-ring EPDM (for DBC74-200)	40085EP	1
13E	body O-ring Chemraz® (for DBC76-200)	40085CR	1
13F	body O-ring Teflon®/Viton® (DBC77-200)	40085TV	1
14	link rivet	40086SS	1
15	groove pin	40087SS	1
16	crank shaft cotter pin	40088SS	1
17	link cotter pin	40088SS	2
18	"EZ Boss lock" cam arm	40089SS	1
19A	cam gasket Buna (for DBC71-200)	250-G-BU	1
19B	cam gasket Viton® (for DBC72-200)	250-G-VI	1
19C	cam gasket Teflon®/Silicone (for DBC73-200)	250-G-TES	1
19D	cam gasket EPDM (for DBC74-200)	250-G-EPR	1
19E	cam gasket Teflon®/Viton® (for DBC76-200 & DBC77-200)	250-G-TFVI	1
20	poppet	40091SS	1
21	crank shaft	40092SS	1
22	link arm	40093SS	1
23	link washer	40094SS	1
24	poppet screw Teflon® O-ring	40095TF	1
25	cylinder spring	40096SS	1
26	set screw	40097SS	1
27	poppet screw (round head)	40098SS	1
28	lock washer	40099SS	1
29	socket head cap screw	40100SS	2
30	cam arm spring pin	40101SS	1
31	nose seal (for DBC73-200, DBC76-200 & DBC77-200)	40170TF	1

**Repair Kits**

Part #	Description	Includes Item #
<b>DBCx1-200RK1 (Buna-N)</b>	replacement seal kit, Buna crank shaft O-ring, Teflon® stuffing box O-ring, Buna body O-ring, Buna cam gasket, Teflon® O-ring (for DBC71-200)	4A, 5, 13A, 19A, 24
<b>DBCx2-200RK1 (Viton®)</b>	replacement seal kit, Viton® crank shaft O-ring, Teflon® stuffing box O-ring, Viton® body O-ring, Viton® cam gasket, Teflon® O-ring (for DBC72-200)	4B, 5, 13B, 19B, 24
<b>DBCx3-200RK1 (Teflon®/Silicone &amp; Chemraz®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Teflon®/Silicone body O-ring, Teflon®/Silicone cam gasket, Teflon® O-ring (for DBC73-200)	4C, 5, 13C, 19C, 24
<b>DBCx4-200RK1 (EPDM)</b>	replacement seal kit, EPDM crank shaft O-ring, Teflon® stuffing box O-ring, EPDM body O-ring, EPDM cam gasket, Teflon® O-ring (for DBC74-200)	4D, 5, 13D, 19D, 24
<b>DBCx6-200RK1 (Chemraz® &amp; Teflon®/Viton®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Chemrez® body O-ring, Teflon®/Viton® cam gasket, Teflon® O-ring (for DBC76-200)	4C, 5, 13E, 19E, 24
<b>DBCx7-200RK1 (Teflon®/Viton® &amp; Chemraz®)</b>	replacement seal kit, Chemraz® crank shaft O-ring, Teflon® stuffing box O-ring, Chemrez® body O-ring, Teflon®/Viton® cam gasket, Teflon® O-ring (for DBC76-200)	4C, 5, 13F, 19E, 24
<b>DBC71-200RK2</b>	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBC71-200)	9A, 10, 12
<b>DBC72-200RK2</b>	replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBC72-200)	9B, 10, 12
<b>DBCx3-200RK2</b>	replacement Teflon® nose seal, Teflon® buttons & Teflon® bushing (for DBC73-200 & DBC66-200)	10, 12, 31
<b>DBC74-200RK2</b>	replacement EPDM seal cylinder, Teflon® buttons & Teflon® bushing (for DBC74-200)	9D, 10, 12
<b>DBCxx-200RK4</b>	replacement link kit, link rivet, cotter pins, link washer, link arm & yoke (for all 2" aluminum)	11, 14, 16, 22, 23
<b>DBCxx-200RK5</b>	replacement stuffing box kit, stuffing box, Teflon® O-ring & large crank shaft bearing (for all 2" aluminum)	2, 5, 6
<b>DBCxx-200RK6</b>	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 2" aluminum)	8, 15, 28, 29
<b>DBCxx-200RK7</b>	replacement crank shaft kit, crank shaft, cotter pin & washer (for all 2" aluminum)	16, 21, 23
<b>DBCxx-200RK8</b>	main cylinder spring	25
<b>DBCxx-200RK9</b>	replacement poppet kit, poppet, round head screw, set screw & Teflon® O-Ring (for all 2" aluminum)	20, 24, 26, 27
<b>DBCL-200</b>	optional add on padlockable lever kit, (handle) (for all 2")	not illustrated

