



The Right Connection®

# Tanker & Overfill Prevention Products



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# Tanker & Overfill Prevention Products

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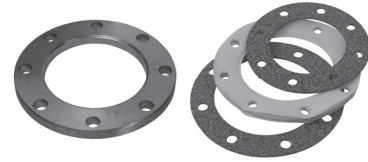
# Tanker & Overfill Prevention Products

## Petroleum Tanker Products

Bayco brand 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 minimise inventory of repair items.

### Aluminium TTMA Flanges and Round Flange Gaskets

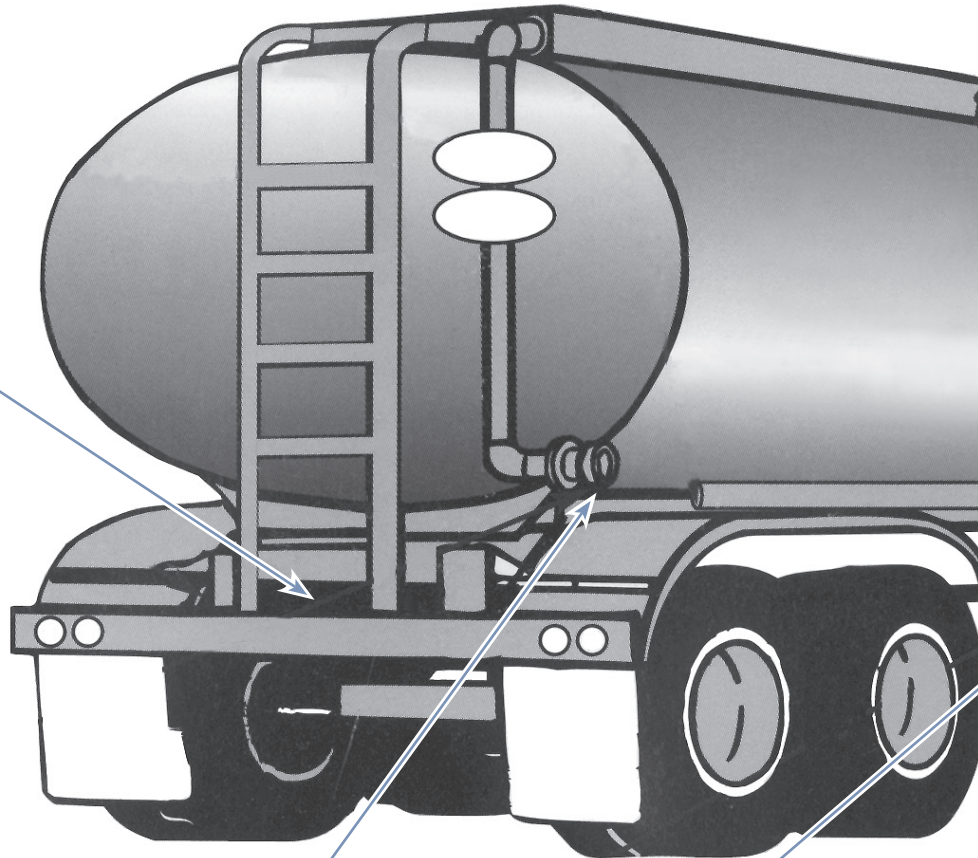
TTF3AL  
TTF4AL  
FG4540  
4443



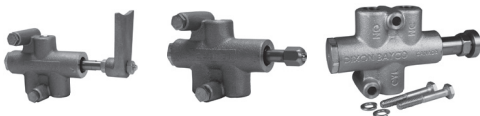
### Grounding Stud



GS1  
GS2



### Air Interlocks



5000AIV

5000AIR

5000AIHD

### Vapour Valves



VR4000

VR4100

VR4100F

### Footvalve



### Locking Fill Caps



SA4050

VR4050AL

### Vapour Caps



VR4050

VR4050PL

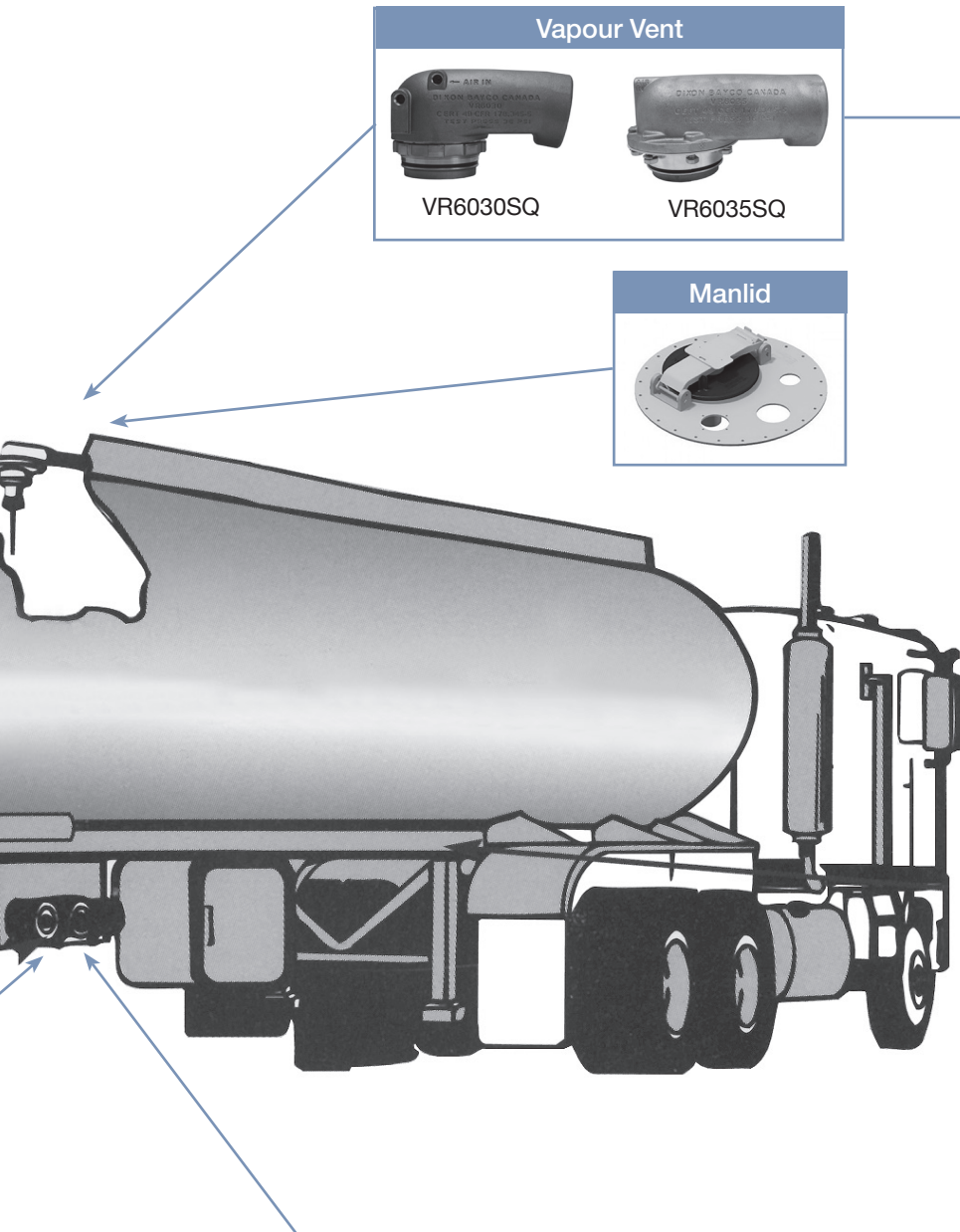
### Vapour Couplers



VRC4040CS-AL

VR4030CS





**Vapour Vent**

VR6030SQ      VR6035SQ

**Manlid**

**FloTech™ Overfill Detection**

**Sockets**

**FT555 Tester**

**API's**

5204L      5204  
5200SFI      5204SFI

**Indicator**

DBPI080

**Dust Caps**

**4500 Series Drop Adapters**

4540      4540F      4540SG

**API Cap Assembly**

5205      5000-25



# Petroleum Products

## Dixon Bayco Fuel Compatibility Chart Biofuel Compatible

| DIXON BAYCO PRODUCT                   | DESCRIPTION  | FUEL PRODUCT* |        |      |           |     |     |     |      |     |     |      |
|---------------------------------------|--|---------------|--------|------|-----------|-----|-----|-----|------|-----|-----|------|
|                                       |  | GASO-LINE     | DIESEL | ULSD | CRUDE OIL | E10 | E20 | E85 | E100 | B2  | B20 | B100 |
| 4500 Series                           | Two Piece API Drop Adapter With Sight Glass, Baylast Seals           | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 4500V Series                          | Two Piece API Drop Adapter With Sight Glass, FKM Seals               | ✓             | ✓      | ✓    | ✓         | NR  | NR  | NR  | NR   | ✓   | ✓   | ✓    |
| 4530 & 4540                           | API Drop Adapter Without Sight Glass, Baylast Seals                  | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 4530V & 4540V                         | API Drop Adapter Without Sight Glass, FKM Seals                      | ✓             | ✓      | ✓    | ✓         | NR  | NR  | NR  | NR   | ✓   | ✓   | ✓    |
| 4530SG & 4540SG                       | One Piece API Drop Adapter With Sight Glass, Baylast™ Seals          | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 4530SGV & 4540SGV                     | One Piece API Drop Adapter With Sight Glass, FKM Seals               | ✓             | ✓      | ✓    | ✓         | NR  | NR  | NR  | NR   | ✓   | ✓   | ✓    |
| 5200SFI & 5200SFI-3                   | TTMA Flanged Sight Glass With Baylast™ Seals                         | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5200SFIV & 5200SFIV-3                 | TTMA Flanged Sight Glass With FKM Seals                              | ✓             | ✓      | ✓    | NR2       | NR  | NR  | NR  | NR   | ✓   | ✓   | ✓    |
| 5204                                  | API Valve With Sight Glass, Baylast™ Seals                           | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | NR  | NR   | ✓   | ✓   | ✓    |
| 5204C                                 | API Valve With Sight Glass & Removable Handle, Baylast™ Seals        | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | NR  | NR   | ✓   | ✓   | ✓    |
| 5204L                                 | API Load Only Valve With Sight Glass, Baylast™ Seals                 | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | NR  | NR   | ✓   | ✓   | ✓    |
| 5204LNG                               | API Load Only Valve Without Sight Glass, Baylast™ Seals              | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5204NG                                | API Valve Without Sight Glass, Baylast™ Seals                        | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5204NGC                               | API Valve Without Sight Glass, With Removable Handle, Baylast™ Seals | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5204NGV                               | API Valve Without Sight Glass, FKM Seals                             | ✓             | ✓      | ✓    | NR2       | NR  | NR  | NR  | NR   | ✓   | ✓   | ✓    |
| 5204SFI                               | API Valve With Inline Tube Sight Glass, Baylast™ Seals               | ✓             | ✓      | ✓    | NR2       | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5204SNG                               | API Valve Without Sight Glass, Baylast™ Seals, Stainless Spring      | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5204TNG                               | API Valve Without Sight Glass, PTFE Seals                            | NR1           | NR1    | NR1  | NR1       | NR1 | NR1 | NR1 | NR1  | NR1 | NR1 | 3    |
| 5300 & 5400                           | API Rack Coupling Buna Seals   | ✓             | ✓      | ✓    | NR        | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | NR   |
| 5300B & 5400B                         | API Rack Coupling FKM-B Seals  | ✓             | ✓      | ✓    | NR        | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 5300G & 5400G                         | API Rack Coupling FKM GFLT Seals                                     | ✓             | ✓      | ✓    | NR        | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| Vapour or Product Hose Couplings      | Petroleum Vapour Hose Couplings, Buna Seals                          | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | NR   |
| Vapour or Product Hose Couplings      | Petroleum Vapour Hose Couplings, FKM Seals                           | ✓             | ✓      | ✓    | ✓         | NR  | NR  | NR  | NR   | ✓   | ✓   | ✓    |
| VR4000 & VR4100 Series Vapour Valves  | Petroleum Vapour Valves  | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| VR6100, VR6200 & VR6500 Vapour Elbows | Petroleum Vapour Elbows & Inlets                                     | ✓             | ✓      | ✓    | NA        | ✓   | ✓   | ✓   | NA   | ✓   | ✓   | NA   |
| VR6030SQ & VR6035SQ                   | Sequential Vapour Vent Valves, Baylast™ Seals                        | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 300GTTFCB & 400GTTFCB                 | Cork Buna TTMA gasket  | ✓             | ✓      | ✓    | ✓         | ✓   | NR  | NR  | NR   | ✓   | NR  | NR   |
| 300GTTFBL & 400GTTFBL                 | TTMA Baylast™ Gasket   | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 400GTTFK                              | Klinger® Style TTMA Gasket   | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 40321TF, 40322TF & 40323TF            | PTFE Soft Core TTMA Gaskets  | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| 40364BL & 40323BL                     | Baylast™ Sump Gaskets  | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| FT151, FT202, FT101                   | FloTech™ Sensors   | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |
| FT150S, FT100S                        | FloTech™ Stainless Steel Sensors                                     | ✓             | ✓      | ✓    | ✓         | ✓   | ✓   | ✓   | ✓    | ✓   | ✓   | ✓    |

Notes:

|      |  |           |   |
|------|--|-----------|---|
| NA   | Not Applicable (This product is not used in this application)  | Crude Oil | Oil in its natural state, as it comes from the ground. Crude oil can contain various other chemicals and gases, many of which can be corrosive. |
| NR   | Not Recommended  |           |   |
| NR1  | Not Recommended cost and tendency for PTFE to become damaged from particulate material is not justified for this application.  | E10       | 10% Ethanol, 90% Gasoline   |
|      |  | E20       | 20% Ethanol, 80% Gasoline   |
| NR2  | Not Recommended crude oil contains acids that are corrosive to steel parts   | E85       | 85% Ethanol, 15% Gasoline   |
|      |  | E100      | 100% Ethanol  |
| ULSD | Ultra low sulfur diesel (ULSD) is a term used to describe a standard for defining diesel fuel with substantially lowered sulfur contents. As of 2006, almost all of the petroleum based diesel fuel available in Europe and North America is of a ULSD type. | B2        | 2% Bio diesel, 98% diesel (normally ULSD as above)  |
|      |  | B20       | 20% Bio diesel, 80% diesel (normally ULSD as above)   |
|      |  | B100      | 100% Bio diesel   |

\* Petroleum companies often put additives in fuels, additives can affect compatibility with fittings and seals, Please contact Dixon™ for more information. FKM GFLT is compatible with all liquids listed above and available from Dixon™ by special quotation. Baylast™ is a proprietary seal compound from Dixon™.



## 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 API valves to interchange with competitor items made to the same specification. Two styles are available; a load only model without handle and a load/unload model with a handle to allow manual opening.

- Unique flow and fluid level sight indicators 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 (PTFE seals optional)
- Any required maintenance is simplified, can be completely rebuilt without removing the valve from the tank
- The ALH (anodised aluminium hard coat) nose ring can be rotated to provide a fresh cam service to compensate for wear



| API LOAD /UNLOAD VALVE |   |
|------------------------|---|
| PART NO.               | DESCRIPTION   |
| 5204NG                 | Fixed handle, without sight glass, ALH nose ring, Baylast™ seal                                 |
| 5204                   | Fixed handle, sight glass, ALH nose ring, Baylast™ seal   |
| 5204C                  | Removable handle*, sight glass, ALH nose ring, Baylast™ seal                                    |
| 5204NGC                | Removable handle*, without sight glass, ALH nose ring, Baylast™ seal                            |
| 5204SNG                | Fixed handle, without sight glass, ALH nose ring, stainless spring for crude oil, Baylast™ seal |
| 5204TNG                | Fixed handle, without sight glass, ALH nose ring, PTFE seals                                    |
| 5204NGV                | Fixed handle, without sight glass, Viton® seals   |
| 5204SFI-P              | Fixed handle, Baylast™ seals and inline full body sight glass, drilled / tapped                 |

\* Removable handle for Canadian market



| API LOAD ONLY VALVE |   |
|---------------------|---|
| PART NO.            | DESCRIPTION   |
| 5204L               | Load only API valve with sight glass, ALH nose ring                 |
| 5204LNG             | Load only API valve without sight glass, ALH nose rings             |
| 5204LSNG            | Load only API valve without sight glass with stainless steel spring |



# Petroleum Products

## API Dust Caps



5205



5000-24



5000-25



5000-24L

| PART NO.  | DESCRIPTION   |
|-----------|---|
| 5205      | Aluminium API cap with flat buna gasket, with nylon quick release lever       |
| 5000-24 1 | Aluminium API cap with O-ring Baylast™ seal*, with brass cam arms             |
| 5000-25   | Nylon API cap with flat buna seal, with plated steel padlockable roller lever |
| 5000-24L  | Aluminium API cap with O-ring Baylast™ seal*, with brass locking cam arms     |

\* FKM seal available.

## API Drop Adapters



4530GFI



4540



4540SG



4502



4540F

| PART NO. | DESCRIPTION   |
|----------|---|
| 4530     | API to 3" drop adapter, Baylast™ O-ring seal                                |
| 4530SG   | API to 3" drop adapter, Baylast™ flat gasket, in line sight glass           |
| 4530GFI  | API to 3" drop adapter BSPP thread c/w sight glass and flow indicator       |
| 4540     | API to 4" drop adapter, Baylast™ O-ring seal                                |
| 4540V    | API to 4" drop adapter, FKM O-ring seal                                     |
| 4540SG   | API to 4" drop adapter, Baylast™ flat gasket, one piece, inline sight glass |
| 4502     | API to 4" drop adapter, Buna-N seals, two piece design with sight glass     |
| 4540SGV  | API to 4" drop adapter, FKM flat gasket, inline sight glass                 |
| 4540F    | API to 4" drop coupler, Buna-N gasket                                       |
| 4502ASSM | API to 4" drop adapter, Baylast™ O-ring w/ sight glass, two piece design    |
| 4504ASSM | API to 4" drop coupler, Buna-N gasket w/ sight glass, two piece design      |



## Gravity Drop Adapters



31440-225AL



41440-225AL



40447ST

\*FKM seal available.

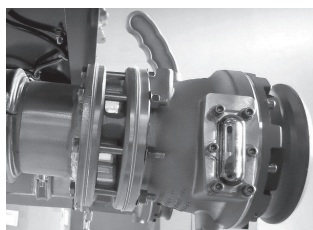
See pages 88-90 for repair parts.

Threaded connection available on request.

| PART NO.    | DESCRIPTION                                       |
|-------------|---|
| 31440-225AL | 4" API to 3" drop adapter with Buna-N flat gasket |
| 41440-225AL | 4" API to 4" drop adapter with Buna-N flat gasket |
| 40447ST     | Heavy duty chain                                  |

## TTMA Flanged Sight Flow Indicators

### Features & Benefits:



5200-SFI shown mounted on petroleum tank



5200-SFI

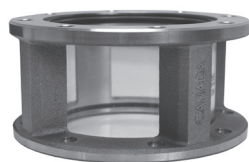
- Due to the proprietary blending of petroleum products, Dixon™ recommends that the thermoplastic tubing and the gaskets be immersion tested in the product to be handled to ensure compatibility (not compatible with crude oil).
- Durable cast aluminium housing replaces competitions all acrylic sight glass commonly found on tank trucks
- Allows for visual identification of the fuel grade prior to opening the valve
- Works with tank truck flanged butterfly valves found on gasoline trucks
- Low cost sight glass tube can be easily replaced
- Rated to 150 PSI

| PART NO.                 | DESCRIPTION  |
|--------------------------|--|
| 5200-SFI-3               | 3" TTMA flange sight flow, 1 3/4" width, 3 1/2" inside diameter                        |
| 5200C-SFI-3 <sup>1</sup> | 3" TTMA flange sight flow, 1 3/4" width, 3 1/2" inside diameter, stainless retain ring |
| 5200-SFI                 | 4" TTMA flange sight flow, 1 3/4" width, 4" inside diameter                            |
| 5200C-SFI <sup>1</sup>   | 4" TTMA flange sight flow, 1 3/4" width, 4" inside diameter, stainless retain ring     |

<sup>1</sup> Are compatible with crude oil.

Note: Maximum flange bolt torque is 200 in-lb (inch pounds)

### Features & Benefits:



5201-SFI

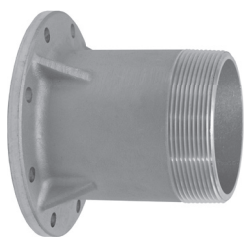
- Due to the proprietary blending of petroleum products, Dixon™ recommends that the thermoplastic tubing and the gaskets be immersion tested in the product to be handled to ensure compatibility (not compatible with crude oil).
- Allows for visual identification of the fuel grade prior to opening the valve
- Works with tank truck flanged butterfly valves found on gasoline trucks
- Larger ID 4" flow indicator allows tank truck flanged butterfly valves to connect to either end of the indicator
- Rated to 150 PSI

| PART NO.   | DESCRIPTION   |
|------------|---|
| 5201-SFI   | 4" TTMA flange sight flow, 3 1/4" width, 4" inside diameter     |
| 5201-SFI-3 | 3" TTMA flange sight flow, 3 1/4" width, 3 1/2" inside diameter |

**TTMA Flanges**



TTF4AL-4MT



TTF4AL-4EMT



TTF4AL-4FT



TTF4AL



TTF400SP

| PART NO.     | DESCRIPTION  |
|--------------|--|
| TTF3AL-3MT   | 3" TTMA flange x 3" male NPT, 2½" overall length             |
| TTF4AL-3MT   | 4" TTMA flange x 3" male NPT, 2½" overall length             |
| TTF4ALHC-3MT | 4" TTMA flange x 3" male NPT, 2½" overall length, hardcoated |
| TTF4AL-3EMT  | 4" TTMA flange x 3" male NPT, 5½" overall length             |
| TTF4AL-3FT   | 4" TTMA flange x 3" female NPT, 2½" overall length           |
| TTF4AL-4MT   | 4" TTMA flange x 4" male NPT, 2½" overall length             |
| TTF4ALHC-4MT | 4" TTMA flange x 4" male NPT, 2½" overall length, hardcoated |
| TTF4AL-4EMT  | 4" TTMA flange x 4" male NPT, 5½" overall length             |
| TTF4AL-4FT   | 4" TTMA flange x 4" female NPT, 2½" overall length           |
| TTF3AL       | 3" TTMA butt weld on flange                                  |
| TTF4AL       | 4" TTMA butt weld on flange                                  |
| TTF400SP     | 4" TTMA socket weld on flange                                |

See page 11 for TTMA flange gaskets.

**TTMA Flange x Cam and Groove**



400-ALT-AL



4022ALTAL



400-DLT-AL



4022DLTAL

| PART NO.   | DESCRIPTION   |
|------------|---|
| 300-ALT-AL | 3" TTMA flange x 3" cam and groove adapter (straight) |
| 3040ALTAL  | 3" TTMA flange x 4" cam and groove adapter (straight) |
| 400-ALT-AL | 4" TTMA flange x 4" cam and groove adapter (straight) |
| 40022ALTAL | 4" TTMA flange x 4" cam and groove adapter (22½°)     |
| 600-ALT-AL | 6" TTMA flange x 6" cam and groove adapter (straight) |
| 300-DLT-AL | 3" TTMA flange x 3" cam and groove coupler (straight) |
| 3040DLTAL  | 3" TTMA flange x 4" cam and groove coupler (straight) |
| 400-DLT-AL | 4" TTMA flange x 4" cam and groove coupler (straight) |
| 40022DLTAL | 4" TTMA flange x 4" cam and groove coupler (22½°)     |

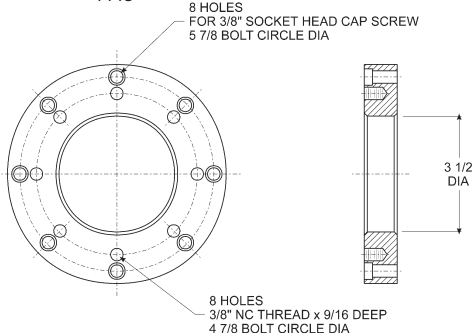
See page 11 for TTMA flange gaskets.



### TTMA Flange Reducer



4443



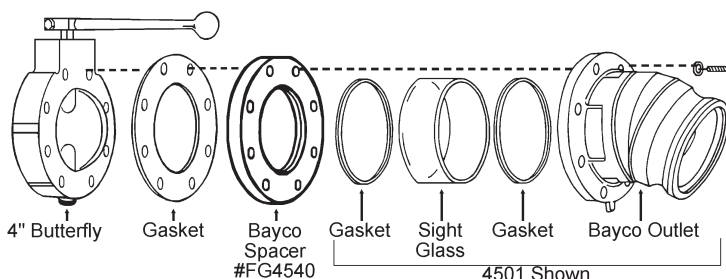
| PART NO. | DESCRIPTION                      |
|----------|----------------------------------|
| 4443     | 4" TTMA x 3" TTMA reducer flange |

### TTMA Butterfly Valve Spacer



FG4540

| PART NO. | DESCRIPTION           |
|----------|-----------------------|
| FG4540   | 4" TTMA flange spacer |



### API and TTMA Flange Gaskets



| PART NO.  | SIZE | DESCRIPTION                          | OD       | ID      | THICKNESS | BOLT CIRCLE |
|-----------|------|--------------------------------------|----------|---------|-----------|-------------|
| 300GTTFCB | 3"   | TTMA - Cork/Buna                     | 5-5/8"   | 3 1/2"  | "         | 4-7/8"      |
| 300GTTFBL | 3"   | TTMA - Baylast™                      | 5-5/8"   | 3-5/8"  | "         | 4-7/8"      |
| 300GTTFK  | 3"   | TTMA Klinger nylon                   | 5-5/8"   | 3 1/2"  | "         | 4-7/8"      |
| 40321TF   | 3"   | TTMA - PTFE with soft fiber core     | 5-29/32" | 3 1/2"  | 3/32"     | 4-7/8"      |
| 40364TF   | 3"   | API Sump - PTFE with soft fiber core | 7 1/4"   | 5"      | 5/32"     | 6 1/4"      |
| 40364BL   | 3"   | API Sump - Baylast™                  | 7 1/4"   | 5"      | "         | 6 1/4"      |
| 400GTTFCB | 4"   | TTMA - Cork/Buna                     | 6-5/8"   | 4-9/16" | "         | 5-7/8"      |
| 400GTTFBL | 4"   | TTMA - Baylast™                      | 6-5/8"   | 4-5/8"  | "         | 5-7/8"      |
| 400GTTFK  | 4"   | TTMA Klinger nylon                   | 6-5/8"   | 4-9/16" | "         | 5-7/8"      |
| 40322TF   | 4"   | TTMA - PTFE with soft fiber core     | 6-7/8"   | 4-5/8"  | 3/32"     | 5-7/8"      |
| 40323TF   | 4"   | API Sump - PTFE with soft fiber core | 8-3/8"   | 5-7/8"  | 5/32"     | 7 1/4"      |
| 40323BL   | 4"   | API Sump - Baylast™                  | 8 1/4"   | 6"      | "         | 7 1/4"      |

# Petroleum Products

## Vapour Return Valves

**Standards:** Manufactured to connect to vapour hose couplings

**Materials:** Aluminium body and buna seals, nylon \* or acrylic \* sight glass if equipped

**Features & Benefits:**

- Rugged cast aluminium construction
- Variety of tank connections to suit any application, including 4" TTMA flange, 3" and 4" Female NPT and 4" female NPS
- Air interlock mounting pad. (VR4000 requires 5000AIV, other models can use the 5000AI, 5000AIS or 5000AIST interlock valves)
- VR4000 is a bulb design which allows for maximum vapour flow, also features 2 large acrylic sight glasses and a drain plug.
- Available with or without poppets. Poppeted versions prevent vapour from escaping from the tanker.
- Easy seal replacement while still on the tanker
- Biofuel vapour compatible, up to E100 (100% Ethanol) and B20 (20% bio diesel).

\* Dependent upon part #, see part number list below for more details



VR4000



VR3100



VR4100



VR4100F



VR4100F-SFI

| PART NO.     | ADAPTER SIZE | TANKER CONNECTION | INLET POPPET VALVE | SIGHT GLASS | DESCRIPTION   |
|--------------|--------------|-------------------|--------------------|-------------|---|
| VR3100       | 4"           | 3" female NPT     | Yes                | No          | Vapour valve, low profile design  |
| VR3100NP     | 4"           | 3" female NPT     | No                 | No          | Vapour valve, low profile design  |
| VR4100       | 4"           | 4" female NPT     | Yes                | No          | Vapour valve, low profile design  |
| VR4100NP     | 4"           | 4" female NPT     | No                 | No          | Vapour valve, low profile design  |
| VR4100S      | 4"           | 4" female NPS     | Yes                | No          | Vapour valve, low profile design  |
| VR4100NPS    | 4"           | 4" female NPS     | No                 | No          | Vapour valve, low profile design  |
| VR4100F      | 4"           | 4" TTMA Flange    | Yes                | Yes         | Vapour valve, low profile design  |
| VR4100FNG    | 4"           | 4" TTMA Flange    | Yes                | No          | Vapour valve, low profile design  |
| VR4100F-SFI  | 4"           | 4" TTMA Flange    | Yes                | Yes         | Vapour valve, low profile design  |
| VR4100F-NGNP | 4"           | 4" TTMA Flange    | No                 | No          | Vapour valve, low profile design  |
| VR4000       | 4"           | 4" TTMA Flange    | Yes                | Yes         | Bulb design for maximum flow, (if required use 5000AIV interlock valve) |

## Vapour Hose Couplings



VR4030CS-AL



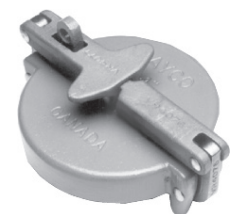
VR4040CS-AL

| PART NO.                 | COUPLER SIZE | CONNECTION TYPE & SIZE  | POPETT VALVE | PROBE |
|--------------------------|--------------|-------------------------|--------------|-------|
| VRC3000AL                | 3"           | 3" hose                 | No           | Yes   |
| VR4030CS-AL <sup>1</sup> | 4"           | 3" hose                 | Yes          | Yes   |
| VR4040CS-AL              | 4"           | 4" hose                 | Yes          | Yes   |
| VR4040CS-4MNPT           | 4"           | 4" male NPT             | Yes          | Yes   |
| 4020-CVR-AL              | 4"           | 2" hose                 | No           | Yes   |
| 4030-CVR-AL              | 4"           | 3" hose                 | No           | Yes   |
| 400-CVR-AL               | 4"           | 4" hose                 | No           | Yes   |
| 4030-DVR-AL              | 4"           | 3" female NPT           | No           | Yes   |
| 400-DVR-AL               | 4"           | 4" female NPT           | No           | Yes   |
| 4030-DAVR-AL             | 4"           | 3" cam & groove adapter | No           | Yes   |
| 400-DDVR-AL              | 4"           | 4" cam & groove coupler | No           | Yes   |
| VR4030CS-NP              | 4"           | 3" hose                 | No           | Yes   |



## Vapour Caps

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



| PART NO.                          | DESCRIPTION   |
|-----------------------------------|---|
| VR4050AL<br>VR4050ALC<br>400-G-BU | Aluminium cap<br>Aluminium cap with chain<br>Replacement gasket |



| PART NO.                             | DESCRIPTION   |
|--------------------------------------|---|
| VR4050PL<br>VR4050PLC<br>VR4050PLRK1 | Ultra lightweight nylon cap<br>Ultra lightweight nylon cap with chain<br>Replacement gasket |

## Sequential Vapour Vents

Sequential vapour vents are used for venting tank vapours during the bottom loading and unloading of petroleum tankers. These pneumatically activated vapour vents can either be installed to open sequentially or to open independently. Vapour vents available to suit either 16" or 20" tank manholes.

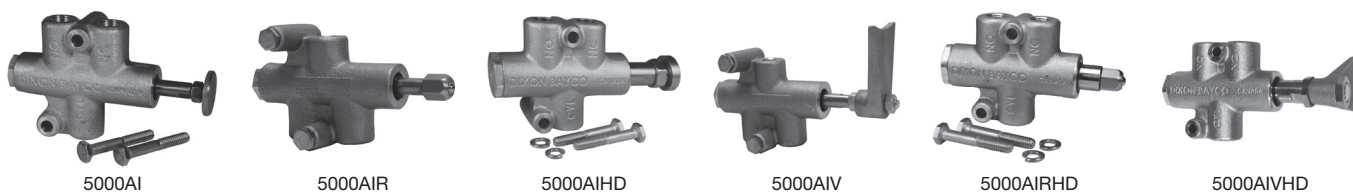
- Highest flow vapour recovery vents on the market
- Floating piston design ensures long life and resists poppet sticking
- Tested vapour tight to 36 psi, certification 49 CFR 178.345-5
- Baylast™ seals resist chemical attack from fuel additives and alcohol
- Can be used for both sequential and non-sequential operation
- Sealed system eliminates common leak points and improves reliability
- Quick and easy to rebuild with simple hand tools



| PART NO.                        | DESCRIPTION   |
|---------------------------------|---|
| VR6030SQ<br>VR6035SQ<br>40193AL | For 16" manhole, mounting ring attachment<br>For 20" manhole, 3" TTMA flange attachment<br>VR6035SQ adapter flange for Parker style vents |

## Air Interlock Valves

### Standard Air Interlock Valves



| PART NO.  | DESCRIPTION   |
|-----------|---|
| 5000AI    | 1" button plunger pneumatic interlock, Baylast™ seals   |
| 5000AIST  | 1½" button plunger pneumatic interlock, Baylast™ seals  |
| 5000AIR   | Roller ball plunger pneumatic interlock, ideal for use on cabinet doors, Baylast™ seals   |
| 5000AIS   | 1" button plunger pneumatic/electronic interlock, ideal for connecting to lights or the overfill detection system, Baylast™ seals |
| 5000AIV   | Paddle plunger pneumatic interlock, for use on VR4000 vapour valve, Baylast™ seals  |
| 5000AIHD  | Heavy duty, high flow air ports, same foot print as 5000AI, Baylast™ seals  |
| 5000AIRHD | Roller end for various angles, large air ports, Baylast™ seals  |
| 5000AIVHD | Heavy duty air interlock with paddle plunger, Baylast™ seals  |

### Heavy Duty 6-Port Air Interlock Valves



| PART NO.  | DESCRIPTION  |
|-----------|--|
| 5006AIHD  | Heavy duty, high flow air ports, Baylast™ seals                |
| 5006AIRHD | Roller end for various angles, large air ports, Baylast™ seals |
| 5006AIVHD | Heavy duty air interlock with paddle plunger, Baylast™ seals   |



## API Bottom Rack Loading Fitting

Dixon API coupler uses a snap on connection where the coupling action is automatic upon contact with the API adapter. The coupler is completely modular so it can be built with various face seal combinations to be compatible with different alternative fuel, performance levels and applications. Two models are available: bonded nose seal and replaceable nose seal.

### Material Specifications:

- Body: hard coated anodized AL 356 T6
- Shroud: hard coated anodized AL 356 T6, SS insert
- Link, shaft, pin and crank: hardened 17-4PH stainless steel
- Cam: CF8M stainless steel
- Poppet and bearing: ZA-12
- Seal options: Baylast™, Viton-B®, Viton® GFLT

### Chemical Compatibility (Baylast™ seals):

- Gasoline
- Diesel
- Avgas
- 100% ethanol
- 100% methanol
- B2 to B20 biodiesel blends

### Technical Specifications:

- Weight: 9.1 kgs.
- Maximum working pressure: 150 PSI
- Peak surge pressure: 350 PSI
- Operating temperature:  
 Viton® seals: -29°C (-20°F) to 204°C (+400°F)  
 Baylast™ seals: -29°C (-20°F) to 121°C (+250°F)
- Maximum flow rate: 600 GPM
- Pressure drop: 3 to 4 PSI

### Chemical Compatibility (Viton-B® seals):

- Gasoline
- Diesel
- Jet fuel
- Avgas
- 100% ethanol
- 100% methanol
- 100% biodiesel
- Any blend of the above fluids

- 4" TTMA inlet mounting flange
- 5 cam design for easy alignment and tight connection
- Ball-end handle for easy, comfortable operation
- No special tools needed for maintenance
- Shaft seals can be changed without removing coupler from loading arm
- Fully compliant with API RP1004:2003 specifications
- Fully interlocked collar can not be opened when connected and can not be disconnected when opened
- One piece bonded nose seal ensures long life and cannot be washed out
- Optional replaceable nose seal for quick replacement without removal from loading arm



bonded nose seal  
model - 5300

| BOTTOM LOADING ARM API COUPLER |                           |                                    |
|--------------------------------|---------------------------|------------------------------------|
| BONDED NOSE SEAL NO.           | REPLACEMENT NOSE SEAL NO. | SEAL MATERIAL                      |
| 5300<br>5300B<br>5300G         | 5400<br>5400B<br>5400G    | Baylast™<br>Viton-B®<br>Viton GFLT |



## Ball Nozzles for Bulk Delivery

The Bayco brand ball nozzle uses a 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 rotate seven at temperatures as low as -40°C (-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 a field replaceable Scully compatible connector or tube spout



| BALL NOZZLES FOR BULK DELIVERY |   |
|--------------------------------|---|
| PART NO.                       | DESCRIPTION   |
| BL062                          | 1 1/4" NPT swivel inlet x quick fill outlet               |
| BL064                          | 1 1/2" NPT swivel inlet x quick fill outlet               |
| BL066                          | 1 1/4" NPT swivel inlet x 1 1/4" NPT with spout           |
| BL066NS                        | 1 1/4" NPT swivel inlet x 1 1/4" NPT without spout        |
| BL068                          | 1 1/2" NPT swivel inlet x 1 1/4" NPT with spout           |
| BL068NS                        | 1 1/2" NPT swivel inlet x 1 1/4" NPT without spout        |
| BL072                          | 1 1/2" NPT swivel inlet x 1 1/2" NPT with spout           |
| BL072NS                        | 1 1/2" NPT inlet x 1 1/2" NPT without spout               |
| 1125A - BSPT                   | 1 1/2" aluminium replacement spout - BSPT thread          |
| BL072-BSPP                     | 1 1/2" BSP inlet x 1 1/2" inlet ball nozzle without spout |
| BL924                          | 2" BSP inlet x 2" inlet ball nozzle without spout         |
| 875-4                          | 12 straight spout for 900 nozzle                          |
| G20085T                        | 2" BSP x 1" delivery spout                                |

Note: Nozzles also available in BSPP thread.

## 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.



| SWIVEL NUT PIPE ADAPTERS FOR BALL NOZZLES |                 |
|---|-----------------|
| PART NO.                                  | DESCRIPTION     |
| BL002                                     | 1 1/4" male NPT |
| BL001                                     | 1 1/2" male NPT |
| BL005                                     | fine thread     |

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



## One Way Full Flow Ball Valves

**Application:** One way full flow ball valves are often used to control the flow of products from tanker compartments.

**Standards:** Manufactured with 2", 3" or 4" female NPT, socket weld to Schedule 40 or grooved ends.

**Materials:** Aluminium body, aluminium and stainless steel wetted parts, FPM (FKM and PTFE seals).

- Features & Benefits:**
- High flow with low pressure drop
  - Working pressure of 150 PSI at 21°C (70°F)
  - Valve spindle can be disassembled with valve installed.



1WAYBV300



1WAYBV300SW



1WAYBV300VIC

| PART NO.     | SIZE | DESCRIPTION             |
|--------------|------|-------------------------|
| 1WAYBV200    | 2"   | Female NPT              |
| 1WAYBV300    | 3"   | Female NPT              |
| 1WAYBV400    | 4"   | Female NPT              |
| 1WAYBV200SW  | 2"   | Schedule 40 socket weld |
| 1WAYBV300SW  | 3"   | Schedule 40 socket weld |
| 1WAYBV200VIC | 2"   | Grooved connections     |
| 1WAYBV300VIC | 3"   | Grooved connections     |

## Two Way-3 Port Diverting Ball Valves

**Application:** Two way diverting ball valves are often used to diverting or mixing products between tanker compartments.

**Standards:** Manufactured with 2", 3" or 4" female NPT, socket weld to Schedule 40 or grooved ends.

**Materials:** Aluminium body, aluminium and stainless steel wetted parts, FPM (FKM and PTFE seals).

- Features & Benefits:**
- High flow with low pressure drop
  - Working pressure of 150 PSI at 21°C (70°F)
  - Valve spindle can be disassembled with valve installed.



2WAYBV300



2WAYBV300SW



2WAYBV300VIC3

| PART NO.      | SIZE | DESCRIPTION             |
|---------------|------|-------------------------|
| 2WAYBV200     | 2"   | Female NPT              |
| 2WAYBV300     | 3"   | Female NPT              |
| 2WAYBV400     | 4"   | Female NPT              |
| 2WAYBV200SW   | 2"   | Schedule 40 socket weld |
| 2WAYBV300SW   | 3"   | Schedule 40 socket weld |
| 2WAYBV200VIC3 | 2"   | Grooved connections     |
| 2WAYBV300VIC3 | 3"   | Grooved connections     |

## Dust Caps and Dust Plugs with Handle



400-DC-ALPH



400-DP-ALPH

| PART NO.    | SIZE | DESCRIPTION         |
|-------------|------|---------------------|
| 300-DC-ALPH | 3"   | Aluminium dust cap  |
| 300-DP-ALPH | 3"   | Aluminium dust plug |
| 400-DC-ALPH | 4"   | Aluminium dust cap  |
| 400-DP-ALPH | 4"   | Aluminium dust plug |

## Tank Transport Equipment



| PIPE CAPS WITH 12" CHAIN AND 'S' HOOK - BSPP THREAD |      |
|---|------|
| ALUMINIUM PART NO.                                  | SIZE |
| 300PCALAP   | 3"   |

## Tank Transport Equipment - Intermodel



| STAINLESS STEEL REDUCERS* FEMALE BSPP X MALE BSP |         |
|--|---------|
| STAINLESS STEEL* PART NO.                        | SIZE    |
| 3020RDSSAP                                       | 3" x 2" |

\* PTFE gaskets standard

## Gaskets & Washers

| BUNA-N PART NO. | PTFE PART NO. | NEOPRENE PART NO. | VITON PART NO. | SIZE   |
|-----------------|---------------|-------------------|----------------|--------|
| -               | 150GPCTF      | -                 | -              | 1 1/2" |
| 200GPCBU        | 200GPCTF      | KNW25             | KVW25          | 2"     |
| 300GPCBU        | 300GPCTF      | KNW35             | KVW35          | 3"     |
| -               | 400GPCTF      | KNW40             | -              | 4"     |

## Static Grounding Balls

**Application:** To help prevent static electric sparking when loading or unloading tankers containing flammable products, the tanker is grounded using a grounding cable with spring clip attached to a tank mounted static grounding ball.

**Standards:** Manufactured with 3/8" -16UN-3A thread.

**Materials:** Brass or stainless steel.

**Features & Benefits:**

- Helps eliminate static electricity sparking
- Valve spindle can be disassembled with valve installed.



GS1



GS2

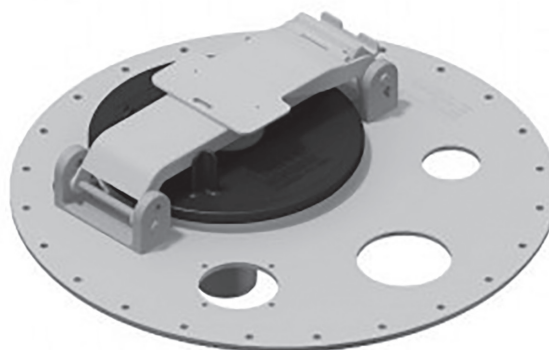
| PART NO. | DESCRIPTION                    |
|----------|--------------------------------|
| GS1      | Brass grounding ball           |
| GS1-2    | Brass grounding ball with nut  |
| GS2      | Stainless steel grounding ball |

## Bolted Manhole/Manlid

**Application:**

Aluminium Manlid has an industry standard 24-hole bolt pattern sized for M8 bolts. The cover has provisions for a vapour recovery vent, overfill protection sensor and dip tube and complete with PAF 7545 pressure relief valve (PRV) and a 6866AL normal vent.

The manhole assembly conforms to ADR 2009, EN13314:2002, EN13317:2002, EN14595:2005, EN14596:2005, SANS 1518:2008 and AS2809.2-2008 drop test requirements.



| PART NO. | DESCRIPTION |
|----------|-------------|
| DML1001  | Manlid      |



## Pneumatic Foot Valve

**Application:**

The ADR/EN Pneumatic Foot valve body is constructed of aluminium and features a shear section which meets break-away requirements of EN13308 and TTMA RP 84 per 49CFR§178.345-8.

A heavy mounting flange is provided to insure a flat gasket surface, and a jack screw is included in the event of an air system failure.

The valve features an interlock system for sequential actuation of other components or indicator signals. A stainless steel screen prevents objects in the tank from entering the piping.

- Maximum Operating Pressure is defined as the maximum tank pressure that valve can open against w/ given air-line pressure.
- Maximum Operating Pressure is 21 psi with 80 psi line pressure and 27 psi with 100 psi line pressure.
- The Valve MAWP is 73 psi [5 bar]
- Minimum Shell Strength is 365 psi [25 bar]

Standard and Low Profile options are available.



| PART NO.   | DESCRIPTION            |
|------------|------------------------|
| DFTV100-SP | Standard Foot Valve    |
| DFTV100-LP | Low Profile Foot Valve |

## Product Grade Indicator

### Application:

This indicator unit is designed to be mounted near the API discharge valves on road tankers. Multi product grade indicators are available individually and are used by simply the pulling and turning of the handle until the required information is displayed



| PART NO. | DESCRIPTION             |
|----------|-------------------------|
| DBPI080  | Product Grade Indicator |

## Tanker Reeling Hose

### Application:

- Designed for use with DIN smooth tail couplings and clamps.
- Sold as 60m assemblies' c/w 2817 fittings. Spring guard optional.
- Suitable for diesel, domestic oils and fuels.
- Red, oil, abrasion, ozone & UV resistant cover.
- Maximum Working Pressure: 17 bar positive.
- Temperature Range: -20 deg C to +70 deg C.
- 35mm Nominal Bore - other sizes available on request



| PART NO.       | DESCRIPTION                  |
|----------------|------------------------------|
| A420035-60MF-T | Tanker Reeling Hose Assembly |

**FloTech™ Overfill Prevention Products**

Overfill detection for road tankers is a secondary emergency shut-off system used to prevent overfilling of tanker compartments during the terminal loading process. When an overfill situation is detected, the system will override and shut down the terminal pump/metreing equipment filling the tanker compartment(s).

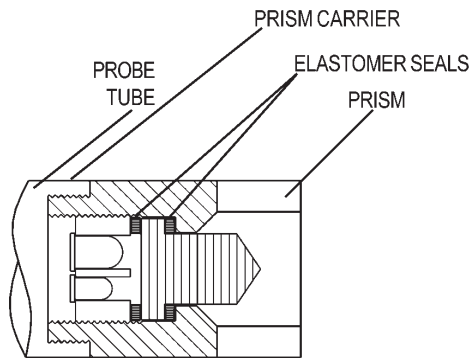
The system consists of overfill sensing devices, which are electronically connected to controls at the terminal through a plug and socket connection. Often on board tanker monitors are employed to inform on the loading process and provide diagnostic data should a problem occur. Monitors also translate electronic signal formats for different operating

systems which may exist between the trailer and terminal. The two signal formats used are known as optic and thermistor and are defined by API as Standard #1004. FloTech™ products specifications for bottom loading and are approved by FM and CSA. Products are manufactured in accordance with EN13922.

Dixon manufactures a full line of sensors, monitors and sockets compatible with Scully and Civacon systems as well as complete overfill kits.



## Principals of Operation



### Knowledge and Experienced Design

Dixon employees have vast 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 Dixon 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

Dixon 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. FloTech™ brand items are shipped with easy to follow installation instructions and manuals.

### Easy Installation

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

### Products In Stock, Delivered On Time

Dixon realise that downtime costs you money so we do everything we can to ensure you receive your parts when you need them.

### A Great Product With An Unparalleled Warranty

FloTech™ brand products are covered by a five year limited warranty. The warranty is part of the total system that makes FloTech™ overfill detection the best choice for your operation.

## FloTech™ Checkmate Overfill/Retain Plug-n-Play System

**Application:**

The reason for many overfill system breakdowns is failed or poor wiring connections. The required amperage within the overfill system is so low that any poorly wired or corroded wiring connections tend to fail (the low current cannot pass through corrosion or poor connections). To remove the possibility of wiring system problems, Dixon™ has introduced the FloTech™.

Plug-n-Play system, all the wire connections are prewired and tested at the factory using high quality weather proof cables and plugs. Plug-n-Play system installation takes a fraction of the time to install when compared to conventional systems, just mount all the components and simply plug them all together.


**Standards:**

Manufactured to American Petroleum Institute standard API RP-1004, which allows for interchangeability.

**Materials:**

Dependent upon the component, see each product section for materials.

**Features & Benefits:**

- Prewired cables and plugs on sensors, wiring harness', onboard monitor and sockets, make it simple to install our Plug-n-Play system in much less time than conventional systems.
- Secure and weather tight connections all the time remove the possibility of poor wiring connections. Sealed connectors pass IP67 and DIN40050 salt spray tests.
- Easy installation: literally Plug-n-Play, just mount the components and plug them all together.
- Biofuel compatible up to E100 (100% Ethanol) and B100 (100% bio diesel) 



## Monitors with Integrated Dual Sockets

**Features & Benefits:**

- Integrated Optic and Thermistor dual sockets with onboard monitor all in one aluminium case
- Takes less space than utilising separate sockets and monitor
- Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of manual crimped wire connections and removes the problems and worries associated with connection problems.
- Includes water-tight integrated fuse holder, all stainless steel hardware and terminal blocks prevent corrosion
- Built-in configurable high current relay output for pump or signal control
- Colour coded display shows well on trailers
- Sockets come standard with FloTech™ unique guaranteed for life stainless steel wear rings.

**Available Integrated Options:**

- Top (overfill) only monitoring, or both top (overfill) and bottom (retain) monitoring
- Pre-wired ground bolt
- Pre-wired pressure sensor which can be used to interlock brakes or vapour vents
- Pre-wired TIM module
- Pre-wired dual male pin power cord



Biofuel Compatible

**FloTech™ Checkmate Overfill/Retain Plug-n-Play System Monitors with Integrated Dual Sockets (continued)**



| PART NO.        | PLUG-N-PLAY CONNECTIONS |                         | AVAILABLE ACCESSORIES INSTALLED |                        |            |                            |  | SOCKETS                     |                              |
|-----------------|-------------------------|-------------------------|---------------------------------|------------------------|------------|----------------------------|--|-----------------------------|------------------------------|
|                 | TOP OVERFILL DETECTION  | BOTTOM RETAIN DETECTION | GROUND BOLT                     | PRESSURE SENSOR SWITCH | TIM MODULE | DUAL MALE PIN - POWER CORD | STAINLESS STEEL 'GUARANTEED FOR LIFE' WEAR RINGS | OPTIC                       | THERMISTOR                   |
| FT208-390P      | Yes                     | No                      | No                              | No                     | No         | No                         | Standard   | 6 contact pins, 3 "J" slots | 10 contact pins, 4 "J" slots |
| FT208-390PG     | Yes                     | No                      | Yes                             | No                     | No         | No                         | Standard   |                             |                              |
| FT208-390PGS    | Yes                     | No                      | Yes                             | Yes                    | No         | No                         | Standard   |                             |                              |
| FT208-390PGST   | Yes                     | No                      | Yes                             | Yes                    | Yes        | No                         | Standard   |                             |                              |
| FT208-390PGT    | Yes                     | No                      | Yes                             | No                     | Yes        | No                         | Standard   |                             |                              |
| FT208-390PGSO   | Yes                     | No                      | Yes                             | Yes                    | No         | Yes                        | Standard   |                             |                              |
| FT208-390PGSTO  | Yes                     | No                      | Yes                             | Yes                    | Yes        | Yes                        | Standard   |                             |                              |
| FT208-390PP     | Yes                     | Yes                     | No                              | No                     | No         | No                         | Standard   |                             |                              |
| FT208-390PPG    | Yes                     | Yes                     | Yes                             | No                     | No         | No                         | Standard   |                             |                              |
| FT208-390PPGS   | Yes                     | Yes                     | Yes                             | Yes                    | No         | No                         | Standard   |                             |                              |
| FT208-390PPGST  | Yes                     | Yes                     | Yes                             | Yes                    | Yes        | No                         | Standard   |                             |                              |
| FT208-390PPGT   | Yes                     | Yes                     | Yes                             | No                     | Yes        | No                         | Standard   |                             |                              |
| FT208-390PPGSO  | Yes                     | Yes                     | Yes                             | Yes                    | No         | Yes                        | Standard   |                             |                              |
| FT208-390PPGSTO | Yes                     | Yes                     | Yes                             | Yes                    | Yes        | Yes                        | Standard   |                             |                              |
| FT208-391P      | Yes                     | No                      | No                              | No                     | No         | No                         | Standard   | 6 contact pins, 4 "J" slots | 10 contact pins, 4 "J" slots |
| FT208-391PG     | Yes                     | No                      | Yes                             | No                     | No         | No                         | Standard   |                             |                              |
| FT208-391PGS    | Yes                     | No                      | Yes                             | Yes                    | No         | No                         | Standard   |                             |                              |
| FT208-391PGST   | Yes                     | No                      | Yes                             | Yes                    | Yes        | No                         | Standard   |                             |                              |
| FT208-391PGT    | Yes                     | No                      | Yes                             | No                     | Yes        | No                         | Standard   |                             |                              |
| FT208-391PP     | Yes                     | Yes                     | No                              | No                     | No         | No                         | Standard   |                             |                              |
| FT208-391PPG    | Yes                     | Yes                     | Yes                             | No                     | No         | No                         | Standard   |                             |                              |
| FT208-391PPGS   | Yes                     | Yes                     | Yes                             | Yes                    | No         | No                         | Standard   |                             |                              |
| FT208-391PPGST  | Yes                     | Yes                     | Yes                             | Yes                    | Yes        | No                         | Standard   |                             |                              |
| FT208-391PPGT   | Yes                     | Yes                     | Yes                             | No                     | Yes        | No                         | Standard   |                             |                              |

See pages 128-129 for repair kits and replacement parts.



## FloTech™ Checkmate Overfill/Retain Plug-n-Play System Stand Alone Monitors

**Features & Benefits:**

- Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of manual crimped wire connections, and removes the problems and worries associated with connection problems
- Includes water-tight integrated fuse holder, all stainless steel hardware and terminal block within the aluminium housing
- High tech colour coded display shows well on trailers
- Monitors include advanced diagnostic capabilities as well as signal translation abilities for all socket types (optic, thermistor or float). The system offers true load at any rack compatibility.

**Available Integrated Options:**

- Top (overfill) only monitoring, or both top (overfill) and bottom (retain) monitoring.



| PART NO. | DESCRIPTION  |
|----------|--|
| FT208P   | Checkmate monitor with Plug-n-Play connectors, top overfill protection only                                      |
| FT208PP  | Checkmate monitor with Plug-n-Play connectors, top overfill and bottom retain detection                          |
| FT208PPC | Checkmate monitor with Plug-n-Play connectors, top overfill and bottom retain detection, for Canadian 'B' trains |
| FT208PSS | Checkmate monitor with Plug-n-Play connectors, dual pressure switches  |
| FT208LCM | Checkmate Load Control Monitor   |
| FT220    | Alarm module with sonalert   |
| FT295    | Alarm interface module assembly  |

See page 130 for repair kits and replacement parts.

## Stand Alone Socket Assemblies

**Features & Benefits:**

- Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of manual crimped wire connections, and removes the problems and worries associated with connection problems
- Aluminium housings, with either aluminium hardcoat or stainless steel wear rings, stainless steel contact pins
- Dual and triple socket assemblies take less space than multiple single sockets.

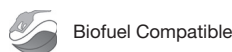
**Available Integrated Options:**

- Pre-wired internal ground wire (dual or triple socket assemblies)
- Pre-wired TIM module (dual or triple socket assemblies)
- FT300P and FT301P sockets are available with FloTech™ unique guaranteed for life stainless steel wear rings as options. Plug-n-Play dual and triple sockets come standard with guaranteed for life stainless steel wear rings.



FT390PG-20

| PART NO.          | DESCRIPTION   |
|-------------------|---|
| <b>FT300P</b>     | Single socket with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots (U.S.)  |
| <b>FT300PG</b>    | Single socket with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots (U.S.). With internal ground wire.  |
| <b>FT301P</b>     | Single socket with Plug-n-Play connector. API Thermistor, 8 contact pins and 4 J slots (U.S.)   |
| <b>FT306P</b>     | Single socket with Plug-n-Play connector. Optic J560 type   |
| <b>FT390PG-20</b> | Dual socket assembly with Plug-n-Play connector on 20 ft cable. API Optic, 6 contact pins and 3 J slots, and Thermistor, 10 contact pins and 4 J slots. Internal ground wire. Guaranteed for life stainless steel wear rings included. (U.S.)   |
| <b>FT394P</b>     | Triple socket assembly with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots, Thermistor, 10 contact pins and 4 J slots, and Optic J560 type. Guaranteed for life stainless steel wear rings included. (U.S.)   |
| <b>FT394PG</b>    | Triple socket assembly with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots, Thermistor, 10 contact pins and 4 J slots, and Optic J560 type. With internal ground wire. Guaranteed for life stainless steel wear rings included. (U.S.)                                  |
| <b>FT394VP</b>    | Triple socket assembly in a vertical socket arrangement with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots, Thermistor, 10 contact pins and 4 J slots, and Optic J560 type. Guaranteed for life stainless steel wear rings included. (U.S.)                            |
| <b>FT394VPG</b>   | Triple socket assembly in a vertical socket arrangement with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots, Thermistor, 10 contact pins and 4 J slots, and Optic J560 type. With internal ground wire. Guaranteed for life stainless steel wear rings included. (U.S.) |
| <b>FT395P-20</b>  | Triple socket assembly with Plug-n-Play connector on 20' cable. Optic, 6 contact pins and 4 J slots, Thermistor, 10 contact pins and 4 J slots, and Optic J560 type. Guaranteed for life stainless steel wear rings included. (Canada)  |
| <b>FT395PG-20</b> | Triple socket assembly with Plug-n-Play connector on 20' cable. Optic, 6 contact pins and 4 J slots, Thermistor, 10 contact pins and 4 J slots, and Optic J560 type. With internal ground wire. Guaranteed for life stainless steel wear rings included. (Canada)                       |
| <b>FT391P-20</b>  | Dual socket Plug-n-Play assembly with 4-J slots; 20 feet of Plug-n-Play cable   |



## FloTech™ Checkmate Overfill/Retain Plug-n-Play System Overfill Sensors

### Features & Benefits:

- Overfill detection sensors are intended to detect a pending overfill condition inside the fuel tank compartment. When they are wetted (come in contact with the fuel) they signal the fuel loading rack to close the fuel supply control valve, to prevent a spill of product
- Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of manual crimped wire connections, and removes the problems and worries associated with connection problems. Easy to install, just mount the housing into the tank and plug the cables together
- Trouble free probes: FloTech™ brand probes incorporate a double elastomer design which seals and secures the sensitive glass optic prism tip. The elastomer seals are flexible allowing thermal expansion and resistance to steam cleaning and petroleum chemical attack
- Custom lengths available upon request
- The FT151P series sensor housing contains a Plug-n-Play probe in a cast aluminium housing. The sensor housing has a 2" NPT mounting thread, heavy duty stainless steel hardware, and FKM probe seal. Install into either a 2" NPT threaded port or a 2" diameter tank opening using the gasket and locking nut provided. All screws and rings are heavy duty stainless steel for easy assembly and long life
- BSPT option available.



| PART NO.        | DESCRIPTION   |
|-----------------|---|
| FT151P-ATEX     | Housing with 7" Plug-n-Play probe, with Plug-n-Play harness connector NPT             |
| FT151P-12-ATEX  | Housing with 12" Plug-n-Play probe, with Plug-n-Play harness connector NPT            |
| FT151P-18-ATEX  | Housing with 18" Plug-n-Play detection probe, with Plug-n-Play harness connector NPT  |
| FTE151P-ATEX    | Housing with 7" Plug-n-Play probe, with Plug-n-Play harness connector BSPT            |
| FTE151P-12-ATEX | Housing with 12" Plug-n-Play probe, with Plug-n-Play harness connector BSPT           |
| FTE151P-18-ATEX | Housing with 18" Plug-n-Play detection probe, with Plug-n-Play harness connector BSPT |

II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C.

### REPLACEMENT PROBES

| PART NO. | DESCRIPTION  |
|----------|--|
| FT150P   | Replacement 7" Plug-n-Play probe with Plug-n-Play harness connector  |
| FT150P   | Replacement 12" Plug-n-Play probe with Plug-n-Play harness connector |
| FT150P   | Replacement 18" Plug-n-Play probe with Plug-n-Play harness connector |

## Retain Sensors

### Features & Benefits:

- Retain sensors inform the loading terminal if the tank compartments are empty, or if there is product left in the tank prior to re-loading the tank (product has been retained)
- Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of manual crimped wire connections, and removes the problems and worries associated with connection problems. Easy to install, just mount the housing into the tank and plug the cables together
- Trouble Free Probes: 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
- The FT152 sensor is a bottom retain detection sensor. Sensor is shipped with a 1/2" NPT weld-on aluminium half coupling for mounting. The main sensor portion is stainless steel to prevent galling in the tank. The wiring box is plastic to prevent corrosion.



| PART NO.    | DESCRIPTION   |
|-------------|---|
| FT152P-ATEX | Housing with Plug-n-Play retain probe, with Plug-n-Play harness connector |

II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C.





## FloTech™ Checkmate Overfill/Retain Plug-n-Play System Wiring Harnesses

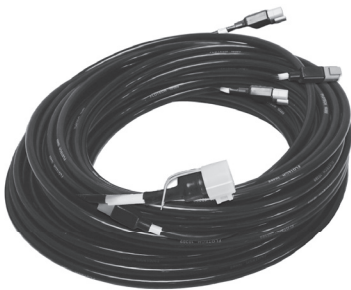
**Features & Benefits:**

- Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of manual crimped wire connections, and removes the problems and worries associated with connection problems. Easy to install, just mount all the components (sensors, sockets, monitors) onto the tank and plug them into the preconfigured harness
- Plug-n-Play cable harnesses come preconfigured for the type of tank (truck mounted tanks or for full length tank trailers) the number of tank compartments, standard harnesses have been designed to fit most standard tank configurations
- Custom length harnesses are available
- Secure and weather tight connections all the time, remove the possibility of poor wiring connections. Sealed connectors pass IP67 and DIN40050 salt spray tests.



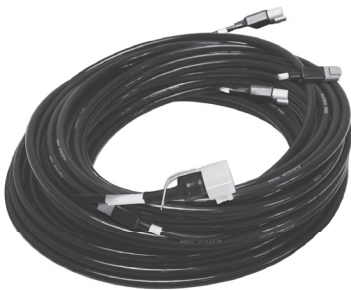
### OVERFILL DETECTION PLUG-N-PLAY CABLE HARNESSES FOR FULL LENGTH TANK TRAILERS

| PART NO. | DESCRIPTION   |
|----------|---|
| FT20801  | One compartment tank trailer. Overfill detection (top) cable harness with Plug-n-play connections   |
| FT20802  | Two compartment tank trailer. Overfill detection (top) cable harness with Plug-n-play connections   |
| FT20803  | Three compartment tank trailer. Overfill detection (top) cable harness with Plug-n-play connections |
| FT20804  | Four compartment tank trailer. Overfill detection (top) cable harness with Plug-n-play connections  |
| FT20805  | Five compartment tank trailer. Overfill detection (top) cable harness with Plug-n-play connections  |
| FT20806  | Six compartment tank trailer. Overfill detection (top) cable harness with Plug-n-play connections   |



### RETAIN DETECTION PLUG-N-PLAY CABLE HARNESSES FOR FULL LENGTH TANK TRAILERS

| PART NO. | DESCRIPTION  |
|----------|--|
| FT20801S | One compartment tank trailer. Retain (bottom) cable harness with Plug-n-play connections   |
| FT20802S | Two compartment tank trailer. Retain (bottom) cable harness with Plug-n-play connections   |
| FT20803S | Three compartment tank trailer. Retain (bottom) cable harness with Plug-n-play connections |
| FT20804S | Four compartment tank trailer. Retain (bottom) cable harness with Plug-n-play connections  |
| FT20805S | Five compartment tank trailer. Retain (bottom) cable harness with Plug-n-play connections  |
| FT20806S | Six compartment tank trailer. Retain (bottom) cable harness with Plug-n-play connections   |



### OVERFILL DETECTION PLUG-N-PLAY CABLE HARNESSES FOR TRUCK MOUNTED TANKS

| PART NO.   | DESCRIPTION   |
|------------|---|
| FT20801TWS | One compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections   |
| FT20802TWS | Two compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections   |
| FT20803TWS | Three compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections |
| FT20804TWS | Four compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections  |
| FT20805TWS | Five compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections  |



Biofuel Compatible



# FloTech™ Overfill Prevention Products

## Checkmate Overfill Detection Systems (Top Detection Only)

**Features & Benefits:**

- FloTech™ brand overfill system kits provide everything needed to install a new overfill system on your tank. One to eight compartment kits are available from our inventory. Systems include: 1 FT208 monitor, 1 FT151 overfill sensor per compartment, FT404 cable and FT402 strain reliefs (cable glands)
- Other probe lengths are available



| PART NO.  | DESCRIPTION   |
|-----------|---|
| FT2801    | Checkmate, 1 compartment system (top only)              |
| FT2802    | Checkmate, 2 compartment system (top only)              |
| FT2803    | Checkmate, 3 compartment system (top only)              |
| FT2804    | Checkmate, 4 compartment system (top only)              |
| FT2805    | Checkmate, 5 compartment system (top only)              |
| FT2806    | Checkmate, 6 compartment system (top only)              |
| FT2807    | Checkmate, 7 compartment system (top only)              |
| FT2808    | Checkmate, 8 compartment system (top only)              |
| FT2801-12 | Checkmate, 1 compartment system (top only) - 12" probes |
| FT2802-12 | Checkmate, 2 compartment system (top only) - 12" probes |
| FT2803-12 | Checkmate, 3 compartment system (top only) - 12" probes |
| FT2804-12 | Checkmate, 4 compartment system (top only) - 12" probes |
| FT2805-12 | Checkmate, 5 compartment system (top only) - 12" probes |
| FT2806-12 | Checkmate, 6 compartment system (top only) - 12" probes |
| FT2807-12 | Checkmate, 7 compartment system (top only) - 12" probes |
| FT2808-12 | Checkmate, 8 compartment system (top only) - 12" probes |

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.



## FloTech™ Checkmate Overfill/Retain Black and White 2 Wire System Checkmate Overfill and Retain Detection Systems

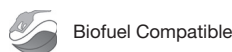
**Features & Benefits:**

- FloTech™ brand overfill system kits provide everything needed to install a new overfill system on your tank. One to eight compartment kits are available from our inventory. Systems include: 1 FT208 monitor, 1 FT151 overfill sensor per compartment, FT404 cable and FT402 strain reliefs (cable glands)
- Other probe lengths are available



| PART NO.         | DESCRIPTION  |
|------------------|--|
| <b>FT2811</b>    | Checkmate, 1 compartment system (overfill & retain)              |
| <b>FT2812</b>    | Checkmate, 2 compartment system (overfill & retain)              |
| <b>FT2813</b>    | Checkmate, 3 compartment system (overfill & retain)              |
| <b>FT2814</b>    | Checkmate, 4 compartment system (overfill & retain)              |
| <b>FT2815</b>    | Checkmate, 5 compartment system (overfill & retain)              |
| <b>FT2816</b>    | Checkmate, 6 compartment system (overfill & retain)              |
| <b>FT2817</b>    | Checkmate, 7 compartment system (overfill & retain)              |
| <b>FT2818</b>    | Checkmate, 8 compartment system (overfill & retain)              |
| <b>FT2811-12</b> | Checkmate, 1 compartment system (overfill & retain) - 12" probes |
| <b>FT2812-12</b> | Checkmate, 2 compartment system (overfill & retain) - 12" probes |
| <b>FT2813-12</b> | Checkmate, 3 compartment system (overfill & retain) - 12" probes |
| <b>FT2814-12</b> | Checkmate, 4 compartment system (overfill & retain) - 12" probes |
| <b>FT2815-12</b> | Checkmate, 5 compartment system (overfill & retain) - 12" probes |
| <b>FT2816-12</b> | Checkmate, 6 compartment system (overfill & retain) - 12" probes |
| <b>FT2817-12</b> | Checkmate, 7 compartment system (overfill & retain) - 12" probes |
| <b>FT2818-12</b> | Checkmate, 8 compartment system (overfill & retain) - 12" probes |

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.



Biofuel Compatible

## FloTech™ Checkmate Overfill/Retain Black & White 2 Wire System Monitor, Overfill Sensors, Replacement Probes and Retain Sensors

### Checkmate Onboard Monitors

**Features & Benefits:**

- Easy to follow programming guide for up to 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
- Stainless steel terminal blocks resist rusting of contacts
- Stainless steel hardware is used on all products
- Powder coated colour matched components for exceptional appearance
- Auxiliary input for Hobbs type switches
- Power control relay output
- Drop-in compatibility with competitors products, see compatibility chart on pages 50-53.
- Wide input power 12-24 VDC
- Monitors include advanced diagnostic capabilities as well as signal translation abilities for all socket types (optic, thermistor or float). The system offers true load at any rack compatibility.

**Available integrated options:**

- Optional FloTech™ Data Link™ feature (patent pending) is only available on Checkmate model onboard monitors. Data Link™ gives maintenance staff the ability to download the performance and diagnostic history of the overfill system. Plug the FloTech™ hand-held diagnostic terminal, into the Checkmate monitor and download to your PC. A time and date stamped report is generated, showing the history of every wetted or failed sensor, rack connection, auxiliary input and load/unload data.



FT208

| CHECKMATE ONBOARD MONITORS |   |
|----------------------------|---|
| PART NO.                   | DESCRIPTION   |
| FT208                      | Checkmate programable monitor and housing                   |
| FT207                      | Checkmate programable replacement monitor only (no housing) |

See page 144 for repair kits and replacement parts.

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.



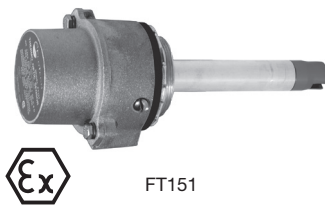


## FloTech™ Checkmate Overfill/Retain Black and White 2 Wire System Checkmate Overfill and Retain Detection Systems (Continued)

### Overfill Detection Sensors

**Features & Benefits:**

- The FloTech™ thermo-optic 2 wire probe is electronically and mechanically compatible for drop-in replacement of other commonly used 2-wire probes with black and white wires. Providing the fast response and reliability of optic technology in a thermistor application.
- Custom probe lengths available upon request
- The sensor housing contains a black and white 2 wire probe in a cast aluminium housing. The sensor housing has a 2" NPT mounting thread, heavy duty stainless steel hardware, and FKM probe seal. Install into either a 2" NPT threaded port or 2- " diametre tank opening using the gasket and locking nut provided.
- BSPT option available



FT151



| OVERFILL DETECTION SENSORS |   |
|----------------------------|---|
| PART NO.                   | DESCRIPTION   |
| FT151-ATEX                 | Housing with 7" black and white 2 wire overfill detection probe NPT   |
| FT151-12-ATEX              | Housing with 12" black and white 2 wire overfill detection probe NPT  |
| FT151-18-ATEX              | Housing with 18" black and white 2 wire overfill detection probe NPT  |
| FTE151-ATEX                | Housing with 7" black and white 2 wire overfill detection probe BSPT  |
| FTE151-12-ATEX             | Housing with 12" black and white 2 wire overfill detection probe BSPT |
| FTE151-18-ATEX             | Housing with 18" black and white 2 wire overfill detection probe BSPT |

II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C

| REPLACEMENT PROBES |   |
|--------------------|---|
| PART NO.           | DESCRIPTION   |
| FT150              | Replacement 7" black and white 2 wire overfill detection probe  |
| FT150-12           | Replacement 12" black and white 2 wire overfill detection probe |
| FT150-18           | Replacement 18" black and white 2 wire overfill detection probe |

### Retain Sensors

**Features & Benefits:**

- Retain sensors inform the loading terminal if the tank compartments are empty, or if there is product left in the tank prior to re-loading the tank (product has been retained).
- Sensor is shipped with a ½" NPT weld-on aluminium half coupling for mounting. The main sensor portion is stainless steel to prevent galling in the tank. The wiring box is nylon to prevent corrosion and is removable to facilitate installation. Our three port housing design is compatible with previous inline and parallel dual port housing.



FT152



| RETAIN SENSORS |   |
|----------------|---|
| PART NO.       | DESCRIPTION   |
| FT152-ATEX     | Housing with black and white 2 wire retain probe (see page 141 for repair kits and replacement parts) |

II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C



# FloTech™ Overfill Prevention Products

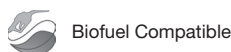
## FloTech™ R/OM Type Overfill Detection Systems (Top Detection Only)

**Features & Benefits:**

- FloTech™ brand overfill system kits provide everything needed to install a new overfill system on your tank. One to six compartment kits are available from our inventory. Systems include: 1 FT204P monitor, 1 FT202 overfill sensor per compartment, FT401 (100') cable and FT402 (20 pieces) strain reliefs (cable glands). Sockets, inline fuse and instruction booklet sold separately.
- Other probe lengths are available



| PART NO.  | DESCRIPTION   |
|-----------|---|
| FT2101    | R/OM type, 1 compartment system (top only)              |
| FT2102    | R/OM type, 2 compartment system (top only)              |
| FT2103    | R/OM type, 3 compartment system (top only)              |
| FT2104    | R/OM type, 4 compartment system (top only)              |
| FT2105    | R/OM type, 5 compartment system (top only)              |
| FT2106    | R/OM type, 6 compartment system (top only)              |
| FT2101-12 | R/OM type, 1 compartment system (top only) - 12" probes |
| FT2102-12 | R/OM type, 2 compartment system (top only) - 12" probes |
| FT2103-12 | R/OM type, 3 compartment system (top only) - 12" probes |
| FT2104-12 | R/OM type, 4 compartment system (top only) - 12" probes |
| FT2105-12 | R/OM type, 5 compartment system (top only) - 12" probes |
| FT2106-12 | R/OM type, 6 compartment system (top only) - 12" probes |



## FloTech™ R/OM Type Overfill and Retain Red and Black 2 Wire Systems

**Features & Benefits:**

- FloTech™ brand overfill system kits provide everything needed to install a new overfill system on your tank. One to six compartment kits are available from our inventory. Systems include: 1 FT204P monitor, 1 FT202 overfill sensor and 1 FT206 retain sensor per compartment, FT401 (100') cable and FT403 (30 pieces) strain reliefs (cable glands). Sockets, inline fuse and instruction booklet sold separately.
- Other probe lengths are available



| PART NO.  | DESCRIPTION  |
|-----------|--|
| FT2001    | R/OM type, 1 compartment system (overfill and retain)              |
| FT2002    | R/OM type, 2 compartment system (overfill and retain)              |
| FT2003    | R/OM type, 3 compartment system (overfill and retain)              |
| FT2004    | R/OM type, 4 compartment system (overfill and retain)              |
| FT2005    | R/OM type, 5 compartment system (overfill and retain)              |
| FT2006    | R/OM type, 6 compartment system (overfill and retain)              |
| FT2001-12 | R/OM type, 1 compartment system (overfill and retain) - 12" probes |
| FT2002-12 | R/OM type, 2 compartment system (overfill and retain) - 12" probes |
| FT2003-12 | R/OM type, 3 compartment system (overfill and retain) - 12" probes |
| FT2004-12 | R/OM type, 4 compartment system (overfill and retain) - 12" probes |
| FT2005-12 | R/OM type, 5 compartment system (overfill and retain) - 12" probes |
| FT2006-12 | R/OM type, 6 compartment system (overfill and retain) - 12" probes |



## FloTech™ R/OM Type Onboard Monitors and Overfill Sensors

### Checkmate R/OM Type Onboard Monitors

**Features & Benefits:**

- Easy to follow programming guide for up to six 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.
- As the monitor is programmed for the number of compartments, terminators are not required.
- Stainless steel terminal blocks resist rusting of contacts
- Stainless steel hardware is used on all products
- Powder coated colour matched components for exceptional appearance
- Auxiliary input
- Wide input power 12-24 VDC
- Drop-in compatibility with competitors products, see compatibility chart on pages 50-53.
- Monitors include advanced diagnostic capabilities as well as signal translation abilities for all socket types (optic, thermistor or float). The system offers true load at any rack compatibility.



FT204P

| CHECKMATE R/OM TYPE ONBOARD MONITORS |   |
|--------------------------------------|---|
| PART NO.                             | DESCRIPTION   |
| FT204P                               | FloTech™ R/OM type programmable monitor & housing.                                  |
| FT203P                               | FloTech™ R/OM type programmable replacement monitor only. (no housing)              |
| FT203PSPEC                           | FloTech™ R/OM type programmable replacement monitor with 8-hole cover. (no housing) |



Biofuel Compatible



## FloTech™ R/OM Type Overfill Sensors

**Features & Benefits:**

- Overfill detection sensors are intended to detect a pending overfill condition inside the fuel tank compartment. When they are wetted (come in contact with the fuel) they signal the fuel loading rack to close the fuel supply control valve, to prevent a spill of product.
- The FloTech™ optic 2 wire probe is electronically and mechanically compatible for drop-in replacement of other commonly used 2-wire probes with red and black wires, such as the Civacon ROM system.
- All FloTech™ brand probes are trouble free probes they come with a unique dual elastomer seal for the glass optic prisms. The elastomer seals are flexible allowing thermal expansion and resistance to steam cleaning and temperature changes, along with resistance to petroleum chemical attack. The replacement probes have a smooth tapered tip design for easy replacement installation into the sensor housing without gasket damage.
- Custom probe lengths available upon request
- The sensor housing contains a red and black 2 wire probe, in a cast aluminium housing. The sensor housing has a 2" NPT mounting thread, heavy duty stainless steel hardware, and FKM probe seal. Install into either a 2" NPT threaded port or 2" diameter tank opening using the gasket and locking nut provided. All screws and rings are heavy duty stainless steel for easy assembly and long life.



FT202

| FLOTECH™ R/OM TYPE OVERFILL SENSORS |  |
|-------------------------------------|--|
| PART NO.                            | DESCRIPTION  |
| FT202-ATEX                          | Housing with 7" red and black 2 wire overfill detection probe  |
| FT202-12-ATEX                       | Housing with 12" red and black 2 wire overfill detection probe |
| FT202-18-ATEX                       | Housing with 18" red and black 2 wire overfill detection probe |

II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C

| REPLACEMENT PROBES |   |
|--------------------|---|
| PART NO.           | DESCRIPTION   |
| FT201              | Replacement 7" red and black 2 wire overfill detection probe  |
| FT201-12           | Replacement 12" red and black 2 wire overfill detection probe |
| FT201-18           | Replacement 18" red and black 2 wire overfill detection probe |



## FloTech™ R/OM Type Overfill/Retain Red and Black 2 Wire Systems

**Features & Benefits:**

- The FT206 sensor is a retain detection sensor. Sensor is shipped with a ½” NPT weld-on aluminium half coupling for mounting. The main sensor portion is stainless steel to prevent galling in the tank. 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 compatible with Civacon model 1000 and the Civacon R/OM System. Our three port housing design is compatible with previous inline and parallel dual port housings.
- Trouble free probes: 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.



FT206

| RETAIN SENSORS |  |
|----------------|--|
| PART NO.       | DESCRIPTION                                    |
| FT206-ATEX     | Housing with red and black 2 wire retain probe |

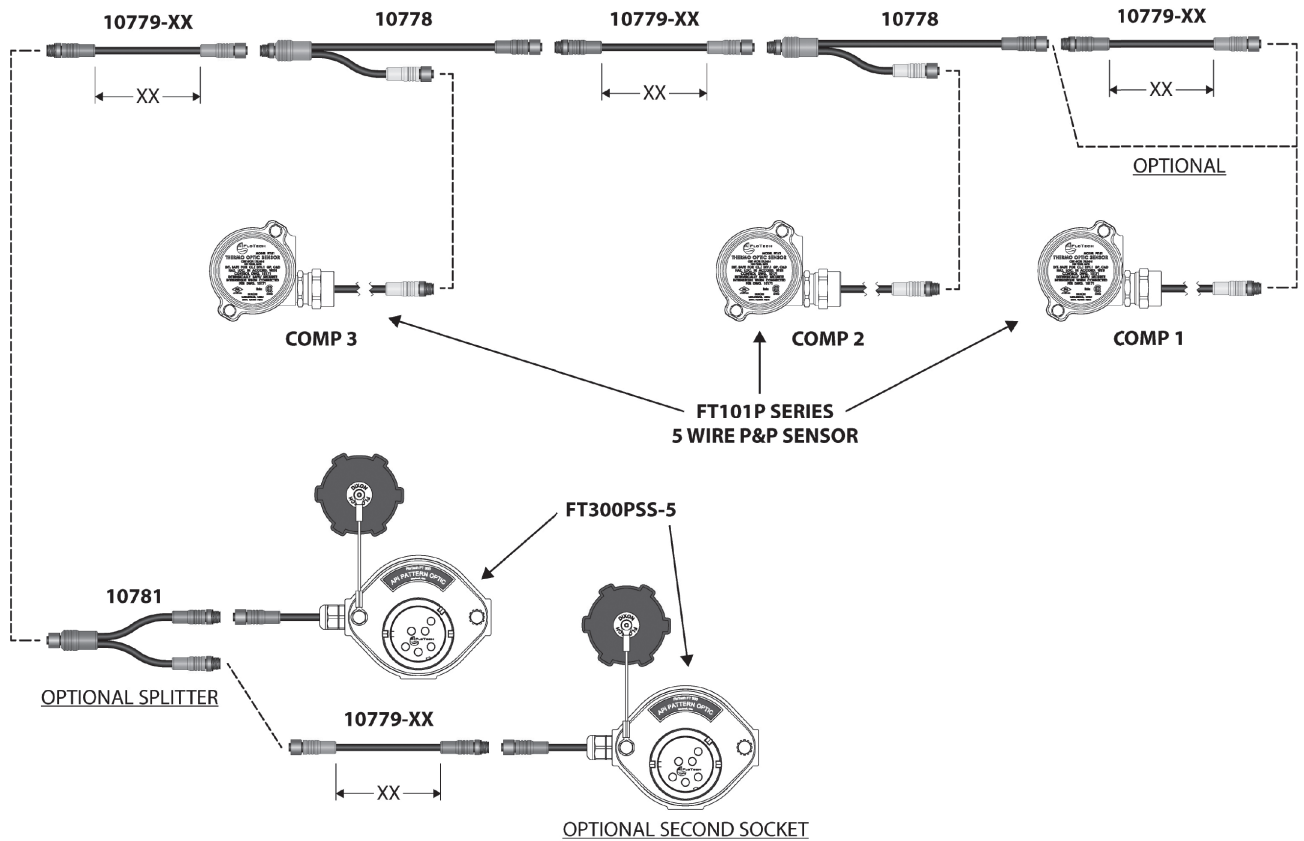
II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C



Biofuel Compatible



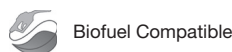
### 5 Wire Plug-n-Play



**Features & Benefits:**

- Simply match like colour coded connectors
- No crimp connections
- No complex schematics
- No incorrect wiring connections
- No time wasted troubleshooting failed systems.
- Modular colour coded connector system
- Flexible length cables fit any tank configuration
- Weather-tight industrial grade connectors maintenance free system
- Replacements in stock

| PART NO.  | DESCRIPTION   |
|-----------|---|
| 10779-20  | 5 wire plug and play harness extention - 20" (508mm)    |
| 10779-40  | 5 wire plug and play harness extention - 40" (1016mm)   |
| 10779-60  | 5 wire plug and play harness extention - 60" (1524mm)   |
| 10779-120 | 5 wire plug and play harness extention - 120" (3048mm)  |
| 10779-240 | 5 wire plug and play harness extention - 240" (6096mm)  |
| 10779-360 | 5 wire plug and play harness extention - 360" (9144mm)  |
| 10779-480 | 5 wire plug and play harness extention - 480" (12192mm) |
| 10779-600 | 5 wire plug and play harness extention - 600" (15240mm) |



# FloTech™ Overfill Prevention Products

## FloTech™ API Optic 5 Wire Overfill Detection Systems

**Application:**

The FloTech™ API Optic 5 wire system is perfectly suited for both new and existing tank installations. The components have a long list of features which make them more reliable than competitor products; the result is years of trouble free service.

The FloTech™ API Optic 5 wire system is a conventionally wired system, which requires wiring connections to be made using crimp connectors. If a simple plug together system is desired, please see our Checkmate Plug-n-Play system as shown on pages 36 - 40.


**Standards:**

Compatible with the Scully brand 5 wire optic system. The components are drop-in replacements and compatible with the signal format required by Scully brand API Optic 5 wire on-board monitors.

**Materials:**

Dependent upon the component, see each product section for materials

**Features & Benefits:**

- See the features and benefits of each of the system components
- Biofuel compatible up to E100 (100% Ethanol) and B100 (100% bio diesel) 

## FloTech™ API Optic Overfill 5 Wire Systems (Top Detection Only)

**Features & Benefits:**

- FloTech™ brand overfill system kits provide everything needed to install a new overfill system on your tank. One to six compartment kits are available from our inventory. Systems include: 1 FT103 monitor, 1 FT101 overfill sensor per compartment, FT400 cable and FT402 strain reliefs (cable glands).
- Other probe lengths are available



| PART NO.  | DESCRIPTION   |
|-----------|---|
| FT1001    | API optic 5 wire, 1 compartment overfill detection system (top only)              |
| FT1002    | API optic 5 wire, 2 compartment overfill detection system (top only)              |
| FT1003    | API optic 5 wire, 3 compartment overfill detection system (top only)              |
| FT1004    | API optic 5 wire, 4 compartment overfill detection system (top only)              |
| FT1005    | API optic 5 wire, 5 compartment overfill detection system (top only)              |
| FT1006    | API optic 5 wire, 6 compartment overfill detection system (top only)              |
| FT1001-12 | API optic 5 wire, 1 compartment overfill detection system (top only) - 12" probes |
| FT1002-12 | API optic 5 wire, 2 compartment overfill detection system (top only) - 12" probes |
| FT1003-12 | API optic 5 wire, 3 compartment overfill detection system (top only) - 12" probes |
| FT1004-12 | API optic 5 wire, 4 compartment overfill detection system (top only) - 12" probes |
| FT1005-12 | API optic 5 wire, 5 compartment overfill detection system (top only) - 12" probes |
| FT1006-12 | API optic 5 wire, 6 compartment overfill detection system (top only) - 12" probes |

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.