# DBC Cam & Groove Dry Disconnects 3" Aluminum Couplers





## DBC Cam & Groove Dry Disconnects 3" Aluminum Couplers

**3" aluminum coupler****Bill of Materials DBC6x-300**

Item #	Description	Part #	Qty
1	groove pin	<b>40087SS</b>	1
2	body	-	1
3	poppet	<b>40195SS</b>	1
4	stem	<b>40196SS</b>	1
5A	seal cylinder (for DBC61-300)	<b>40197ALBN</b>	1
5B	seal cylinder (for DBC62-300)	<b>40197ALVI</b>	1
5C	seal cylinder (for DBC63-300)	<b>40304SS</b>	1
5D	seal cylinder (for DBC64-300)	<b>40197SSEP</b>	1
5E	seal cylinder (for DBC69-300)	<b>40197SSVB</b>	1
6	Teflon® button	<b>40198TF</b>	8
7	cylinder spring	<b>DBCxx-300RK8</b>	1
8	poppet spring seat	<b>40200AL</b>	1
9	Teflon® bushing	<b>40201TF</b>	1
10	poppet spring guide	<b>40202SS</b>	1
11	shaft	<b>40203SS</b>	1
12	yoke	<b>40204SS</b>	1
13	link	<b>40205SS</b>	1
14	shaft retainer	<b>40206SS</b>	1
15	stuffing box	<b>40207SS</b>	1
16	lever (handle)	<b>40208SS</b>	1
17	set screw	<b>40209SS</b>	1
18	poppet screw	<b>40210SS</b>	1
19	Teflon® bearing	<b>40211TF</b>	1
20	clevis pin	<b>40212SS</b>	2
21	bearing	<b>40213FG</b>	1
22	cotter pin	<b>40214SS</b>	1
23	lever (handle) screw	<b>40216SS</b>	1
24	lever (handle) lock washer	<b>40217SS</b>	1
25	cam arm pin	<b>40218SS</b>	2
26	Teflon® O-ring	<b>40219TF</b>	1
27	cotter pin	<b>40221SS</b>	2
28A	Buna coupler gasket (for DBC61-300)	<b>DBCx1-300RK3</b>	1
28B	Viton® coupler gasket (for DBC62-300)	<b>DBCx2-300RK3</b>	1
28C	Teflon®/Silicone coupler gasket (for DBC63-300)	<b>DBCx3-300RK3</b>	1
28D	EPDM coupler gasket (for DBC64-300)	<b>DBCx4-300RK3</b>	1
28E	Viton® "B" coupler gasket (for DBC69-300)	<b>DBCx9-300RK3</b>	1
29A	Buna O-ring (for DBC61-300)	<b>40223BN</b>	1
29B	Viton® O-ring (for DBC62-300)	<b>40223VI</b>	1
29C	Chemraz® O-ring (for DBC63-300)	<b>40223CR</b>	1
29D	EPDM O-ring (for DBC64-300)	<b>40223EP</b>	1
29E	Viton® "B" O-ring (for DBC69-300)	<b>40223VB</b>	1
30A	Buna O-ring (for DBC61-300)	<b>40224BN</b>	1
30B	Viton® O-ring (for DBC62-300)	<b>40224VI</b>	1
30C	Teflon®/Silicone O-Ring (for DBC63-300)	<b>40224TS</b>	1
30D	EPDM O-ring (for DBC64-300)	<b>40224EP</b>	1
30E	Viton® "B" O-ring (for DBC69-300)	<b>40224VB</b>	1
31	Teflon® O-ring	<b>40235TF</b>	1
32	locking paddle arm	<b>40285SSSS</b>	2
33	nose seal (for DBC63-300)	<b>40305TF</b>	1

**Repair Kits**

Part #	Description	Includes Item #
<b>DBCx1-300RK1 (Buna-N)</b>	replacement seal kit, Buna stuffing box O-ring, Teflon® stuffing box to body O-ring, Buna body O-ring, Buna cam gasket, Teflon® Poppet screw O-ring (for DBC61-300)	26, 28A, 29A, 30A, 31
<b>DBCx2-300RK1 (Viton®)</b>	replacement seal kit, Viton® stuffing box O-ring, Teflon® stuffing box to body O-ring, Viton® body O-ring, Viton® cam gasket, Teflon® Poppet screw O-ring (for DBC62-300)	26, 28B, 29B, 30B, 31
<b>DBCx3-300RK1 (Teflon®/Silicone &amp; Chemraz®)</b>	replacement seal kit, Chemraz® stuffing box O-ring, Teflon® stuffing box to body O-ring, Teflon®/Silicone body O-ring, Teflon®/Silicone cam gasket, Teflon® Poppet screw O-ring (for DBC63-300)	26, 28C, 29C, 30C, 31
<b>DBCx4-300RK1 (EPDM)</b>	replacement seal kit, EPDM stuffing box O-ring, Teflon® stuffing box to body O-ring, EPDM body O-ring, EPDM cam gasket, Teflon® Poppet screw O-ring (for DBC64-300)	26, 28D, 29D, 30D, 31
<b>DBCx9-300RK1 (Viton® "B")</b>	replacement seal kit, Viton® "B" stuffing box O-ring, Teflon® stuffing box to body O-ring, Viton® "B" body O-ring, Viton® "B" cam gasket, Teflon Poppet screw O-ring (for DBC69-300)	26, 28E, 29E, 30E, 31
<b>DBC61-300RK2</b>	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBC61-300)	5A, 6, 9
<b>DBC62-300RK2</b>	replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBC62-300)	5B, 6, 9
<b>DBCx3-300RK2</b>	replacement Teflon® nose seal, Teflon® buttons & Teflon® bushing (for DBC63-300)	6, 9, 33
<b>DBC64-300RK2</b>	replacement EPDM seal cylinder, Teflon® buttons & Teflon® bushing (for DBC64-300)	5D, 6, 9
<b>DBC69-300RK2</b>	replacement Viton® "B" seal cylinder, Teflon® buttons & Teflon® bushing (for DBC69-300)	5E, 6, 9
<b>DBCx1-300RK3</b>	replacement Buna coupler gasket	28A
<b>DBCx2-300RK3</b>	replacement Viton® coupler gasket	28B
<b>DBCx3-300RK3</b>	replacement Teflon®/Silicone coupler gasket	28C
<b>DBCx4-300RK3</b>	replacement EPDM coupler gasket	28D
<b>DBCx9-300RK3</b>	replacement Viton® "B" coupler gasket	28E
<b>DBCxx-300RK4</b>	replacement link kit, clevis pin, cotter pin, stem, link & yoke (for all 3" aluminum)	4, 12, 13, 20, 22
<b>DBCxx-300RK5</b>	replacement stuffing box kit, stuffing box, Teflon® O-ring & bearing	15, 21, 26
<b>DBCxx-300RK6</b>	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 3" aluminum)	1, 16, 23, 24
<b>DBCxx-300RK7</b>	replacement shaft kit, shaft, cotter pin, bearing, shaft retainer	11, 14, 19, 22
<b>DBCxx-300RK8</b>	main cylinder spring	7
<b>DBCxx-300RK9</b>	replacement poppet kit, poppet & screw, set screw & Teflon® O-ring	3, 17, 18, 31