## FloTech™ API Optic 5 Wire System Onboard Monitor

**Features & Benefits:**

- Stainless steel terminal blocks resist rusting of contacts
- Stainless steel hardware is used on all products
- Powder coated colour matched components for exceptional appearance
- Drop-in compatibility with competitors products, see compatibility chart on pages 50-53.
- Signal translation ability, allows the connection all socket types (optic, thermistor or float). The system offers true load at any rack compatibility.



| PART NO.     | DESCRIPTION   |
|--------------|---|
| <b>FT103</b> | FloTech™ API Optic 5 wire monitor and housing                   |
| <b>FT102</b> | FloTech™ API Optic 5 wire replacement monitor only (no housing) |

See page 142 for repair kits and replacement parts

## FloTech™ API Optic 5 Wire Overfill Detection System Overfill Sensors

**Features & Benefits:**

- The FloTech™ API optic 5 wire probe is electronically and mechanically compatible for drop-in replacement of other commonly used 5 wire probes
- Custom probe lengths available upon request
- The sensor housing contains a 5 wire probe, in a cast aluminium housing. The sensor housing has a 2" NPT mounting thread, heavy duty stainless steel hardware, and FKM probe seal. Install into either a 2" NPT threaded port or 2- " diametre tank opening using the gasket and locking nut provided
- BSPT Options Available



| PART NO.              | DESCRIPTION   |
|-----------------------|---|
| <b>FT101-ATEX</b>     | Housing with 7" - 5 wire overfill detection probe NPT   |
| <b>FT101-12-ATEX</b>  | Housing with 12" - 5 wire overfill detection probe NPT  |
| <b>FT101-18-ATEX</b>  | Housing with 18" - 5 wire overfill detection probe NPT  |
| <b>FTE101-ATEX</b>    | Housing with 7" - 5 wire overfill detection probe BSPT  |
| <b>FTE101-12-ATEX</b> | Housing with 12" - 5 wire overfill detection probe BSPT |
| <b>FTE101-18-ATEX</b> | Housing with 18" - 5 wire overfill detection probe BSPT |

II 1G, Ex ia IIB T4 Ga; Ta = -40°C to + 70°C.

### REPLACEMENT PROBES

| PART NO.        | DESCRIPTION                                       |
|-----------------|---|
| <b>FT100</b>    | Replacement 7" - 5 wire overfill detection probe  |
| <b>FT100-12</b> | Replacement 12" - 5 wire overfill detection probe |
| <b>FT100-18</b> | Replacement 18" - 5 wire overfill detection probe |

See page 140 for repair kits and replacement parts.

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.



## Stainless Steel Black and White 2 Wire Probes and Sensor Housings

**Features & Benefits:**



- The FloTech™ stainless steel probes and sensor housings are designed to be used with chemicals. All wetted services are 316 stainless or PTFE. These probes are designed to thread onto a DOT 407 tank 3” clean out nipple
- All FloTech™ brand probes are trouble free probes, they come with a unique dual elastomer seal for the glass optic prisms. The elastomer seals are flexible allowing thermal expansion and resistance to steam cleaning and temperature changes, along with resistance to petroleum chemical attack. The replacement probes have a smooth tapered tip design for easy replacement installation into the sensor housing without gasket damage
- **Custom probe lengths can be available by using 3/4” pipe nipples upon request**

| PART NO. | DESCRIPTION  |
|----------|--|
| FT150S   | 7" 316 stainless steel-black and white 2 wire, overfill detection probe only (no housing)  |
| FT191S   | Stainless steel probe housing. 3" female NPS thread (housing only, order probe separately) |

## Stainless Steel 5 Wire Probes and Sensor Housings

**Features & Benefits:**



- The FloTech™ stainless steel probes and sensor housings are designed to be used with chemicals. All wetted services are 316 stainless or PTFE. These probes are designed to thread onto a DOT 407 tank 3” clean out nipple. Sensor length can be adjusted using 3/4” NPT pipe nipples
- All FloTech™ brand probes are trouble free probes: they come with a unique dual elastomer seal for the glass optic prisms. The elastomer seals are flexible allowing thermal expansion and resistance to steam cleaning and temperature changes, along with resistance to petroleum chemical attack. The replacement probes have a smooth tapered tip design for easy replacement installation into the sensor housing without gasket damage
- **Custom probe lengths available upon request.**

| PART NO. | DESCRIPTION  |
|----------|--|
| FT100S   | 7" 316 stainless steel 5 wire overfill detection probe only (no housing)                   |
| FT191S   | Stainless steel probe housing, 3" female NPS thread (housing only, order probe separately) |

See page 141 for repair kits and replacement parts.



## Single Sockets

### Features & Benefits:

- Single face plate sockets have hard coated aluminium alloy J slot wear rings, these ensure a long service life. Also available are single sockets with “guaranteed for life” stainless steel wear rings
- Stainless steel hardware and contact pins prevent corrosion
- Sockets and caps are colour coded with industry standardized colours which allows for easy identification of socket type (optic sockets are blue, thermistor sockets are green, and float sockets are red, coloured caps are included for optic and thermistor models only)
- Sockets with m20x1.5 cable entry holes available



FT300



FT300GW



FT301



FT304BVI



FT302

See pages 145 - 147 for repair kits and replacement parts.

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.

| ALUMINIUM HARDCOAT J SLOT             |  |
|---------------------------------------|--|
| PART NO.                              | DESCRIPTION  |
| <b>FT300</b>                          | Optic socket API / WOGA, 6 pin and 3 J-slots (US)                                  |
| <b>FT300E</b>                         | Optic Socket API/WOGA, as above c/w M20x1.5 cable entry holes                      |
| <b>FT300GW</b>                        | Optic Socket API / WOGA, 6 pin and 3 J-Slots with ground wire                      |
| <b>FT300VI</b>                        | Optic Socket API/WOGA, 6 pin and 3 J-slots with vapour recovery interlock          |
| <b>FT307</b>                          | Optic socket, 6 pin and 4 J-slots (Canada)   |
| <b>FT306</b>                          | Optic socket, J560 pin type  |
| <b>FT301GW</b>                        | Thermistor socket, API, 8 pin and 4-J slots with ground wire                       |
| <b>FT304</b>                          | Thermistor socket, 10 pin and 4 J-slots (Canada, Europe)                           |
| <b>FT304BVI</b>                       | Square Housing 10pin and 4 J-Slots c/w brake and vapour interlock (Canada, Europe) |
| <b>FT304E</b>                         | Thermistor socket, as above c/w M20x1.5 cable entry holes                          |
| <b>FT305</b>                          | Thermistor socket, J560 pin type   |
| <b>FT302</b>                          | Float, API, J560 pin type socket   |
| Replacement face plates and dust caps |  |
| <b>FT310</b>                          | API optic face plate assembly, 6 pin, 3-J slots (US)                               |
| <b>FT313</b>                          | Optic pattern contact assembly with thermistor, 6 pin, 4-J slots (US)              |
| <b>FT317</b>                          | Optic pattern face plate assembly, 6 pin, 4-J slots (Canada)                       |
| <b>FT316</b>                          | Optic replacement face plate, J560 type  |
| <b>FT311</b>                          | API thermistor face plate assembly, 8 pin, 4-J slots (US)                          |
| <b>FT314</b>                          | Thermistor face plate assembly, 10 pin 4-J slots. (Canada/Europe)                  |
| <b>FT315</b>                          | Thermistor replacement face plate, J560 type                                       |
| <b>FT320</b>                          | Replacement blue optic dust cap  |
| <b>FT321</b>                          | Replacement green thermistor dust cap  |

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

US patent 6,824,423.

| GFL (GUARANTEED FOR LIFE) STAINLESS STEEL J SLOT WEAR RINGS |  |
|---|--|
| PART NO.  | DESCRIPTION  |
| <b>FT300SS</b>  | Optic socket API / WOGA, 6 pin and 3 J-slots, GFL stainless J slot wear ring (US)                |
| <b>FT300SSGW</b>  | Optic socket API / WOGA, 6 pin and 3-J slots, GFL stainless J slot wear ring with ground wire    |
| <b>FT303SS</b>  | Optic socket, 6 pin and 4 J-slots, GFL stainless J slot wear ring (US)                           |
| <b>FT307SS</b>  | Optic socket, 6 pin and 4 J-slots, GFL stainless J slot wear ring (Canada)                       |
| <b>FT301SS</b>  | Thermistor socket, API, 8 pin and 4 J-slots, GFL stainless J slot wear ring (US)                 |
| <b>FT301SSGW</b>  | Thermistor socket, API, 8 pin and 4-J slots, GFL stainless J slot wear ring with ground wire     |
| <b>FT304SS</b>  | Thermistor socket, 10 pin and 4 J-slot, GFL stainless J slot wear ring (Canada, Europe)          |
| Replacement face plates and dust caps                       |  |
| <b>FT310SS</b>  | API optic face plate assembly, 6 pin, 3-J slots, GFL stainless J slot wear ring (US)             |
| <b>FT313SS</b>  | Optic pattern contact assembly, 6 pin, 4-J slots, GFL stainless J slot wear ring (US)            |
| <b>FT317SS</b>  | Optic pattern face plate assembly, 6 pin, 4-J slots, GFL stainless J slot wear ring (Canada)     |
| <b>FT311SS</b>  | API thermistor face plate assembly, 8 pin, 4-J slots, GFL stainless J slot wear ring (US)        |
| <b>FT314SS</b>  | Thermistor face plate assembly 10 pin 4-J slots, GFL stainless J slot wear ring (Canada, Europe) |
| <b>FT320</b>  | Replacement blue optic dust cap  |
| <b>FT321</b>  | Replacement green thermistor dust cap  |



Biofuel Compatible

# FloTech™ Overfill Prevention Products

## EZ-Cept Double and Triple Sockets

### Features & Benefits:



FT390



FT394

- Stainless steel hardware and contact pins prevent corrosion
- Sockets and caps are colour coded with industry standardized colours which allows for easy identification of socket type (optic sockets are blue, thermistor sockets are green, and float sockets are red, coloured caps are included for optic and thermistor models only)
- Guaranteed for Life J-Slots: Our unique stainless steel alloy J-slot ring will probably outlast your trailer
- Prewired ready for tank installation, no more long hours wiring and troubleshooting your socket connections. Simply bolt to the trailer and connect to the terminal block in the on board monitor
- Internal ground wire and ID chip ready: Both internal ground wire 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
- Patented, the EZ-Cept has so many innovative features it is covered by US patent 6,824,423. Just another example of how FloTech™ is leading the way delivering reliability and innovation to our valued customers.

### EZ-CEPT DOUBLE SOCKETS

| PART NO.  | DESCRIPTION  |
|-----------|--|
| FT390     | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings (US)                                     |
| FT390V    | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, vertical mount, GFL stainless J slot wear rings (US)                                       |
| FT390G    | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings, internal ground wire (US)               |
| FT390GT   | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings, internal ground wire. T.I.M. chip (US)  |
| FT390T    | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings, T.I.M. chip (US)                        |
| FT390-20  | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings, 20' of cable (US)                       |
| FT390G-20 | Optic 6 pin, 3 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings, internal ground wire, 20' of cable (US) |
| FT391     | Optic 6 pin, 4 J-slot, and thermistor 10 pin, 4 J-slot, horizontal mount, GFL stainless J slot wear rings (Canada)                                 |
| FT391V    | Optic 6 pin, 4 J-slot, and thermistor 10 pin, 4 J-slot, vertical mount, GFL stainless J slot wear rings (Canada)                                   |

See pages 148-149 for repair kits and replacement parts.

### EZ-CEPT TRIPLE SOCKETS

| PART NO. | DESCRIPTION  |
|----------|--|
| FT393    | Optic 6 pin, 3 J-slot, thermistor 10 pin, 4 J-slot, and float J560, horizontal mount, GFL stainless J slot wear rings (US)                           |
| FT394    | Optic 6 pin, 3 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, horizontal mount, GFL stainless J slot wear rings (US)                           |
| FT394G   | Optic 6 pin, 3 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, horizontal mount, internal ground wire, GFL stainless J slot wear rings (US)     |
| FT394V-G | Optic 6 pin, 3 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, vertical mount, internal ground wire, GFL stainless J slot wear rings (US)       |
| FT395    | Optic 6 pin, 4 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, horizontal mount, GFL stainless J slot wear rings (Canada)                       |
| FT395G   | Optic 6 pin, 4 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, horizontal mount, internal ground wire, GFL stainless J slot wear rings (Canada) |
| FT395V   | Optic 6 pin, 4 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, horizontal mount, internal ground wire, GFL stainless J slot wear rings (Canada) |
| FT395V-G | Optic 6 pin, 4 J-slot, thermistor 10 pin, 4 J-slot, and optic J560, vertical mount, internal ground wire, GFL stainless J slot wear rings (Canada)   |

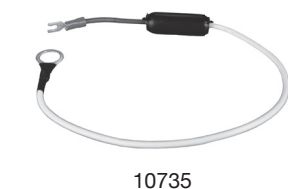
See pages 150-151 for repair kits and replacement parts.

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.





## Grounding Ball and Bolt



10735



FT450



FT451

| PART NO. | DESCRIPTION              |
|----------|--------------------------|
| FT450    | Ground verification bolt |
| FT451    | Ground verification ball |
| 10735    | Ground wire              |

See page 152 for repair kits and replacement parts.

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.

## FloTech™ Checkmate Overfill/Retain Black & White 2 Wire System Sensor Dummy



FT205



| PART NO. | DESCRIPTION  |
|----------|--|
| FT155    | Thermistor sensor dummy (each dummy adds up to 5 compartments) |
| FT205    | R/OM terminator  |

## Cables and Strain Reliefs

### Features & Benefits:

- Due to the very low current used in overfill systems it's extremely important to use the correct type of cable. The use of other types of cabling often leads to failed overfill systems due mostly to corroded connections. FloTech™ cable is specially produced with tin plated wire, which when connected correctly using crimp connections, will provide years of trouble free service.



FT400



FT402

| PART #     | DESCRIPTION                 | SYSTEM TYPE                                      |
|------------|-----------------------------|--|
| FT400      | 100' of 5 conductor cable   | 5 wire API optic                                 |
| FT400-500  | 500' of 5 conductor cable   | 5 wire API optic                                 |
| FT400-1000 | 1000' of 5 conductor cable  | 5 wire API optic                                 |
| FT401      | 100' of 7 conductor cable   | Red and black 2 wire R/OM type                   |
| FT401-150  | 150' of 7 conductor cable   | Red and black 2 wire R/OM type                   |
| FT401-1000 | 1000' of 7 conductor cable  | Red and black 2 wire R/OM type                   |
| FT404      | 100' of 11 conductor cable  | Black and white 2 wire Checkmate/Thermistor type |
| FT404-150  | 150' of 11 conductor cable  | Black and white 2 wire Checkmate/Thermistor type |
| FT404-1000 | 1000' of 11 conductor cable | Black and white 2 wire Checkmate/Thermistor type |

### Cable Strain Reliefs (Glands)

|           |   |
|-----------|---|
| FT402     | 20 pc pack of strain relief fittings, 1/2" NPT  |
| FT403     | 30 pc pack of strain relief fittings, 1/2" NPT  |
| FT405-500 | 500 pc pack of strain relief fittings, 1/2" NPT |

### Cable Tools and Supplies

|        |   |
|--------|---|
| FT9023 | Professional cable stripping tool                                       |
| FT9024 | Professional cable crimping tool  |
| FT9021 | 100 pc pack of crimp connectors   |
| FT9022 | 2.8 oz tube of GE RTV103 silicone for sealing crimped wired connections |
| FT9025 | Terminal pins, 14-16 AWG, 100 pieces                                    |



Biofuel Compatible

## Optic System Testers

**Application:**

- Used to trouble shoot overfill system circuits.

**Standards:**

- Will work with any optic overfill system.

**Materials:**

- Durable plastic case, heavy duty cable connectors and test leads.

**Features & Benefits:**

- The FT520 optic test kit includes a tester and test lead set to test 5 wire optic pulse, five wire optic probes, two wire optic probes, plug & play optic probes as well as onboard 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, 2 9-volt batteries (included).



FT520



FT520WOGA

| PART NO.             | DESCRIPTION  |
|----------------------|--|
| <b>FT520</b>         | Optic system tester, 5 piece set of test leads, batteries and instructions                   |
| <b>FT520CASE</b>     | Optional storage case for FT520  |
| <b>FT520WOGA</b>     | Optic system tester, with FT521 API optic 6pin and 3 J slot plug, batteries and instructions |
| <b>FT520WOGACASE</b> | Optional storage case for FT520WOGA  |
| <b>FT521</b>         | API optic test plug, six pins and 3 J slots  |
| <b>FT522</b>         | Optic test plug, six pins and 2 or 4 J slots (plug fits both 2 and 4 J slot sockets)         |
| <b>FT523</b>         | Optic test plug J560 type  |
| <b>10622</b>         | Plug-n-Play test lead set  |
| <b>FT9037</b>        | Replacement test lead set for FT520  |

## Trailer Identification Module (T.I.M.) Chip Reader

**Application:**

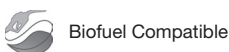
- Designed to read and test Scully type T.I.M. modules mounted inside API compatible overfill sockets.

**Features & Benefits:**

- Designed to read Scully T.I.M. chips
- Solid aluminium construction
- Backlit LCD display
- Interchangeable optic or thermistor J-slot screws
- Provides long battery life



| PART NO.     | DESCRIPTION   |
|--------------|---|
| <b>FT530</b> | FT520 Optic system tester, 4 pc set of test leads, batteries and instructions |



## FloTech™ Truck Tester

**Application:**

- Allows complete testing of ground bolt grounding systems. Tests ground bolt in forward and reverse just like the rack monitor.

**Features & Benefits:**

- Reads TIM modules and displays the serial number on the screen
- Automatic mode allows all four tests, or any combination, to run for a complete test of the trailer
- LCD screen displays the final test results and a pass/fail indication for easy rapid testing of the overfill system
- One man “Wet Test” feature FT555 signal an audible alarm sounding a number of beeps that match the wetted sensor
- Microprocessor controlled with designed in flexibility to expand into a number of applications
- Requires two D cell flashlight batteries that can be changed through a side battery access door



FT555



FT555PW

| PART NO. | DESCRIPTION                 |
|----------|-----------------------------|
| FT555    | Truck Tester                |
| FT555PW  | Truck Tester and Test Leads |

## FloTech™ Trailer Identification Module

**Application:**

- Designed as a drop in replacement for the Scully VIP module, providing you with longer life and reduced costs.

**Features & Benefits:**

- FloTech™ TI Module has the same installation and serial number configuration as the Scully design.



| PART NO. | DESCRIPTION                   |
|----------|-------------------------------|
| FT470    | Trailer Identification Module |



# FloTech™ Overfill Prevention Products

## FloTech™ FT151RL ROM Link Replacement Sensor

**Application:**

- The FT151RL is designed to replace the complete ROM Link sensor assembly. Simply remove the Civacon sensor housing from the manhole lid and install the FloTech™ FT151RL or FT151RL-12. Plug the FT151RL into the wiring harness using our connector adapter and the change out is complete.

**Standards:**

- Drop in replacement for the Civacon ROM Link sensors 1554-007 & 1554-0012.

**Materials:**

- Aluminium housing with stainless steel hardware

**Features & Benefits:**

- Trouble free probes: FloTech™ brand probes incorporate a double elastomer design which seals and secures the sensitive glass optic prism tip. The elastomer seals are flexible allowing thermal expansion and resistance to steam cleaning and petroleum chemical attack.
- Unlike our competitors, FloTech™ probes do not use internal coil cord connectors which consistently fail in moisture. All FloTech™ Plug-n-Play probes are prewired to our harness connector, which has proven itself in moisture.
- FloTech™ sensor housings have a sturdy bolt on cap to better seal out water.
- The FT151RL includes an adapter connector to permit interchange between Civacon's Rom link system and the FloTech™ FT150RL sensor.
- Custom lengths available upon request
- The FT151RL sensor housing contains a Plug-n-Play probe. The sensor housing has a 2" NPT mounting thread, heavy duty stainless steel hardware, and FKM probe seal. Install into either a 2" NPT threaded port or a 2- " diametre tank opening using the gasket and locking nut provided. All screws and rings are heavy duty stainless steel for easy assembly and long life.



FT151RL



FT152RL

| PART NO.                  | DESCRIPTION   |
|---------------------------|---|
| <b>FT151RL</b>            | Housing with 7" Plug-n-Play overfill detection probe, with Plug-n-Play harness and ROM link jumper cable connector  |
| <b>FT151RL-12</b>         | Housing with 12" Plug-n-Play overfill detection probe, with Plug-n-Play harness and ROM link jumper cable connector |
| <b>FT152RL</b>            | Retain sensor with Plug-n-Play harness and ROM link jumper cable  |
| <b>Replacement Probes</b> |   |
| <b>FT150P</b>             | Replacement 7" Plug-n-Play probe for FT151RL only   |
| <b>FT150P-12</b>          | Replacement 12" Plug-n-Play probe for FT151RL-12 only   |
| <b>FT152RL</b>            | Replacement Plug-n-Play probe for FT152P  |
| <b>10688</b>              | Gender adapter  |
| <b>10605PL</b>            | Plug-n-Play harness to monitor connector clip   |

Please refer to chart on pages 50-53 for cross references to other manufacturer part numbers.



Biofuel Compatible



## API Compatible Rack Cords

- FT600 and FT620 are compatible with API thermistor and optic configurations
- Cord 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 34-35 for the cross reference chart
- Plug body is machined from 6061 aluminium and is colour 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 colour codes and wiring number configurations
- The 9 pin conductor is shielded to be compatible with Scully VIP system



| MODEL FT620 API OPTIC ASSEMBLIES |                 |                  |                              |
|----------------------------------|-----------------|------------------|------------------------------|
| PART NO.                         | SCULLY PART NO. | CIVACON PART NO. | DESCRIPTION                  |
| FT620                            | 21831           | 7120SR           | plug with 30' coiled cable   |
| FT620S                           | -               | -                | plug with 20' straight cable |
| FT621                            | 21766           | 7110             | replacement plug body        |
| FT622                            | 27211           | -                | replacement 30' coiled cable |
| FT623                            | 08235           | -                | plug hanger                  |

| MODEL FT600 API THERMISTOR ASSEMBLIES |                 |                  |  |
|---------------------------------------|-----------------|------------------|--|
| PART NO.                              | SCULLY PART NO. | CIVACON PART NO. | DESCRIPTION  |
| FT600                                 | 21818           | 7320             | plug with 30' coiled cable                           |
| FT600C                                | -               | -                | API thermistor plug and 30' coiled cord set (Canada) |
| FT600S                                | -               | -                | plug with 20' straight cable                         |
| FT600SC                               | -               | -                | plug with 20' straight cord set (Canada)             |
| FT601                                 | 20769           | 7310             | replacement plug body                                |
| FT601-10                              | 08959           | -                | replacement plug, 10 pin (Canada)                    |
| FT602                                 | 27211           | -                | replacement 30' coiled cable                         |
| FT603                                 | -               | -                | plug hanger  |
| FT604                                 | -               | -                | replacement 20' straight cord                        |



# FloTech™ Overfill Prevention Products

## Comparison Reference Chart

Listed is a cross reference between FloTech™ brand “Drop In” replacement parts and competitor products.

| COMPETITOR PRODUCTS     |                   |                  |                 |   |
|-------------------------|-------------------|------------------|-----------------|---|
| LIQUID LEVEL SENSORS    | FLOTECH™ PART NO. | CIVACON PART NO. | SCULLY PART NO. | DESCRIPTION   |
|                         | FT100             | 1300             | 09209           | Replacement probe, optic, 5-wire, 7” long                               |
|                         | FT100-12          | 13008            | 09214           | Replacement probe, optic, 5-wire, 12” long                              |
|                         | FT101             | 1110             | 09208           | Sensor, optic, 5-wire, 2” NPT housing, 7” probe                         |
|                         | FT101-12          | 11108            | 09213           | Sensor, optic, 5-wire, 2” NPT housing with 12” probe                    |
|                         | FT150             | 1650             | 09409           | Replacement probe, thermo-optic, 7” long, 2-wire (black & white)        |
|                         | FT150-12          | 16508            | 09414           | Replacement probe, thermo-optic, 12” long, 2-wire (black & white)       |
|                         | FT151             | 1550             | 09408           | Sensor, thermo-optic, 2” NPT housing, 7” probe, 2-wire (black & white)  |
|                         | F151-12           | 15508            | 09413           | Sensor, thermo-optic, 2” NPT housing, 12” probe, 2-wire (black & white) |
|                         | FT152             | -                | 08810           | Retain sensor   |
|                         | FT155             | 1900             | 08542           | Thermistor dummy, 5 compartment   |
|                         | FT201             | 1350             | -               | Replacement R/OM type, 7” top probe, 2-wire (red & black)               |
|                         | FT201-12          | 13508            | -               | Replacement R/OM type, 12” top probe, 2-wire (red & black)              |
|                         | FT202             | 1050             | -               | Top sensor R/OM type, 2” NPT housing, 7” probe, 2-wire (red & black)    |
|                         | FT202-12          | -                | -               | Top sensor R/OM type, 2” NPT housing, 12” probe, 2-wire (red & black)   |
|                         | FT205             | 1910             | -               | Terminator  |
|                         | FT206             | 1000             | -               | Retain sensor R/OM type, 2” NPT sensor (red & black)                    |
| ON BOARD MONITORS       | FLOTECH™ PART NO. | CIVACON PART NO. | SCULLY PART NO. | DESCRIPTION   |
|                         | FT102             | 3150             | 08563           | Replacement chassis, API compatible                                     |
|                         | FT103             | 3100             | 88687           | API compatible on-board monitor, with housing                           |
|                         | FT203P            | 3252             | -               | Replacement chassis, R/OM type on-board monitor                         |
|                         | FT204P            | 3202             | -               | R/OM type on-board monitor, with housing                                |
|                         | FT207             | -                | 09100/09111     | Replacement module, Checkmate on-board monitor                          |
|                         | FT208             | -                | 09109.09107     | Checkmate programmable monitor for top, or top and bottom sensors       |
| SOCKETS                 | FLOTECH™ PART NO. | CIVACON PART NO. | SCULLY PART NO. | DESCRIPTION   |
|                         | FT300             | 4100             | 07974           | API compatible optic socket with cap (6 pin, 3 J-slots)                 |
|                         | FT301             | 4400             | 07720           | API compatible thermistor socket with cap (8 pin, 2/4 J-slots)          |
|                         | FT302             | 4600             | 08116           | API compatible float socket   |
|                         | FT303             | 4200             | 07976           | Optic pattern with thermistor J-slots, and cap (6 pin, 2/4 J-slots)     |
|                         | FT304             | 4401             | 07716           | Canadian / European thermistor socket with cap (10 pin, 4 J-slots)      |
|                         | FT305             | 4500             | 07681           | Thermistor socket, J560 type  |
|                         | FT306             | 4300             | 08199           | Optic socket, J560 type   |
|                         | FT310             | 4110             | 21790           | API optic face plate assembly with cap                                  |
|                         | FT311             | 4410             | 20770           | API thermistor face plate assembly with cap                             |
|                         | FT314             | -                | 20768           | Canadian / European thermistor replacement face plate with cap          |
|                         | FT320             | 4150             | 08575           | Blue optic dust cap   |
|                         | FT321             | 4450             | 08574           | Green thermistor dust cap   |
|                         | FT390             | -                | 09060           | EZ-Cept dual socket assembly  |
|                         | FT304BI           | -                | 08646I          | Socket with brake interlock   |
|                         | FT304VI           | 4401B            | 08646P          | Socket with vapour recovery interlock                                   |
|                         | FT304BVI          | 4401E-SQS        | 08646IP         | Socket with both brake interlock and vapour recovery interlock          |
| HARDWARE SYSTEM TESTERS | FLOTECH™ PART NO. | CIVACON PART NO. | SCULLY PART NO. | DESCRIPTION   |
|                         | FT400             | 2100             | 22056           | 5 conductor cable 100’  |
|                         | FT401             | 2310             | 27382           | 7 conductor cable 100’  |
|                         | FT402             | 2510             | -               | 20 strain relief fittings, 1/2 NPT                                      |
|                         | FT403             | -                | -               | 30 strain relief fittings, 1/2 NPT                                      |
|                         | FT520             | -                | -               | Optic system tester   |
|                         | FT530             | -                | -               | T.I.M. reader   |

Civacon and R/OM are registered trademarks of Civacon/Dover Corp. Intellichcek is a registered trademark of Scully Signal Co.

## Comparison Reference Chart (continued)

Listed is a cross reference between FloTech™ brand “Drop In” replacement parts and competitor products.

| REPLACEMENT PARTS & COMPETITOR PRODUCTS |                   |                  |                 |   |
|---|-------------------|------------------|-----------------|---|
| ON BOARD SYSTEMS                        | FLOTECH™ PART NO. | CIVACON PART NO. | SCULLY PART NO. | DESCRIPTION   |
|   | FT1004            | 2004             | 08305           | API compatible 4 compartment system                         |
|   | FT1005            | 2005             | 08306           | API compatible 5 compartment system                         |
|   | FT2004            | 3024             | -               | R/OM type, 4 compartment system                             |
|   | FT2005            | 3025             | -               | R/OM type, 5 compartment system                             |
|   | FT2104            | 3034             | -               | R/OM type, 4 compartment system (top only)                  |
|   | FT2105            | 3035             | -               | R/OM type, 5 compartment system (top only)                  |
|   | FT2801            | -                | 08251           | Checkmate system, one compartment, top only                 |
|   | FT2802            | -                | 08352           | Checkmate system, two compartment, top only                 |
|   | FT2803            | -                | 08353           | Checkmate system, three compartment, top only               |
|   | FT2804            | -                | 08354           | Checkmate system, four compartment, top only                |
|   | FT2805            | -                | 08355           | Checkmate system, five compartment, top only                |
|   | FT2806            | -                | 08356           | Checkmate system, six compartment, top only                 |
|   | FT2807            | -                | 08380           | Checkmate system, seven compartment, top only               |
|   | FT2808            | -                | 08381           | Checkmate system, eight compartment, top only               |
|   | FT2811            | -                | 08361           | Checkmate system, one compartment, top and bottom sensors   |
|   | FT2812            | -                | 08362           | Checkmate system, two compartment, top and bottom sensors   |
|   | FT2813            | -                | 08363           | Checkmate system, three compartment, top and bottom sensors |
|   | FT2814            | -                | 08364           | Checkmate system, four compartment, top and bottom sensors  |
|   | FT2815            | -                | 08365           | Checkmate system, five compartment, top and bottom sensors  |
|   | FT2816            | -                | 08366           | Checkmate system, six compartment, top and bottom sensors   |
|   | FT2817            | -                | 08382           | Checkmate system, seven compartment, top and bottom sensors |
|   | FT2818            | -                | 08383           | Checkmate system, eight compartment, top and bottom sensors |

Civacon and R/OM are registered trademarks of Civacon/Dover Corp. Intellcheck is a registered trademark of Scully Signal Co.

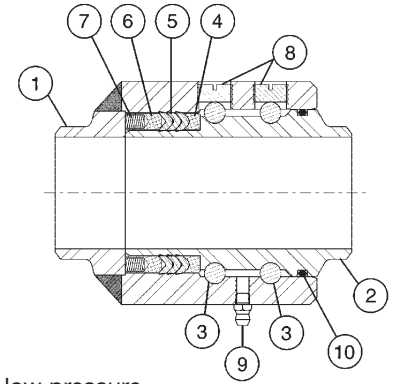
Dixon Valve and Coupling Company warrants the FloTech™ products described herein, and manufactured by Dixon to be free from defects in material and workmanship for a period of five (5) years from date of shipment by Dixon under normal use and service.

For further warranty information see page 156.

# Swivel Joints

## V-Ring Swivel Joints

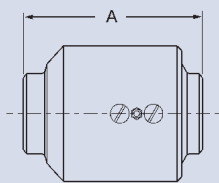
- |                           |                        |
|---------------------------|------------------------|
| 1. Body                   | 6. Spring retainer     |
| 2. Sleeve                 | 7. Spring              |
| 3. Ball bearings          | 8. Ball retainer screw |
| 4. Seal retainer          | 9. Grease fitting      |
| 5. V-Ring (pressure) seal | 10. O-Ring (dust) seal |



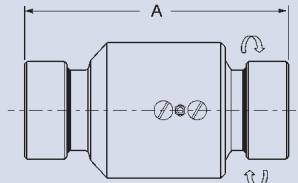
### V-Ring Features

- The spring-loaded triple V-ring sealing system ensures a leak proof seal at either high or low pressure and an extended seal life compared to the conventional single O-ring design
- The 3" - 8" carbon steel swivels are manufactured from a special grade of carbon steel with flame hardened dual raceways for greater load bearing capacity and longer life
- The stainless steel swivels are manufactured in 316 grade stainless steel for superior corrosion resistance.
- Available with pressure ratings to 1,000 psi
- Available in carbon steel, stainless steel and aluminium

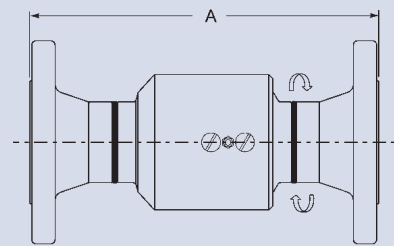
### Single Plane V-Ring Style 20



weld end x weld end  
sizes 2" - 8"

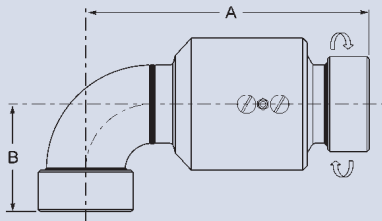


female NPT x female NPT  
sizes 2" - 8"

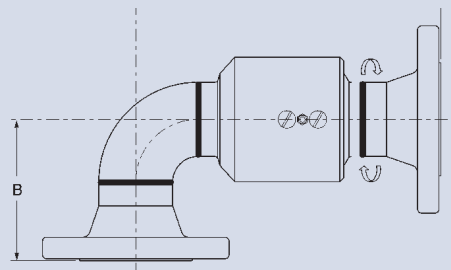


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Single Plane V-Ring Style 30

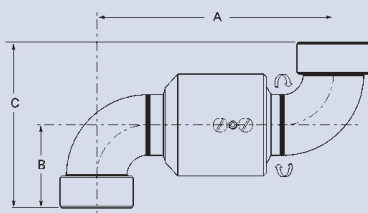


female NPT x female NPT  
sizes 2" - 8"

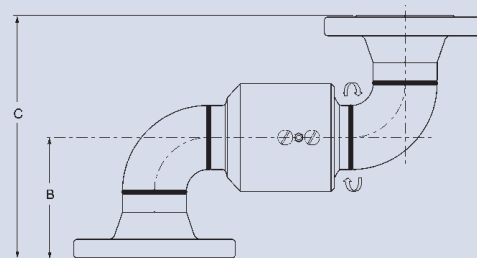


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

### Single Plane V-Ring Style 40



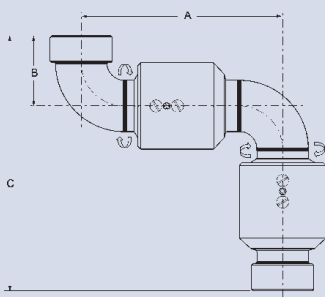
female NPT x female NPT  
sizes 2" - 8"



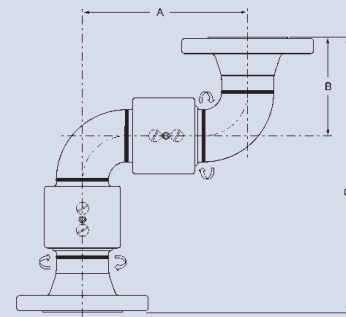
150# ASA flange x 150# ASA flange  
sizes 2" - 8"



**Double Plane V-Ring Style 50**

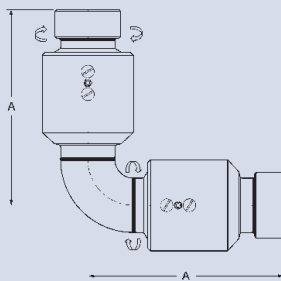


female NPT x female NPT  
sizes 2" - 8"

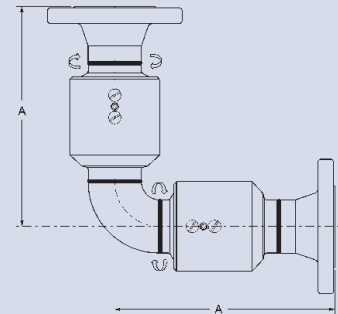


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

**Double Plane V-Ring Style 60**

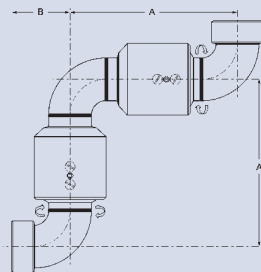


female NPT x female NPT  
sizes 2" - 8"

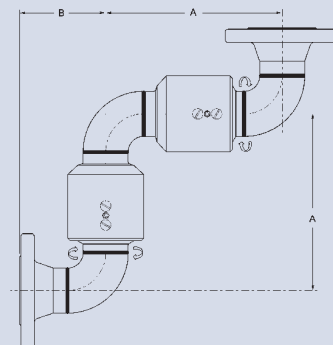


150# ASA flange x 150# ASA flange  
sizes 2" - 8"

**Double Plane V-Ring Style 70**

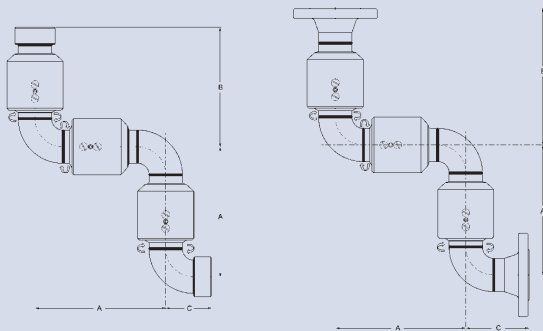


female NPT x female NPT  
sizes 2" - 8"



150# ASA flange x 150# ASA flange  
sizes 2" - 8"

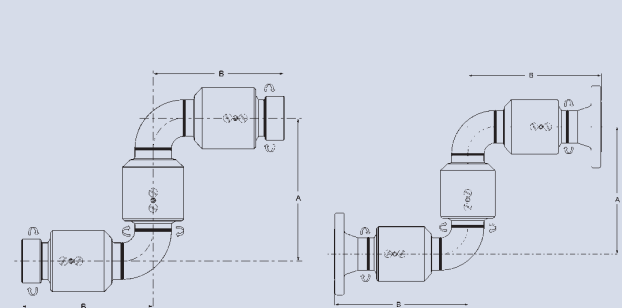
**Triple Plane V-Ring Style 80**



female NPT x female NPT  
sizes 2" - 8"

150# ASA flange x 150# ASA flange  
sizes 2" - 8"

**Triple Plane V-Ring Style 10**

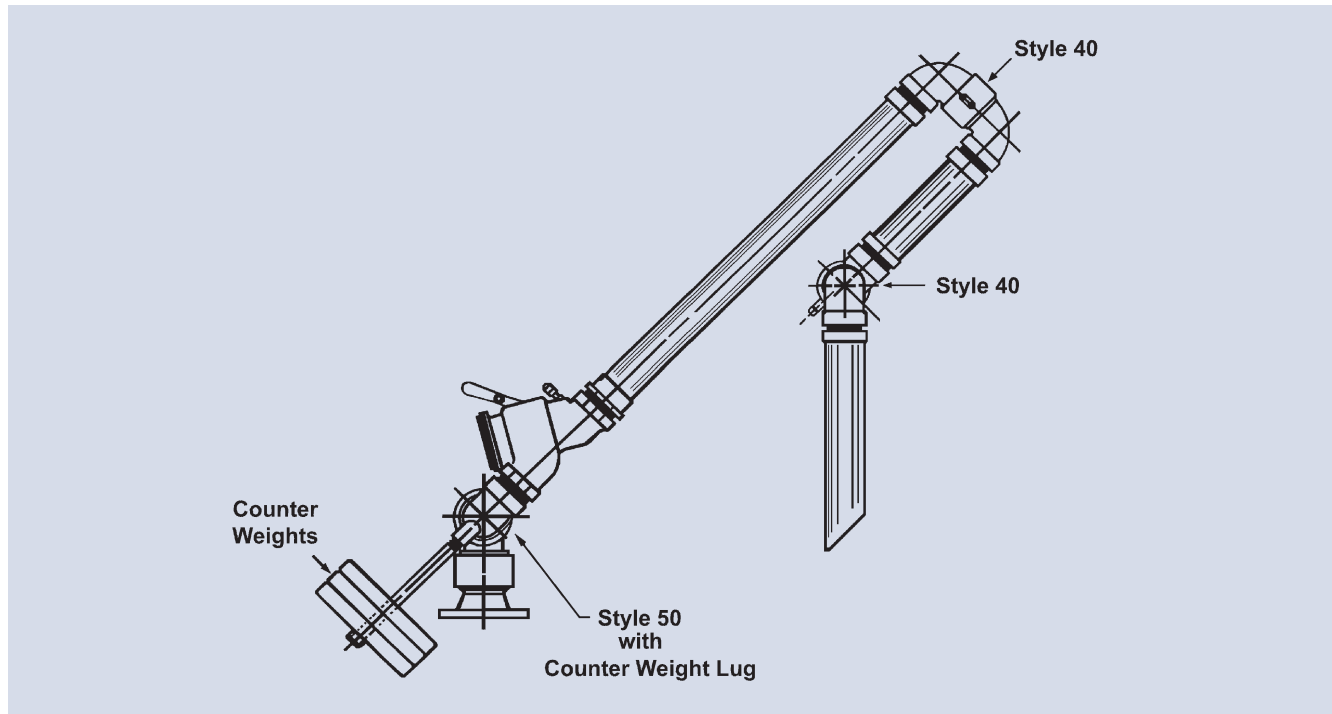


female NPT x female NPT  
sizes 2" - 8"

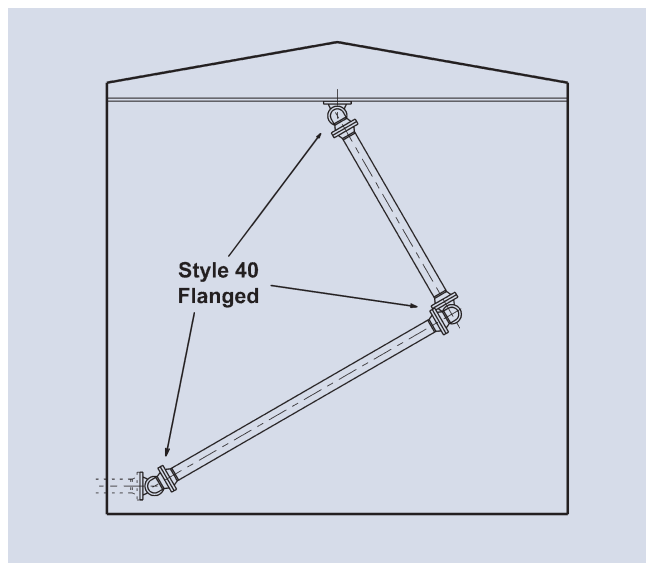
150# ASA flange x 150# ASA flange  
sizes 2" - 8"

## Typical Applications for V-Ring Swivels

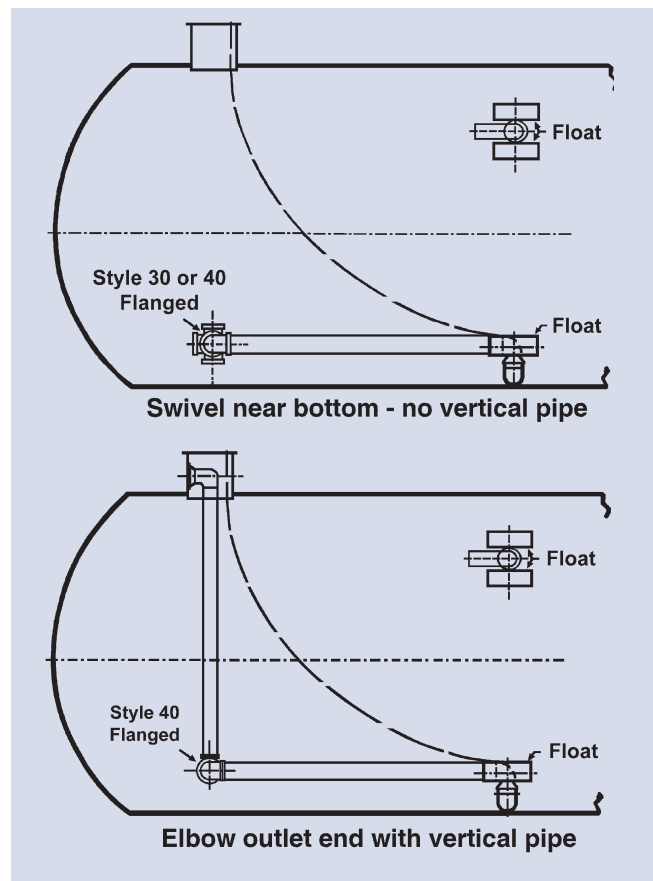
### Loading Arms



### Floating Roof Drains

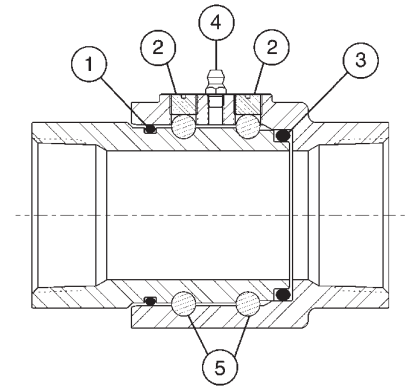


### Floating Suction



## O-Ring Swivel Joints

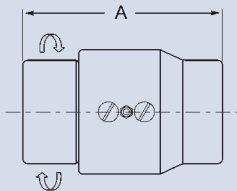
1. O-Ring (dust) seal
2. Ball retainer screw
3. O-Ring (pressure) seal
4. Grease fitting
5. Ball bearings



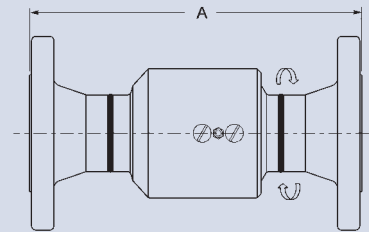
### O-Ring Features

- The O-ring pressure seal ensures a leak-proof seal at either high or low pressure and smoother rotation at lower torque than multiple seal designs
- Spring-loaded PTFE pressure seals are available up through 3"
- Carbon steel and stainless steel O-ring type swivels provide greater strength and corrosion resistance when needed for lower torque applications
- Available in carbon steel, stainless steel, aluminium, brass and iron

### Single Plane O-Ring Style 20

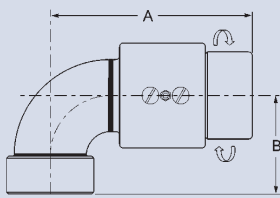


female NPT x female NPT  
sizes 1" - 4"

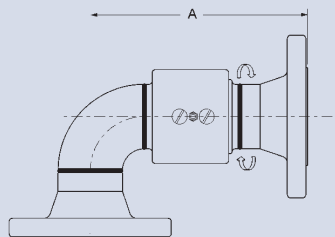


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

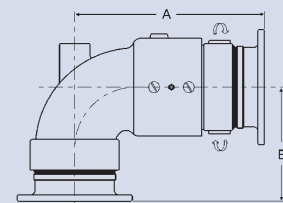
### Single Plane O-Ring Style 30



female NPT x female NPT  
sizes 1" - 4"

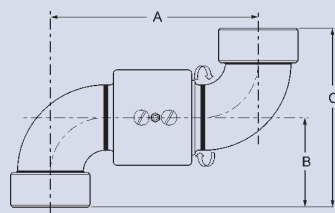


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

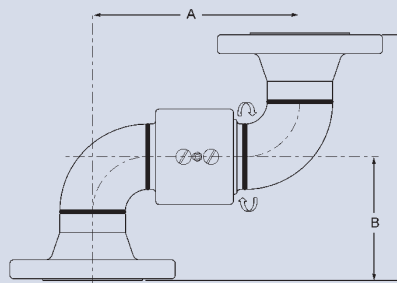


tank truck flange x tank truck flange  
sizes 2" - 4"

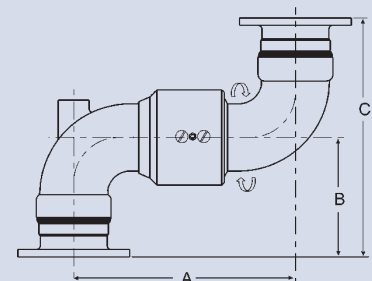
### Single Plane O-Ring Style 40



female NPT x female NPT  
sizes 1" - 4"

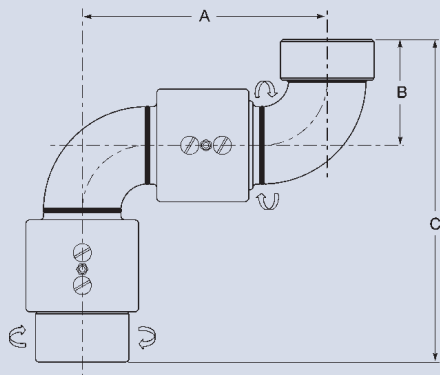


150# ASA flange x 150# ASA flange  
sizes 1" - 4"

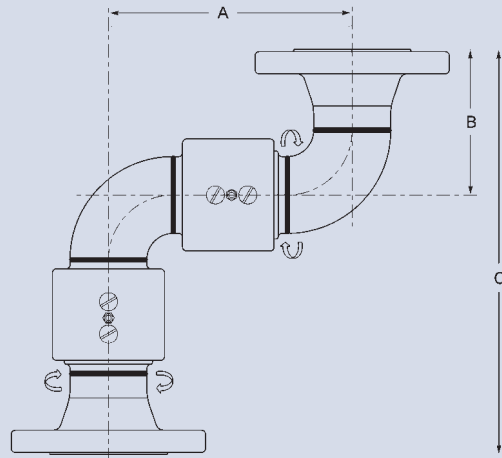


tank truck flange x tank truck flange  
sizes 2" - 4"

**Double Plane O-Ring Style 50**

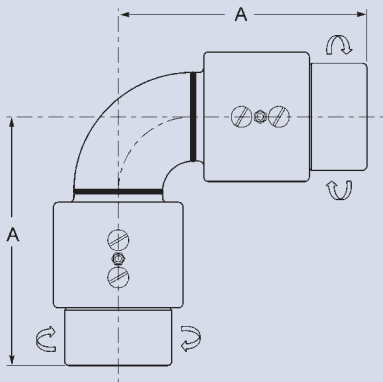


female NPT x female NPT  
 sizes 1" - 4"

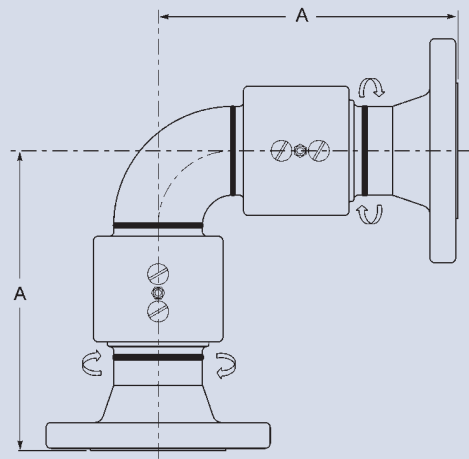


150# ASA flange x 150# ASA flange  
 sizes 1" - 4"

**Double Plane O-Ring Style 60**

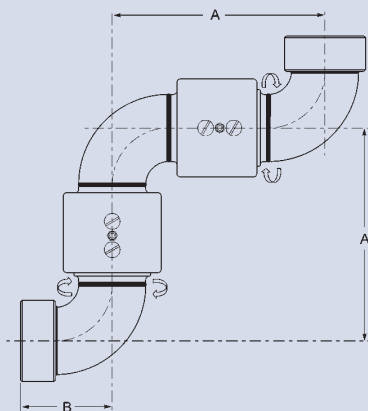


female NPT x female NPT  
 sizes 1" - 4"

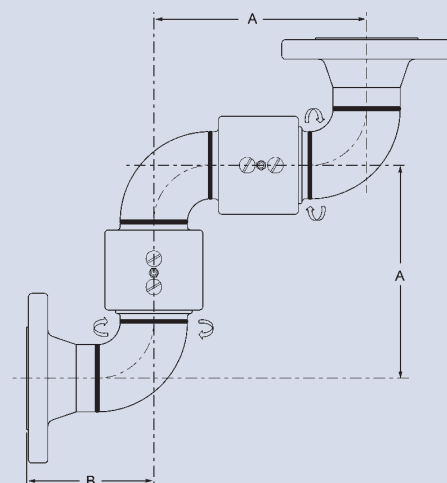


150# ASA flange x 150# ASA flange  
 sizes 1" - 4"

**Triple Plane O-Ring Style 70**



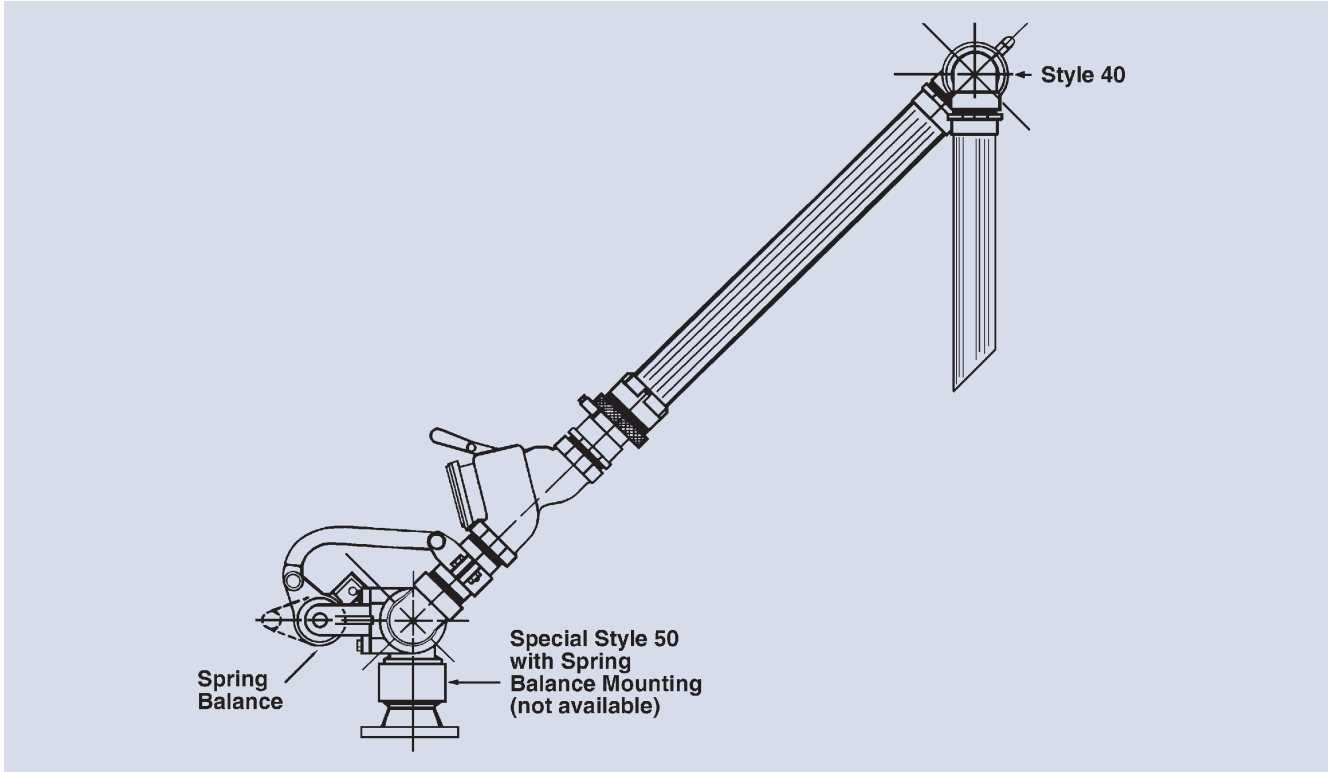
female NPT x female NPT  
 sizes 1" - 4"



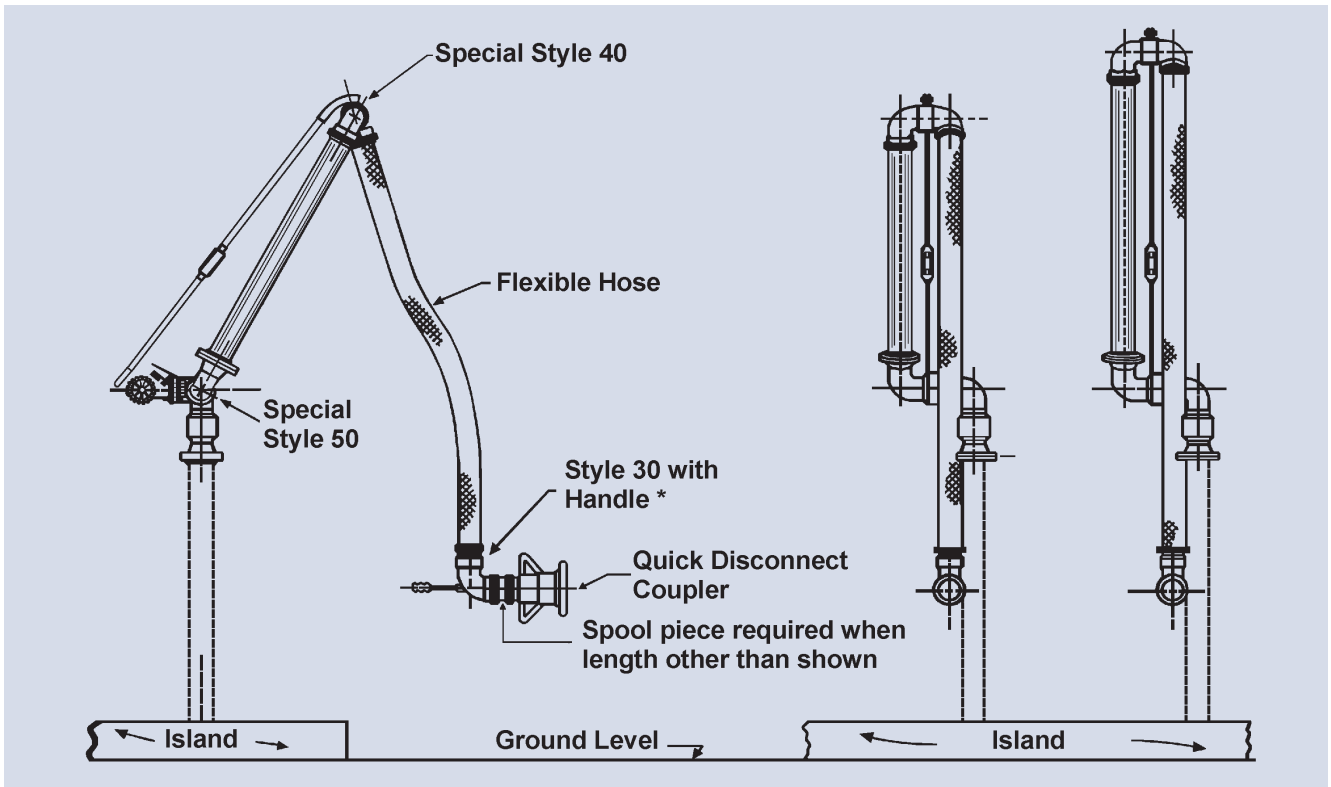
150# ASA flange x 150# ASA flange  
 sizes 1" - 4"

### Typical Applications for O-Ring Swivels

#### Loading Arms



#### Hose Loaders



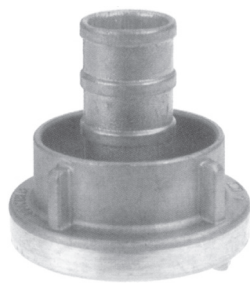
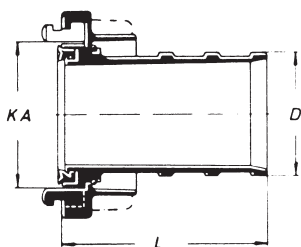
\* style 60 may also be found in this application



# Tanker Couplings

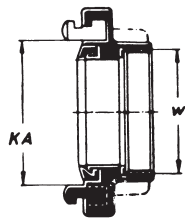
## Aluminium Storz Couplings

- Sizes:** 1/2" to 8"
- Materials:** Aluminium Alloy  
Optional Materials of Stainless Steel and Brass available
- Pressure:** Maximum working pressure 16 bar/232 psi
- Options:** Both halves of the coupling are of an identical design with no separate male or female halves. Either half can, therefore, be connected to any similar size of coupling. The hose coupling can be connected to another style, e.g.: hose tail, female or male threaded and blanking caps. It is essential that the distance between locking ears (KA) is the same on all fittings



| SUCTION COUPLINGS |                                |        |         |        |
|-------------------|--------------------------------|--------|---------|--------|
| PART NO.          | NOMINAL SIZE                   | D (mm) | KA (mm) | L (mm) |
| 2/D-25 AL         | Storz 25 (D) = DIN 14301       | 25     | 31      | 50     |
| 2/32-19 AL        | Storz 32                       | 19     | 44      | 65     |
| 2/32-25 AL        | Storz 32                       | 25     | 44      | 65     |
| 2/32-32 AL        | Storz 32                       | 32     | 44      | 75     |
| 2/38-38 AL        | Storz 38                       | 38     | 52      | 75     |
| 2/C-32 AL         | Storz 52 (C)                   | 25     | 66      | 90     |
| 2/C-38 AL         | Storz 52 (C)                   | 32     | 66      | 90     |
| 2/C-45 AL         | Storz 52 (C)                   | 45     | 66      | 90     |
| 2/C-52 AL         | Storz 52 (C) = DIN14321        | 52     | 66      | 90     |
| 2/C-60 AL         | Storz 52 (C)                   | 60     | 66      | 125    |
| 2/65-65 AL        | Storz 65                       | 65     | 81      | 90     |
| 2/B-65 AL         | Storz 75 (B)                   | 65     | 89      | 125    |
| 2/B-70 AL         | Storz 75 (B)                   | 70     | 89      | 95     |
| 2/B-75 AL         | Storz 75 (B) = DIN 14322       | 75     | 89      | 125    |
| 2/B/80 AL         | Storz 75 (B)                   | 80     | 89      | 135    |
| 2/90 AL           | Storz 90                       | 90     | 105     | 150    |
| 2/100 AL          | Storz 100                      | 100    | 115     | 120    |
| 2/A-100 AL        | Storz 110 (A)                  | 100    | 133     | 170    |
| 2/A-110 AL        | Storz 110 (A) = DIN 14323      | 110    | 133     | 170    |
| 2/125 AL          | Storz 125                      | 125    | 148     | 196    |
| 2/135-135 AL      | Storz 135                      | 135    | 159     | 196    |
| 2/150-150 AL      | Storz 150 = F (3 Claws) Forged | 150    | 160     | 180    |
| 2/165-150 AL      | Storz 165                      | 150    | 188     | 275    |
| 2/205 AL          | Storz 205                      | 205    | 220     | 375    |
| 96                | Storz Spanner                  | -      | -       | -      |

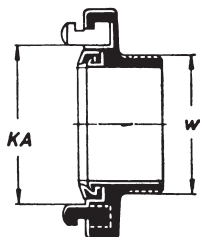
Rubber Seals (suitable for Petrol and Oil Fluids)



**BSPF FEMALE THREADED ADAPTERS**

| PART NO.     | NOMINAL SIZE<br>DIN ISO 228    | PIPE<br>THREAD | KA<br>(mm) | MATERIAL        |
|--------------|--------------------------------|----------------|------------|-----------------|
| 3/D-050 AL   | Storz 25 (D) - DS*             | 1/2"           | 31         | Aluminium Alloy |
| 3/D-075 AL   | Storz 25 (D) - DS*             | 3/4"           | 31         | Aluminium Alloy |
| 3/D-100 AL   | Storz 25 (D) - DS* = DIN14306  | 1"             | 31         | Aluminium Alloy |
| 3/32-100 AL  | Storz 32 - DS*                 | 1"             | 44         | Aluminium Alloy |
| 3/32-125 AL  | Storz 32 - DS*                 | 1 1/4"         | 44         | Aluminium Alloy |
| 3/38-150 AL  | Storz 38 - DS*                 | 1 1/2"         | 52         | Aluminium Alloy |
| 3/38-200 AL  | Storz 38 - DS*                 | 2"             | 52         | Aluminium Alloy |
| 3/C-100 AL   | Storz 52 (C)                   | 1"             | 66         | Aluminium Alloy |
| 3/C-125 AL   | Storz 52 (C)                   | 1 1/4"         | 66         | Aluminium Alloy |
| 3/C-150 AL   | Storz 52 (C)                   | 1 1/2"         | 66         | Aluminium Alloy |
| 3/C-200 AL   | Storz 52 C = DIN14307          | 2"             | 66         | Aluminium Alloy |
| 3/C-250 AL   | Storz 52 (C)                   | 2 1/2"         | 66         | Aluminium Alloy |
| 3/65-200 AL  | Storz 65                       | 2"             | 81         | Aluminium Alloy |
| 3/65-250 AL  | Storz 65                       | 2 1/2"         | 81         | Aluminium Alloy |
| 3/B-200 AL   | Storz 75 (B)                   | 2"             | 89         | Aluminium Alloy |
| 3/B-250 AL   | Storz 75 B = DIN 14308         | 2 1/2"         | 89         | Aluminium Alloy |
| 3/B-300 AL   | Storz 75 (B)                   | 3"             | 89         | Aluminium Alloy |
| 3/90-300 AL  | Storz 90                       | 3"             | 105        | Aluminium Alloy |
| 3/100-400 AL | Storz 100 - DS*                | 4"             | 115        | Aluminium Alloy |
| 3/A-400 AL   | Storz 110 (A)                  | 4"             | 133        | Aluminium Alloy |
| 3/A-450 AL   | Storz 110 A = DIN 14309        | 4 1/2"         | 133        | Aluminium Alloy |
| 3/125-500 AL | Storz 125                      | 5"             | 148        | Aluminium Alloy |
| 3/150-600 AL | Storz 150 = F (3 Claws) Forged | 6"             | 160        | Aluminium Alloy |
| 3/165-600 AL | Storz 165                      | 6"             | 188        | Aluminium Alloy |
| 3/165-700 AL | Storz 165                      | 7"             | 188        | Aluminium Alloy |
| 3/205-800 AL | Storz 205                      | 8"             | 220        | Aluminium Alloy |
| 96           | Storz Spanner                  | -              | -          | -               |

\*DS - Suitable for both pressure and suction couplings

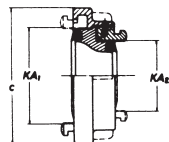


**BSPM MALE THREADED ADAPTERS**

| PART NO.      | NOMINAL SIZE<br>DIN ISO 228 | PIPE<br>THREAD | KA<br>(mm) | MATERIAL        |
|---------------|-----------------------------|----------------|------------|-----------------|
| 4/D-100 AL    | Storz 25 (D) - DS*          | 1"             | 31         | Aluminium Alloy |
| 4/D-32-100 AL | Storz 32 DS*                | 1"             | 44         | Aluminium Alloy |
| 4/32-125 AL   | Storz 32 DS*                | 1 1/4"         | 44         | Aluminium Alloy |
| 4/38-150 AL   | Storz 38 - DS*              | 1 1/2"         | 52         | Aluminium Alloy |
| 4/C-125 AL    | Storz 52 (C)                | 1 1/4"         | 66         | Aluminium Alloy |
| 4/C-200 AL    | Storz 52 (C)                | 2"             | 66         | Aluminium Alloy |
| 4/B-250 AL    | Storz 75(B)                 | 2 1/2"         | 89         | Aluminium Alloy |
| 4/B-300 AL    | Storz 75(B)                 | 3"             | 89         | Aluminium Alloy |
| 4/A-400 AL    | Storz 110(A)                | 4"             | 133        | Aluminium Alloy |

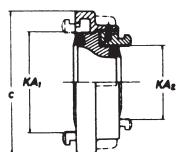
\*DS - Suitable for both pressure and suction couplings

# Tanker Couplings



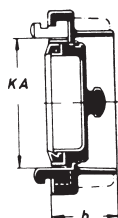
## REDUCERS STORZ - STORZ (SWIVEL)

| PART NO. | NOMINAL SIZE      | KA x KA (mm) | MATERIAL        |
|----------|-------------------|--------------|-----------------|
| 7/C-D AL | C - D = DIN 14341 | 66/31        | Aluminium Alloy |
| 7/B-C AL | B - C = DIN 14342 | 89/66        | Aluminium Alloy |
| 7/A-B AL | A - A = DIN 14343 | 133/89       | Aluminium Alloy |



## REDUCERS STORZ - STORZ (RIGID)

| PART NO.   | NOMINAL SIZE | KA x KA (mm) | MATERIAL        |
|------------|--------------|--------------|-----------------|
| 7/C-38 AL  | Storz C-38   | 66/52        | Aluminium Alloy |
| 7/C-32 AL  | Storz C-32   | 66/44        | Aluminium Alloy |
| 7/65-C AL  | Storz 65-C   | 81/66        | Aluminium Alloy |
| 7/B-65 AL  | Storz B-65   | 89/81        | Aluminium Alloy |
| 7/90-B AL  | Storz 90-B   | 105/89       | Aluminium Alloy |
| 7/100-B AL | Storz 100-B  | 115/89       | Aluminium Alloy |
| 7/A-100 AL | Storz A-100  | 133/115      | Aluminium Alloy |
| 7/125-A AL | Storz 125-A  | 148/133      | Aluminium Alloy |
| 7/150-A    | Storz 150-A  | 160/133      | Aluminium Alloy |



## BLANK CAPS WITH CHAIN

| PART NO. | NOMINAL SIZE                   | KA (mm) | MATERIAL<br>I.D. of coupling |
|----------|--------------------------------|---------|------------------------------|
| 8/D AL   | Storz 25 D - DS* = DIN 14310   | 31      | Aluminium Alloy              |
| 8/32 AL  | Storz 32 DS*                   | 44      | Aluminium Alloy              |
| 8/38 AL  | Storz 38 DS*                   | 52      | Aluminium Alloy              |
| 8/C AL   | Storz 52 C = DIN 14311         | 66      | Aluminium Alloy              |
| 8/65 AL  | Storz 65                       | 81      | Aluminium Alloy              |
| 8/B AL   | Storz 75 B = DIN 14312         | 89      | Aluminium Alloy              |
| 8/90 AL  | Storz 90                       | 105     | Aluminium Alloy              |
| 8/100 AL | Storz 100 - DS*                | 115     | Aluminium Alloy              |
| 8/A AL   | Storz 110 A = DIN 14313        | 133     | Aluminium Alloy              |
| 8/125 AL | Storz 125                      | 148     | Aluminium Alloy              |
| 8/150 AL | Storz 150 = F (3 Claws) forged | 160     | Aluminium Alloy              |
| 8/165 AL | Storz 165                      | 188     | Aluminium Alloy              |
| 8/205 AL | Storz 205                      | 220     | Aluminium Alloy              |
| 96       | Storz Spanner                  | -       | -                            |

\*DS - Suitable for both pressure and suction couplings



| DELIVERY-SUCTION SEALS |                         |
|------------------------|-------------------------|
| PART NO.               | NOMINAL SIZE            |
| 69/D PB                | Storz 25 D* = DIN 14301 |
| 69/32 PB               | Storz 32 - DS*          |
| 69/38 PB               | Storz 38 - DS*          |
| 69/CPB                 | Storz 52 C = DIN 14311  |
| 69/65 PB               | Storz 65                |
| 69/BPB                 | Storz 75 B = DIN 14312  |
| 69/90 PB               | Storz 90                |
| 69/100 PB              | Storz 100 - DS*         |
| 69/A PB                | Storz 110 A = DIN 14313 |
| 69/125 PB              | Storz 125               |

\*DS - Suitable for both pressure & suction couplings.  
Food quality material available on request.

# Tanker Couplings

## Tank Wagon Couplings BS EN 14420-6:2004

| STAINLESS STEEL TANKWAGON COUPLINGS |                       |   |
|-------------------------------------|-----------------------|---|
| PART NO.                            | SIZE                  | MATERIAL  |
| MK50SS<br>MK80SS<br>MK100SS         | DN50<br>DN80<br>DN100 | Stainless Steel<br>Stainless Steel<br>Stainless Steel |
| VK50SS<br>VK80SS<br>VK100SS         | DN50<br>DN80<br>DN100 | Stainless Steel<br>Stainless Steel<br>Stainless Steel |
| VB50SS<br>VB80SS                    | DN50<br>DN80          | Stainless Steel<br>Stainless Steel                    |
| MB50SS<br>MB80SS                    | DN50<br>DN80          | Stainless Steel<br>Stainless Steel                    |



| FORGED BRASS TANKWAGON COUPLINGS |                       |  |
|----------------------------------|-----------------------|--|
| PART NO.                         | SIZE                  | MATERIAL                                     |
| MK50BR<br>MK80BR<br>MK100BR      | DN50<br>DN80<br>DN100 | Forged Brass<br>Forged Brass<br>Forged Brass |
| VK50BR<br>VK80BR<br>VK100BR      | DN50<br>DN80<br>DN100 | Forged Brass<br>Forged Brass<br>Forged Brass |





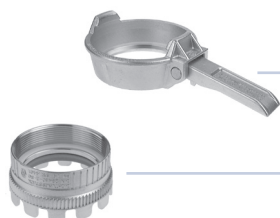
**Tank Wagon Spares & Seals BS EN 14420-6:2004**

**STAINLESS STEEL TANKWAGON SPARE PARTS**



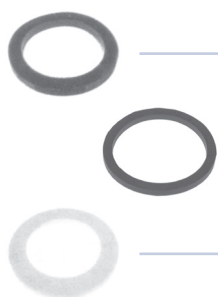
| PART NO.                             | SIZE                  | DESCRIPTION  |
|--------------------------------------|-----------------------|--|
| MKLR 50SS<br>MKLR 80SS<br>MKLR 100SS | DN50<br>DN80<br>DN100 | Locking Ring<br>Locking Ring<br>Locking Ring                         |
| MKSR 50SS<br>MKSR 80SS<br>MKSR 100SS | DN50<br>DN80<br>DN100 | Sealing Ring Section<br>Sealing Ring Section<br>Sealing Ring Section |

**FORGED BRASS TANKWAGON SPARE PARTS**



| PART NO.                          | SIZE                  | DESCRIPTION  |
|-----------------------------------|-----------------------|--|
| MKLR50BR<br>MKLR80BR<br>MKLR100BR | DN50<br>DN80<br>DN100 | Locking Ring<br>Locking Ring<br>Locking Ring                         |
| MKSR50BR<br>MKSR80BR<br>MKSR100BR | DN50<br>DN80<br>DN100 | Sealing Ring Section<br>Sealing Ring Section<br>Sealing Ring Section |

**SEALS AND GASKETS FOR TANKWAGON COUPLINGS**



| PART NO.                    | SIZE                  | DESCRIPTION  |
|-----------------------------|-----------------------|--|
| MBG50<br>MBG80<br>MBG100    | DN50<br>DN80<br>DN100 | Female Blanking Gasket<br>Female Blanking Gasket<br>Female Blanking Gasket |
| TWHS50<br>TWHS80<br>TWHS100 | DN50<br>DN80<br>DN100 | Hypalon Seal<br>Hypalon Seal<br>Hypalon Seal                               |
| TS 50T<br>TS 80T<br>TS 100T | DN50<br>DN80<br>DN100 | PTFE Thread Seal<br>PTFE Thread Seal<br>PTFE Thread Seal                   |

## Dry Disconnect Couplings

When your product is:

- Expensive
- Expensive to clean up
- Expensive to reprocess or dispose
- Hazardous to workers or the environment
- Prone to accidental spillage and product loss

Dry Disconnect Couplings are designed for quick and spill free connection and disconnection of hoses and pipelines. They are used by producers of ink, adhesives, fatty acids, pharmaceuticals, liquid soaps, petroleum, chemicals, agricultural and a wide variety of common caustic and specialty acids.



- **Easy to handle -**  
Push and turn - free flow, turn and pull - closed
- **Time saving-**  
No need to drain hoses or pipe systems
- **Economical-**  
No loss or spillage of liquids at connection or disconnection
- **Safety-**  
The valve cannot be opened until the unit is coupled
- **Environment friendly-**  
Accidental spillage eliminated
- **Safe and reliable-**  
Due to rugged construction
- **Selectivity-**  
Optional selectivity for preventing contamination due to incorrect and cross-coupling
- **Product life-**  
Uncomplicated design and high quality materials ensures longer product life
- **Working Pressure -**

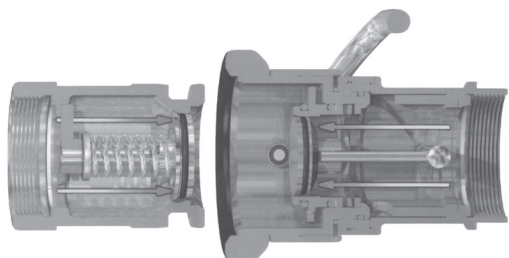
|                  |                  |
|------------------|------------------|
| Aluminium:       | 260 psi / 18 bar |
| Brass/ Gunmetal: | 360 psi / 25 bar |
| Stainless Steel: | 360 psi / 25 bar |
- **Optional Seals-**

|          |              |
|----------|--------------|
| EPDM     | BR - nitrile |
| Kalrez®  | Chemraz®     |
| Perlast® |              |

Interchanges with Avery Hardoll and Todo-matic®

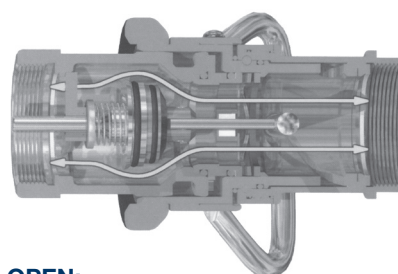
## How it works

The principle of operation is identical for all sizes of couplings.



### CLOSED:

- Turn and pull  
It's released - no spillage



### OPEN:

- Push and turn  
It's coupled - full flow

## Dry Quick Disconnect Couplers

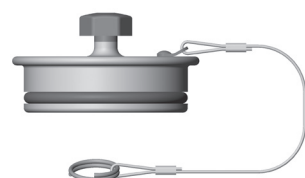
### Hose Unit

- Coupler has built-in swivel
- Stainless Steel ball bearings
- Shaft journal in stainless steel embedded in PTFE to eliminate seizure
- Riveted piston pin to minimise the risk for failure under extreme pressure conditions
- Protecting ring is weather resistant rubber
- Electrically conductive
- All wetted parts are stainless steel
- Rollers for the stainless steel units are Hastelloy™ C276 on the stainless steel shaft
- Rollers for the Aluminium and Brass units are Aluminium-bronze on the stainless steel shaft



### DRY QUICK DISCONNECT COUPLERS x FEMALE THREAD WITH VITON® SEALS

| PART NO.           | FEMALE NTP/BSP | BODY SIZE | BODY MATERIAL       |
|--------------------|----------------|-----------|---------------------|
| <b>DDC150SS</b>    | 1 1/2"         | 70mm      | 316 Stainless Steel |
| <b>DDC200SS</b>    | 2"             | 70mm      | 316 Stainless Steel |
| <b>DDC300SS105</b> | 3"             | 105mm     | 316 Stainless Steel |
| <b>DDC300SS</b>    | 3"             | 119mm     | 316 Stainless Steel |
| <b>DDC400SS</b>    | 4"             | 164mm     | 316 Stainless Steel |
| <b>DDC150AL</b>    | 1 1/2"         | 70mm      | Anodised Aluminium  |
| <b>DDC200AL</b>    | 2"             | 70mm      | Anodised Aluminium  |
| <b>DDC300AL105</b> | 3"             | 105mm     | Anodised Aluminium  |
| <b>DDC300AL</b>    | 3"             | 119mm     | Anodised Aluminium  |
| <b>DDC400AL</b>    | 4"             | 164mm     | Anodised Aluminium  |
| <b>DDC150BR</b>    | 1 1/2"         | 70mm      | Brass               |
| <b>DDC200BR</b>    | 2"             | 70mm      | Brass               |
| <b>DDC300GM105</b> | 3"             | 105mm     | Gunmetal            |
| <b>DDC300GM</b>    | 3"             | 119mm     | Gunmetal            |
| <b>DDC400GM</b>    | 4"             | 164mm     | Gunmetal            |



### COMPOSITE DUST PLUGS FOR COUPLERS

| PART NO.          | SIZE          | BODY SIZE |
|-------------------|---------------|-----------|
| <b>DDDP150</b>    | 1 1/2" and 2" | 70mm      |
| <b>DDDP300105</b> | 3"            | 105mm     |
| <b>DDDP300</b>    | 3"            | 119mm     |
| <b>DDDP400</b>    | 4"            | 164mm     |

## Dry Quick Disconnect Adapters

### Tank Unit

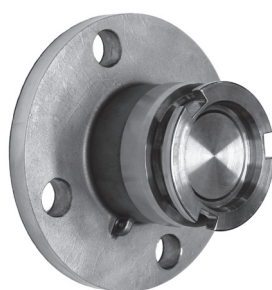
- The adapter is usually installed on the tank or manifold
- Available in female NPT/BSP or 150# ASA flange
- Conical valve seat to eliminate the risk for “piston blow out”
- PTFE bearing between the piston shaft and the piston guide to eliminate the risk for seizure

### Construction:

- Aluminium adapter - Aluminium poppet, stainless steel internal parts
- Stainless Steel adapter - Stainless steel poppet, stainless steel internal parts
- Brass / Gunmetal adapter - Brass poppet, Brass and stainless steel internal parts



| DRY QUICK DISCONNECT ADAPTERS x FEMALE THREAD WITH VITON® SEALS |                |           |                     |
|---|----------------|-----------|---------------------|
| PART NO.  | FEMALE NPT/BSP | BODY SIZE | BODY MATERIAL       |
| DDA150SS  | 1 1/2"         | 70mm      | 316 Stainless Steel |
| DDA200SS  | 2"             | 70mm      | 316 Stainless Steel |
| DDA300SS105   | 3"             | 105mm     | 316 Stainless Steel |
| DDA300SS  | 3"             | 119mm     | 316 Stainless Steel |
| DDA400SS  | 4"             | 164mm     | 316 Stainless Steel |
| DDA150AL  | 1 1/2"         | 70mm      | Anodised Aluminium  |
| DDA200AL  | 2"             | 70mm      | Anodised Aluminium  |
| DDA300AL105   | 3"             | 105mm     | Anodised Aluminium  |
| DDA300AL  | 3"             | 119mm     | Anodised Aluminium  |
| DDA400AL  | 4"             | 164mm     | Anodised Aluminium  |
| DDA150BR  | 1 1/2"         | 70mm      | Brass               |
| DDA200BR  | 2"             | 70mm      | Brass               |
| DDA300GM105   | 3"             | 105mm     | Gunmetal            |
| DDA300GM  | 3"             | 119mm     | Gunmetal            |
| DDA400GM  | 4"             | 164mm     | Gunmetal            |



| DRY QUICK DISCONNECT ADAPTERS x 150# ASA FLANGE WITH VITON® SEALS |                |           |                     |
|---|----------------|-----------|---------------------|
| PART NO.  | FEMALE NPT/BSP | BODY SIZE | BODY MATERIAL       |
| DDA150SSFL  | 1 1/2"         | 70mm      | 316 Stainless Steel |
| DDA200SSFL  | 2"             | 70mm      | 316 Stainless Steel |
| DDA300SS105FL   | 3"             | 105mm     | 316 Stainless Steel |
| DDA300SSFL  | 3"             | 119mm     | 316 Stainless Steel |
| DDA400SSFL  | 4"             | 164mm     | 316 Stainless Steel |
| DDA150ALFL  | 1 1/2"         | 70mm      | Anodised Aluminium  |
| DDA200ALFL  | 2"             | 70mm      | Anodised Aluminium  |
| DDA300AL105FL   | 3"             | 105mm     | Anodised Aluminium  |
| DDA300ALFL  | 3"             | 119mm     | Anodised Aluminium  |
| DDA400ALFL  | 4"             | 164mm     | Anodised Aluminium  |
| DDA150BRFL  | 1 1/2"         | 70mm      | Brass               |
| DDA200BRFL  | 2"             | 70mm      | Brass               |
| DDA300GM105FL   | 3"             | 105mm     | Gunmetal            |
| DDA300GMFL  | 3"             | 119mm     | Gunmetal            |
| DDA400GMFL  | 4"             | 164mm     | Gunmetal            |



| COMPOSITE DUST CAPS FOR ADAPTERS |               |           |
|----------------------------------|---------------|-----------|
| PART NO.                         | SIZE          | BODY SIZE |
| DDDC150                          | 1 1/2" and 2" | 70mm      |
| DDDC300105                       | 3"            | 105mm     |
| DDDC300                          | 3"            | 119mm     |
| DDDC400                          | 4"            | 164mm     |

## Dry Break Cam and Groove Dry Disconnect Couplings

Compatible with most cam and groove style dry disconnects. The Bayco dry disconnect helps prevent spillage from normal or accidental disconnects. A spring loaded sealing device is designed to snap closed should the valve become disconnected with the poppet open, significantly limiting liquid loss.

Our dry disconnect couplings are available in a wide range of sizes, metals, and seal materials. Please refer to our product description cross-reference chart for details. Special configurations can be designed for your application.