## DBC Cam & Groove Dry Disconnects

### 3" Stainless Couplers

**3" stainless coupler****Bill of Materials DBC7x-200**

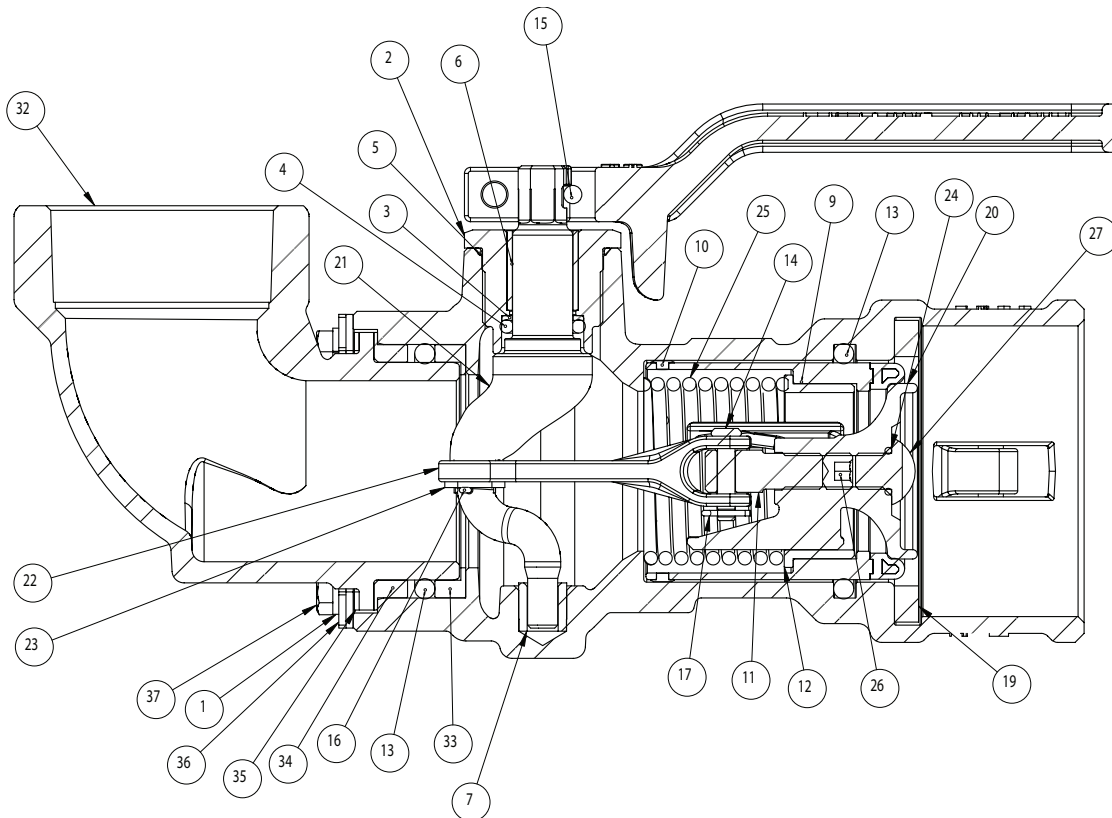
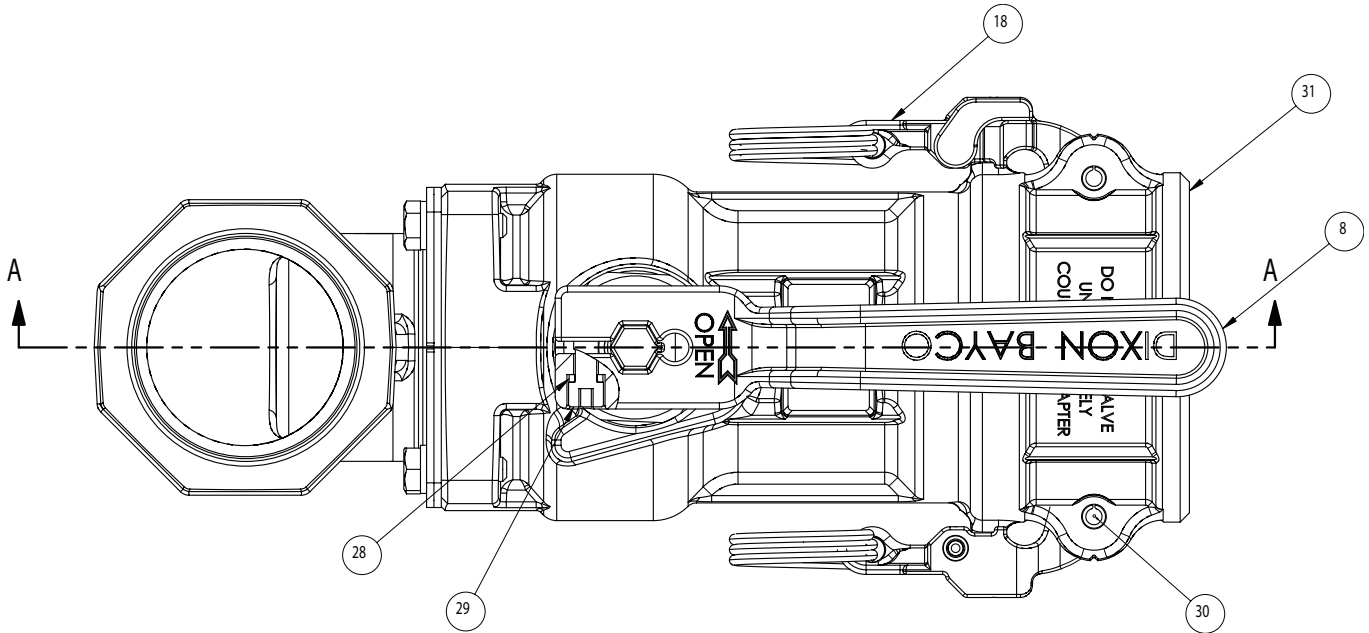
Item #	Description	Part #	Qty
1	groove pin	40087SS	1
2	body	-	1
3	poppet	40195SS	1
4	stem	40196SS	1
5A	seal cylinder Buna (for DBC71-300)	40197SSBN	1
5B	seal cylinder Viton® (for DBC72-300)	40197SSVI	1
5C	stainless cylinder (for DBC73-300, DBC76-300 & DBC77-300)	40304SS	1
5D	seal cylinder EPDM (for DBC74-300)	40197SSEP	1
6	Teflon® button	40198TF	8
7	cylinder spring	DBCxx-300RK8	1
8	spring seat	40200SS	1
9	Teflon® bushing	40201TF	1
10	spring guide	40202SS	1
11	shaft	40203SS	1
12	yoke	40204SS	1
13	link arm	40205SS	1
14	shaft retainer	40206SS	1
15	stuffing box	40207SS	1
16	lever (handle)	40208SS	1
17	set screw	40209SS	1
18	poppet screw	40210SS	1
19	Teflon® bearing	40211TF	1
20	clevis pin	40212SS	2
21	bearing	40213FG	1
22	cotter pin	40214SS	1
23	lever (handle) screw	40216SS	1
24	lever (handle) lock washer	40217SS	1
25	cam arm pin	40218SS	2
26	Teflon® O-ring	40219TF	1
27	cotter pin	40221SS	2
28A	Buna coupler gasket (for DBC71-300)	DBCx1-300RK3	1
28B	Viton® coupler gasket (for DBC72-300)	DBCx2-300RK3	1
28C	Teflon®/Silicone coupler gasket (for DBC73-300)	40222TS	1
28D	EPDM coupler gasket (for DBC74-300)	40222EP	1
28E	Teflon®/Viton® coupler gasket (for DBC76-300 & DBC77-300)	40222TV	1
29A	Buna O-ring (for DBC71-300)	40223BN	1
29B	Viton® O-ring (for DBC72-300)	40223VI	1
29C	Chemraz® O-ring (for DBC73-300, DBC76-300 & DBC77-300)	40223CR	1
29D	EPDM O-ring (for DBC74-300)	40223EP	1
30A	Buna O-ring (for DBC71-300)	40224BN	1
30B	Viton® O-ring (for DBC72-300)	40224VI	1
30C	Teflon®/Silicone O-ring (for DBC73-300)	40224TS	1
30D	EPDM O-ring (for DBC74-300)	40224EP	1
30E	Chemraz® O-ring (for DBC76-300)	40224CR	1
30F	Teflon®/Viton® O-ring (for DBC77-300)	40224TV	1
31	Teflon® O-ring	40235TF	2
32	locking paddle arm	40285SSSS	1
33	Teflon® nose seal (for DBC73-300, DBC76-300 & DBC77-300)	40305TF	1

**Repair Kits**

Part #	Description	Includes Item #
DBCx1-300RK1 (Buna-N)	replacement seal kit, Buna stuffing box O-ring, Teflon® stuffing box to body O-ring, Buna body O-ring, Buna cam gasket, Teflon® poppet screw O-ring (for DBC71-300)	26, 28A, 29A, 30A, 31
DBCx2-300RK1 (Viton®)	replacement seal kit, Viton® stuffing box O-ring, Teflon® stuffing box to body O-ring, Viton® body O-ring, Viton® cam gasket, Teflon® poppet screw O-ring (for DBC72-300)	26, 28B, 29B, 30B, 31
DBCx3-300RK1 (Teflon®/Silicone & Chemraz®)	replacement seal kit, Chemraz® stuffing box O-ring, Teflon® stuffing box to body O-ring, Teflon®/Silicone body O-ring, Teflon®/Silicone cam gasket, Teflon® poppet screw O-ring (for DBC73-300)	26, 28C, 29C, 30C, 31
DBCx4-300RK1 (EPDM)	replacement seal kit, EPDM stuffing box O-ring, Teflon® stuffing box to body O-ring, EPDM body O-ring, EPDM cam gasket, Teflon® poppet screw O-ring (for DBC74-300)	26, 28D, 29D, 30D, 31
DBCx6-300RK1 (Chemraz® & Teflon®/Viton®)	replacement seal kit, Chemraz® stuffing box O-ring, Teflon® stuffing box to body O-ring, Chemraz® body O-ring, Teflon®/Viton® cam gasket, Teflon® poppet screw O-ring (for DBC76-300)	26, 28E, 29C, 30E, 31
DBCx7-300RK1 (Teflon®/Viton® & Chemraz®)	replacement seal kit, Chemraz® stuffing box O-ring, Teflon® stuffing box to body O-ring, Teflon®/Viton® body O-ring, Teflon®/Viton® cam gasket, Teflon® poppet screw O-ring (for DBC77-300)	26, 28E, 29C, 30F, 31
DBC71-300RK2	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBC71-300)	5A, 6, 9
DBC72-300RK2	replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBC72-300)	5B, 6, 9
DBCx3-300RK2	replacement Teflon® nose seal, Teflon® buttons & Teflon® bushing (for DBC73-300, DBC76-300 & DBC77-300)	6, 9, 33
DBC74-300RK2	replacement EPDM seal cylinder, Teflon® buttons & Teflon® bushing (for DBC74-300)	5D, 6, 9
DBCX1-300RK3	replacement Buna coupler gasket	28A
DBCx2-300RK3	replacement Viton® coupler gasket	28B
DBCxx-300RK4	replacement link kit, clevis pin, cotter pin, stem, link arm & yoke (for all 3" SS)	4, 12, 13, 20, 22,
DBCxx-300RK5	replacement stuffing box kit, stuffing box, Teflon® O-ring & bearing (for all 3" SS)	15, 21, 26
DBCxx-300RK6	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 3" SS)	1, 16, 23, 24
DBCxx-300RK7	replacement shaft kit, shaft, cotter pin bearing, shaft retainer, (for all 3" SS)	11, 14, 19, 22
DBCxx-300RK8	main cylinder spring	7
DBCxx-300RK9	replacement poppet kit, poppet, poppet screw, set screw & Teflon® O-ring (for all 3" SS)	3, 17, 18, 31