### Couplers

- Dry disconnect coupler has automatic closing poppet assembly
- Heavy duty stainless steel crank and link provide long service life
- 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
- Aluminium fittings have stainless steel internals\*
- For pressure ratings at other temperatures, contact the factory
- Dixon EZ Boss-Lock cam arms provide high security from accidental opening due to vibration or snagging on 1½” and 2” fittings
- Large paddle type cam arms allow for an easy grip on 3” fittings

**SAFETY ALERT**  
Must be used with a DBA style adapter for coupler to operate.  
Adapter sold separately.



1½” and 2” coupler x female NPT



1½” and 2” coupler x female NPT

| COUPLER x FEMALE NPT |                           |            |              |                                      |                  |
|----------------------|---------------------------|------------|--------------|--------------------------------------|------------------|
| ALUMINIUM PART NO.   | STAINLESS STEEL* PART NO. | FEMALE NPT | COUPLER SIZE | SEAL MATERIAL                        | MAX. PSI AT 70°C |
| DBC61-150            | DBC71-150                 | 1½”        | 2”           | Buna                                 | 210              |
| DBC61-200            | DBC71-200                 | 2”         | 2½”          |                                      | 150              |
| DBC61-300            | DBC71-300                 | 3”         | 4”           |                                      | 120              |
| DBC62-150            | DBC72-150                 | 1½”        | 2”           | Viton®                               | 210              |
| DBC62-200            | DBC72-200                 | 2”         | 2½”          |                                      | 150              |
| DBC62-300            | DBC72-300                 | 3”         | 4”           |                                      | 120              |
| DBC63-150            | DBC73-150                 | 1½”        | 2”           | PTFE Encapsulated Silicone & Kalrez® | 210              |
| DBC63-200            | DBC73-200                 | 2”         | 2½”          |                                      | 150              |
| DBC63-300            | DBC73-300                 | 3”         | 4”           |                                      | 120              |
| DBC64-150            | DBC74-150                 | 1½”        | 2”           | EPT                                  | 210              |
| DBC64-200            | DBC74-200                 | 2”         | 2½”          |                                      | 150              |
| DBC64-300            | DBC74-300                 | 3”         | 4”           |                                      | 120              |
| ---                  | DBC76-150                 | 1½”        | 2”           | Kalrez® and PTFE**                   | 210              |
| DBC66-200            | DBC76-200                 | 2”         | 2½”          |                                      | 150              |
| ---                  | DBC76-300                 | 3”         | 4”           |                                      | 120              |
| ---                  | DBC77-150                 | 1½”        | 2”           | PTFE Encapsulated Viton® & Kalrez®   | 210              |
| ---                  | DBC77-200                 | 2”         | 2½”          |                                      | 150              |
| ---                  | DBC77-300                 | 3”         | 4”           |                                      | 120              |
| DBC69-300            | DBC79-300                 | 3”         | 4”           | Viton® B                             | 150              |
|                      |                           |            |              |                                      | 120              |

| GREASELESS COUPLER x FEMALE NPT |            |              |                                    |                  |
|---------------------------------|------------|--------------|------------------------------------|------------------|
| STAINLESS STEEL* PART NO.       | FEMALE NPT | COUPLER SIZE | SEAL MATERIAL                      | MAX. PSI AT 70°C |
| DBC77-150-GL                    | 1½”        | 2”           | PTFE Encapsulated Viton® & Kalrez® | 210              |
| DBC77-200-GL                    | 2”         | 2½”          | PTFE Encapsulated Viton® & Kalrez® | 150              |

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

\*\*Kalrez® gasket, main seal O-ring and handle O-ring. PTFE seals on cylinder assembly, stuffing box, and seal under poppet screw.





# Tanker Couplings



| COUPLER x 90° SWIVEL FEMALE NPT |            |              |                                      |                  |
|---------------------------------|------------|--------------|--------------------------------------|------------------|
| ALUMINIUM PART NO.              | FEMALE NPT | COUPLER SIZE | SEAL MATERIAL                        | MAX. PSI AT 70°C |
| DBS61-200                       | 2"         | 2½"          | Buna                                 | 150              |
| DBS62-200                       | 2"         | 2½"          | Viton®                               | 150              |
| DBS63-200                       | 2"         | 2½"          | PTFE Encapsulated Silicone & Kalrez® | 150              |

## Dust Plug for Couplers



| DUST PLUG FOR COUPLERS |                           |      |
|------------------------|---------------------------|------|
| ALUMINIUM PART NO.     | STAINLESS STEEL* PART NO. | SIZE |
| 200-DP-AL              | 200-DP-SS                 | 2"   |
| 250-DP-AL              | 250-DP-SS                 | 2½"  |
| 400-DP-AL              | 400-DP-SS                 | 4"   |

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

## Locking Kit for Couplers



| LOCKING KIT FOR COUPLERS |  |
|--------------------------|--|
| ALUMINIUM PART NO.       | DESCRIPTION  |
| DBCL-200<br>DBCL-300     | for use with 1½" and 2" dry disconnect couplers<br>for use with 3" dry disconnect couplers |

## Cam and Groove Style Dry Disconnect D2C Couplings

**Application:**

Dry disconnects help prevent spillage from normal or accidental disconnection of the connection. D2C series couplings are similar to the DBC series as shown on page 23, except the D2C do not have an internal seal cylinder, therefore the couplings do not automatically close. The D2C couplers are suited to vapour recovery, suction pump and applications where it is necessary to easily drain the hose or piping for cleaning. They can also be used when product retention in hose or pipe is desired, but environmental damage from an open coupling is not a threat.

**Standards:**

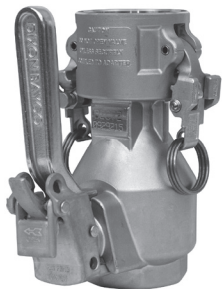
Use with Dixon Bayco DBA series adapters. Manufactured to interchange with other cam and groove type dry disconnect couplings.

**Materials:**

316 Stainless steel bodies with Buna\*, FKM\*, FKM-B\*, PTFE encapsulated silicone\*, EPT (EPDM)\*, Kalrez®, PTFE encapsulated FKM seals, see part number chart for full seal selection. Contact Dixon™ at 800-355-1991 for working pressures at temperatures other than 21°C (70°F) and for chemical compatibility, size, and material selection.

**Features & Benefits:**

- Helps eliminate the possibility of costly spills
- Compatible with most other brands of cam and groove style dry disconnects
- Special configurations can be designed for your application
- Female NPT
- Couplers below are used with the DBA adapters shown on page 69
- Use standard cam and groove dust plugs, sized one size larger than the dry disconnect size, see chart below for dust plug size selection
- Stainless steel valve handle locking kit included on valve handle
- EZ Boss-lock automatic locking cam arms provide added security from accidental opening due to cam arms getting snagged or vibration. Very easy to use, just close the arms and they lock, to open simply lift the lever (possible even with gloves on).



D2C71-150



D2C71-200

\* Dependent upon part #, see part number list below for more details.

| STAINLESS STEEL FEMALE NPT COUPLERS |        |              |                            |                       |
|-------------------------------------|--------|--------------|----------------------------|-----------------------|
| PART NO.                            | FEMALE | COUPLER SIZE | SEAL MATERIAL              | MAX PSI @ 21°C (70°F) |
| D2C71-150                           | 1½"    | 2"           | Buna                       | 210                   |
| D2C71-200                           | 2"     | 2½"          | Buna                       | 150                   |
| D2C72-150                           | 1½"    | 2"           | FKM                        | 210                   |
| D2C72-200                           | 2"     | 2½"          | FKM                        | 150                   |
| D2C73-150                           | 1½"    | 2"           | PTFE Encapsulated Silicone | 210                   |
| D2C73-200                           | 2"     | 2½"          | PTFE Encapsulated Silicone | 150                   |
| D2C74-150                           | 1½"    | 2"           | EPT (EPDM)                 | 210                   |
| D2C74-200                           | 2"     | 2½"          | EPT (EPDM)                 | 150                   |

See page 115 for repair kits and replacement parts.

Product instruction sheets and technical data can be viewed on our website at [dixoneurope.co.uk](http://dixoneurope.co.uk)



# Tanker Couplings

## Adapters

- Two-piece adapter design for easy rebuilding of adapters
- Fully interchangeable with Kamvalok (OPW trademark) style fittings
- Aluminium fittings have aluminium nose piece and brass piston
- For pressure ratings at other temperatures, contact the factory



1 1/2" and 2" adapter



3" adapter

| ADAPTER X FEMALE NPT |                           |            |              |                                   |                  |
|----------------------|---------------------------|------------|--------------|-----------------------------------|------------------|
| ALUMINIUM PART NO.   | STAINLESS STEEL* PART NO. | FEMALE NPT | ADAPTER SIZE | SEAL MATERIAL                     | MAX. PSI AT 70°C |
| DBA11-150            | DBA71-150                 | 2"         | 2"           | Buna                              | 210              |
| DBA11-200            | DBA71-200                 | 2 1/2"     | 2 1/2"       |                                   | 150              |
| DBA11-300            | DBA71-300                 | 4"         | 4"           |                                   | 120              |
| DBA12-150            | DBA72-150                 | 2"         | 2"           | Viton®                            | 210              |
| DBA12-200            | DBA72-200                 | 2 1/2"     | 2 1/2"       |                                   | 150              |
| DBA12-300            | DBA72-300                 | 4"         | 4"           |                                   | 120              |
| DBA63-150            | DBA73-150                 | 2"         | 2"           | PTFE Encapsulated Silicone        | 210              |
| DBA63-200            | DBA73-200                 | 2 1/2"     | 2 1/2"       |                                   | 150              |
| DBA63-300            | DBA73-300                 | 4"         | 4"           |                                   | 120              |
| DBA64-150            | DBA74-150                 | 2"         | 2"           | EPT                               | 210              |
| DBA64-200            | DBA74-200                 | 2 1/2"     | 2 1/2"       |                                   | 150              |
| DBA64-300            | DBA74-300                 | 4"         | 4"           |                                   | 120              |
| DBA66-150            | DBA76-150                 | 2"         | 2"           | Kalrez®                           | 210              |
| DBA66-200            | DBA76-200                 | 2 1/2"     | 2 1/2"       |                                   | 150              |
| DBA66-300            | DBA76-300                 | 4"         | 4"           |                                   | 120              |
| ---                  | DBA77-150                 | 2"         | 2"           | PTFE Encapsulated Viton® Viton® B | 210              |
| ---                  | DBA77-200                 | 2 1/2"     | 2 1/2"       |                                   | 150              |
| ---                  | DBA77-300                 | 4"         | 4"           |                                   | 120              |
| DBA69-300            | ---                       | 4"         | 4"           |                                   | 120              |

| JUMP SIZE ADAPTER X FEMALE NPT |            |              |               |                  |
|--------------------------------|------------|--------------|---------------|------------------|
| ALUMINIUM PART NO.             | FEMALE NPT | ADAPTER SIZE | SEAL MATERIAL | MAX. PSI AT 70°C |
| DBA11-1520                     | 2"         | 2"           | Buna          | 150              |
| DBA12-1520                     | 2"         | 2"           | Viton®        | 150              |

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



| ADAPTER X 150# ASA FLANGE |             |              |                            |                  |
|---------------------------|-------------|--------------|----------------------------|------------------|
| STAINLESS STEEL* PART NO. | FLANGE SIZE | ADAPTER SIZE | SEAL MATERIAL              | MAX. PSI AT 70°C |
| DBAF72-1520               | 2"          | 2"           | Viton®                     | 150              |
| DBAF73-1520               | 2"          | 2"           | PTFE Encapsulated Silicone | 150              |
| DBAF74-1520               | 2"          | 2"           | EPT                        | 150              |
| DBAF76-1520               | 2"          | 2"           | Kalrez®                    | 150              |
| DBAF72-200                | 2"          | 2"           | Viton®                     | 150              |
| DBAF73-200                | 2"          | 2"           | PTFE Encapsulated Silicone | 150              |
| DBAF74-200                | 2"          | 2 1/2"       | EPT                        | 150              |
| DBAF76-200                | 2"          | 2 1/2"       | Kalrez®                    | 150              |
| DBAF72-300                | 2"          | 2 1/2"       | Viton®                     | 150              |
| DBAF73-300                | 3"          | 4"           | PTFE Encapsulated Silicone | 120              |
| DBAF74-300                | 3"          | 4"           | EPT                        | 120              |
| DBAF76-300                | 3"          | 4"           | Kalrez®                    | 120              |

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



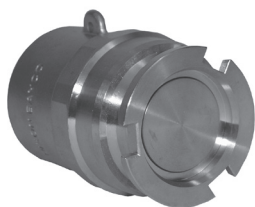
| VAPOUR ADAPTER X FEMALE THREAD |             |              |               |                  |
|--------------------------------|-------------|--------------|---------------|------------------|
| STAINLESS STEEL* PART NO.      | FEMALE NPSM | ADAPTER SIZE | SEAL MATERIAL | MAX. PSI AT 70°C |
| DBAV73-2030                    | 2"          | 3"           | PTFE          | 150              |

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

## Bayco Bayonet Style Dry Disconnect Couplings

- Application:** Bayonet dry disconnect fittings are ideally suited for the spill-less transfer of petroleum products such as fuel oil, lube oil blending, and tank truck delivery. The design of the Bayco bayonet dry disconnect system ensures a spill free connection, fluid cannot flow until couplings are connected together and the valve is opened. The coupling can then not be disconnected until the valve handle is closed.
- Standards:** Manufactured to interchange with other brands of bayonet type dry disconnect couplings. Canadian registration number CRN #OH14055 all provinces.
- Materials:** Adapters have anodized aluminium \*, brass \* or stainless steel \* bodies with either anodized aluminium \* or brass \* poppet valves. Couplers are aluminium. Adapters and couplers are available with either buna or FKM seals.
- Features & Benefits:**
- Helps eliminate the possibility of costly spills
  - Compatible with most other brands of bayonet style dry disconnects
  - Female NPT
  - Rubber dust caps and plugs with stainless steel chains are available to protect the adapters and couplers from contamination and damage
  - Maximum operating pressure: 85 PSI at 75°F, for pressure ratings at other temperatures contact Dixon™.

\* Dependent upon part #, see part number list below for more details



BA32-200



BA62-300

### FEMALE NPT ADAPTERS

| PART NO. | RUBBER DUST CAP PART NO. | DESCRIPTION                                  | FEMALE NPT SIZE | SEAL MATERIAL |
|----------|--------------------------|--|-----------------|---------------|
| BA31-200 | BAC-200                  | Stainless steel body with brass poppet valve | 2"              | Buna          |
| BA32-200 | BAC-200                  | Stainless steel body with brass poppet valve | 2"              | FKM           |
| BA31-300 | BAC-300                  | Brass body and poppet valve                  | 3"              | Buna          |
| BA32-300 | BAC-300                  | Brass body and poppet valve                  | 3"              | FKM           |
| BA61-300 | BAC-300                  | Anodized aluminium body and poppet valve     | 3"              | Buna          |
| BA62-300 | BAC-300                  | Anodized aluminium body and poppet valve     | 3"              | FKM           |

See pages 118-121 for repair kits and replacement parts.

Product instruction sheets and technical data can be viewed on our website at [dixoneurope.co.uk](http://dixoneurope.co.uk)



# Tanker Couplings



BC61-200



BSS61-300



BS61-300

## FEMALE NPT COUPLERS

| PART NO.  | RUBBER DUST CAP PART NO. | DESCRIPTION  | FEMALE NPT SIZE | SEAL MATERIAL |
|-----------|--------------------------|--|-----------------|---------------|
| BC61-200  | BCP-200                  | Anodized aluminium body with straight non-swiveling NPT connection | 2"              | Buna          |
| BC62-200  | BCP-200                  | Anodized aluminium body with straight non-swiveling NPT connection | 2"              | FKM           |
| BSS61-200 | BCP-200                  | Aluminium body with straight swiveling NPT connection              | 2"              | Buna          |
| BSS62-200 | BCP-200                  | Aluminium body with straight swiveling NPT connection              | 2"              | FKM           |
| BS61-200  | BCP-200                  | Aluminium body with 90° swiveling NPT connection                   | 2"              | Buna          |
| BS62-200  | BCP-200                  | Aluminium body with 90° swiveling NPT connection                   | 2"              | FKM           |
| BSS61-300 | BCP-300                  | Aluminium body with straight swiveling NPT connection              | 3"              | Buna          |
| BSS62-300 | BCP-300                  | Aluminium body with straight swiveling NPT connection              | 3"              | FKM           |
| BS61-300  | BCP-300                  | Aluminium body with 90° swiveling NPT connection                   | 3"              | Buna          |
| BS62-300  | BCP-300                  | Aluminium body with 90° swiveling NPT connection                   | 3"              | FKM           |

## Bayco Bayonet Style Dry Disconnect Caps and Plugs

### Application:

Bayonet dry disconnect caps and plugs keep dirt, debris and water out of couplers preventing build up on the sealing surface that will cause seals to fail prematurely.

### Materials:

The caps have a stainless steel chain to secure them to the adapter chain lug. The plugs have a stainless steel chain to secure them to the coupler.

### Features & Benefits:

- Simple to use
- Low cost
- Durable and flexible rubber
- Prevents contamination of product



BAC-300



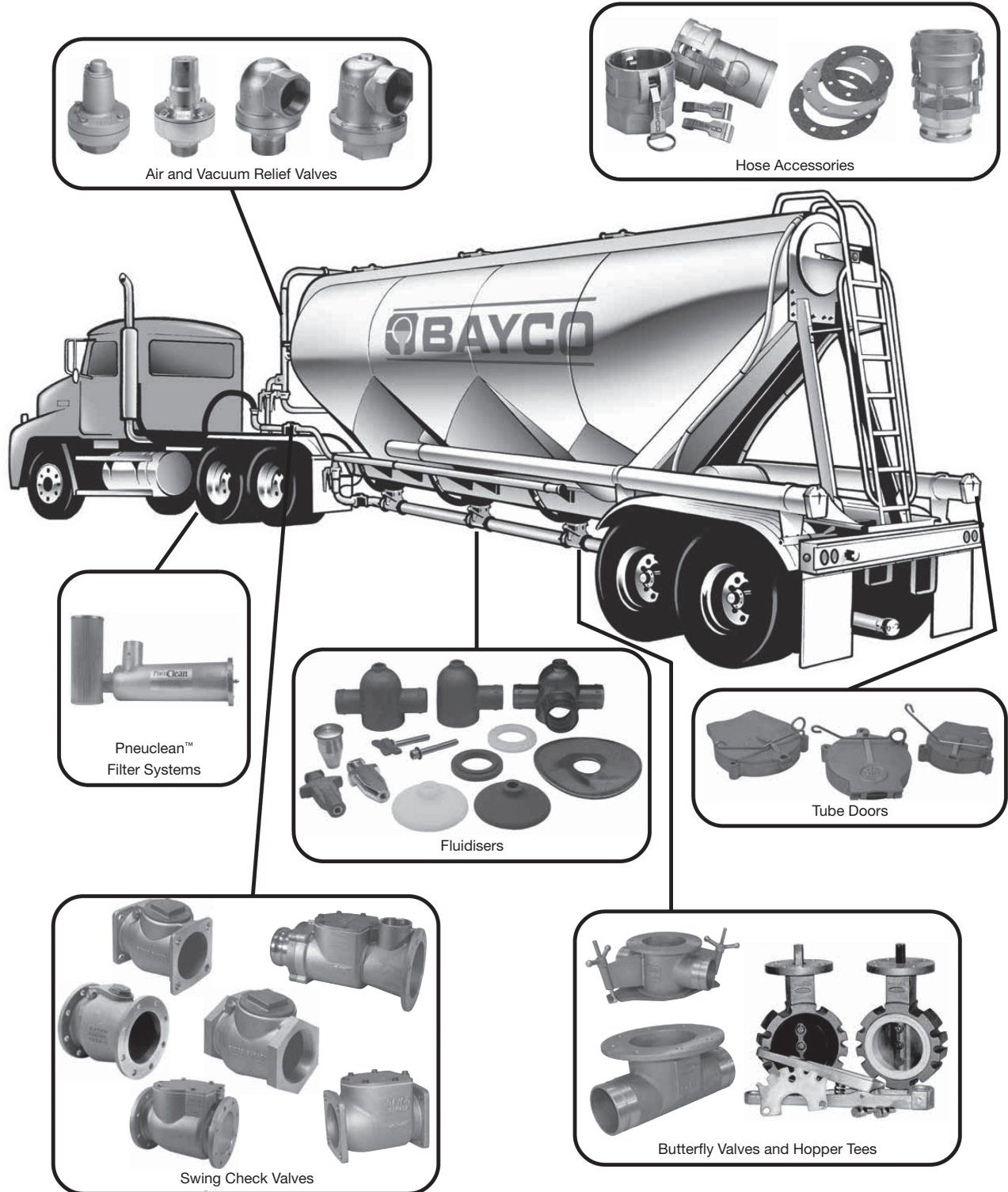
BCP-300

| PART NO. | SIZE | DESCRIPTION  |
|----------|------|--------------|
| BCP-200  | 2"   | Coupler plug |
| BCP-300  | 3"   | Coupler plug |
| BAC-200  | 2"   | Adapter cap  |
| BAC-300  | 3"   | Adapter cap  |



## Dry Bulk

Dixon Dry Bulk products are designed for use with bulk trailers and truck blowers for the pneumatic transfer of dry bulk commodities such as powders, grains and plastic pellets. Other industrial applications are possible when pneumatic control of air or dry products is required.



Air and Vacuum Relief Valves

Hose Accessories

Pneuclean™  
Filter Systems

Fluidisers

Tube Doors

Swing Check Valves

Butterfly Valves and Hopper Tees

## Air Relief Valves

- Designed to relieve air pressure at a specific pressure setting (customer to advise when ordering - typical setting 15-25 psi)
- Air Relief Flow Rates:
  - A2180 up to 500 SCFM
  - A2182 up to 1400 SCFM
  - A3180 up to 1300 SCFM
- A choice of setting tolerances are provided. In addition to conventional field duty tolerances of +3/-0 psi, offers OEM tolerances of +1/-0 psi. The tighter tolerance air reliefs are designated with the prefix A, (A2180, A3180, A2182). Both conventional field duty and OEM tolerance products are of identical construction, however OEM models are identified with an A imprinted before the setting stamp

*NOTE: Adjustable models, (A2180ADJ, A3108ADJ) are only available with OEM settings*

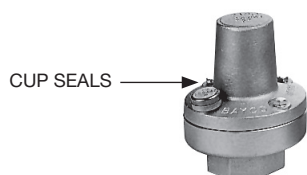
*Relief Valve Flow Rates vary depending on the preset relief pressure, for specific relief rates contact Dixon.*

### Features:

- High Grade Diaphragms – White, food grade, and high temperature elastomers for all models
- Suitable for high temperature (to 200°C) and food grade service
- Tamper proof stainless steel cup seals
- Available in a female thread version
- Model 2182 has Silicon rubber poppet which reduces tendency to cake – cement, lime etc

Safety Note: Air/vacuum relief valves must be regularly inspected, cleaned and maintained. Product particles can prevent the valve from fully reseating which can lead to early opening/leakage from the valve or can prevent it from opening at all. For ease of removal and installation, to allow for inspections, cleaning and maintenance all 2180 and 2182 series air relief valves are available with either male cam and groove or victaulic grooved connections.

## Designed for trailer service



| PART NO. | DESCRIPTION   |
|----------|---------------|
| 2180/xx  | 2" Female NPT |
| A2180/xx | 2" Female NPT |
| 3180/xx  | 3" Female NPT |
| A3180/xx | 3" Female NPT |



| PART NO. | DESCRIPTION    |
|----------|----------------|
| 2180V/15 | 2" Grooved End |

Set at 15 psi



Shown with optional Safety Lanyard (CAL25) attached.

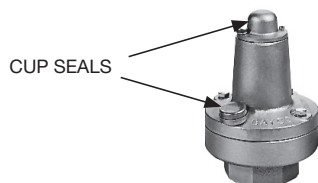


| PART NO. | DESCRIPTION |
|----------|-------------|
| 2180B/15 | 2" Adapter  |

Set at 15 psi



Shown with optional Safety Lanyard (CAL25) attached.



| PART NO.    | DESCRIPTION   |
|-------------|---------------|
| A2180/xxADJ | 2" Female NPT |
| A3180/xxADJ | 2" Female NPT |

Adjustable models allow an adjustment of + or - 3 psi from specified setting. Designed for trailer service. /xx refers to the choice of pressure settings provided. Please request the required settings when ordering.

## Designed for high capacity blower or trailer service



| PART NO. | DESCRIPTION    |
|----------|----------------|
| 2182/xx  | 2" Male NPT    |
| A2182/xx | 2" Male NPT    |
| 2182B/xx | 2" Adapter     |
| 2182V/xx | 2" Grooved End |



| PART NO. | DESCRIPTION   |
|----------|---------------|
| 2182F/xx | 2" Female NPT |

/xx refers to the choice of pressure settings provided. Please request the required settings when ordering.

## Pneuclean™ Pneumatic Filtration System

The Pneuclean™ unit is designed to remove microscopic particles generated by blowers during pneumatic conveying of contaminant-sensitive dry bulk products. Contaminants such as Iron and Hydrocarbons are produced by blowers and can adversely affect dry products such as plastic pellets and food materials.

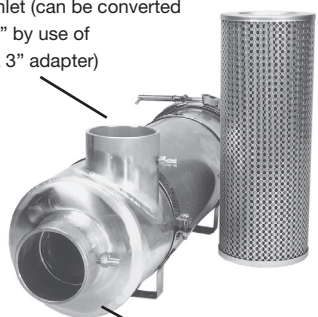
These filter units are typically used on dry bulk tanker trucks and placed after the blower and before the bulk storage tanker. This in-line pneumatic system is also suitable for industrial applications or wherever microscopic filtration (up to 4 microns) of impurities is required.

Standard units employ 4" inlets and outlets. However, 3" plumbing can be used with available weld-on 4" x 3" female NPT adapters.

Special cartridge-style filter elements have a typical life expectancy of approximately 12 months or 2000 hrs. of service.

4" AW and 4" DW Aluminium fittings may be butt-welded to filter inlet to allow quick coupler connection of hose.

4" inlet (can be converted to 3" by use of 4" x 3" adapter)



Stainless Steel cartridge with microporous, semi-permeable PTFE membrane filter element.

4" outlet (can be converted to 3" by use of 4" x 3" adapter)

| PART NO. | DESCRIPTION                               |
|----------|---|
| PC5000   | 4" Pneuclean complete housing with filter |
| PART NO. | REPLACEMENT PARTS DESCRIPTION             |
| PC5001   | Filter                                    |
| PC5003   | Mounting Bracket                          |
| PC5004   | V-clamp                                   |
| PC5005   | Lid O-ring                                |
| PC5006   | Bottom Gasket                             |
| PC5007   | Lid w/Adjusting nut                       |

### In-Line High Pressure Air Filtration for 4" Air Lines

- FDA Medium with 99.99% maximum efficiency at 4 microns.
- Maximum air flow 1000 CFM's
- Back pressure only .05 psi
- Temperature range -45° to 230°C
- Average 12 month filter cartridge lifespan
- Quick release V-clamp for easy inspection
- Overall weight 26 lbs (11.8kg)



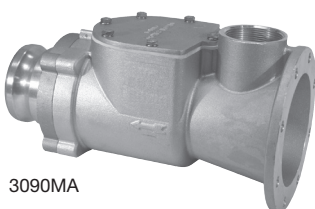
# Dry Bulk Products

## Swing Check Valves

- High flow body design
- Drop in flapper assembly
- High temperature white food grade seal
- Easy maintenance inspection lid
- Captive springs and shaft to prevent contamination
- Stainless Steel hardware



3030SQ



3090MA

| SWING CHECK VALVES |  |
|--------------------|--|
| PART NO.           | DESCRIPTION  |
| 3030SQ             | 3" Square Flange Swing Check Valve                                 |
| 3090M              | 3" Swing Check Manifold  |
| 3090MA             | 3" Swing Check Manifold with 3" Adapter                            |
| 3090MB             | 3" Swing Check Manifold with 4" Adapter                            |
| 3030SK             | Security Kit For 3" Swing Check Manifold                           |
| 3090MS             | 3" Swing Check Manifold with Security Kit installed                |
| 3090MAS            | 3" Swing Check Manifold with 3" Adapter and Security Kit installed |
| 3090MBS            | 3" Swing Check Manifold with 4" Adapter and Security Kit installed |

## 3" and 4" Swing Check Valves

- Cast Aluminium bodies with Bronze inspection caps
- Safety flapper assembly - all flapper assemblies are drilled and pinned and will not come apart
- Choice of seals: metal-to-metal, Buna or Silicon Rubber seals
- Choice of models with or without spring loaded flapper
- Full flow design - flappers swing out of flow path for maximum flow and low resistance
- Designs with large caps allow flapper repair/rebuild on unit

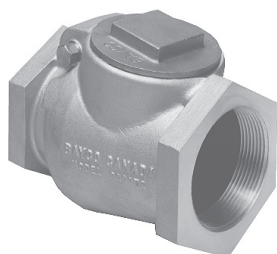
Check valves allow one way directional flow only. They are used as a protective safety device to prevent flow reversal should back pressure result. These valves are designed specifically for service with pneumatic equipment which transfers dry bulk commodities.



| 3" ROUND FLANGED (TTMA) |   |
|-------------------------|---|
| PART NO.                | DESCRIPTION                                 |
| 3000N                   | Metal-to-metal seal                         |
| 3000SP                  | Metal-to-metal seal & spring loaded flapper |
| 3000B                   | Buna Rubber seal                            |
| 3000S                   | Silicon Rubber seal                         |
| 3000BSP                 | Buna seal & spring loaded flapper           |
| 3000SSP                 | Silicon Rubber seal & spring loaded flapper |



| 3" SQUARE FLANGED (TTMA) |   |
|--------------------------|---|
| PART NO.                 | DESCRIPTION                                 |
| 3001SQ-N                 | Metal-to-metal seal                         |
| 3001SQ-SP                | Metal-to-metal seal & spring loaded flapper |
| 3001SQ-B                 | Buna Rubber seal                            |
| 3001SQ-S                 | Silicon Rubber seal                         |
| 3001SQ-BSP               | Buna seal & spring loaded flapper           |
| 3001SQ-SSP               | Silicon Rubber seal & spring loaded flapper |



| 3" THREADED ENDS (NPT) |   |
|------------------------|---|
| PART NO.               | DESCRIPTION                                 |
| 3000TE                 | Metal-to-metal seal                         |
| 3000TE-SP              | Metal-to-metal seal & spring loaded flapper |
| 3000TE-B               | Buna Rubber seal                            |
| 3000TE-S               | Silicon Rubber seal                         |
| 3000TE-BSP             | Buna seal & spring loaded flapper           |
| 3000TE-SSP             | Silicon Rubber seal & spring loaded flapper |

Gaskets should be purchased separately.



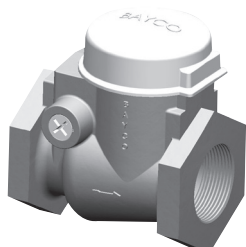
| 4" ROUND FLANGED (TTMA) |   |
|-------------------------|---|
| PART NO.                | DESCRIPTION                                 |
| 4040RD                  | Metal-to-metal seal & spring loaded flapper |

| 4" THREADED ENDS (NPT) |                                      |
|------------------------|--------------------------------------|
| PART NO.               | DESCRIPTION                          |
| 4040TE                 | Silicone seal, spring loaded flapper |



**2" Swing Check Valves**

- Aluminium cast, square flanged and threaded end models
- Self-aligning, moulded "white food grade EPDM" rubber flapper assembly (176°C / 350°F) with externally mounted springs, to prevent ingestion of parts
- Easy open (no tools required) inspection cap
- Full flow performance

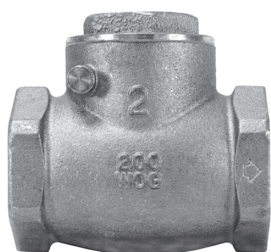


| 2" SWING CHECKS |                  |
|-----------------|------------------|
| PART NO.        | DESCRIPTION      |
| 3020SQ          | 2" Square Flange |
| 3020TE          | 2" Female NPT    |



## Horizontal Swing Check Valves

- Swing Check Valves are designed to prevent backflow in plumbing and liquid piping systems, while offering full flow performance with a minimum of turbulence or pressure loss
- A positive seating disc allows flow only in one direction and a screw-in cap provides easy access for periodic cleaning
- For horizontal or vertical use
- Rated to 200 psi WOG
- Brass body & disc
- Temperature range (-4°C to 66°C / -20°F to 150°F)



| FEMALE NPT x FEMALE NPT |             |
|-------------------------|-------------|
| PART NO.                | DESCRIPTION |
| SWCV50                  | 1/2"        |
| SWCV75                  | 3/4"        |
| SWCV100                 | 1"          |
| SWCV125                 | 1 1/4"      |
| SWCV150                 | 1 1/2"      |
| SWCV200                 | 2"          |
| SWCV300                 | 3"          |

## In-line Sight Glass

- Designed for dry bulk transfer applications
- Available in combination of 3" and 4" coupler or adapter ends
- Includes:
  - Aluminium bodies
  - Buna seals
  - Acrylic sight glasses
  - Stainless steel hardware
  - Bronze cam arms (where applicable)



| PART NO. | DESCRIPTION             |
|----------|-------------------------|
| 3544CA   | 4" Coupler x 4" Adapter |
| 3533CA   | 3" Coupler x 3" Adapter |
| 3543CA   | 4" Coupler x 3" Adapter |
| 3534CA   | 3" Coupler x 4" Adapter |
| 3533AA   | 3" Adapter x 3" Adapter |
| 3544AA   | 4" Adapter x 4" Adapter |
| 3534AA   | 3" Adapter x 4" Adapter |
| 3544CC   | 4" Coupler x 4" Coupler |
| 3533CC   | 3" Coupler x 3" Coupler |
| 3543CC   | 4" Coupler x 3" Coupler |

## Butterfly Valves - 400 Series

- Housing:** Aluminium
- Discs:** Type 316 Stainless or Nodular Iron
- Stem Packing:** Buna-N
- Stem Bushings:** Thermal plastic polymer, top and bottom
- Resilient Seat:** Nitrile
- Handle:** High strength 713 Alloy Aluminium with retrogressive re-aging process - stronger than industry standard Cast Iron handles. Stainless Steel spring and locking lever pin
- Throttling Plate:** Five position, high strength Aluminium Alloys

**Features:**

- Aluminium Body
- Nodular Iron Disc
- 17-4 SS Stem
- Nitrile, FDA approved Black Seat



| NODULAR IRON                          |         |                                |      |                                 |         |
|---------------------------------------|---------|--------------------------------|------|---------------------------------|---------|
| COMPLETE VALVE WITH NODULAR IRON DISC |         | NODULAR IRON REPLACEMENT DISCS |      | BLACK REPLACEMENT NITRILE SEATS |         |
| PART NO.                              | SIZE    | PART NO.                       | SIZE | PART NO.                        | SIZE    |
| 2-400-1500                            | 2"      | 2-400-422237F                  | 2"   | 2-400-422500                    | 2"      |
| 3-400-1500                            | 3"      | 3-400-422237F                  | 3"   | 3-400-422500                    | 3"      |
| 4-400-1500                            | 4"      | 4-400-422237U                  | 4"   | 4-400-422500                    | 4"      |
| 4A-400-1500                           | 4" TTMA | 5-400-422237U                  | 5"   | 4A-400-422500                   | 4" TTMA |
| 5-400-1500                            | 5"      | 6-400-422237U                  | 6"   | 5-400-422500                    | 5"      |
| 6-400-1500                            | 6"      |                                |      | 6-400-422500                    | 6"      |

Handles should be ordered separately.

**Features:**

- Aluminium Body
- 316 SS Disc
- 17-4 SS Stem
- Nitrile, FDA approved White Seat



| STAINLESS STEEL                              |      |                                       |      |                                 |         |
|--|------|---------------------------------------|------|---------------------------------|---------|
| COMPLETE VALVE WITH 316 STAINLESS STEEL DISC |      | 316 STAINLESS STEEL REPLACEMENT DISCS |      | WHITE REPLACEMENT NITRILE SEATS |         |
| PART NO.                                     | SIZE | PART NO.                              | SIZE | PART NO.                        | SIZE    |
| 3-400-3501                                   | 3"   | 2-400-422209F                         | 2"   | 2-400-422501                    | 2"      |
| 4-400-3501                                   | 4"   | 3-400-422209F                         | 3"   | 3-400-422501                    | 3"      |
| 5-400-3501                                   | 5"   | 4-400-422209U                         | 4"   | 4-400-422501                    | 4"      |
| 6-400-3501                                   | 6"   | 5-400-422209U                         | 5"   | 4A-400-422501                   | 4" TTMA |
|  |      | 6-400-422209U                         | 6"   | 5-400-422501                    | 5"      |
|  |      |                                       |      | 6-400-422501                    | 6"      |

Handles should be ordered separately.



# Dry Bulk Products

## Butterfly Valves - 390 Series

|                          |   |
|--------------------------|---|
| <b>Housing:</b>          | Aluminium   |
| <b>Discs:</b>            | Type 316 Stainles   |
| <b>Body Screws:</b>      | Cadmium Plated Steel  |
| <b>Stem Packing:</b>     | Buna  |
| <b>Stem Bushings:</b>    | Thermal plastic polymer, top and bottom   |
| <b>Resilient Seat:</b>   | Nitrile   |
| <b>Handle:</b>           | High strength 713 Alloy Aluminium with retrogressive re-aging process - stronger than industry standard Cast Iron handles. Stainless Steel spring and locking lever pin |
| <b>Throttling Plate:</b> | Five position, high strength Aluminium Alloy  |

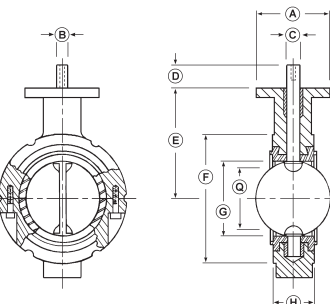
**Features:**

- 2 Piece Aluminium Body
- One piece 316 SS Disc and Stem
- Nitrile, FDA approved White Seat



| STAINLESS STEEL                 |      |                                       |      |                                 |      |
|---------------------------------|------|---------------------------------------|------|---------------------------------|------|
| COMPLETE VALVE WITH 316 SS DISC |      | 316 STAINLESS STEEL REPLACEMENT DISCS |      | WHITE REPLACEMENT NITRILE SEATS |      |
| PART NO.                        | SIZE | PART NO.                              | SIZE | PART NO.                        | SIZE |
| 3-390-828501                    | 3"   | 3-390-209F                            | 3"   | 3-400-422501                    | 3"   |
| 4-390-828U501                   | 4"   | 4-390-209U                            | 4"   | 4-400-422501                    | 4"   |
| 5-390-828U501                   | 5"   | 5-390-209U                            | 5"   | 5-400-422501                    | 5"   |
| 6-390-828U501                   | 6"   | 6-390-209U                            | 6"   | 6-390-363501                    | 6"   |

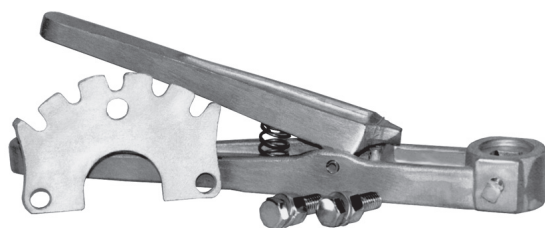
Handles should be ordered separately.  
 For 6" 390 series valve, use special handle 400-206-65.



| DIMENSIONS & WEIGHTS |            |      |      |       |       |       |       |       |       |                |
|----------------------|------------|------|------|-------|-------|-------|-------|-------|-------|----------------|
| SIZE                 | DIMENSIONS |      |      |       |       |       |       |       |       | WEIGHT IN LBS. |
|                      | A          | B    | C    | D     | E     | F     | G     | H     | Q     |                |
| 2"                   | 4.000      | .375 | .563 | 1.250 | 3.938 | 4.125 | 2.125 | 1.625 | 1.688 | 3              |
| 3"                   | 4.000      | .375 | .563 | 1.250 | 4.875 | 5.375 | 3.125 | 1.750 | 2.875 | 4              |
| 4"                   | 4.000      | .438 | .625 | 1.250 | 6.000 | 6.875 | 4.125 | 2.000 | 3.875 | 7              |
| 5"                   | 4.000      | .438 | .625 | 1.250 | 6.000 | 7.625 | 5.188 | 2.125 | 5.000 | 9              |
| 6"                   | 4.000      | .438 | .625 | 1.250 | 6.500 | 8.750 | 6.125 | 2.125 | 6.000 | 9              |

NOTE: Q dimension is the minimum allowable inside diameter of the pipe or mating flange.

## Butterfly Valve Accessories



### ALUMINIUM HANDLE KIT

| PART NO.    | SIZE       |
|-------------|------------|
| 206-23-5    | 2" and 3"  |
| 206-46-5    | 4" thru 6" |
| 400-206-65* | 6" - 390   |

### BUSHING & PACKING KITS

| PART NO.         | SIZE       |
|------------------|------------|
| 2-3-400-99-BPKIT | 2" and 3"  |
| 4-6-400-99-BPKIT | 4" thru 6" |
| 6-99-400BPKIT*   | 6"         |

### 316 STAINLESS SCREW SETS

| PART NO.  | SIZE       |
|-----------|------------|
| 2-3-213   | 2" and 3"  |
| 4-5-6-213 | 4" thru 6" |

### 17-4 STAINLESS STEMS

| PART NO.     | SIZE |
|--------------|------|
| 2-400-422240 | 2"   |
| 3-400-422240 | 3"   |
| 4-400-422240 | 4"   |
| 5-400-422240 | 5"   |
| 6-400-422240 | 6"   |

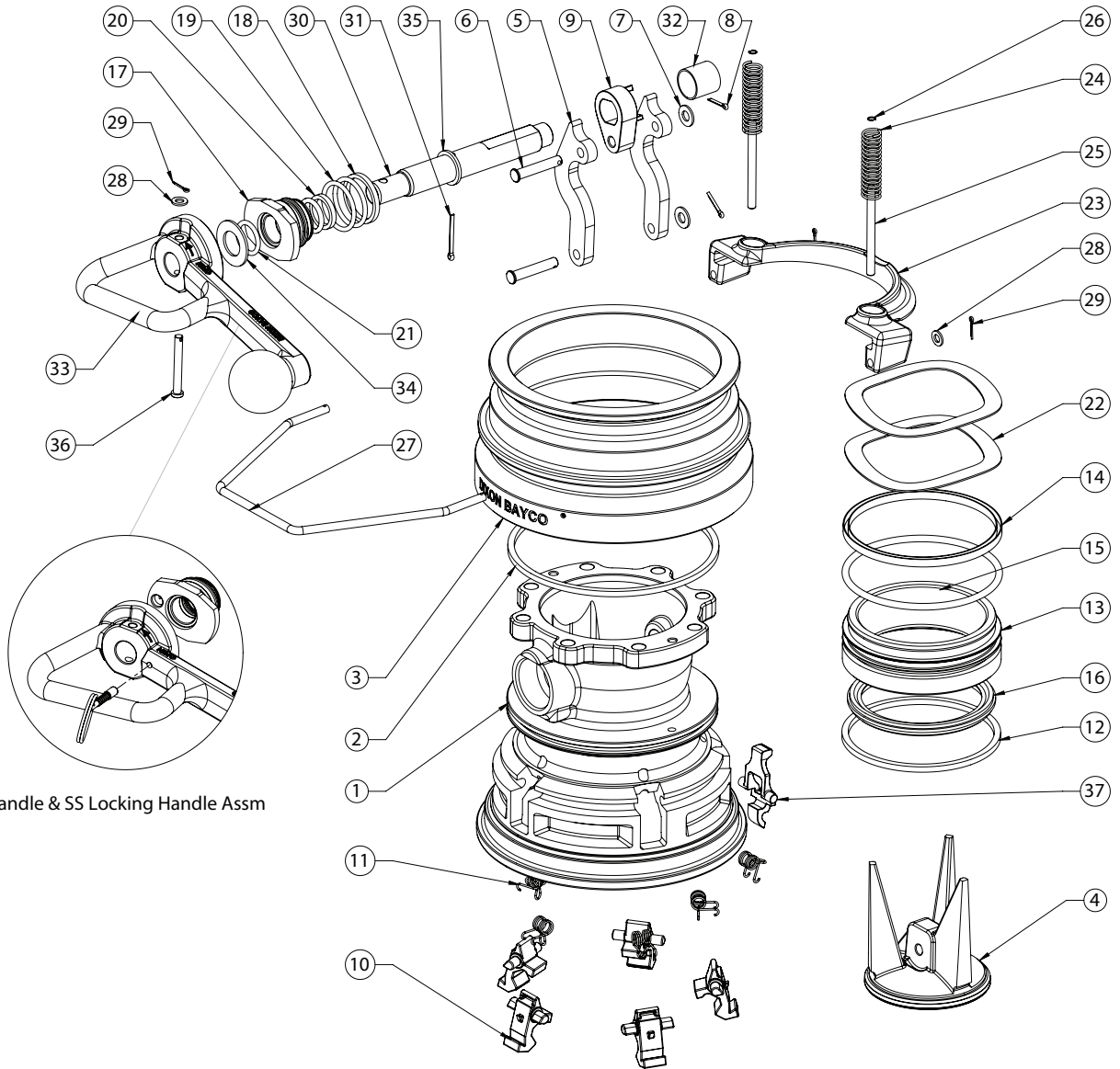
Includes handle plate kit and handle/lever assembly.

\*Use on 6" 390 series valves

# Replacement Parts

## 5300/5400 Series API Couplers

### API Bottom Rack Loading Fittings



Stainless Handle & SS Locking Handle Assm



| BILL OF MATERIALS   |          |   | QTY OF COMPONENTS PER UNIT |       |        |         |       |      |       |       |
|---|----------|---|----------------------------|-------|--------|---------|-------|------|-------|-------|
| PART NO.  | ITEM NO. | DESCRIPTION                             | 5300                       | 5300B | 5300BC | 5300BCL | 5300G | 5400 | 5400B | 5400G |
| -   | 1        | body                                    | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112173  | 2        | body dust ring                          | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 400684  | 3        | sleeve assembly                         | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| Use kit 5354K19   | 4A       | poppet                                  | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| Use kit 5354K20   | 4B       | poppet for crude oil                    | N/A                        | N/A   | 1      | 1       | N/A   | N/A  | N/A   | N/A   |
| 112151  | 5        | bent link                               | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 391141  | 6        | link pin                                | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 112158  | 7        | link washer                             | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 110721  | 8        | 304SS cotter pin                        | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 112148  | 9        | drive link                              | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112147  | 10       | interlocking cam                        | 5                          | 5     | 5      | 5       | 5     | 5    | 5     | 5     |
| 112149  | 11       | torsion spring                          | 5                          | 5     | 6      | 6       | 5     | 5    | 5     | 5     |
| 112174  | 12       | nose piece dust ring                    | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| Use kit 5354K7, 5354K8, 5354K9, 5354K10, 5354K11, 5354K12 & 5354K20 | 13       | nose piece                              | N/A                        | N/A   | N/A    | N/A     | N/A   | 1    | 1     | 1     |
| 112164  | 14       | PTFE U-Seal 350 (optional) <sup>1</sup> | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| Use kit 5354K7, 5354K8, 5354K13 or 5354K14                          | 15A      | O-ring 2-350, Buna                      | 1                          | N/A   | N/A    | N/A     | N/A   | 1    | N/A   | N/A   |
| Use kit 5354K9, 5354K10, 5354K15, 5354K16 or 5354K20                | 15B      | O-ring 2-350, FKM B                     | N/A                        | 1     | 1      | 1       | N/A   | N/A  | 1     | N/A   |
| "Use kit 5354K11, 5354K12, 5354K17 or 5354K18"                      | 15C      | O-ring 2-350, FKM GFLT                  | N/A                        | N/A   | N/A    | N/A     | 1     | N/A  | N/A   | 1     |
| Use kit 5354K13 or 5354K14  | 16A      | replaceable nose seal, Buna             | N/A                        | N/A   | N/A    | N/A     | N/A   | 1    | N/A   | N/A   |
| Use kit 5354K15 or 5354K16  | 16B      | replaceable nose seal, FKM B            | N/A                        | N/A   | N/A    | N/A     | N/A   | N/A  | 1     | N/A   |
| Use kit 5354K17 or 5354K18  | 16C      | replaceable nose seal, FKM GFLT         | N/A                        | N/A   | N/A    | N/A     | N/A   | N/A  | N/A   | 1     |
| Use kit 5354K7 or 5354K8  | 16D      | bonded nose seal, Buna                  | 1                          | N/A   | N/A    | N/A     | N/A   | N/A  | N/A   | N/A   |
| Use kit 5354K9 or 5354K10   | 16E      | bonded nose seal, FKM B                 | N/A                        | 1     | N/A    | N/A     | N/A   | N/A  | N/A   | N/A   |
| Use kit 5354K11 or 5354K12  | 16 F     | bonded nose seal, FKM GFLT              | N/A                        | N/A   | N/A    | N/A     | 1     | N/A  | N/A   | N/A   |
| Use kit 5354K20   | 16G      | bonded nose seal for crude oil          | N/A                        | N/A   | 1      | 1       | N/A   | N/A  | N/A   | N/A   |
| 341790  | 17A      | bearing                                 | 1                          | 1     | N/A    | N/A     | 1     | 1    | 1     | 1     |
| 400696  | 17B      | bearing for crude oil                   | N/A                        | N/A   | 1      | N/A     | N/A   | N/A  | N/A   | N/A   |
| 400696  | 17C      | bearing for crude oil with lock handle  | N/A                        | N/A   | NA     | 1       | N/A   | N/A  | N/A   | N/A   |
| 112163  | 18       | PTFE U-Seal 220 (Optional) <sup>1</sup> | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| Use kit 5354K1, 5354K2 or 5354K20                                   | 19A      | O-ring 2-220, Buna                      | 1                          | N/A   | N/A    | N/A     | N/A   | 1    | N/A   | N/A   |
| Use kit 5354K3, 5354K4 or 5354K20                                   | 19B      | O-ring 2-220, FKM B                     | N/A                        | 1     | 1      | 1       | N/A   | N/A  | 1     | N/A   |
| Use kit 5354K5 or 5354K6  | 19C      | O-ring 2-220, FKM GFLT                  | N/A                        | N/A   | N/A    | N/A     | 1     | N/A  | N/A   | 1     |
| 112162  | 20       | PTFE U-Seal 212 (optional) <sup>1</sup> | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| Use kit 5354K1 or 5354K2  | 21A      | O-ring 2-212, Buna                      | 2                          | N/A   | N/A    | N/A     | N/A   | 2    | N/A   | N/A   |
| Use kit 5354K3, 5354K4, 5354K20                                     | 21B      | O-ring 2-212, FKM B                     | N/A                        | 2     | 2      | 2       | N/A   | N/A  | 2     | N/A   |
| Use kit 5354K5 or 5354K6  | 21C      | O-ring 2-212, FKM GFLT                  | N/A                        | N/A   | N/A    | N/A     | 2     | N/A  | N/A   | 2     |
| 112172  | 22A      | wave spring washer                      | 2                          | 2     | N/A    | N/A     | 2     | 2    | 2     | 2     |
| 112282  | 22B      | wave washer for crude oil               | N/A                        | N/A   | 1      | 1       | N/A   | N/A  | N/A   | N/A   |
| 341788  | 23       | bail                                    | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112150  | 24       | bail spring                             | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 112175  | 25       | bail pin                                | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 112176  | 26       | internal retaining ring                 | 2                          | 2     | 2      | 2       | 2     | 2    | 2     | 2     |
| 391139  | 27       | release                                 | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 111562  | 28       | washer                                  | 3                          | 3     | 3      | 3       | 3     | 3    | 3     | 3     |
| 111563  | 29       | cotter pin                              | 3                          | 3     | 3      | 3       | 3     | 3    | 3     | 3     |
| 391140  | 30       | shaft                                   | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112307  | 31       | shaft cotter pin                        | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 391142  | 32       | spacer                                  | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 341789  | 33A      | handle (aluminium)                      | 1                          | 1     | -      | -       | 1     | 1    | 1     | 1     |
| 112392  | 33B      | handle (stainless steel)                | N/A                        | N/A   | 1      | N/A     | N/A   | N/A  | N/A   | N/A   |
| 400713  | 33B      | handle (stainless steel)                | N/A                        | N/A   | N/A    | 1       | N/A   | N/A  | N/A   | N/A   |
| 112160  | 34       | shaft outside washer                    | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112159  | 35       | shaft inside washer                     | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112500  | 36       | clevis pin                              | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |
| 112240  | 37       | latch                                   | 1                          | 1     | 1      | 1       | 1     | 1    | 1     | 1     |

<sup>1</sup> Items 14, 18 and 20 are optional PTFE U seals. When the U seals are added to the coupler they isolate the main rubber seals from the liquid being conveyed, thereby increasing the longevity of the rubber seals. N/A = "Not Applicable"



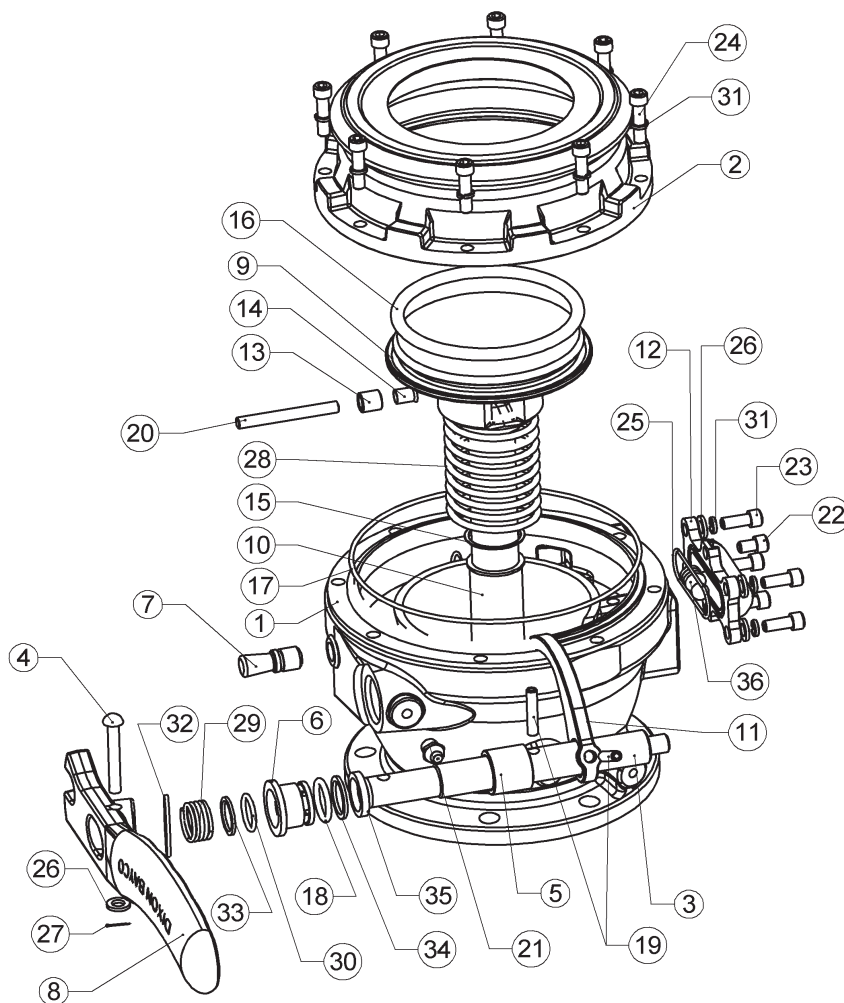
# Replacement Parts

## REPAIR KITS

| PART NO. | DESCRIPTION   | INCLUDE ITEMS #                                      |
|----------|---|--|
| 5354K1   | Buna shaft seal kit: for 5300 and 5400                                  | 19A, 21A, 34, 35                                     |
| 5354K2   | Buna shaft seal kit with optional PTFE U Seals: for 5300 and 5400       | 18 <sup>1</sup> , 19A, 20 <sup>1</sup> , 21A, 34, 35 |
| 5354K3   | FKM-B shaft seal kit: for 5300B and 5400B                               | 19B, 21B, 34, 35                                     |
| 5354K4   | FKM-B shaft seal kit with optional PTFE U Seals: for 5300B and 5400B    | 18 <sup>1</sup> , 19B, 20 <sup>1</sup> , 21B, 34, 35 |
| 5354K5   | FKM GFLT shaft seal kit: for 5300G and 5400G                            | 19C, 21C, 34, 35                                     |
| 5354K6   | FKM GFLT shaft seal kit with optional PTFE U Seals: for 5300G and 5400G | 18 <sup>1</sup> , 19C, 20 <sup>1</sup> , 21C, 34, 35 |
| 5354K7   | Buna bonded nose seal kit: for 5300                                     | 12, 13, 15A, 16D                                     |
| 5354K8   | Buna bonded nose seal kit with optional PTFE U seal: for 5300           | 12, 13, 14 <sup>1</sup> , 15A, 16D                   |
| 5354K9   | FKM-B bonded nose seal kit: for 5300B                                   | 12, 13, 15B, 16E                                     |
| 5354K10  | FKM-B bonded nose seal kit with optional PTFE U seal: for 5300B         | 12, 13, 14 <sup>1</sup> , 15B, 16E                   |
| 5354K11  | FKM GFLT bonded nose seal kit: for 5300G                                | 12, 13, 15C, 16F                                     |
| 5354K12  | FKM GFLT bonded nose seal kit with optional PTFE U seal: for 5300G      | 12, 13, 14 <sup>1</sup> , 15C, 16F                   |
| 5354K13  | Buna replaceable nose seal kit: for 5400                                | 12, 15A, 16A   |
| 5354K14  | Buna replaceable nose seal kit with optional PTFE U seal: for 5400      | 12, 14 <sup>1</sup> , 15A, 16A                       |
| 5354K15  | FKM-B replaceable nose seal kit: for 5400B                              | 12, 15B, 16B   |
| 5354K16  | FKM-B replaceable nose seal kit with optional PTFE U seal: for 5400B    | 12, 14 <sup>1</sup> , 15B, 16B                       |
| 5354K17  | FKM GFLT replaceable nose seal kit: for 5400G                           | 12, 15C, 16C   |
| 5354K18  | FKM GFLT replaceable nose seal kit with optional PTFE U seal: for 5400G | 12, 14 <sup>1</sup> , 15C, 16C                       |
| 5354K19  | Valve assembly repair kit: for 5300, 5300B, 5300G, 5400, 5400B, 5400G   | 4, 5, 6, 7, 8, 9, 34, 35                             |
| 5354K20  | crude conversion kit  | 4B, 16G, 17C, 22B, 31                                |
| 5354K21  | locking handle kit  | 17C, 21B, 28, 29, 31, 33B, 34, 36                    |

<sup>1</sup> Items 14, 18 and 20 are optional PTFE U seals. When the U seals are added to the coupler they isolate the main rubber seals from the liquid being conveyed, thereby increasing the longevity of the rubber seals.

**5204 Series, API Bottom Load Valves**



**REPAIR KITS**

| PART NO. | DESCRIPTION  | INCLUDE ITEMS #                          |
|----------|--|--|
| 5204K2   | complete rebuild kit: Baylast™ O-rings, bearings   | 6,10, 13, 14, 16A, 17A, 18A, 25A, 30, 35 |
| 5204KV2  | complete rebuild kit: FKM poppet O-ring, Baylast™ O-rings, bearings                          | 6,10, 13, 14, 16B, 17B, 18B, 25B, 30, 35 |
| 5204K3   | replacement anodized nose ring with Baylast™ gasket, screws and lock washers                 | 2, 17A, 24, 31                           |
| 5204K5   | replacement detachable handle assembly (for 5204C and 5204NGC)                               | not illustrated                          |
| 5204K6   | PTFE encapsulated seal kit, poppet O-ring, nose O-ring, shaft O-ring, and sight glass O-ring | 16C, 17B, 18B, 25B                       |
| 5204K7   | replacement fixed handle assembly  | 4, 8A, 26, 27, 29, 32                    |
| 5204K8   | sight glass repair kit   | 12, 25A, 36, 37                          |
| 5204K9   | sight glass cover kit (to convert units with sight glass to non-sight glass)                 | not illustrated                          |
| 5204K11  | nose ring replacement 8 hex bolts & 8 washers kit  | 24, 31                                   |
| 5204K12  | sight glass replacement hardware, 6 hex bolts, 6 lock washers and 4 washers kit              | 23, 26, 31                               |
| 5204K13  | replacement full body sight glass, seals and retainer kit for 5204SFI                        | 38, 39, 40                               |



# Replacement Parts

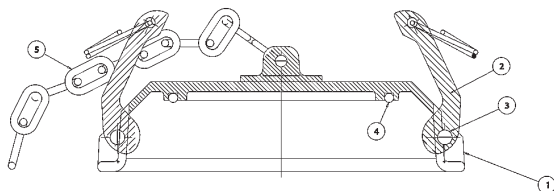
| BILL OF MATERIALS |          |                                 | QTY OF COMPONENTS PER UNIT |        |         |         |         |       |         |       |         |
|-------------------|----------|---------------------------------|----------------------------|--------|---------|---------|---------|-------|---------|-------|---------|
| PART NO.          | ITEM NO. | DESCRIPTION                     | 5204                       | 5204NG | 5204TNG | 5204SNG | 5204NGV | 5204C | 5204NGC | 5204L | 5204LNG |
| use kit 5204K3    | 2        | nose ring                       | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | 1     | 1       |
| 390812            | 3        | shaft                           | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111559            | 4        | handle pin                      | 1                          | 1      | 1       | 1       | 1       | N/A   | N/A     | N/A   | N/A     |
| 390813            | 5        | shaft spacer                    | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111557            | 6        | shaft bearing                   | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 5204-SP           | 7        | stop pin                        | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| use kit 5204K7    | 8A       | fixed handle                    | 1                          | 1      | 1       | 1       | 1       | N/A   | N/A     | N/A   | N/A     |
| use kit 5204K5    | 8B       | removeable handle               | N/A                        | N/A    | N/A     | N/A     | N/A     | 1     | 1       | N/A   | N/A     |
| 341755            | 9A       | poppet (load/unload versions)   | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 341756            | 9B       | poppet (load only versions)     | N/A                        | N/A    | N/A     | N/A     | N/A     | N/A   | N/A     | 1     | 1       |
| 341801            | 10       | poppet bearing                  | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | 1     | 1       |
| 111550            | 11       | cam                             | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| use kit 5204K8    | 12       | sight glass                     | 1                          | N/A    | N/A     | N/A     | N/A     | 1     | N/A     | 1     | N/A     |
| 390815            | 13       | poppet roller                   | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111556            | 14       | poppet roller bearing           | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111560            | 15       | retaining ring                  | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | 1     | 1       |
| 5204K1            | 16A      | Baylast™ poppet O-ring          | 1                          | 1      | N/A     | 1       | N/A     | 1     | 1       | 1     | 1       |
| 5204KV1           | 16B      | FKM poppet O-ring               | N/A                        | N/A    | N/A     | N/A     | 1       | N/A   | N/A     | N/A   | N/A     |
| use kit 5204K6    | 16C      | PTFE encapsulated poppet O-ring | N/A                        | N/A    | 1       | N/A     | N/A     | N/A   | N/A     | N/A   | N/A     |
| 111554            | 17A      | nose ring O-ring                | 1                          | 1      | N/A     | 1       | 1       | 1     | 1       | 1     | 1       |
| use kit 5204K6    | 17B      | PTFE nose O-ring                | N/A                        | N/A    | 1       | N/A     | N/A     | N/A   | N/A     | N/A   | N/A     |
| 111552            | 18A      | shaft O-ring                    | 1                          | 1      | N/A     | 1       | 1       | 1     | 1       | N/A   | N/A     |
| use kit 5204K6    | 18B      | PTFE shaft O-ring               | N/A                        | N/A    | 1       | N/A     | N/A     | N/A   | N/A     | N/A   | N/A     |
| 6000-12           | 19       | shaft and cam roll pin          | 2                          | 2      | 2       | 2       | 2       | 2     | 2       | N/A   | N/A     |
| 111566            | 20       | pin roller                      | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111561            | 21       | grease fitting                  | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| use kit 5204K12   | 23       | sight glass screw               | 6                          | N/A    | N/A     | N/A     | N/A     | 6     | N/A     | 6     | N/A     |
| use kit 5204K11   | 24       | nose ring screw                 | 8                          | 8      | 8       | 8       | 8       | 8     | 8       | 8     | 8       |
| use kit 5204K8    | 25A      | Baylast™ sight glass O-ring     | 1                          | N/A    | N/A     | N/A     | N/A     | 1     | N/A     | 1     | N/A     |
| use kit 5204K6    | 25B      | PTFE sight glass O-ring         | N/A                        | N/A    | N/A     | N/A     | N/A     | N/A   | N/A     | N/A   | N/A     |
| 111562            | 26       | washer                          | 1                          | 1      | 1       | 1       | 1       | 6     | N/A     | 6     | N/A     |
| 111563            | 27       | cotter pin                      | 1                          | 1      | 1       | 1       | 1       | N/A   | N/A     | N/A   | N/A     |
| 111564            | 28A      | main spring-steel               | 1                          | 1      | N/A     | N/A     | 1       | 1     | 1       | 1     | 1       |
| 111542            | 28B      | main spring- stainless steel    | N/A                        | N/A    | 1       | 1       | N/A     | N/A   | N/A     | N/A   | N/A     |
| 111565            | 29       | handle spring                   | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111553            | 30       | dust seal O-ring                | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111569            | 31       | lock washer ¼"                  | 14                         | 8      | 8       | 8       | 8       | 14    | 8       | 14    | 8       |
| 111573            | 32       | handle shaft spring washer      | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111574            | 33       | handle shaft washer             | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111579            | 34       | back-up ring                    | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| 111580            | 35       | u-cup seal                      | 1                          | 1      | 1       | 1       | 1       | 1     | 1       | N/A   | N/A     |
| use kit 5204K8    | 36       | flow indicator                  | 1                          | N/A    | N/A     | N/A     | N/A     | 1     | N/A     | N/A   | N/A     |
| use kit 5204K13   | 38 1     | retaining ring                  | N/A                        | N/A    | N/A     | N/A     | N/A     | N/A   | N/A     | N/A   | N/A     |
| use kit 5204K13   | 39 1     | SFI sight glass                 | N/A                        | N/A    | N/A     | N/A     | N/A     | N/A   | N/A     | N/A   | N/A     |

1 Not illustrated, parts for 5204-SFI

N/A = Not Applicable



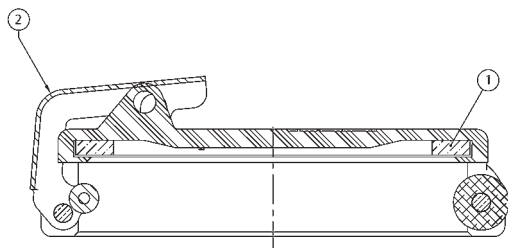
### 5000-24 API Dust Caps



| BILL OF MATERIALS |          |                                  |     |
|-------------------|----------|----------------------------------|-----|
| PART NO.          | ITEM NO. | DESCRIPTION                      | QTY |
| ---               | 1        | body                             | 1   |
| 300-HRP-BR        | 2        | cam arm and ring                 | 2   |
| 5000-24           | 3        | cam arm pin                      | 2   |
| 4500-5            | 4A       | Baylast™ O-ring (standard)       | 1   |
| 4500-7            | 4B       | FKM O-ring (optional)            | 1   |
| 5205-RK4          | 5        | replacement 18" chain and S hook | 1   |

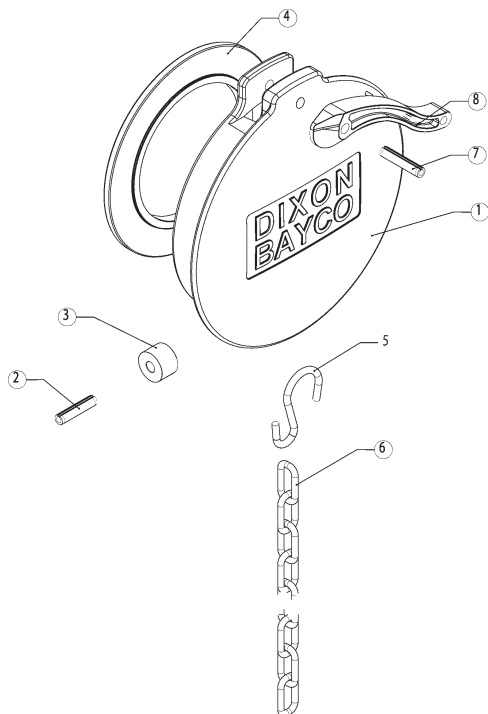
| REPAIR KITS |          |  |
|-------------|----------|--|
| PART NO.    | ITEM NO. | DESCRIPTION  |
| 4500RK      | 2, 3, 4A | replacement cam arms, pins and Baylast™ O-ring seal (standard) |
| 4500RK-V    | 2, 3, 4B | replacement cam arms, pins and FKM O-ring seal (optional)      |
| 5205-RK4    | 5        | replacement 18" chain and S hook                               |

### 5000-25 API Dust Caps



| BILL OF MATERIALS |          |                      |     |
|-------------------|----------|----------------------|-----|
| PART NO.          | ITEM NO. | DESCRIPTION          | QTY |
| 5000-25RK1        | 1        | gasket               | 1   |
| 5000-25RK2        | 2        | cam arm sub assembly | 1   |

### 5205 API Dust Caps



| BILL OF MATERIALS |          |                 |     |
|-------------------|----------|-----------------|-----|
| PART NO.          | ITEM NO. | DESCRIPTION     | QTY |
| ---               | 1        | body            | 1   |
| use kit 5205-RK3  | 2        | slotted pin     | 1   |
| use kit 5205-RK3  | 3        | roller          | 1   |
| 5205-RK1          | 4        | gasket          | 1   |
| use kit 5205-RK4  | 5        | S hook          | 1   |
| use kit 5205-RK4  | 6        | 18" chain       | 1   |
| use kit 5205-RK2  | 7        | spring pin      | 1   |
| use kit 5205-RK2  | 8        | plastic cam arm | 1   |

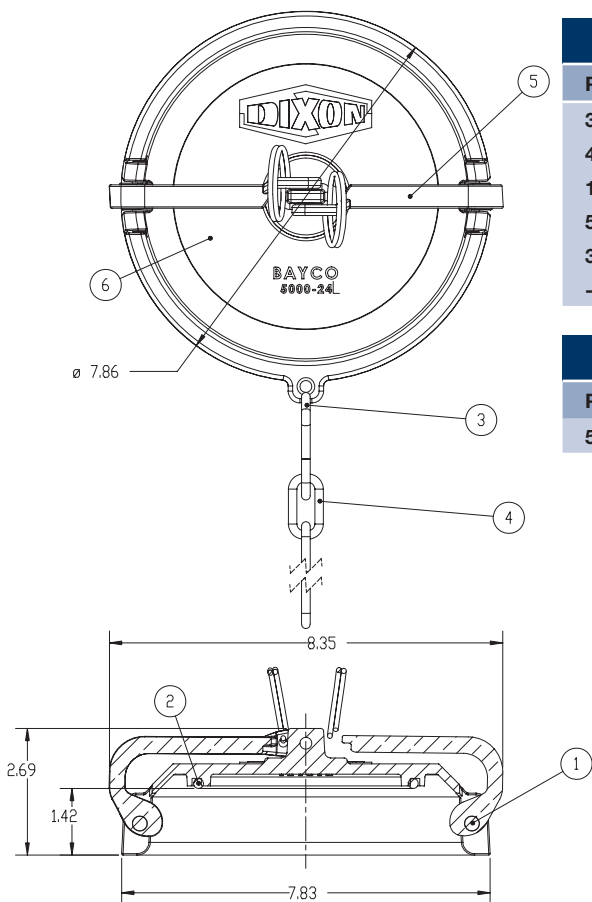
| REPAIR KITS |          |                              |
|-------------|----------|------------------------------|
| PART NO.    | ITEM NO. | DESCRIPTION                  |
| 5205-RK1    | 4        | gasket replacement kit       |
| 5205-RK2    | 7, 8     | replacement cam arm and pin  |
| 5205-RK3    | 2, 3     | replacement roller and pin   |
| 5205-RK4    | 5, 6     | replacement chain and S hook |





# Replacement Parts

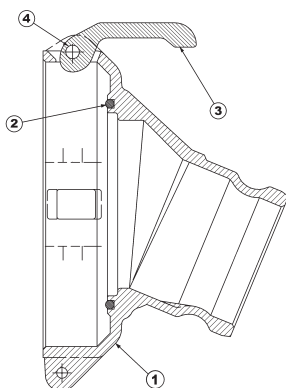
## 5000-24L Lockable API Cap



| BILL OF MATERIALS |        |                        |     |
|-------------------|--------|------------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION            | QTY |
| 325-P             | 1      | pin                    | 2   |
| 4500-5            | 2      | Buna-N O-ring          | 1   |
| 112167            | 3      | s-hook                 | 1   |
| 500-15            | 4      | chain 18"              | 1   |
| 341836            | 5      | lockable arm with ring | 2   |
| ---               | 6      | API dust cap           | 1   |

| REPAIR KITS |         |                         |
|-------------|---------|-------------------------|
| PART NO.    | ITEM #  | DESCRIPTION             |
| 5000-24LRK  | 1, 2, 5 | arm and seal repair kit |

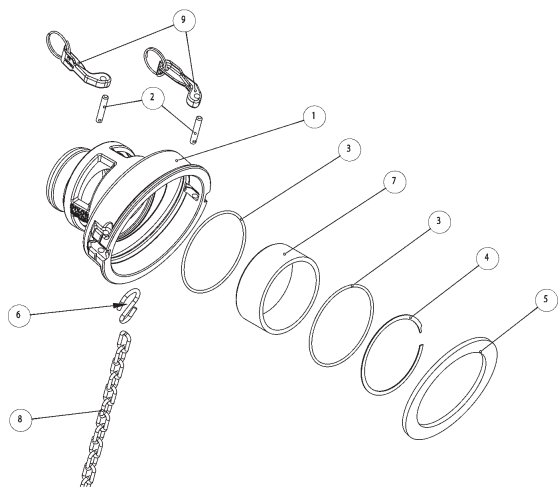
## 4530 and 4540 Series Gravity Drop Adapters



| BILL OF MATERIALS |        |                                  |     |
|-------------------|--------|----------------------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION                      | QTY |
| ---               | 1      | body                             | 1   |
| 4500-5            | 2A     | Baylast™ O-ring (standard)       | 1   |
| 4500-7            | 2B     | FKM O-ring (standard)            | 1   |
| 300-HRP-BR        | 3      | cam arm and ring                 | 2   |
| 300-HRP-BR        | 4      | cam pin                          | 2   |
| 5205-RK4          | ---    | replacement 18" chain and S hook | 1   |

| REPAIR KITS |          |   |
|-------------|----------|---|
| PART NO.    | ITEM #   | DESCRIPTION                               |
| 4500RK      | 2A, 3, 4 | cam arms, rings, pins and Baylast™ O-ring |
| 4500RK-V    | 2B, 3, 4 | cam arms, rings, pins and FKM O-ring      |
| 5205-RK4    | -        | 8" security chain and S hook              |

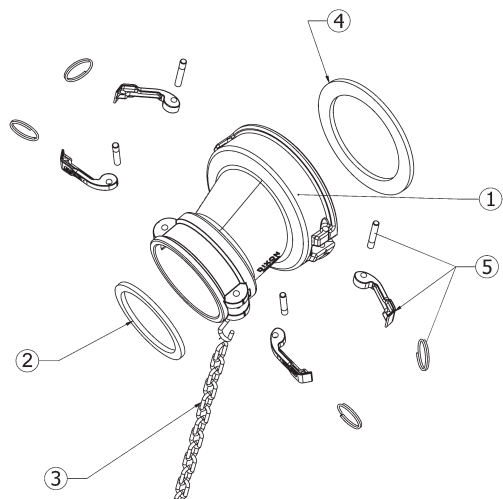
### 4530SG and 4540SG (with Sight Glass) Gravity Drop Adapters



| BILL OF MATERIALS  |        |                      |     |
|--------------------|--------|----------------------|-----|
| PART NO.           | ITEM # | DESCRIPTION          | QTY |
| ---                | 1      | body                 | 1   |
| L519-15            | 2      | cam arm pin          | 2   |
| 112052             | 3      | Baylast™ O-ring      | 2   |
| 112053             | 4      | retaining ring       | 1   |
| 4540SG-RK2         | 5      | Baylast™ main gasket | 1   |
| use kit 5205-RK4   | 6      | S hook               | 1   |
| use kit 4540SG-RK1 | 7      | sight glass          | 1   |
| use kit 5205-RK4   | 8      | 18" chain            | 1   |

| REPAIR KITS  |         |  |
|--------------|---------|--|
| PART NO.     | ITEM #  | DESCRIPTION                                    |
| 4540SG-RK1   | 3, 4, 7 | sight glass repair kit (fits 3" and 4")        |
| 4540SG-RK2   | 5A      | Baylast™ main gasket (fits 3" and 4")          |
| 4540SG-RK2-V | 5B      | FKM main gasket (fits 3" and 4")               |
| 4540SG-RK3   | 2, 9    | replacement cam arms and pins (fits 3" and 4") |
| 5205-RK4     | 6, 8    | replacement chain and "S" hook                 |

### 4540F Gravity Drop Adapters

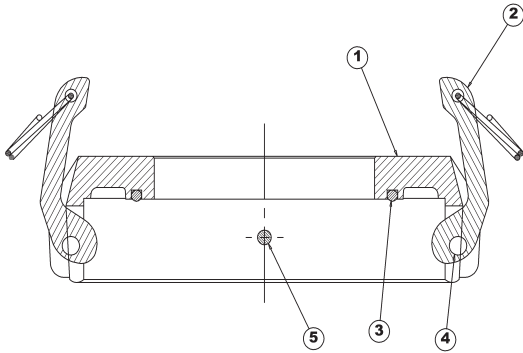


| BILL OF MATERIALS |        |  |     |
|-------------------|--------|--|-----|
| PART NO.          | ITEM # | DESCRIPTION                              | QTY |
| ---               | 1      | body                                     | 1   |
| 400-G-BF          | 2      | 4" Buna fuel gasket                      | 1   |
| 5205-RK4          | 3      | 18" chain with S hook                    | 1   |
| 4540SG-RK2        | 4      | Baylast™ main gasket                     | 1   |
| 300-HRP-BR        | 5      | brass cam arm, pin and finger ring (kit) | 4   |

# Replacement Parts

## 4500 Drop Adapter Mounting Ring for 2 Piece Gravity Drop Adapters

4500, 4502 and 4504 Main Body Inlet



### BILL OF MATERIALS

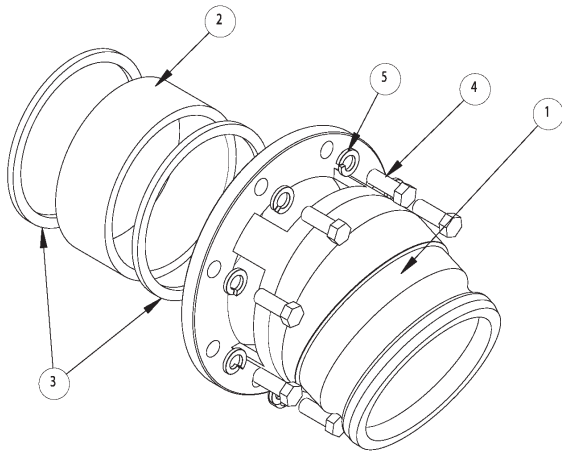
| PART NO.   | ITEM # | DESCRIPTION                | QTY |
|------------|--------|----------------------------|-----|
| ---        | 1      | body                       | 1   |
| 300-HRP-BR | 2      | cam arm and ring           | 2   |
| 4500-5     | 3A     | Baylast™ O-ring (standard) | 1   |
| 4500-7     | 3B     | FKM O-ring (optional)      | 1   |
| 300-HRP-BR | 4      | cam arm pin                | 2   |
| 390564     | 5      | rivet                      | 1   |

### REPAIR KITS

| PART NO. | ITEM #   | DESCRIPTION  |
|----------|----------|--|
| 4500RK   | 2, 3A, 4 | replacement cam arms, rings, pins and Baylast™ O-ring (standard) |
| 4500RK-V | 2, 3B, 4 | replacement cam arms, rings, pins and FKM O-ring (optional)      |

## 4500 Series Drop Adapter Outlets

4501, 4502, 4503 and 4504



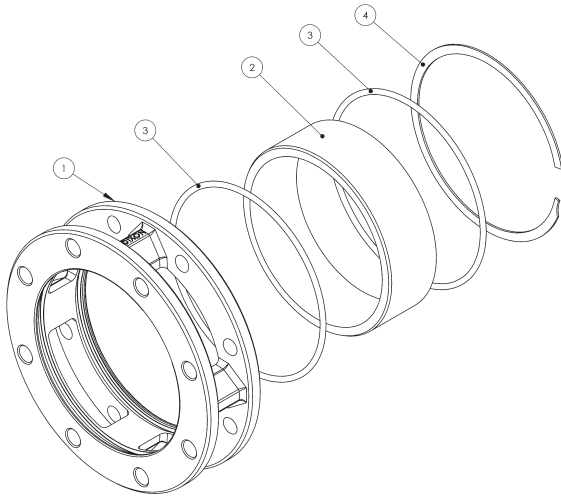
### BILL OF MATERIALS

| PART NO.      | ITEM #          | DESCRIPTION               | QTY |
|---------------|-----------------|---------------------------|-----|
| ---           | 1               | body                      | 1   |
| see below     | 2               | sight glass               | 2   |
| 4433          | 3A              | Baylast™ gasket           | 2   |
| 4426          | 3B              | FKM gasket                | 1   |
| 4427          | 4               | stainless bolt            | 8   |
| WASHER.375-SS | 5               | stainless washer          | 8   |
| 400-G-BF      | not illustrated | coupler gasket for 4504   | 1   |
| ACAR34BZ      | not illustrated | cam arm and ring for 4504 | 2   |
| L519-12       | not illustrated | cam arm pin for 4504      | 2   |

### REPAIR KITS

| PART NO.  | ITEM # | DESCRIPTION  |
|-----------|--------|--|
| 4400SGK   | 2, 3A  | replacement sight glass and Baylast™ gaskets for 4501 and 4504 |
| 4400SGK-V | 2, 3B  | replacement sight glass and FKM gaskets for 4501 and 4504      |
| 4502SGK   | 2, 3A  | replacement sight glass and Baylast™ gaskets for 4502 and 4503 |
| 4502SGK-V | 2, 3B  | replacement sight glass and FKM gaskets for 4502 and 4503      |

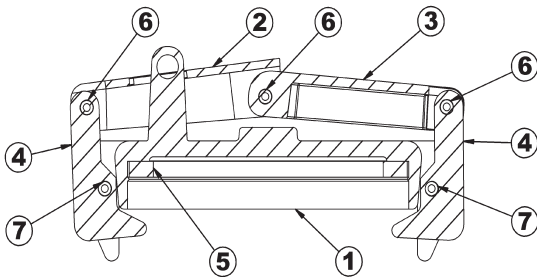
### 5200-SFI Series, Sight Glass



| BILL OF MATERIALS    |        |                    |          |            |          |
|----------------------|--------|--------------------|----------|------------|----------|
| PART NO.             | ITEM # | DESCRIPTION        | 5200-SFI | 5200-SFI-3 | 5201-SFI |
| ---                  | 1      | body               | 1        | 1          | 1        |
| use repair kit below | 2      | sight glass        | 1        | 1          | 1        |
| use repair kit below | 3A     | 3" Baylast™ O-ring | n/a      | 1          | n/a      |
| use repair kit below | 3B     | 4" Baylast™ O-ring | 2        | n/a        | 2        |
| use repair kit below | 4A     | 3" retainer ring   | n/a      | 1          | n/a      |
| use repair kit below | 4B     | 4" retaining ring  | 1        | n/a        | 1        |

| REPAIR KITS    |              |  |
|----------------|--------------|--|
| PART NO.       | ITEM #       | DESCRIPTION                                |
| 5200-SFI-3-RK1 | 1, 2, 3A, 4A | sight glass repair kit for 3" - 5200-SFI-3 |
| 5200-SFI-RK1   | 1, 2, 3B, 4B | sight glass repair kit for 4" - 5200-SFI   |
| 5201-SFI-RK1   | 1, 2, 3B, 4B | sight glass repair kit for 4" - 5201-SFI   |

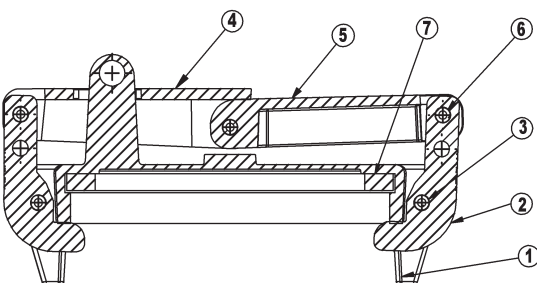
### SA4050AL Caps



| BILL OF MATERIALS |        |                 |     |
|-------------------|--------|-----------------|-----|
| PART NO.          | ITEM # | DESCRIPTION     | QTY |
| ---               | 1      | cap body        | 1   |
| 4050AL            | 2      | top large lever | 1   |
| 4062AL            | 3      | minor lever     | 1   |
| 4063              | 4      | cam arm         | 2   |
| 400-G-BU          | 5      | gasket          | 1   |
| 4066              | 6      | lever pin       | 3   |
| 4068              | 7      | cam arm pin     | 2   |

### 4" Vapour Caps

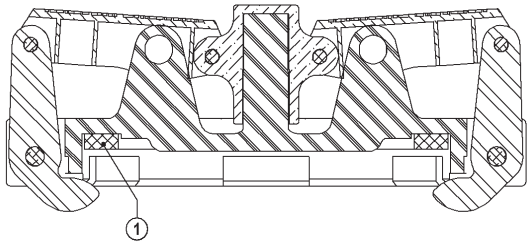
#### VR4050AL



| BILL OF MATERIALS |        |                 |     |
|-------------------|--------|-----------------|-----|
| PART NO.          | ITEM # | DESCRIPTION     | QTY |
| ---               | 1      | cap body        | 1   |
| VR4075            | 2      | cam arm         | 2   |
| 4068              | 3      | arm pin         | 2   |
| VR4077            | 4      | top large lever | 1   |
| VR4076            | 5      | minor lever     | 1   |
| 4066              | 6      | lever pin       | 3   |
| 400-G-BU          | 7      | Buna gasket     | 1   |

# Replacement Parts

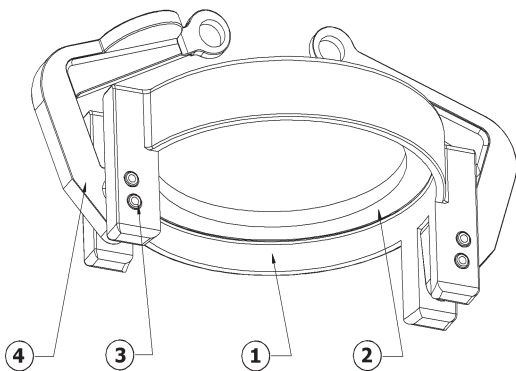
## VR4050PL Series 4" Nylon Vapour Caps



### BILL OF MATERIALS

| PART NO.    | ITEM # | DESCRIPTION | QTY |
|-------------|--------|-------------|-----|
| VR4050PLRK1 | 1      | gasket      | 1   |