# DBS 90° Swivel Cam & Groove Dry Disconnects

## 2" Aluminum 90° Swivel Couplers



Section A - A

## DBS 90° Swivel Cam & Groove Dry Disconnects 2" Aluminum 90° Swivel Couplers

### 2" aluminum 90° coupler Bill of Materials DBS6x-200

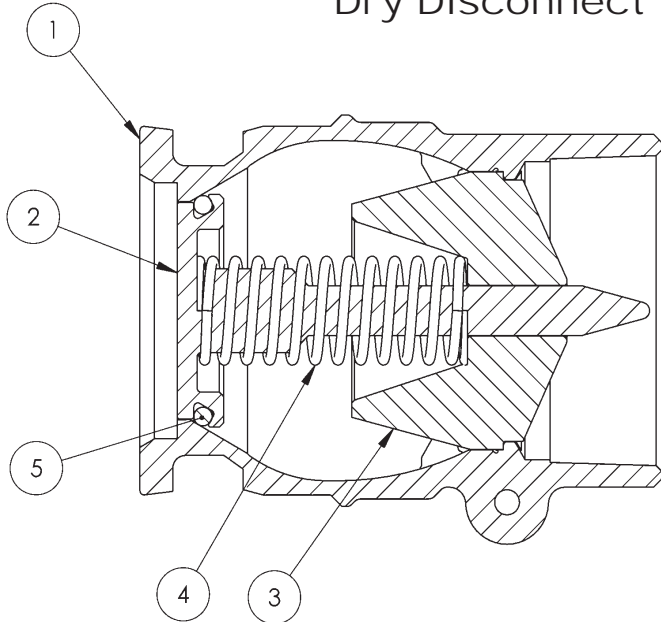
Item #	Description	Part #	Qty
1	lock washer	10111	4
2	stuffing box	40074SS	1
3	back up ring	40075TF	1
4A	crank shaft O-ring Buna (for DBS61-200)	40076BN	1
4B	crank shaft O-ring Viton® (for DBS62-200)	40076VI	1
5	stuffing box Teflon® O-ring	40077TF	1
6	large crank shaft bearing	40078FG	1
7	small crank shaft bearing	40079SS	1
8	lever (handle)	40080SS	1
9A	seal cylinder (for DBS61-200)	40081ALBN	1
9B	seal cylinder (for DBS62-200)	40081ALVI	1
10	Teflon® button	40082TF	6
11	yoke	40083SS	1
12	Teflon® bushing	40084TF	1
13A	body & swivel Buna O-ring (for DBS61-200)	40085BN	2
13B	body & swivel Viton® O-ring (for DBS62-200)	40085VI	2
14	link rivet	40086SS	1
15	groove pin	40087SS	1
16	crank shaft cotter pin	40088SS	1
17	link cotter pin	40088SS	1
18	EZ Boss lock cam arm	40089SS	2
19A	cam gasket Buna (for DBS61-200)	250-G-BU	1
19B	cam gasket Viton® (for DBS62-200)	250-G-VI	1
20	poppet	40091SS	1
21	crank shaft	40092SS	1
22	link arm	40093SS	1
23	link washer	40094SS	1
24	poppet screw Teflon® O-ring	40095TF	1
25	cylinder spring	DBCxx-200RK8	1
26	set screw	40097SS	1
27	poppet screw (round head)	40098SS	1
28	lock washer	40099SS	1
29	socket head cap screw	40100SS	1
30	cam arm spring pin	40101SS	2
31	main body	-	1
32	elbow body	-	1
33	bottom bearing	40106AC	1
34	top bearing	40108AC	1
35	washer	40109AC	1
36	flange retainer	40110ST	4
37	screw	40111SS	4

### Repair Kits

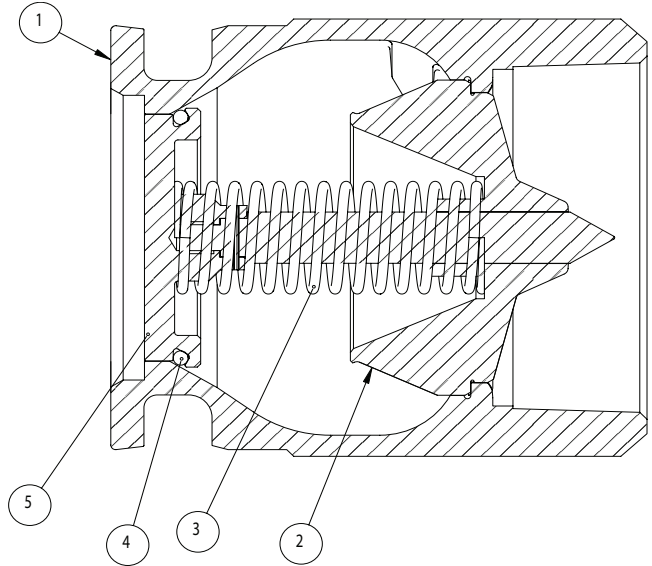
Part #	Description	Includes Item #
<b>DBS61-200RK1</b>	replacement seal kit, Buna crank shaft O-ring, Teflon® stuffing box O-ring, Buna & Swivel body O-rings, Buna cam gasket, Teflon® O-ring (for DBS61-200)	4A, 5, 13A, 19A, 24
<b>DBS62-200RK1</b>	replacement seal kit, Viton® crank shaft O-ring, Teflon® stuffing box O-ring, Viton® body & swivel O-rings, Viton® cam gasket, Teflon® O-ring (for DBS62-200)	4B, 5, 13B, 19B, 24
<b>DBS61-200RK4</b>	swivel rebuild kit, Buna body O-ring, top & bottom bearings, washer, flange retainers & screws (for DBS61-200)	13A, 33, 34, 35, 36, 37
<b>DBS62-200RK4</b>	swivel rebuild kit, Viton® body O-ring, top & bottom bearings, washer, flange retainers & screws (for DBS62-200)	13B, 33, 34, 35, 36, 37
<b>DBS61-200RK10</b>	replacement swivel seal kit, Buna body O-ring, top & bottom bearings (for DBS61-200)	13A, 33, 34
<b>DBS62-200RK10</b>	replacement swivel seal kit, Buna body O-ring, top & bottom bearings (for DBS62-200)	13B, 33, 34
<b>DBC61-200RK2</b>	replacement Buna seal cylinder, Teflon® buttons & Teflon® bushing (for DBS61-200)	9A, 10, 12
<b>DBC62-200RK2</b>	replacement Viton® seal cylinder, Teflon® buttons & Teflon® bushing (for DBS62-200)	9B, 10, 12
<b>DBCxx-200RK4</b>	replacement link kit, link rivet, cotter pins, link washer, link arm & yoke (for all 2" aluminum)	11, 14, 16, 22, 23
<b>DBCxx-200RK5</b>	replacement stuffing box kit, stuffing box, Teflon® O-ring & large crank shaft bearing. (for all 2" aluminum)	2, 5, 6
<b>DBCxx-200RK6</b>	replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 2" aluminum)	8, 15, 28, 29
<b>DBCxx-200RK7</b>	replacement crank shaft kit, crank shaft, cotter pin & washer (for all 2" aluminum)	16, 21, 23
<b>DBCxx-200RK8</b>	main cylinder spring	25
<b>DBCxx-200RK9</b>	replacement poppet kit, poppet, round head screw, set screw & Teflon® O-ring (for all 2" aluminum)	20, 24, 26, 27
<b>DBCL-200</b>	optional add on padlockable lever kit, (handle) (for all 2")	not illustrated



## Dry Disconnect Bayonet Style Adapters



**2" Adapter**



**3" Adapter**

### Bill of Materials, 2" Adapter

Item #	Description	Part #	Qty
1	stainless body	<b>40053SS</b>	1
2	brass poppet	<b>40054BR</b>	1
3	stainless deflector	<b>40055SS</b>	1
4	stainless spring	<b>40056SS</b>	1
5A	Buna O-ring (for BA31-200)	<b>BA31-200RK1</b>	1
5B	Viton® O-ring (for BA32-200)	<b>BA32-200RK1</b>	1

### Bill of Materials, 3" Adapter

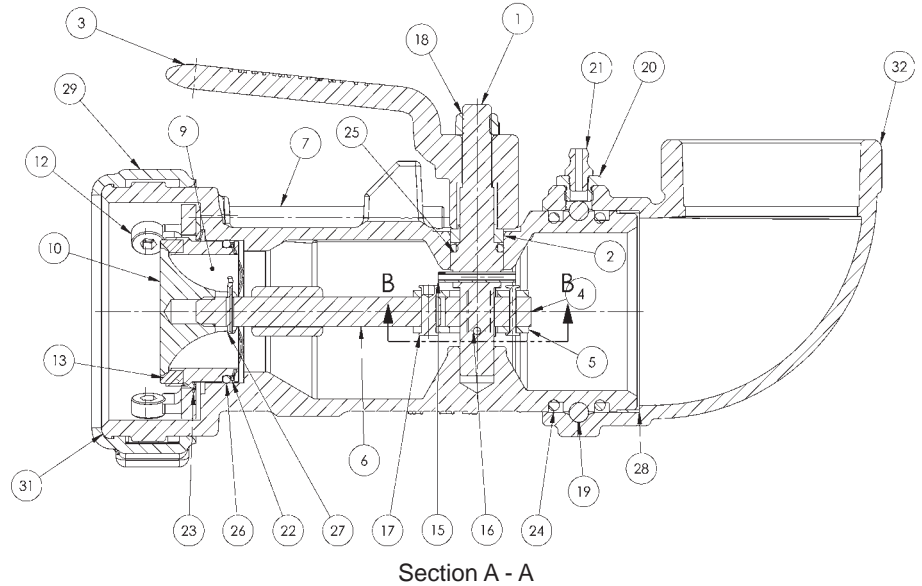
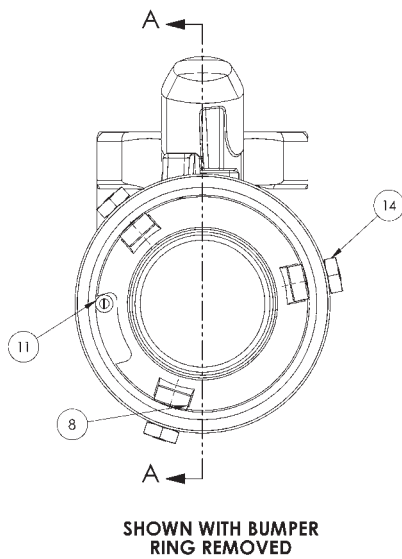
Item #	Description	Part #	Qty
1	aluminum body	<b>40278AL</b>	1
2	aluminum deflector	<b>40280AL</b>	1
3	aluminum spring	<b>40281SS</b>	1
4A	Buna O-ring (for BA61-300)	<b>BA31-300RK1</b>	1
4B	Viton® O-ring (for BA61-300)	<b>BA31-300RK1</b>	1
5	aluminum poppet	<b>40279AL</b>	1

### Bill of Materials, 3" Adapter

Item #	Description	Part #	Qty
1	bronze body	<b>40278BR</b>	1
2	brass deflector	<b>40280BR</b>	1
3	stainless spring	<b>40281SS</b>	1
4	Buna O-ring (BA31-300)	<b>BA31-300RK1</b>	1
5A	Viton® O-ring (BA32-300)	<b>BA31-300RK1</b>	1
5B	brass poppet	<b>40279BR</b>	1



# Dry Disconnect Bayonet Style Couplers



## Bill of Materials

Item #	Description	Part #	Qty
1	lever shaft	40138SS	1
2	follower	40139SS	1
3	lever (handle)	40140SS	1
4	link	40141SS	1
5	belt link	40142SS	2
6	stem	40143SS	1
7	interlocking pin	40144SS	1
8	lock link	40145SS	1
9	nose piece	40146HC	1
10	poppet	40147CA	1
11	coiled pin	40148SS	1
12	bayonet stud	40149SS	3
13	Buna nose seal (BS61-200)	40150BN	1
14	Viton® nose seal (BS62-200)	40150VI	1
15A	jam nut	40151SS	3
15B	spring pin	40152SS	1
16	grooved pin	40153SS	1
17	rivet	40154SS	2
18	lock nut	40155SS	1
19	ball bearing	40156SS	32
20	ball plug	40157BR	1
21	grease fitting (BS 90° swivel)	40158ST	1
22	set screw (BSS straight swivel)	40178SS	1
23A	wave spring	40159SS	2
23B	wave spring washer	40160SS	1
24	Buna swivel O-ring (BS61-200)	40161BN	2
25	Viton® swivel O-ring (BS62-200)	40161VI	2
26A	Buna stem O-ring (BS61-200)	40162BN	1
26B	Viton® stem O-ring (BS62-200)	40162VI	1
27A	Buna nose O-ring (BS61-200)	40163BN	1
27B	Viton® nose O-ring (BS62-200)	40163VI	1
28A	cotter pin	40164SS	1
28B	bearing strip	40165NY	1
29	bumper ring	40166VY	1
30	label	40161AL	1
31	main body	---	1
32	swivel body	---	1