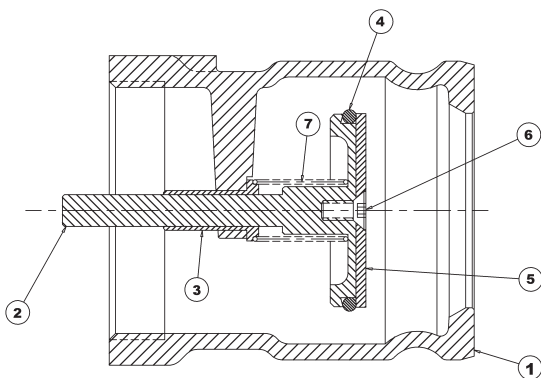
## TL4070BZ Series Bronze Caps



### BILL OF MATERIALS

| PART NO. | ITEM # | DESCRIPTION | QTY |
|----------|--------|-------------|-----|
| ---      | 1      | cap body    | 1   |
| 400-G-BU | 2      | Buna gasket | 1   |
| 4068     | 3      | arm pin     | 4   |
| 4071     | 4      | arm (lever) | 2   |

## VR3100 Series 3" Vapour Hose Valves



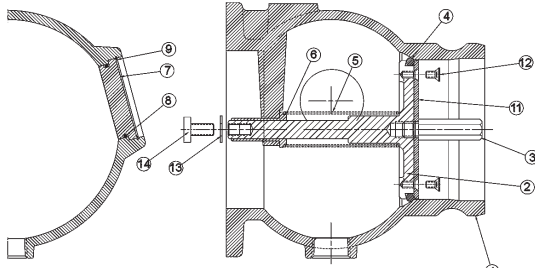
### BILL OF MATERIALS

| PART NO.        | ITEM # | DESCRIPTION  | QTY |
|-----------------|--------|--------------|-----|
| ---             | 1      | body         | 1   |
| 341827          | 2      | valve        | 1   |
| VR6000-3        | 3      | bushing      | 1   |
| O-RING-AS-334   | 4      | FKM O-ring   | 1   |
| VR4100-3        | 5      | valve plate  | 1   |
| SC5-16NCX.75FSS | 6      | screw        | 1   |
| SPRING-L5123    | 7      | valve spring | 1   |

### REPAIR KITS

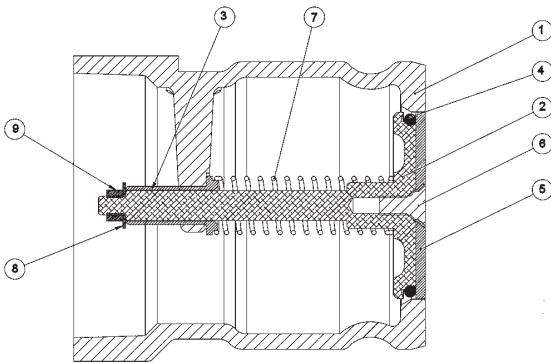
| PART NO.  | ITEM #           | DESCRIPTION  |
|-----------|------------------|--|
| VR4100RK1 | 2, 3, 4, 5, 6, 7 | valve, bushing, O-ring, valve plate, screw, and spring |

**VR4000 Series 4" Vapour Hose Valves**



| BILL OF MATERIALS |        |                    |     |
|-------------------|--------|--------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION        | QTY |
| ---               | 1      | body               | 1   |
| VR4000-2          | 2      | valve              | 1   |
| VR4000-3          | 3      | valve standoff     | 1   |
| O-RING-AS339-V    | 4      | valve O-ring       | 1   |
| SPRG/L4432        | 5      | spring             | 1   |
| VR6000-3          | 6      | bushing            | 1   |
| VR4000-4          | 7      | sight glass        | 2   |
| O-RING#132        | 8      | sight glass O-ring | 2   |
| RING-VH-225       | 9      | retaining ring     | 2   |
| 110748            | 10     | plug               | 1   |
| VR4000-5          | 11     | valve plate        | 1   |
| SC1024375-SS      | 12     | valve plate screws | 2   |
| 112270            | 13     | washer             | 1   |
| 112269            | 14     | hex cap screw      | 1   |

**VR4100 Series 4" Vapour Hose Valves**



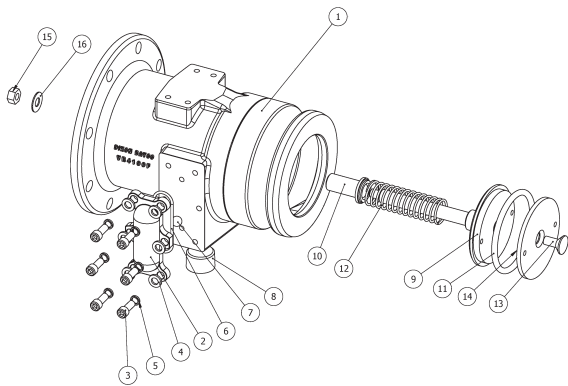
| BILL OF MATERIALS |        |              |     |
|-------------------|--------|--------------|-----|
| PART NO.          | ITEM # | DESCRIPTION  | QTY |
| ---               | 1      | body         | 1   |
| 341827            | 2      | valve        | 1   |
| VR6000-3          | 3      | bushing      | 1   |
| O-RING-AS-334     | 4      | FKM O-ring   | 1   |
| VR4100-3          | 5      | valve plate  | 1   |
| SC5-16NCX.75FSS   | 6      | screw        | 1   |
| SPRING-L5123      | 7      | valve spring | 1   |
| 112270            | 8      | washer       | 1   |

| REPAIR KITS |                  |  |
|-------------|------------------|--|
| PART NO.    | ITEM #           | DESCRIPTION  |
| VR4100RK1   | 2, 3, 4, 5, 6, 7 | valve, bushing, O-ring, valve plate, screw, and spring |



# Replacement Parts

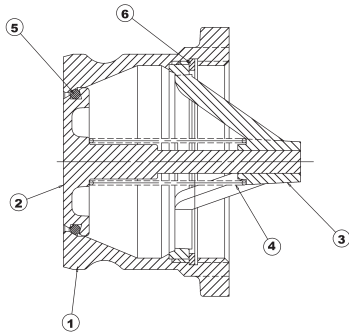
## VR4100F Series Vapour Hose Valves



| BILL OF MATERIALS |        |                         |     |
|-------------------|--------|-------------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION             | QTY |
| ---               | 1      | body                    | 1   |
| 111575            | 2      | sight glass             | 1   |
| 111570            | 3      | sight glass bolts       | 6   |
| 111562            | 4      | sight glass washer      | 4   |
| 111569            | 5      | sight glass lock washer | 6   |
| 111733            | 6      | sight glass O-ring      | 1   |
| 111572            | 7      | sight glass float ball  | 1   |
| 112044            | 8      | 3/4" body plug          | 1   |
| VR4100-2          | 9      | valve                   | 1   |
| VR6000-3          | 10     | bushing                 | 1   |
| O-RING-AS-334     | 11     | FKM valve O-ring        | 1   |
| SPRING-L5123      | 12     | valve spring            | 1   |
| SC5-16NCX.75FSS   | 13     | screw                   | 1   |
| VR4100-3          | 14     | valve plate             | 1   |
| 112271            | 15     | washer                  | 1   |
| 112270            | 16     | nut                     | 1   |

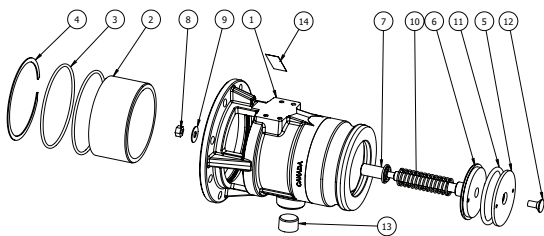
| REPAIR KITS |         |  |
|-------------|---------|--|
| PART NO.    | ITEM #  | DESCRIPTION                                      |
| 5204K8      | 2, 6, 7 | sight glass, O-ring, float ball                  |
| 5204K12     | 3, 4, 5 | hex bolts (6), lock washers (6), washers (4) kit |

## VR4086 Series Vapour Adapters



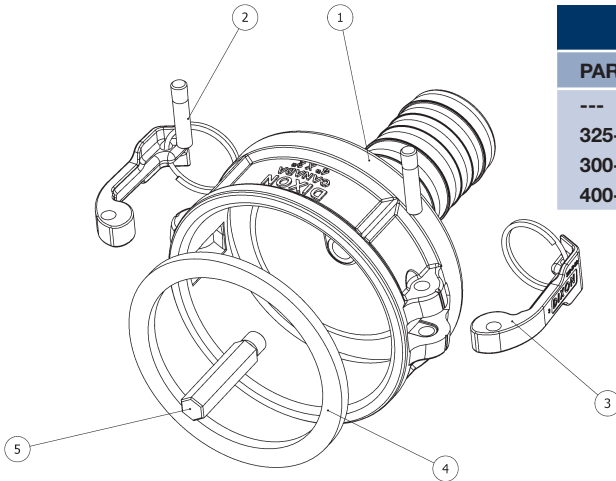
| BILL OF MATERIALS |        |              |     |
|-------------------|--------|--------------|-----|
| PART NO.          | ITEM # | DESCRIPTION  | QTY |
| ---               | 1      | body         | 1   |
| 340331            | 2      | valve        | 1   |
| 340304            | 3      | valve spider | 1   |
| 110892            | 4      | spring       | 1   |
| O-RING-AS-334     | 5      | FKM O-ring   | 1   |
| G4000AS           | 6      | body gasket  | 1   |

## VR4100-SFI Series Vapour Hose Coupler



| BILL OF MATERIALS |        |                |     |
|-------------------|--------|----------------|-----|
| PART NO.          | ITEM # | DESCRIPTION    | QTY |
| 341832            | 1      | body           | 1   |
| 391855            | 2      | sight glass    | 1   |
| 112180            | 3      | O-ring         | 2   |
| 112281            | 4      | retaining ring | 1   |
| 390663            | 5      | plate          | 1   |
| 341827            | 6      | valve          | 1   |
| 390146            | 7      | bushing        | 1   |
| 112271            | 8      | nut            | 1   |
| 112270            | 9      | washer         | 1   |
| 111197            | 10     | spring         | 1   |
| 110691            | 11     | O-ring FKM     | 1   |
| 110842            | 12     | screw          | 1   |
| 112044            | 13     | plug           | 1   |
| 112205            | 14     | warning label  | 1   |

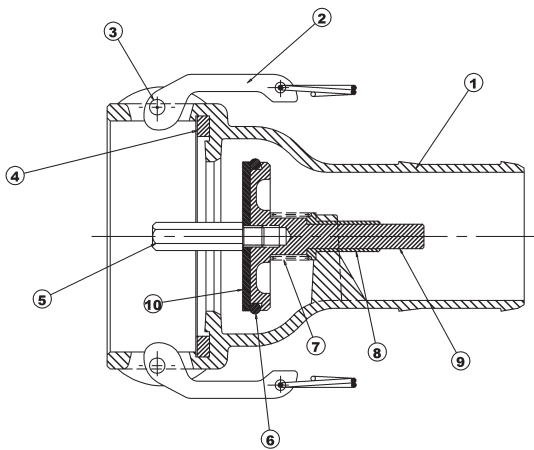
### 4020-CVR-AL Vapour Hose Couplers



| BILL OF MATERIALS |        |                   |     |
|-------------------|--------|-------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION       | QTY |
| ---               | 1      | body              | 1   |
| 325-P             | 2      | pin               | 2   |
| 300-HR-BR         | 3      | cam arm with ring | 2   |
| 400-G-BU          | 4      | gasket 4"         | 1   |

### VR4030CS-AL Vapour Hose Couplers

4" x 3" with poppet

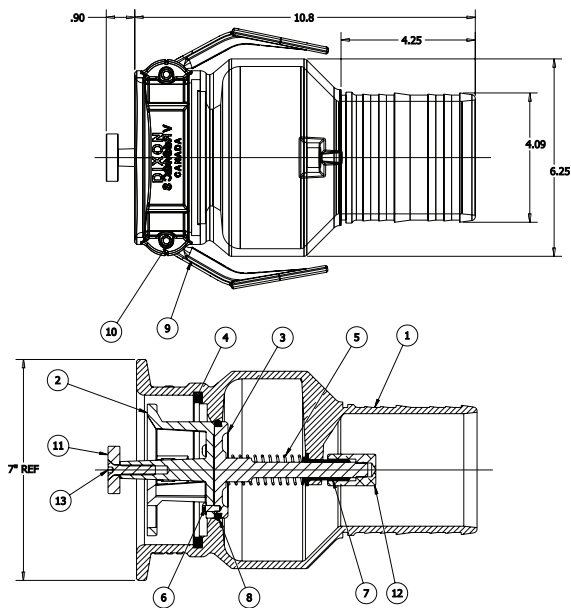


| BILL OF MATERIALS |        |                     |     |
|-------------------|--------|---------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION         | QTY |
| ---               | 1      | body                | 1   |
| 300-HRP-BR        | 2      | cam arm and ring    | 2   |
| 300-HRP-BR        | 3      | cam pin             | 2   |
| 400-G-BU          | 4      | Buna coupler gasket | 1   |
| VR6000-7          | 5      | probe               | 1   |
| O-RING-AS-334     | 6      | FKM valve O-ring    | 1   |
| SPRG/L4238        | 7      | spring              | 1   |
| VR6000-3          | 8      | bushing             | 1   |
| VR4030CS-1        | 9      | valve               | 1   |
| VR4030CS-4        | 10     | valve plate         | 1   |

| REPAIR KITS |            |  |
|-------------|------------|--|
| PART NO.    | ITEM #     | DESCRIPTION  |
| VAC4030RK   | 2, 3, 4, 6 | replacement cam arms, rings, pins, coupler gasket and valve O-ring |

# Replacement Parts

## VR4040CS-AL, VR4040CS & VR4040CS-4MNPT Vapour Hose Couplers

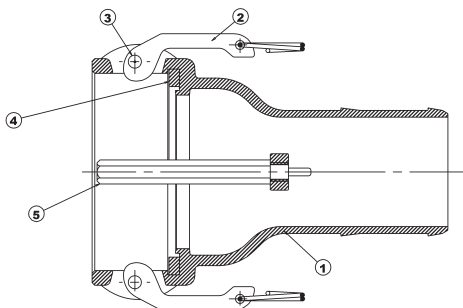


| BILL OF MATERIALS      |        |  |     |
|------------------------|--------|--|-----|
| PART NO.               | ITEM # | DESCRIPTION                                    | QTY |
| ---                    | 1      | body   | 1   |
| 341819                 | 2      | cage   | 1   |
| 341820                 | 3      | poppet   | 1   |
| 112262                 | 4      | gasket Buna -N                                 | 1   |
| 112263                 | 5      | spring   | 1   |
| 112264                 | 6      | machine screw                                  | 3   |
| VR6000-3               | 7      | bushing  | 1   |
| O-RING-AS-334          | 8      | O-ring FKM                                     | 1   |
| use kit<br>VR4040CSRK2 | 9      | paddle arm                                     | 2   |
| use kit<br>VR4040CSRK2 | 10     | cam arm pin                                    | 2   |
| 391860                 | 11A    | standard button (VR4040CS-AL & VR4040CS-4MNPT) | 1   |
| 391866                 | 11B    | long button (VR4040CS-ALL)                     | 1   |
| 112416                 | 12     | screw  | 1   |
| 391868                 | 13     | poppet stop                                    | 1   |

| REPAIR KITS |                       |                     |
|-------------|-----------------------|---------------------|
| PART NO.    | ITEM #                | DESCRIPTION         |
| VR4040CSRK1 | 2, 3, 10              | seal repair kit     |
| VR4040CSRK2 | 4, 6, 8               | cam arm repair kit  |
| VR4040CSRK3 | 2,3,5,6,7, 8,11,12,13 | internal repair kit |

## VR4030CS-NP Vapour Hose Couplers

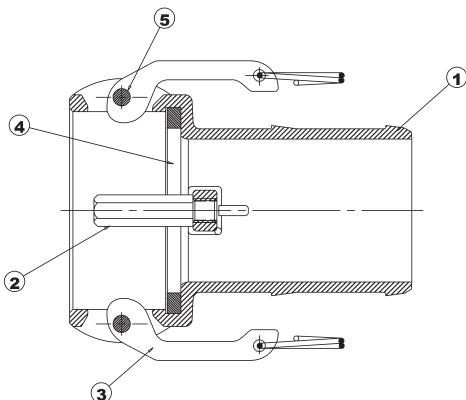
4" x 3" without poppet



| BILL OF MATERIALS |        |                     |     |
|-------------------|--------|---------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION         | QTY |
| ---               | 1      | body                | 1   |
| 300-HRP-BR        | 2      | cam arm and ring    | 2   |
| 300-HRP-BR        | 3      | cam arm pin         | 2   |
| 400-G-BU          | 4      | Buna coupler gasket | 1   |
| VR4030CS-3        | 5      | probe               | 1   |

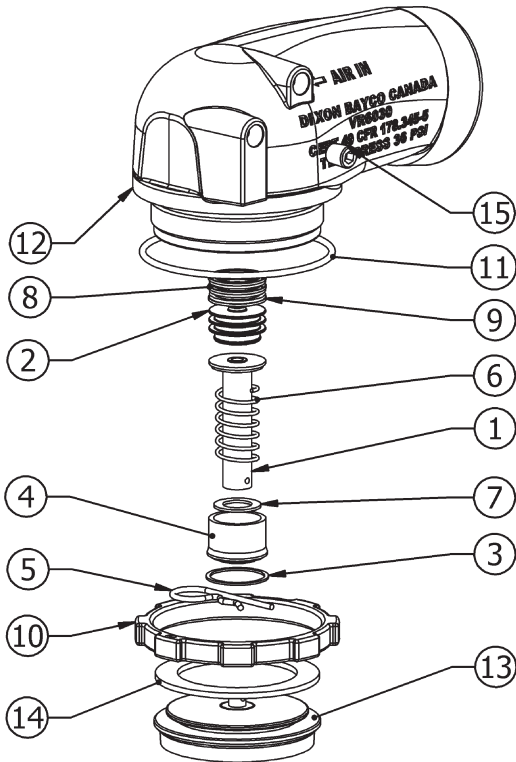
## VRC3000AL Vapour Hose Couplers

3" x 3" without poppet



| BILL OF MATERIALS |        |                     |     |
|-------------------|--------|---------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION         | QTY |
| ---               | 1      | body                | 1   |
| L4217             | 2      | probe               | 1   |
| 300-HRP-BR        | 3      | cam arm and ring    | 2   |
| 300-G-BU          | 4      | Buna coupler gasket | 1   |
| 300-HRP-BR        | 5      | cam arm pin         | 2   |

**VR6030SQ Series Sequential Vapor Vents**

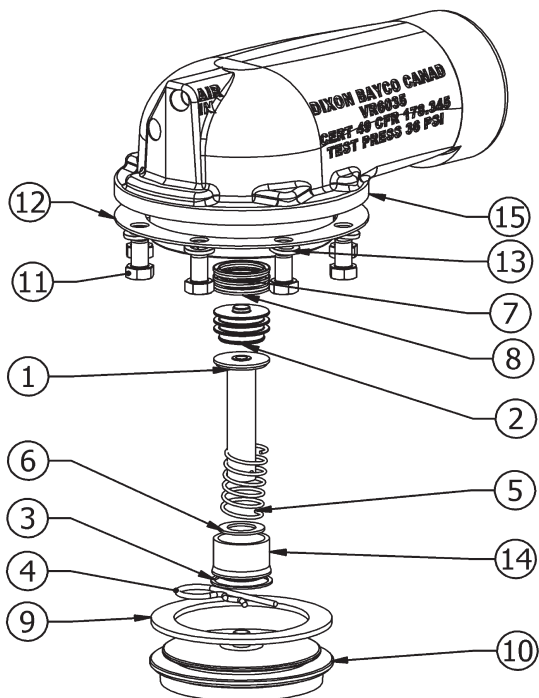


| BILL OF MATERIALS |        |                         |     |
|-------------------|--------|-------------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION             | QTY |
| 400636            | 1      | stem                    | 1   |
| use kit VR6030RK2 | 2      | piston                  | 1   |
| 111681            | 3      | retaining ring          | 1   |
| 390822            | 4      | bearing                 | 1   |
| 111680            | 5      | hitch pin               | 1   |
| 111679            | 6      | spring                  | 1   |
| 111683            | 7      | bearing seal washer     | 1   |
| 111686            | 8      | top lip seal            | 2   |
| 111687            | 9      | bottom lip seal         | 1   |
| 390826            | 10A    | mounting ring           | 1   |
| 111693            | 10B    | mounting ring set screw | 1   |
| 111692            | 11     | O-ring                  | 1   |
| ---               | 12     | body                    | 1   |
| 341643            | 13     | poppet                  | 1   |
| VR6030RK3         | 14A    | Baylast™ poppet gasket  | 1   |
| VR6030RKV3        | 14B    | FKM poppet gasket       | 1   |
| 111694            | 15     | pipe plug               | 1   |

| REPAIR KITS |                        |  |
|-------------|------------------------|--|
| PART NO.    | ITEM #                 | DESCRIPTION                                      |
| VR6030RK1   | 2, 3, 5, 8, 9, 11, 14A | replacement seal kit (with Baylast™ poppet seal) |
| VR6030RKV1  | 2, 3, 5, 8, 9, 11, 14B | replacement seal kit (with FKM poppet seal)      |
| VR6030RK2   | 2, 8, 9                | replacement piston assembly                      |
| VR6030RK3   | 14                     | replacement Baylast™ poppet gasket               |
| VR6030RKV3  | 14                     | replacement FKM poppet gasket                    |

# Replacement Parts

## VR6035Q Series Sequential Vapour Vents



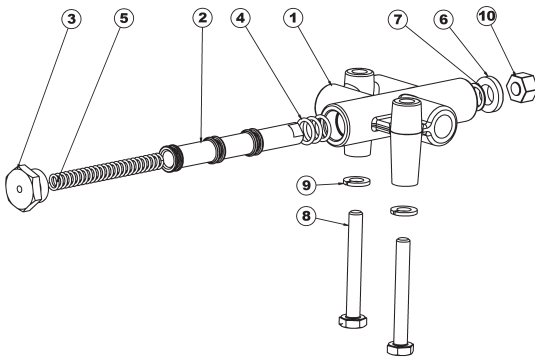
### BILL OF MATERIALS

| PART NO.          | ITEM # | DESCRIPTION            | QTY |
|-------------------|--------|------------------------|-----|
| 400636            | 1      | stem assembly          | 1   |
| use kit VR6030RK2 | 2      | piston                 | 1   |
| 111681            | 3      | retaining ring         | 1   |
| 111680            | 4      | cotter pin             | 1   |
| 111679            | 5      | spring                 | 1   |
| 111683            | 6      | bearing seal washer    | 1   |
| 111686            | 7      | lip seal               | 2   |
| 111687            | 8      | lip seal               | 1   |
| VR6035RK3         | 9A     | Baylast™ poppet gasket | 1   |
| VR6035RKV3        | 9B     | FKM poppet gasket      | 1   |
| 341641            | 10     | poppet                 | 1   |
| use kit VR6035RK4 | 11     | hex bolt               | 8   |
| 111689            | 12     | body gasket            | 1   |
| use kit VR6035RK4 | 13     | lock washer            | 8   |
| 390822            | 14     | stem bearing           | 1   |
| ---               | 15     | body                   | 1   |

### REPAIR KITS

| PART NO.   | ITEM #                | DESCRIPTION                                      |
|------------|-----------------------|--|
| VR6035RK1  | 2, 3, 4, 7, 8, 9A, 12 | replacement seal kit (with Baylast™ poppet seal) |
| VR6035RKV1 | 2, 3, 4, 7, 8, 9B, 12 | replacement seal kit (with FKM poppet seal)      |
| VR6035RK2  | 2, 7, 8               | replacement piston assembly                      |
| VR6035RK3  | 9A                    | replacement Baylast™ poppet gasket               |
| VR6035RKV3 | 9B                    | replacement FKM poppet gasket                    |
| VR6035RK4  | 11, 13                | replacement (8) bolts & lock washers             |

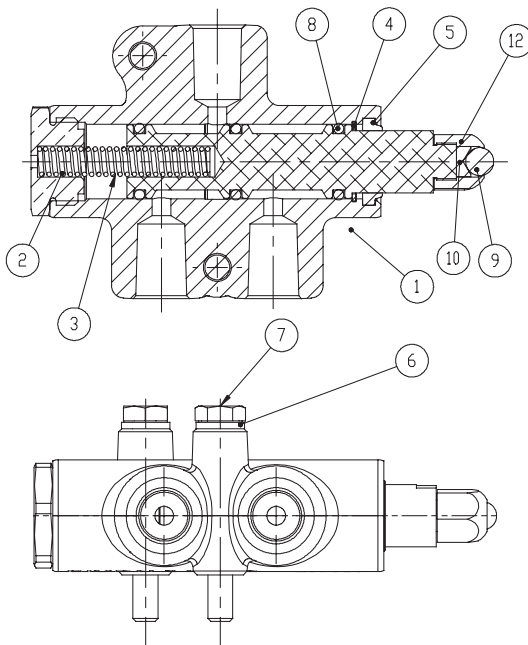
### 5000AIR Series Roller Ball End Air Interlock Valves



| BILL OF MATERIALS |        |                      |     |
|-------------------|--------|----------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION          | QTY |
| use kit 5000AIRSK | 2      | piston               | 1   |
| use kit 5000AIRSK | 3      | end plug             | 1   |
| use kit 5000AIRSK | 4      | Buna O-ring          | 3   |
| use kit 5000AIRSK | 5      | spring               | 1   |
| use kit 5000AIRSK | 6      | urethane wiper       | 1   |
| RING-WH-50        | 7      | retaining ring       | 1   |
| use kit 5000AIHK  | 8      | mounting bolts       | 2   |
| use kit 5000AIHK  | 9      | lock washer          | 2   |
| 5000AIRRK1        | 10     | roller ball assembly | 1   |

| REPAIR KITS |               |   |
|-------------|---------------|---|
| PART NO.    | ITEM #        | DESCRIPTION                                 |
| 5000AIHK    | 8, 9          | replacement mounting bolts and lock washers |
| 5000AIRSK   | 2, 3, 4, 5, 6 | replacement piston and seal kit             |
| 5000AIRRK1  | 10            | replacement roller ball                     |

### 5000AIRHD Series Heavy Duty Roller Ball End Air Interlock Valves



| BILL OF MATERIALS |        |                 |     |
|-------------------|--------|-----------------|-----|
| PART NO.          | ITEM # | DESCRIPTION     | QTY |
| ---               | 1      | body            | 1   |
| 391848            | 2      | end plug        | 1   |
| 112260            | 3      | wiper           | 1   |
| 112261            | 4      | retaining ring  | 1   |
| 110897            | 5      | spring          | 1   |
| 110928            | 6      | lock washer     | 2   |
| 111196            | 7      | mounting bolts  | 2   |
| 111SS3            | 8      | O-ring          | 3   |
| 100202            | 9      | ball            | 1   |
| 390104            | 10     | bearing         | 1   |
| 391858            | 11     | piston          | 1   |
| 390105            | 12     | roller head cap | 1   |

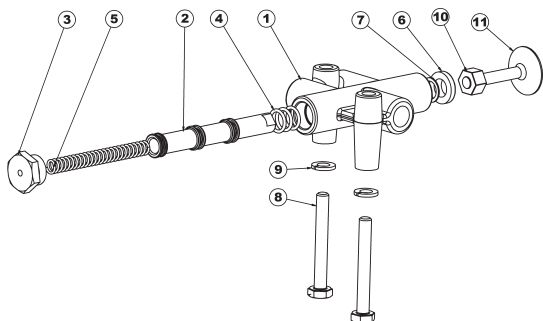
| REPAIR KITS |                |   |
|-------------|----------------|---|
| PART NO.    | ITEM #         | DESCRIPTION                                 |
| 5000AIHK    | 6, 7           | replacement mounting bolts and lock washers |
| 5000AIRHDSK | 2, 3, 5, 8, 11 | replacement piston and seal kit             |
| 5000AIRRK1  | 9              | replacement roller ball                     |



# Replacement Parts

## 5000AI Series Button Plunger End Air Interlock Valves

5000AI, 5000AIS and AIST

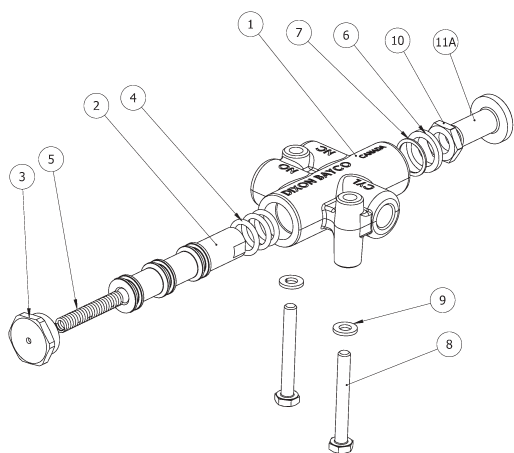


| BILL OF MATERIALS |        |  |     |
|-------------------|--------|--|-----|
| PART NO.          | ITEM # | DESCRIPTION  | QTY |
| ---               | 1      | body   | 1   |
| use kit 5000AISK  | 2      | piston   | 1   |
| use kit 5000AISK  | 3A     | end plug (5000AI, 5000AIST)                          | 1   |
| 5000S             | 3B     | electronic switch kit (not illustrated, for 5000AIS) | 1   |
| use kit 5000AISK  | 4      | Buna O-ring  | 3   |
| use kit 5000AISK  | 5      | spring   | 1   |
| use kit 5000AISK  | 6      | urethane wiper                                       | 1   |
| RING-WH-50        | 7      | retaining ring                                       | 1   |
| use kit 5000AIHK  | 8      | mounting bolt  | 2   |
| use kit 5000AIHK  | 9      | lock washer  | 2   |
| NUT.25HX-SS       | 10     | plunger nut  | 1   |
| use kit 5000AIRK1 | 11A    | 1" SS plunger button (5000AI)                        | 1   |
| use kit 5000ST    | 11B    | 1 1/2" SS plunger button (5000AIST)                  | 1   |

| REPAIR KITS |                |   |
|-------------|----------------|---|
| PART NO.    | ITEM #         | DESCRIPTION                                 |
| 5000AIHK    | 8, 9           | mounting bolt, lock washer                  |
| 5000AISK    | 2, 3A, 4, 5, 6 | piston, end plug, spring, O-ring, rod wiper |
| 5000AIRK1   | 10, 11A        | plunger end, nut                            |
| 5000ST      | 10, 11B        | replacement 1 1/2" plunger button and nut   |
| 5000S       | 3B             | electronic switch attachment kit            |
| 5000AIRK2   | --             | plunger button extension and sleeve kit     |

## 5000AI Series Button Plunger End Air Interlock Valves

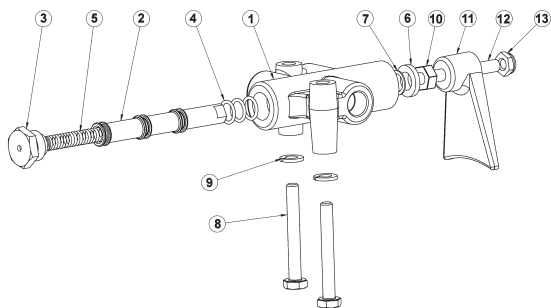
5000AI, 5000AIS and AIST



| BILL OF MATERIALS   |        |                  |     |
|---------------------|--------|------------------|-----|
| PART NO.            | ITEM # | DESCRIPTION      | QTY |
| ---                 | 1      | body             | 1   |
| use kit 5000AIHDSK  | 2      | piston           | 1   |
| use kit 5000AIHDSK  | 3      | end plug         | 1   |
| use kit 5000AIHDSK  | 4      | O-ring           | 3   |
| use kit 5000AIHDSK  | 5      | spring           | 1   |
| use kit 5000AIHDSK  | 6      | wiper            | 1   |
| 112251              | 7      | retaining ring   | 1   |
| use kit 5000AIHK    | 8      | mounting bolts   | 2   |
| use kit 5000AIHK    | 9      | lock washer      | 2   |
| 390909              | 10     | nut              | 1   |
| use kit 5000AIHDRK1 | 11A    | 1" plunger end   | 1   |
| use kit 5000STHD    | 11B    | 1.5" plunger end | 1   |

| REPAIR KITS |               |                                   |
|-------------|---------------|-----------------------------------|
| PART NO.    | ITEM #        | DESCRIPTION                       |
| 5000AIHK    | 8, 9          | mounting bolts and lock washers   |
| 5000AIHDSK  | 2, 3, 4, 5, 6 | replacement piston and seal kit   |
| 5000AIHDRK1 | 10, 11A       | replacement 1" plunger assembly   |
| 5000STHD    | 10, 11B       | replacement 1.5" plunger assembly |

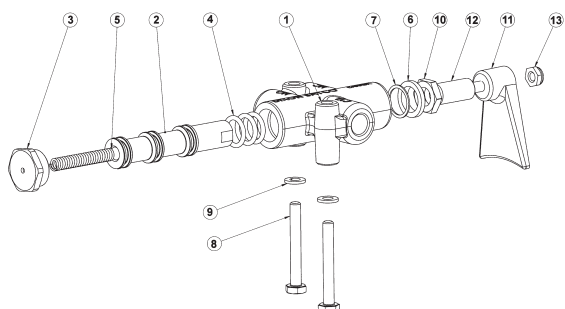
### 5000AIV Series Paddle End Air Interlock Valves



| BILL OF MATERIALS |        |                         |     |
|-------------------|--------|-------------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION             | QTY |
| ---               | 1      | body                    | 1   |
| use kit 5000AISK  | 2      | piston                  | 1   |
| use kit 5000AISK  | 3      | end plug                | 1   |
| use kit 5000AISK  | 4      | Buna O-ring             | 3   |
| use kit 5000AISK  | 5      | spring                  | 1   |
| use kit 5000AISK  | 6      | urethane wiper          | 1   |
| RING-WH-50        | 7      | retaining ring          | 1   |
| use kit 5000AIHK  | 8      | mounting bolt           | 2   |
| use kit 5000AIHK  | 9      | lock washer             | 2   |
| NUT.25HX-SS       | 10     | paddle nut              | 1   |
| 5000AI-2          | 11     | paddle plunger          | 1   |
| 5000AI-5          | 12     | paddle plunger stud     | 1   |
| 112370            | 13     | paddle plunger lock nut | 1   |

| REPAIR KITS |               |   |
|-------------|---------------|---|
| PART NO.    | ITEM #        | DESCRIPTION                                 |
| 5000AIHK    | 8, 9          | mounting bolt, lock washer                  |
| 5000AISK    | 2, 3, 4, 5, 6 | piston, end plug, spring, O-ring, rod wiper |

### 5000AIVHD Series Heavy Duty Paddle End Air Interlock Valves

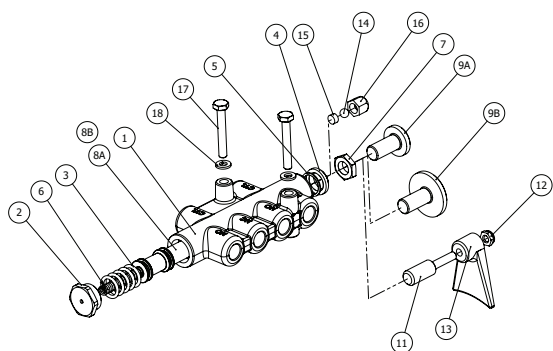


| BILL OF MATERIALS  |        |                |     |
|--------------------|--------|----------------|-----|
| PART NO.           | ITEM # | DESCRIPTION    | QTY |
| ---                | 1      | body           | 1   |
| use kit 5000AIHDSK | 2      | piston         | 1   |
| use kit 5000AIHDSK | 3      | end plug       | 1   |
| use kit 5000AIHDSK | 4      | O-ring         | 1   |
| use kit 5000AIHDSK | 5      | spring         | 1   |
| use kit 5000AIHDSK | 6      | wiper          | 1   |
| WH-77              | 7      | retaining ring | 1   |
| use kit 5000AIHK   | 8      | mounting bolts | 2   |
| use kit 5000AIHK   | 9      | lock washer    | 2   |
| 390909             | 10     | nut            | 3   |
| 341142             | 11     | paddle end     | 1   |
| 390910             | 12     | stud           | 1   |
| 112370             | 13     | lock nut       | 1   |

| REPAIR KITS |               |                                 |
|-------------|---------------|---------------------------------|
| PART NO.    | ITEM #        | DESCRIPTION                     |
| 5000AIHK    | 8, 9          | mounting bolt, lock washer      |
| 5000AIHDSK  | 2, 3, 4, 5, 6 | replacement piston and seal kit |

# Replacement Parts

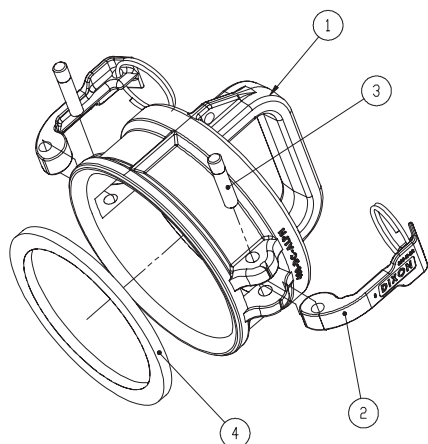
## 5006AIHD Series Heavy Duty Air Interlock Valve



| BILL OF MATERIALS |                     |          |            |           |           |
|-------------------|---------------------|----------|------------|-----------|-----------|
| ITEM #            | DESCRIPTION         | 5600AIHD | 5006AISTHD | 5006AIVHD | 5006AIRHD |
| 1                 | body                | 1        | 1          | 1         | 1         |
| 2                 | end plug            | 1        | 1          | 1         | 1         |
| 3                 | O-ring              | 5        | 5          | 5         | 5         |
| 4                 | wiper               | 1        | 1          | 1         | 1         |
| 5                 | retaining ring      | 1        | 1          | 1         | 1         |
| 6                 | spring              | 1        | 1          | 1         | 1         |
| 7                 | hex jam nut         | 1        | 1          | 1         | 1         |
| 8A                | piston              | 1        | 1          | 1         | -         |
| 8B                | piston for air      | -        | -          | -         | 1         |
| 9A                | 1" plunger end      | 1        | -          | -         | -         |
| 10B               | 1½" plunger end     | -        | 1          | -         | -         |
| 11                | paddle plunger stud | -        | -          | 1         | -         |
| 12                | nylon locknut       | -        | -          | 1         | -         |
| 13                | paddle plunger      | -        | -          | 1         | -         |
| 14                | ball                | -        | -          | -         | 1         |
| 15                | bearing             | -        | -          | -         | 1         |
| 16                | roller head cap     | -        | -          | -         | 1         |
| 17                | mounting bolt       | 2        | 2          | 2         | 2         |
| 18                | lock washer         | 2        | 2          | 2         | 2         |

| REPAIR KITS |                |  |
|-------------|----------------|--|
| PART NO.    | ITEM #         | DESCRIPTION                                    |
| 5006AIHDSK  | 2, 3, 4, 6, 8A | piston and seal kit for 5006AIHD and 5006AIVHD |
| 5006AIRHDSK | 2, 3, 4, 6, 8B | piston and seal kit for 5006AIRHD              |

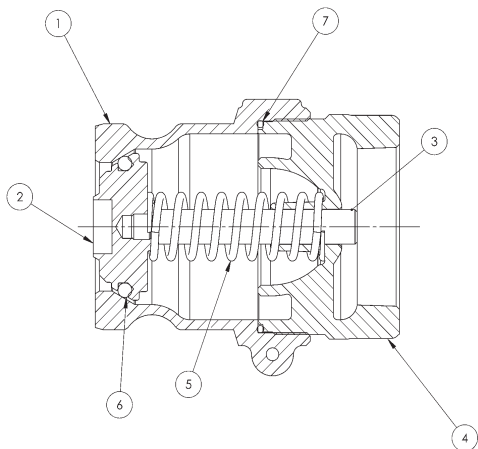
## 400-DC-ALPH Dust Cap with Handle



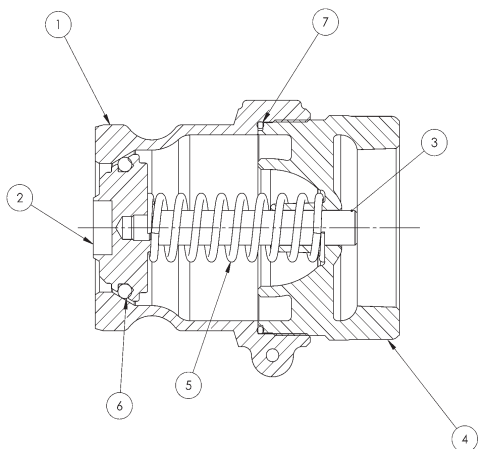
| BILL OF MATERIALS |        |                      |     |
|-------------------|--------|----------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION          | QTY |
| 400-DC-ALPH       | 1      | dust cap with handle | 1   |
| 300-HR-BR         | 2      | cam arm with ring    | 2   |
| 325-P             | 3      | pin                  | 2   |
| 400-G-BU          | 4      | 4" gasket            | 1   |

## DBA Cam and Groove Dry Disconnects

Aluminium and Stainless Adapters



| <b>1 1/2" ALUMINIUM ADAPTER(DBA6X),<br/>ZINC ADAPTER (DBA1X) BILL OF MATERIALS<br/>DBA1X-150, DBA6X-150 &amp; DBA1X-1520</b> |        |  |     |
|--|--------|--|-----|
| PART NO.   | ITEM # | DESCRIPTION                                | QTY |
| 40129AL  | 1A     | aluminium adapter body (DBA6x-150)         | 1   |
| 40129ZA  | 1B     | zinc adapter body (DBA1x-150 & DBA1x-1520) | 1   |
| 40130AL  | 2      | poppet                                     | 1   |
| 40133BR  | 3A     | stem (DBA1x-150 & DBA1x-1520)              | 1   |
| 40133SS-001  | 3B     | stem (for DBA6x-150)                       | 1   |
| 40131AL  | 4A     | thread end body                            | 1   |
| 40303AL  | 4B     | thread end body (for DBA1x1520)            | 1   |
| 40132SS  | 5      | poppet spring                              | 1   |
| use kit DBAK1-150  | 6A     | poppet O-ring Buna                         | 1   |
| use kit DBAK2-150  | 6B     | poppet O-ring FKM                          | 1   |
| use kit DBAK3-150  | 6C     | poppet O-ring PTFE/Silicone                | 1   |
| use kit DBAK4-150  | 6D     | poppet O-ring EPDM                         | 1   |
| use kit DBAK6-150  | 6E     | poppet O-ring Kalrez®                      | 1   |
| use kit DBAK7-150  | 6F     | poppet O-ring PTFE/FKM                     | 1   |
| use kit DBAK1-150  | 7A     | body O-ring Buna                           | 1   |
| use kit DBAK2-150  | 7B     | body O-ring FKM                            | 1   |
| use kit DBAK3-150, DBAK6-150 or DBAK7-150  | 7C     | body O-ring PTFE                           | 1   |
| use kit DBAK4-150  | 7D     | body O-ring EPDM                           | 1   |