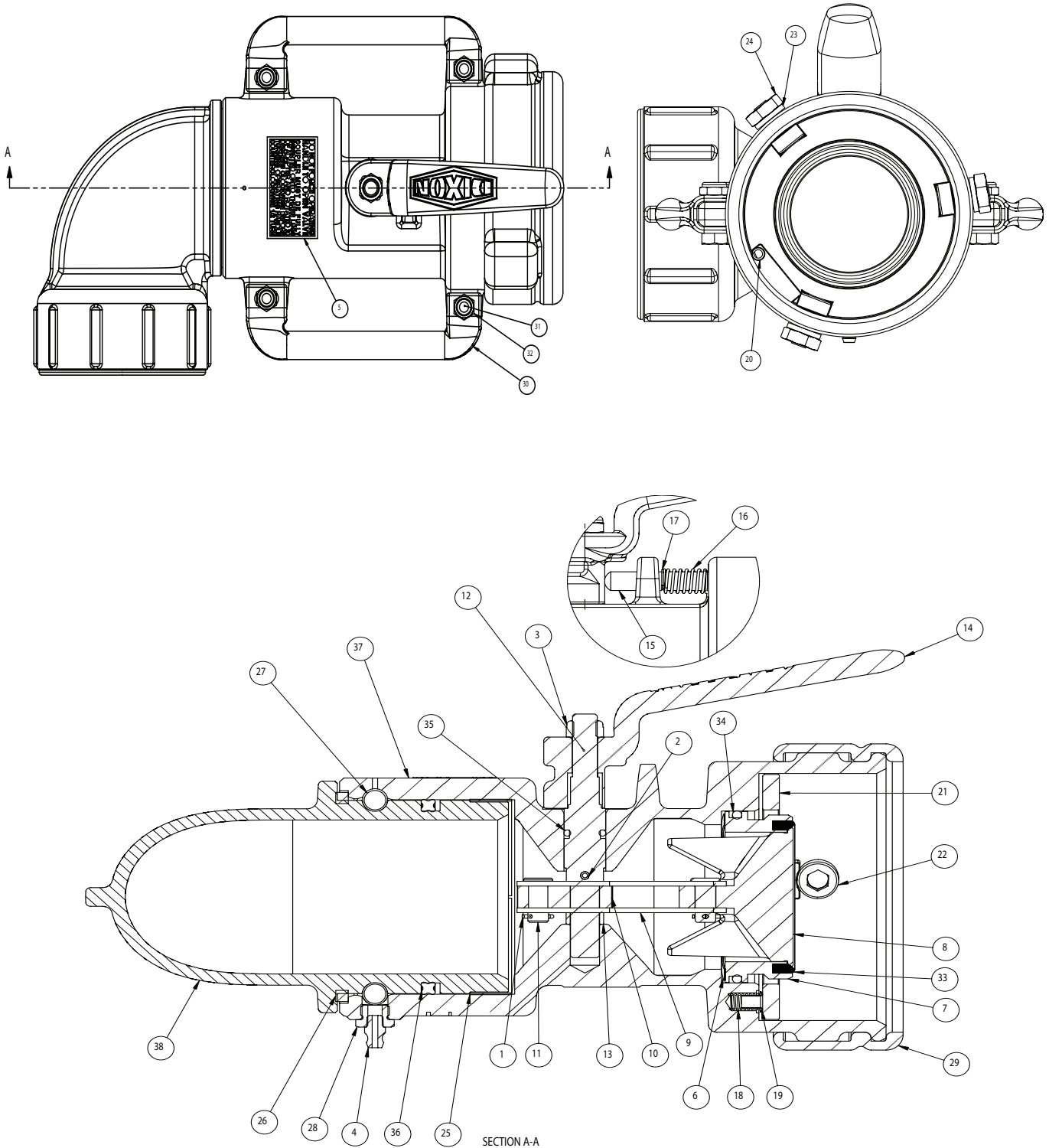
Illustrated is the 90° swivel coupler (BS series).

The straight swivel coupler (BSS series) uses the same components except it does not have #21A grease nipple, it utilizes a #21B set screw plug.

## Repair Kit

Part #	Description	Includes Item #s
<b>BS61-200RK1</b>	nose seal, spring pin, grooved pin, O-rings, cotter pin, bearing strip, bumper ring	13, 15, 16, 24, 25, 26, 27, 28, 29
<b>BS62-200RK1</b>	nose seal, spring pin, grooved pin, O-rings, cotter pin, bearing strip, bumper ring	13, 15, 16, 24, 25, 26, 27, 28, 29
<b>BS61-200RK2</b>	O-ring, bearing strip	24, 28
<b>BS62-200RK2</b>	O-ring, bearing strip	24, 28

# BA/BS/BSS Series Bayonet Style Dry Disconnects 3" 90° & Straight Swivel Couplers



## BA/BS/BSS Series Bayonet Style Dry Disconnects 3" 90° & Straight Swivel Couplers

*Illustrated on page 96 is the 90° swivel coupler (BS series).  
The straight swivel coupler (BSS series) uses the same  
components.*

### 3" swivel aluminum coupler

#### Bill of Materials BS6x-300 & BSS6x-300

Item #	Description	Part #	Qty
1	cotter pin	40088SS	2
2	spring pin	40152SS	1
3	lock nut	40155SS	1
4	grease fitting	40158ST	1
5	label	40167AL	1
6	wave spring	40246SS	1
7	nose piece	40247HC	1
8	poppet	40248CA	1
9	bent link	40249SS	2
10	drive link	40250SS	1
11	clevis pin	40251SS	2
12	stem	40252SS	1
13	stem spacer	40253AL	1
14	lever (Handle)	40254SS	1
15	interlock pin	40255SS	1
16	compression spring	40256SS	1
17	retaining ring	40257ST	1
18	compression spring	40258SS	3
19	eyelet	40259BR	3
20	spring pin	40260SS	1
21	lock ring	40261SS	1
22	bayonet stud	40262SS	3
23	lock washer	40263SS	3
24	nut	40264SS	3
25	bearing strip	40265NY	1
26	dust seal	40266FL	1
27	ball bearings	40267SS	27
28	ball plug	40268BR	1
29	bumper ring	40269VY	1
30	grip handle	40270SS	2
31	bolt	40271SS	4
32	lock nut	40272SS	4
33A	Buna nose seal	40273BN	1
33B	Viton® nose seal	40273VI	1
34A	Buna nose body O-ring	40274BN	1
34B	Viton® nose body O-ring	40274VI	2
35A	Buna stem O-ring	40275BN	1
35B	Viton® stem O-ring	40275VI	1
36A	Buna quad ring	40276BN	1
36B	Viton® quad ring	40276VI	1
37	main body	---	1
38	swivel body	---	1

#### Complete Seal Repair Kit - Buna

Part #	Description	Includes Item #s
<b>BS61-300RK1</b>	seal repair kit, Viton® nose seal, spring pin, grooved pin, Viton® swivel O-rings, Viton® stem O-ring, Viton® nose body O-ring, cotter pin, bearing strip & bumper ring	15A, 17, 18, 26A, 27A, 28A, 29, 30, 31
<b>BS62-300RK1</b>	seal repair kit, Viton® nose seal, spring pin, grooved pin, Viton® swivel O-rings, Viton® stem O-ring, Viton® nose body O-ring, cotter pin, bearing strip & bumper ring	15B, 17, 18, 26B, 27B, 28B, 29, 30, 32
<b>BS61-300RK2</b>	swivel seal repair kit, Buna swivel O-rings & bearing strip	26A, 30
<b>BS62-300RK2</b>	swivel seal repair kit, Viton® swivel O-rings & bearing strip	26B, 31

1011.....	93	111729.....	59	1565U.....	24	3020-RD-SS.....	21
100-AL-SS.....	33	111730.....	59	1570RK.....	81	3020RDSSAP.....	21
100AV-12.....	74	111732.....	59, 64	1580R.....	24	3025ASSAP.....	21
100AV-15.....	74	111733.....	70	15S.....	20	3030RDSSAP.....	21
100AV-17.....	74	111929.....	65	200-AL-AL.....	31	3040ALT-AL.....	31
100-DL-SS.....	31	112012.....	57, 62, 65	200-AL-SS.....	31	3040DLT-AL.....	31
110088.....	74	112028.....	56	200-DL-AL.....	31	31025600DOT.....	26
110319.....	62, 63, 64, 65	112044.....	70	200-DL-SS.....	31	31026000DOT.....	26
110717.....	67	112056.....	56	200-G-BU.....	85, 86	31035614DOT.....	27
110746.....	73, 74	112090.....	80	200-G-EPR.....	85, 86	31035618DOT.....	27
110748.....	68	112091.....	80	200-G-TES.....	85, 86	31036014DOT.....	27
110798.....	72, 74	112092.....	80	200-G-TFVI.....	86	31036018DOT.....	27
110892.....	70	112097.....	56	200-G-VI.....	85, 86	31045600DOT.....	26
110902.....	78	112098.....	56	200-GPCBU.....	21	31046000DOT.....	26
111233.....	65	112099.....	76	200GPCTF.....	21	31065600DOT.....	26
111309.....	65	112138.....	63	200-PC-MI.....	21	31066000DOT.....	26
111450.....	65	112140.....	63	200-PC-SS.....	21	31085614DOT.....	27
111542.....	51	1124D.....	22	200-PV-9.....	25	31085618DOT.....	27
111550.....	51	1125A.....	73, 78	2143SEALBU.....	7	31086014DOT.....	27
111552.....	51	112D.....	22	234-80-4.....	76	31086018DOT.....	27
111553.....	51	112DNS.....	22	234-80-5.....	76	31095614DOT.....	27
111554.....	51	112DSK.....	73	250-G-BU.....	87, 88, 93	31095618DOT.....	27
111556.....	51	114/2D-TK.....	73, 74	250-G-EPR.....	87, 88, 93	31096014DOT.....	27
111557.....	51	1143A.....	73, 74, 78	250-G-TES.....	87, 88, 93	31096018DOT.....	27
111558.....	51	1143B.....	74	250-G-TFVI.....	87, 88, 93	31145614DOT.....	27
111559.....	51	1144D.....	22	250-G-VI.....	87, 88, 93	31146018DOT.....	27
111560.....	51	114D.....	22	2500L.....	25	31155614DOT.....	27
111561.....	51	114DAL-2.....	73	2500RW.....	25	31155618DOT.....	27
111562.....	51, 70	114DAL-3.....	74	2500SFV.....	25	31156014DOT.....	27
111563.....	51	114DAL-4.....	74	2WAYBV200.....	20	31156018DOT.....	27
111564.....	51	114DAL-9.....	73	2WAYBV300.....	20	31405600DOT.....	26
111565.....	51	114DAL10.....	73, 74	300-AL-AL.....	31	31406000DOT.....	26
111566.....	51	114DAL-AV-15.....	74	300-AL-MI.....	31	31440-225AL.....	7
111569.....	51, 53, 64, 70	114DAL-AV-16.....	74	300-AL-SS.....	31	31485614DOT.....	27
111570.....	68	114DAL-AV-19.....	73, 74	300-ALT-AL.....	31	341641.....	66
111572.....	70	114DAL-AV-20.....	74	300-ALT-SS.....	31	341643.....	66
111573.....	51	114DAL-AV-22.....	74	300-ASSSAP.....	21	341703.....	78
111574.....	51	114DAL-AV-25.....	74	300-DL-AL.....	31	390552.....	67
111575.....	70	114DAV.....	22	300-DL-SS.....	31	390795.....	65
111579.....	51	114DAV-SK.....	74	300-DLT-AL.....	31	390812.....	51
111580.....	51	114DAV-06ASM.....	22	300-G-BU.....	56, 68	390813.....	51
111581.....	65	114DAVR.....	22	300GPCBU.....	21	390817.....	65
111678.....	50	114DNS.....	22	300GPCTF.....	21	390822.....	66
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111686.....	66	1250-94.....	22	300PCSSAP.....	21	391137.....	80
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111693.....	66	112052.....	53	300-SFC-SS.....	21	40002AL.....	83
111694.....	66	112053.....	53	3010-RC-SS.....	21	40003AL.....	83
111719.....	78	1500SK.....	81	3020-RD-AL.....	21	40003SS.....	83
111723.....	64	150-AL-SS.....	31	3020-RD-MI.....	21	40004SS.....	65
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40056SS.....	94	40108AC.....	93	40158ST.....	97, 97	40223CR.....	90, 91
400636.....	66	40109AC.....	93	40159SS.....	95	40223EP.....	90, 91
400637.....	65	40110ST.....	93	40160SS.....	95	40223VB.....	90
400669.....	64	40111SS.....	93	40161BN.....	95	40224BN.....	90, 91
40074SS.....	85, 86, 87, 88, 93	40114SS.....	85, 86	40161VI.....	95	40224CR.....	91
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4066.....	82	4540SG-RK1.....	53	5205-RK1.....	52	6200D.....	8
4068.....	82	4540SG-RK2.....	53	5205-RK2.....	52	6200EHK.....	65
4071.....	82	4540SG-RK3.....	53	5205-RK3.....	52	6200RH.....	8
40278AL.....	94	4SFI-G-VI.....	16	5205-RK4.....	52, 53	6200RHA.....	8
40280AL.....	94	4SFIPSG.....	16	525AV.....	24	6200SGK.....	57, 58, 61, 62
40281SS.....	94					6200SHK.....	58, 59, 62
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