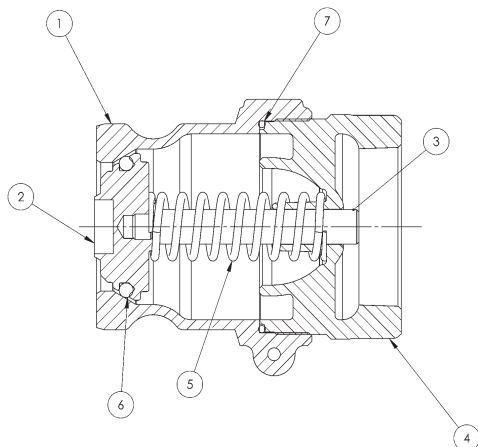


| <b>2" ALUMINIUM ADAPTER(DBA6X),<br/>ZINC ADAPTER (DBA1X) BILL OF MATERIALS<br/>DBA1X-200, DBA6X-200</b> |        |                                    |     |
|---|--------|------------------------------------|-----|
| PART NO.  | ITEM # | DESCRIPTION                        | QTY |
| 40001AL   | 1A     | aluminium adapter body (DBA6x-200) | 1   |
| 40001ZA   | 1B     | zinc adapter Body (DBA1x-200)      | 1   |
| 40002AL   | 2      | poppet                             | 1   |
| 40005BR   | 3A     | stem (for DBA1x-200)               | 1   |
| 40005SS-001   | 3B     | stem (for DBA6x-200)               | 1   |
| 40003AL   | 4      | thread end body                    | 1   |
| 40004SS   | 5      | poppet spring                      | 1   |
| use kit DBAK1-200   | 6A     | poppet O-ring Buna                 | 1   |
| use kit DBAK2-200   | 6B     | poppet O-ring FKM                  | 1   |
| use kit DBAK3-200   | 6C     | poppet O-ring PTFE/Silicone        | 1   |
| use kit DBAK4-200   | 6D     | poppet O-ring EPDM                 | 1   |
| use kit DBAK6-200   | 6E     | poppet O-ring Kalrez®              | 1   |
| use kit DBAK7-200   | 6F     | poppet O-ring PTFE/FKM             | 1   |
| use kit DBAK1-200   | 7A     | body O-ring Buna                   | 1   |
| use kit DBAK2-200   | 7B     | body O-ring FKM                    | 1   |
| use kit DBAK3-200, DBAK6-200 or DBAK7-200   | 7C     | body O-ring PTFE                   | 1   |
| use kit DBAK4-200   | 7D     | body O-ring EPDM                   | 1   |

# Replacement Parts

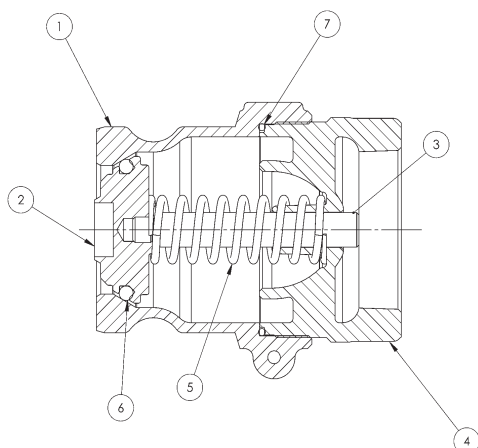
## DBA Cam and Groove Dry Disconnects (continued)

### Aluminium and Stainless Adapters



#### 1 1/2" STAINLESS ADAPTER, BILL OF MATERIALS DBA7X-150

| PART NO.                                  | ITEM # | DESCRIPTION                 | QTY |
|---|--------|-----------------------------|-----|
| 40129SS                                   | 1      | stainless adapter body      | 1   |
| 40130SS                                   | 2      | poppet                      | 1   |
| 40133SS-002                               | 3      | stem                        | 1   |
| 40131SS                                   | 4      | thread end body             | 1   |
| 40132SS                                   | 5      | poppet spring               | 1   |
| use kit DBAK1-150                         | 6A     | poppet O-ring Buna          | 1   |
| use kit DBAK2-150                         | 6B     | poppet O-ring FKM           | 1   |
| use kit DBAK3-150                         | 6C     | poppet O-ring PTFE/Silicone | 1   |
| use kit DBAK4-150                         | 6D     | poppet O-ring EPDM          | 1   |
| use kit DBAK6-150                         | 6E     | poppet O-ring Kalrez®       | 1   |
| use kit DBAK7-150                         | 6F     | poppet O-ring PTFE/FKM      | 1   |
| use kit DBAK1-150                         | 7A     | body O-ring Buna            | 1   |
| use kit DBAK2-150                         | 7B     | body O-ring FKM             | 1   |
| use kit DBAK3-150, DBAK6-150 or DBAK7-150 | 7C     | body O-ring PTFE            | 1   |
| use kit DBAK4-150                         | 7D     | body O-ring EPDM            | 1   |

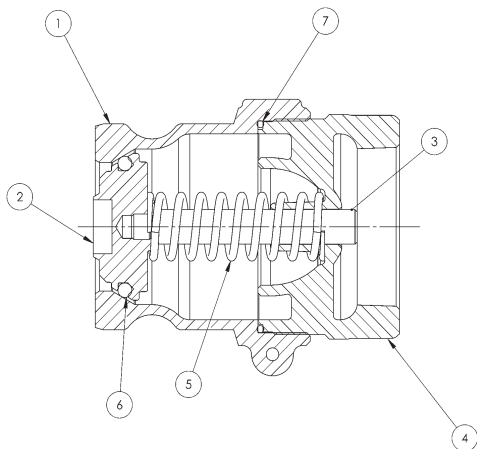


#### 2" STAINLESS ADAPTER, BILL OF MATERIALS DBA7X-200

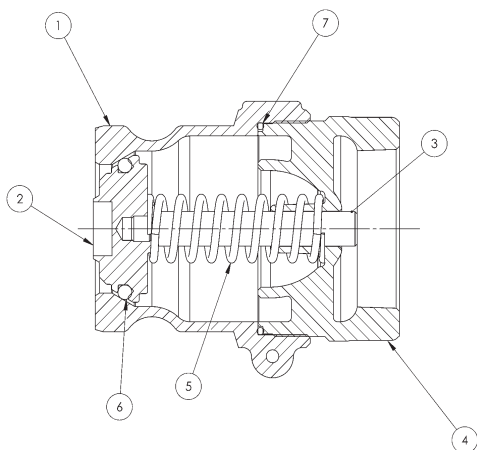
| PART NO.                                  | ITEM # | DESCRIPTION                 | QTY |
|---|--------|-----------------------------|-----|
| 40001SS                                   | 1      | stainless adapter body      | 1   |
| 40002SS                                   | 2      | poppet                      | 1   |
| 40005SS-002                               | 3      | stem                        | 1   |
| 40003SS                                   | 4      | thread end body             | 1   |
| 40004SS                                   | 5      | poppet spring               | 1   |
| use kit DBAK1-200                         | 6A     | poppet O-ring Buna®         | 1   |
| use kit DBAK2-200                         | 6B     | poppet O-ring FKM           | 1   |
| use kit DBAK3-200                         | 6C     | poppet O-ring PTFE/Silicone | 1   |
| use kit DBAK4-200                         | 6D     | poppet O-ring EPDM          | 1   |
| use kit DBAK6-200                         | 6E     | poppet O-ring Kalrez®       | 1   |
| use kit DBAK7-200                         | 6F     | poppet O-ring PTFE/FKM      | 1   |
| use kit DBAK1-200                         | 7A     | body O-ring Buna            | 1   |
| use kit DBAK2-200                         | 7B     | body O-ring FKM             | 1   |
| use kit DBAK3-200, DBAK6-200 or DBAK7-200 | 7C     | body O-ring PTFE            | 1   |
| use kit DBAK4-200                         | 7D     | body O-ring EPDM            | 1   |

**DBA Cam and Groove Dry Disconnects (continued)**

**Aluminium and Stainless Adapters**



| <b>3" ALUMINIUM ADAPTER (DBA6X), ZINC ADAPTER(DBA1X)<br/>BILL OF MATERIALS DBA1X-300, DBA6X-300</b> |        |                             |     |
|---|--------|-----------------------------|-----|
| PART NO.  | ITEM # | DESCRIPTION                 | QTY |
| 40180AL   | 1      | aluminium adapter body      | 1   |
| 40180ZA   | 1B     | zinc adapter body           | 1   |
| 40182AL   | 2      | poppet                      | 1   |
| 40183BR   | 3      | stem                        | 1   |
| 40181AL   | 4      | thread end body             | 1   |
| 40184SS   | 5      | poppet spring               | 1   |
| use kit DBAK1-300   | 6A     | poppet O-ring Buna          | 1   |
| use kit DBAK2-300   | 6B     | poppet O-ring FKM           | 1   |
| use kit DBAK3-300   | 6C     | poppet O-ring PTFE/Silicone | 1   |
| use kit DBAK4-300   | 6D     | poppet O-ring EPDM          | 1   |
| use kit DBAK6-300   | 6E     | poppet O-ring Kalrez®       | 1   |
| use kit DBAK7-300   | 6F     | poppet O-ring PTFE/FKM      | 1   |
| use kit DBAK9-300   | 6G     | poppet O-ring FKM "B"       | 1   |
| use kit DBAK1-300   | 7A     | body O-ring Buna            | 1   |
| use kit DBAK2-300   | 7B     | body O-ring FKM             | 1   |
| use kit DBAK3-300, DBAK6-300 or DBAK7-300   | 7C     | body O-ring PTFE            | 1   |
| use kit DBAK4-300   | 7D     | body O-ring EPDM            | 1   |
| use kit DBAK9-300   | 7E     | body O-ring FKM-B           | 1   |



| <b>3" STAINLESS ADAPTER BILL OF MATERIALS DBA7X-300</b> |        |                              |     |
|---|--------|------------------------------|-----|
| PART NO.  | ITEM # | DESCRIPTION                  | QTY |
| 40180SS   | 1      | stainless adapter body       | 1   |
| 40182SS   | 2      | poppet                       | 1   |
| 40183SS   | 3      | stem                         | 1   |
| 40181SS   | 4      | thread end body              | 1   |
| 40184SS   | 5      | poppet spring                | 1   |
| use kit DBAK1-300                                       | 6A     | poppet O-ring Buna           | 1   |
| use kit DBAK2-300                                       | 6B     | poppet O-ring FKM            | 1   |
| use kit DBAK3-300                                       | 6C     | poppet O-ring PTFE/Silicone® | 1   |
| use kit DBAK4-300                                       | 6D     | poppet O-ring EPDM           | 1   |
| use kit DBAK6-300                                       | 6E     | poppet O-ring Kalrez®        | 1   |
| use kit DBAK7-300                                       | 6F     | poppet O-ring PTFE/FKM       | 1   |
| use kit DBAK9-300                                       | 6G     | Poppet O-ring FKM-B          | 1   |
| use kit DBAK1-300                                       | 7A     | body O-ring Buna             | 1   |
| use kit DBAK2-300                                       | 7B     | body O-ring FKM              | 1   |
| use kit DBAK3-300                                       | 7C     | body O-ring PTFE             | 1   |
| use kit DBAK4-300                                       | 7D     | body O-ring EPDM             | 1   |
| use kit DBAK9-300                                       | 7E     | body O-ring FKM-B            | 1   |

**REPAIR KITS**

| PART NO.  | ITEM # | DESCRIPTION                          | PART NO.  | ITEM # | DESCRIPTION                         |
|-----------|--------|--------------------------------------|-----------|--------|-------------------------------------|
| DBAK1-150 | 6A, 7A | 1½" replacement Buna seals           | DBAK6-200 | 6E, 7C | 2" replacement PTFE/Kalrez® seals   |
| DBAK2-150 | 6B, 7B | 1½" replacement FKM seals®           | DBAK7-200 | 6F, 7C | 2" replacement PTFE/FKM seals       |
| DBAK3-150 | 6C, 7C | 1½" replacement PTFE/Silicone® seals | DBAK1-300 | 6A, 7A | 3" replacement Buna seals           |
| DBAK4-150 | 6D, 7D | 1½" replacement EPDM seals           | DBAK2-300 | 6B, 7B | 3" replacement FKM seals            |
| DBAK6-150 | 6E, 7C | 1½" replacement PTFE/Kalrez® seals   | DBAK3-300 | 6C, 7C | 3" replacement PTFE/Silicone® seals |
| DBAK7-150 | 6F, 7C | 1½" replacement PTFE/FKM seals®      | DBAK4-300 | 6D, 7D | 3" replacement EPDM seals           |
| DBAK1-200 | 6A, 7A | 2" replacement Buna seals            | DBAK6-300 | 6E, 7C | 3" replacement PTFE/Kalrez® seals   |
| DBAK2-200 | 6B, 7B | 2" replacement FKM seals             | DBAK7-300 | 6F, 7C | 3" replacement PTFE/FKM seals       |
| DBAK3-200 | 6C, 7C | 2" replacement PTFE/Silicone® seals  | DBAK9-300 | 6G, 7E | 3" replacement FKM-B seals          |
| DBAK4-200 | 6D, 7D | 2" replacement EPDM seals            |           |        |                                     |

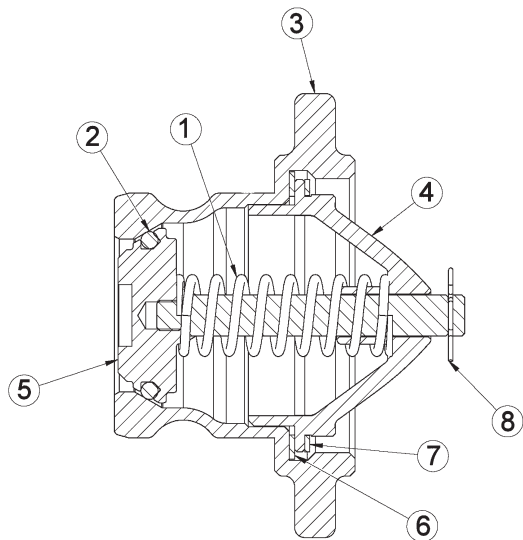




# Replacement Parts

## DBVA Cam and Groove Dry Disconnects

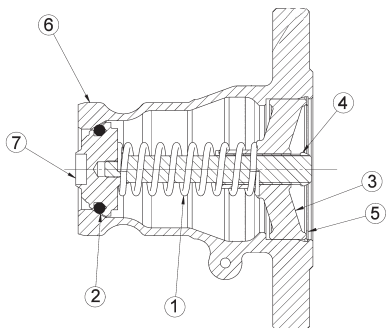
### Stainless Vapour Adapter



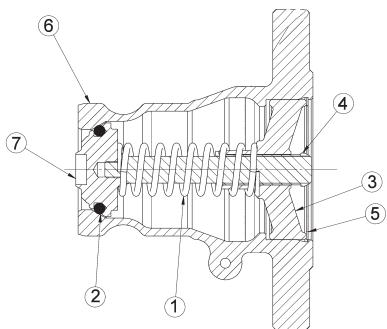
| 2" X 3" STAINLESS VAPOUR ADAPTER<br>BILL OF MATERIALS DBVA73-200 |        |                             |     |
|--|--------|-----------------------------|-----|
| PART NO.   | ITEM # | DESCRIPTION                 | QTY |
| 40004SS  | 1      | spring                      | 1   |
| 40006TS  | 2      | poppet O-ring PTFE/Silicone | 1   |
| --   | 3      | adapter body                | 1   |
| 40175SS  | 4      | bridge                      | 1   |
| 40187SSSS  | 5      | poppet assembly             | 1   |
| 40190TF  | 6      | large body gasket           | 1   |
| 40191TF  | 7      | small body gasket           | 1   |
| 40192SS  | 8      | poppet clip                 | 1   |

## DBAF Cam and Groove Dry Disconnects

### Stainless Flange Adapter



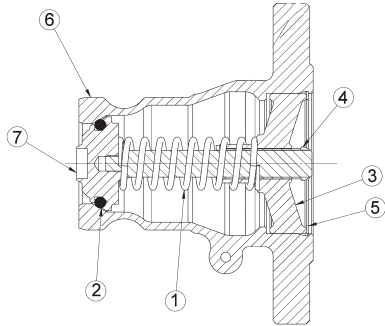
| 2" FLANGE X 1½" STAINLESS ADAPTER<br>BILL OF MATERIALS DBAF7X-1520 |        |                              |     |
|--|--------|------------------------------|-----|
| PART NO.   | ITEM # | DESCRIPTION                  | QTY |
| 40004SS  | 1      | spring                       | 1   |
| 40134BN  | 2A     | poppet O-ring Buna           | 1   |
| 40134VI  | 2B     | poppet O-ring FKM            | 1   |
| 40134TS  | 2C     | poppet O-ring PTFE/Silicone® | 1   |
| 40134EP  | 2D     | poppet O-ring EPDM           | 1   |
| 40134KR  | 2E     | poppet O-ring Kalrez®        | 1   |
| 40341SS  | 3      | bridge                       | 1   |
| 40343TF  | 4      | bearing                      | 1   |
| 40344SS  | 5      | retaining ring               | 1   |
| ---  | 6      | body                         | 1   |



| 2" FLANGE X 2" STAINLESS ADAPTER<br>BILL OF MATERIALS DBAF7X-200 |        |                              |     |
|--|--------|------------------------------|-----|
| PART NO.   | ITEM # | DESCRIPTION                  | QTY |
| 40004SS  | 1      | spring                       | 1   |
| 40006BN  | 2A     | poppet O-ring Buna           | 1   |
| 40006VI  | 2B     | poppet O-ring FKM            | 1   |
| 40006TS  | 2C     | poppet O-ring PTFE/Silicone® | 1   |
| 40006EP  | 2D     | poppet O-ring EPDM           | 1   |
| 40006KR  | 2E     | poppet O-ring Kalrez®        | 1   |
| 40341SS  | 3      | bridge                       | 1   |
| 40343TF  | 4      | bearing                      | 1   |
| 40344SS  | 5      | retaining ring               | 1   |
| ---  | 6      | body                         | 1   |
| 40342SSSS  | 7      | poppet assembly              | 1   |

## DBAF Cam and Groove Dry Disconnects (continued)

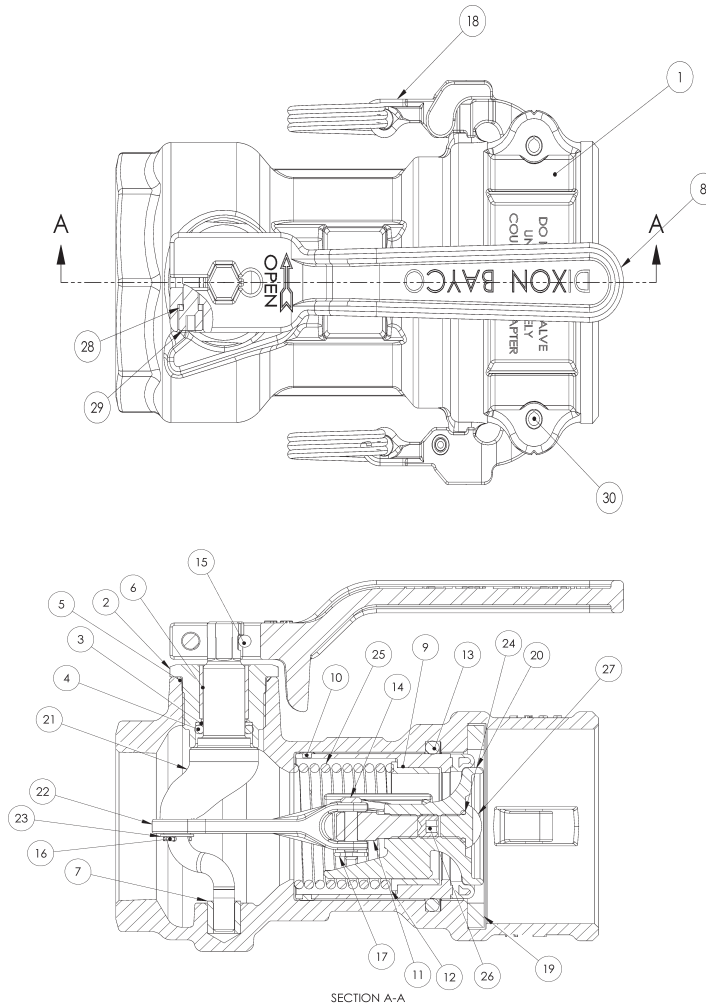
### Stainless Flange Adapter



| 3" FLANGE X 3" STAINLESS ADAPTER<br>BILL OF MATERIALS DBAF7X-300 |        |                              |     |
|--|--------|------------------------------|-----|
| PART NO.   | ITEM # | DESCRIPTION                  | QTY |
| 40184SS  | 1      | spring                       | 1   |
| 40185BN  | 2A     | poppet O-ring Buna           | 1   |
| 40185VI  | 2B     | poppet O-ring FKM            | 1   |
| 40185TS  | 2C     | poppet O-ring PTFE/Silicone® | 1   |
| 40185EP  | 2D     | poppet O-ring EPDM           | 1   |
| 40185KR  | 2E     | poppet O-ring Kalrez®        | 1   |
| 40360SS  | 3      | bridge                       | 1   |
| 40362TF  | 4      | bearing                      | 1   |
| 40361SS  | 5      | retaining ring               | 1   |
| ---  | 6      | body                         | 1   |
| 40359SSSS  | 7      | poppet assembly              | 1   |

## DBC Cam and Groove Dry Disconnects

### Aluminium and Stainless Couplers



# Replacement Parts

## DBC Cam and Groove Dry Disconnects

### 1½" Aluminium Couplers

| 1½" ALUMINIUM COUPLER<br>BILL OF MATERIALS DBC6X-150 |        |   |     | REPAIR KITS  |                              |  |
|--|--------|---|-----|--|------------------------------|--|
| PART NO.   | ITEM # | DESCRIPTION   | QTY | PART NO.   | INCL. ITEM #                 | DESCRIPTION  |
| ---  | 1      | body  | 1   |  |                              |  |
| 40074SS  | 2      | stuffing box  | 1   |  |                              |  |
| 40075TF  | 3      | back up ring  | 1   |  |                              |  |
| 40076BN  | 4A     | crank shaft O-ring Buna<br>(for DBC61-150)                        | 1   | <b>DBCx1-150RK1<br/>(Buna-N)</b>                     | 4A, 5,<br>13A, 19A,<br>24    | replacement seal kit, Buna crank shaft<br>O-ring, PTFE stuffing box O-ring,<br>Buna body O-ring, Buna cam gasket,<br>PTFE O-ring (for DBC61-150)                         |
| 40076VI  | 4B     | crank shaft O-ring FKM (for DBC62-150)                            | 1   | <b>DBCx2-150RK1<br/>(FKM)</b>                        | 4B, 5,<br>13B, 19B,<br>24    | replacement seal kit, FKM crank shaft<br>O-ring, PTFE stuffing box O-ring, FKM<br>body O-ring, FKM cam gasket, PTFE<br>O-ring (for DBC62-150)                            |
| 40076KR  | 4C     | crank shaft O-ring Kalrez®<br>(for DBC63-150)                     | 1   | <b>DBCx3-150RK1<br/>(PTFE and<br/>Kalrez®)</b>       | 4C, 5,<br>13C,<br>19C, 24    | replacement seal kit, Kalrez® crank shaft<br>O-ring, PTFE stuffing box O-ring, PTFE/<br>Silicone® body O-ring, PTFE/Silicone® cam<br>gasket, PTFE O-ring (for DBC63-150) |
| 40076EP  | 4D     | crank shaft O-ring EPDM (for<br>DBC63-150, DBC66-150 & DBC67-150) | 1   | <b>DBCx4-150RK1<br/>(EPDM)</b>                       | 4D, 5,<br>13D, 19D,<br>24    | replacement seal kit, EPDM crank shaft<br>O-ring, PTFE stuffing box O-ring, EPDM<br>body O-ring, EPDM cam gasket, PTFE,<br>O-ring (for DBC64-150)                        |
| 40077TF  | 5      | stuffing box PTFE O-ring  | 1   |  |                              |  |
| 40078FG  | 6      | large crank shaft bearing   | 1   |  |                              |  |
| 40079SS  | 7      | small crank shaft bearing   | 1   |  |                              |  |
| 40080SS  | 8      | lever (handle)  | 1   |  |                              |  |
| 40117ALBN  | 9A     | seal cylinder (for DBC61-150)                                     | 1   |  |                              |  |
| 40117ALVI  | 9B     | seal cylinder (for DBC62-150)                                     | 1   |  |                              |  |
| 40169SS  | 9C     | seal cylinder (for DBC63-150,<br>DBC66-150 & DBC67-150)           | 1   | <b>DBCx6-150RK1<br/>(Kalrez® &amp;<br/>PTFE/FKM)</b> | 4C, 5,<br>13E, 19E,<br>24    | replacement seal kit, Kalrez® crank shaft<br>O-ring, PTFE stuffing box O-ring, Kalrez®<br>body O-ring, PTFE/FKM cam gasket,<br>PTFE O-ring (for DBC66-150)               |
| 40117ALEP  | 9D     | seal cylinder (for DBC64-150)                                     | 1   |  |                              |  |
| 40082TF  | 10     | PTFE button   | 6   |  |                              |  |
| 40118SS  | 11     | yoke  | 1   | <b>DBCx7-150RK1</b>                                  | 4C, 5,<br>13F, 19E,<br>24    | replacement seal kit, Kalrez® crank<br>shaft O-ring, PTFE stuffing box O-ring,<br>PTFE/FKM body O-ring, PTFE/FKM cam<br>gasket, PTFE O-ring (for DBC67-150)              |
| 40119TF  | 12     | PTFE bushing  | 1   |  |                              |  |
| 40120BN  | 13A    | body O-ring Buna (for DBC61-150)                                  | 1   |  |                              |  |
| 40120VI  | 13B    | body O-ring FKM (for DBC62-150)                                   | 1   |  |                              |  |
| 40120TS  | 13C    | body O-ring PTFE/Silicone®-<br>(for DBC63-150)                    | 1   | <b>DBC61-150RK2</b>                                  | 9A, 10,<br>12                | replacement Buna seal cylinder,<br>PTFE buttons and PTFE bushing<br>(for DBC61-150)  |
| 40120EP  | 13D    | body O-ring EPDM (for DBC64-150)                                  | 1   |  |                              |  |
| 40120KR  | 13E    | body O-ring Kalrez®<br>(for DBC66-150)                            | 1   | <b>DBC62-150RK2</b>                                  | 9B, 10,<br>12                | replacement FKM seal cylinder,<br>PTFE buttons and PTFE bushing<br>(for DBC62-150)   |
| 40120TV  | 13F    | body O-ring PTFE/FKM (for DBC67-150)                              | 1   |  |                              |  |
| 40086SS  | 14     | link rivet  | 1   | <b>DBCx3-150RK2</b>                                  | 10, 12, 31                   | replacement PTFE nose seal,<br>PTFE buttons and PTFE bushing<br>(for DBC63-150, DBC66-150 & DBC67-150)   |
| 40087SS  | 15     | groove pin  | 1   |  |                              |  |
| 40088SS  | 16     | crank shaft cotter pin  | 1   | <b>DBC64-150RK2</b>                                  | 9D, 10,<br>12                | replacement EPDM seal cylinder,<br>PTFE buttons and PTFE bushing<br>(for DBC64-150)  |
| 40088SS  | 17     | link cotter pin   | 1   |  |                              |  |
| 40089SS  | 18     | EZ Boss-Lock™ cam arm   | 2   |  |                              |  |
| 200-G-BU   | 19A    | cam gasket Buna (for DBC61-150)                                   | 1   | <b>DBCxx-150RK4</b>                                  | 11, 14,<br>16, 17,<br>22, 23 | replacement link kit, link rivet, cotter pins,<br>link washer, link arm and yoke<br>(for all 1½" aluminium)  |
| 200-G-VI   | 19B    | cam gasket FKM (for DBC62-150)                                    | 1   |  |                              |  |
| 200-G-TES  | 19C    | cam gasket PTFE/Silicone® (for DBC63-150)                         | 1   | <b>DBCxx-150RK5</b>                                  | 2, 5, 6                      | replacement stuffing box kit, stuffing<br>box, PTFE O-ring and large crank shaft<br>bearing (for all 1½" aluminium)  |
| 200-G-EPR  | 19D    | cam gasket EPR (for DBC64-150)                                    | 1   |  |                              |  |
| 200-G-TFVI   | 19E    | cam gasket PTFE/FKM (for DBC66-150<br>& DBC67-150)                | 1   | <b>DBCxx-150RK6</b>                                  | 8, 15, 28,<br>29             | replacement lever (handle) kit, lever,<br>groove pin, lock washer and socket head<br>cap screw (for all 1½" aluminium)   |
| 40114SS  | 20     | poppet  | 1   |  |                              |  |
| 40115SS  | 21     | crank shaft   | 1   |  |                              |  |
| 40116SS  | 22     | link arm  | 1   | <b>DBCxx-150RK7</b>                                  | 16, 21, 23                   | replacement crank shaft kit, crank shaft,<br>cotter pin and washer<br>(for all 1½" aluminium)  |
| 40094SS  | 23     | link washer   | 1   |  |                              |  |
| 40122TF  | 24     | poppet screw PTFE O-ring  | 1   | <b>DBCxx-150RK8</b>                                  | 25                           | main cylinder spring   |
| <b>DBCxx-150RK8</b>                                  | 25     | cylinder spring   | 1   |  |                              |  |
| 40124SS  | 26     | set screw   | 1   |  |                              |  |
| 40125SS  | 27     | poppet screw (round head)   | 1   |  |                              |  |
| 40099SS  | 28     | lock washer   | 1   | <b>DBCxx-150RK9</b>                                  | 20, 24,<br>26, 27            | replacement poppet kit, poppet, round<br>head screw, set screw and PTFE washer<br>(for all 1½" aluminium)  |
| 40100SS  | 29     | socket head cap screw   | 1   |  |                              |  |
| 40101SS  | 30     | cam arm spring pin  | 2   |  |                              |  |
| 40171TF  | 31     | nose seal (for DBC63-150,<br>DBC66-150 & DBC67-150)               | 1   | <b>DBCL-200</b>                                      | not<br>illustrated           | optional add on padlockable lever kit,<br>handle (for all 1½")   |

## DBC Cam and Groove Dry Disconnects

### 1½” Stainless Couplers

| 1½” STAINLESS COUPLER<br>BILL OF MATERIALS DBC7X-150 |        |   |     | REPAIR KITS  |                        |  |
|--|--------|---|-----|--|------------------------|--|
| PART NO.   | ITEM # | DESCRIPTION   | QTY | PART NO.   | INCL. ITEM #           | DESCRIPTION  |
| ---  | 1      | body  | 1   | <b>DBCx1-150RK1 (Buna-N)</b>                       | 4A, 5, 13A, 19A, 24    | replacement seal kit, Buna crank shaft O-ring, PTFE stuffing box O-ring, Bunabody O-ring, Buna cam gasket, PTFE O-ring (for DBC71-150)                       |
| <b>40074SS</b>                                       | 2      | stuffing box  | 1   |  |                        |  |
| <b>40075TF</b>                                       | 3      | back up ring  | 1   |  |                        |  |
| <b>40076BN</b>                                       | 4A     | crank shaft O-ring Buna (for DBC71-150)                             | 1   |  |                        |  |
| <b>40076VI</b>                                       | 4B     | crank shaft O-ring FKM (for DBC72-150)                              | 1   | <b>DBCx2-150RK1 (FKM)</b>                          | 4B, 5, 13B, 19B, 24    | replacement seal kit, FKM crank shaft O-ring, PTFE stuffing box O-ring, FKM body O-ring, FKM cam gasket, PTFE O-ring (for DBC72-150)                         |
| <b>40076KR</b>                                       | 4C     | crank shaft O-ring Kalrez® (for DBC73-150, DBC76-150 and DBC77-150) | 1   |  |                        |  |
| <b>40076EP</b>                                       | 4D     | crank shaft O-ring EPDM (for DBC74-150)                             | 1   | <b>DBCx3-150RK1 (PTFE/Silicone &amp; Chemrez®)</b> | 4C, 5, 13C, 19C, 24    | replacement seal kit, Kalrez® crank shaft O-ring, PTFE stuffing box O-ring, PTFE/Silicone body O-ring, PTFE/Silicone cam gasket, PTFE O-ring (for DBC73-150) |
| <b>40077TF</b>                                       | 5      | stuffing box PTFE O-ring  | 1   |  |                        |  |
| <b>40078FG</b>                                       | 6      | large crank shaft bearing   | 1   |  |                        |  |
| <b>40079SS</b>                                       | 7      | small crank shaft bearing   | 1   | <b>DBCx4-150RK1 (EPDM)</b>                         | 4D, 5, 13D, 19D, 24    | replacement seal kit, EPDM crank shaft O-ring, PTFE stuffing box O-ring, EPDM body O-ring, EPDM cam gasket, PTFE O-ring (for DBC74-150)                      |
| <b>40080SS</b>                                       | 8      | lever (handle)  | 1   |  |                        |  |
| <b>40117SSBN</b>                                     | 9A     | seal cylinder (for DBC71-150)                                       | 1   |  |                        |  |
| <b>40117SSVI</b>                                     | 9B     | seal cylinder (for DBC72-150)                                       | 1   |  |                        |  |
| <b>40169SS</b>                                       | 9C     | seal cylinder (for DBC73-150, DBC76-150 and DBC77-150)              | 1   | <b>DBCx6-150RK1 (Kalrez® &amp; PTFE/FKM)</b>       | 4C, 5, 13E, 19E, 24    | replacement seal kit, Kalrez® crank shaft O-ring, PTFE stuffing box O-ring, Kalrez® body O-ring, PTFE/FKM cam gasket, PTFE O-ring (for DBC76-150)            |
| <b>40117SSEP</b>                                     | 9D     | seal cylinder (for DBC74-150)                                       | 1   |  |                        |  |
| <b>40082TF</b>                                       | 10     | PTFE button   | 6   | <b>DBCx7-150RK1</b>                                | 4C, 5, 13F, 19E, 24    | replacement seal kit, Kalrez® crank shaft O-ring, PTFE stuffing box O-ring, PTFE/FKM body O-ring, PTFE/FKM cam gasket, PTFE O-ring (for DBC77-150)           |
| <b>40118SS</b>                                       | 11     | yoke  | 1   |  |                        |  |
| <b>40119TF</b>                                       | 12     | PTFE bushing  | 1   |  |                        |  |
| <b>40120BN</b>                                       | 13A    | body O-ring Buna (for DBC71-150)                                    | 1   |  |                        |  |
| <b>40120VI</b>                                       | 13B    | body O-ring FKM (for DBC72-150)                                     | 1   | <b>DBC71-150RK2</b>                                | 9A, 10, 12             | replacement Buna seal cylinder, PTFE buttons & PTFE bushing (for DBC71-150)  |
| <b>40120TS</b>                                       | 13C    | body O-ring PTFE/Silicone® (for DBC73-150)                          | 1   |  |                        |  |
| <b>40120EP</b>                                       | 13D    | body O-ring EPDM (for DBC74-150)                                    | 1   | <b>DBC72-150RK2</b>                                | 9B, 10, 12             | replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBC72-150)   |
| <b>40120KR</b>                                       | 13E    | body O-ring Kalrez® (for DBC76-150)                                 | 1   |  |                        |  |
| <b>40120TV</b>                                       | 13F    | body O-ring PTFE/FKM (for DBC77-150)                                | 1   | <b>DBCx3-150RK2</b>                                | 10, 12, 31             | replacement PTFE nose seal, PTFE buttons & PTFE bushing (for DBC73-150, DBC76-150 & DBC77-150)   |
| <b>40086SS</b>                                       | 14     | link rivet  | 1   |  |                        |  |
| <b>40087SS</b>                                       | 15     | groove pin  | 1   |  |                        |  |
| <b>40088SS</b>                                       | 16     | crank shaft cotter pin  | 1   | <b>DBC74-150RK2</b>                                | 9D, 10, 12             | replacement EPDM seal cylinder, PTFE buttons & PTFE bushing (for DBC74-150)  |
| <b>40088SS</b>                                       | 17     | link cotter pin   | 1   |  |                        |  |
| <b>40089SS</b>                                       | 18     | EZ Boss-Lock™ cam arm   | 2   | <b>DBCxx-150RK4</b>                                | 11, 14, 16, 17, 22, 23 | replacement link kit, link rivet, cotter pins, link washer, link arm & yoke (for all 1½" stainless steel)  |
| <b>200-G-BU</b>                                      | 19A    | cam gasket Buna (for DBC71-150)                                     | 1   |  |                        |  |
| <b>200-G-VI</b>                                      | 19B    | cam gasket FKM (for DBC72-150)                                      | 1   |  |                        |  |
| <b>200-G-TES</b>                                     | 19C    | cam gasket PTFE/Silicone®   |     | <b>DBCxx-150RK5</b>                                | 2, 5, 6                | replacement stuffing box kit, stuffing box, PTFE O-ring & large crank shaft bearing (for all 1½" stainless steel)  |
| <b>(for DBC73-150)</b>                               | 1      |   |     |  |                        |  |
| <b>200-G-EPR</b>                                     | 19D    | cam gasket EPDM (for DBC74-150)                                     | 1   | <b>DBCxx-150RK6</b>                                | 8, 15, 28, 29          | replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 1½" stainless steel)   |
| <b>200-G-TFVI</b>                                    | 19E    | cam gasket PTFE/FKM   |     |  |                        |  |
| <b>(for DBC76-150 and DBC77-150)</b>                 | 1      |   |     | <b>DBCxx-150RK7</b>                                | 16, 21, 23             | replacement crank shaft kit, crank shaft, cotter pin & washer (for all 1½" stainless steel)  |
| <b>40114SS</b>                                       | 20     | poppet  | 1   |  |                        |  |
| <b>40115SS</b>                                       | 21     | crank shaft   | 1   |  |                        |  |
| <b>40116SS</b>                                       | 22     | link arm  | 1   | <b>DBCxx-150RK8</b>                                | 25                     | main cylinder spring   |
| <b>40094SS</b>                                       | 23     | link washer   | 1   |  |                        |  |
| <b>40122TF</b>                                       | 24     | poppet screw PTFE O-ring  | 1   | <b>DBCxx-150RK9</b>                                | 20, 24, 26, 27         | replacement poppet kit, poppet, round head screw, set screw & PTFE O-ring (for all 1½" stainless steel)  |
| <b>DBCxx-150RK8</b>                                  | 25     | cylinder spring   | 1   |  |                        |  |
| <b>40124SS</b>                                       | 26     | set screw   | 1   |  |                        |  |
| <b>40125SS</b>                                       | 27     | poppet screw (round head)   | 1   | <b>DBCL-200</b>                                    | not illustrated        | Optional add on padlockable lever kit (handle) (for all 1½")   |
| <b>40099SS</b>                                       | 28     | lock washer   | 1   |  |                        |  |
| <b>40100SS</b>                                       | 29     | socket head cap screw   | 1   |  |                        |  |
| <b>40101SS</b>                                       | 30     | cam arm spring pin  | 2   |  |                        |  |
| <b>40171TF</b>                                       | 31     | nose seal (for DBC73-150, DBC76-150 and DBC77-150)                  | 1   |  |                        |  |



# Replacement Parts

## DBC Cam and Groove Dry Disconnects

### 2" Aluminium Couplers

| 2" ALUMINIUM COUPLER<br>BILL OF MATERIALS DBC6X-200 |        |   |     |
|---|--------|---|-----|
| PART NO.  | ITEM # | DESCRIPTION   | QTY |
| ---   | 1      | body  | 1   |
| 40074SS   | 2      | stuffing box  | 1   |
| 40075TF   | 3      | back up ring  | 1   |
| 40076BN   | 4A     | crank shaft O-ring Buna (for DBC61-200)                                 | 1   |
| 40076VI   | 4B     | crank shaft O-ring FKM (for DBC62-200)                                  | 1   |
| 40076KR   | 4C     | crank shaft O-ring Kalrez®<br>(for DBC63-200 ,DBC66-200<br>& DBC67-200) | 1   |
| 40076EP   | 4D     | crank shaft O-ring EPDM<br>(for DBC64-200)                              | 1   |
| 40077TF   | 5      | stuffing box PTFE O-ring  | 1   |
| 40078FG   | 6      | large crank shaft bearing   | 1   |
| 40079SS   | 7      | small crank shaft bearing   | 1   |
| 40080SS   | 8      | lever (handle)  | 1   |
| 40081ALBN   | 9A     | seal cylinder (for DBC61-200)   | 1   |
| 40081ALVI   | 9B     | seal cylinder (for DBC62-200)   | 1   |
| 40168SS   | 9C     | seal cylinder (for DBC63-200,<br>DBC66-200 & DBC67-200)                 | 1   |
| 40081ALEP   | 9D     | seal cylinder (for DBC64-200)   | 1   |
| 40082TF   | 10     | PTFE button   | 6   |
| 40083SS   | 11     | yoke  | 1   |
| 40084TF   | 12     | PTFE bushing  | 1   |
| 40085BN   | 13A    | body O-ring Buna (for DBC61-200)  | 1   |
| 40085VI   | 13B    | body O-ring FKM (for DBC62-200)   | 1   |
| 40085TS   | 13C    | body O-ring PTFE/Silicone<br>(for DBC63-200)                            | 1   |
| 40085EP   | 13D    | body O-ring EPDM (for DBC64-200)  | 1   |
| 40085KR   | 13E    | body O-ring Kalrez®(for DBC66-200)                                      | 1   |
| 40085TV   | 13F    | body O-ring PTFE/FKM (for DBC67-200)                                    | 1   |
| 40086SS   | 14     | link rivet  | 1   |
| 40087SS   | 15     | groove pin  | 1   |
| 40088SS   | 16     | crank shaft cotter pin  | 1   |
| 40088SS   | 17     | link cotter pin   | 1   |
| 40089SS   | 18     | EZ Boss-Lock™ cam arm   | 2   |
| 250-G-BU  | 19A    | cam gasket Buna (for DBC61-200)   | 1   |
| 250-G-VI  | 19B    | cam gasket FKM (for DBC62-200)  | 1   |
| 250-G-TES   | 19C    | cam gasket PTFE/Silicone (for DBC63-200)                                | 1   |
| 250-G-EPR   | 19D    | cam gasket EPDM (for DBC64-200)   | 1   |
| 250-G-TFVI  | 19E    | cam gasket PTFE/FKM (for DBC66-200<br>& DBC67-200)                      | 1   |
| 40091SS   | 20     | poppet  | 1   |
| 40092SS   | 21     | crank shaft   | 1   |
| 40093SS   | 22     | link arm  | 1   |
| 40094SS   | 23     | link washer   | 1   |
| 40095TF   | 24     | poppet screw PTFE O-ring  | 1   |
| DBCxx-200RK8  | 25     | cylinder spring   | 1   |
| 40097SS   | 26     | set screw   | 1   |
| 40098SS   | 27     | poppet screw (round head)   | 1   |
| 40099SS   | 28     | lock washer   | 1   |
| 40100SS   | 29     | socket head cap screw   | 1   |
| 40101SS   | 30     | cam arm spring pin  | 2   |
| 40170TF   | 31     | nose seal (for DBC63-200, DBC66-200<br>& DBC67-200)                     | 1   |

| REPAIR KITS                                    |                           |   |
|--|---------------------------|---|
| PART NO.                                       | INCL. ITEM #              | DESCRIPTION   |
| DBCx1-200RK1<br>(Buna-N)                       | 4A, 5,<br>13A, 19A,<br>24 | replacement seal kit, Buna crank shaft<br>O-ring,PTFE stuffing box O-ring,<br>Buna body O-ring, Buna cam gasket,<br>PTFE O-ring (for DBC61-200)                     |
| DBCx2-200RK1<br>(FKM)                          | 4B, 5,<br>13B, 19B,<br>24 | replacement seal kit, FKM crank shaft<br>O-ring,PTFE stuffing box O-ring,<br>FKM body O-ring, FKM cam gasket,<br>PTFE O-ring (for DBC62-200)                        |
| DBCx3-200RK1<br>(PTFE/Silicone<br>and Kalrez®) | 4C, 5,<br>13C,<br>19C, 24 | replacement seal kit, Kalrez® crank shaft<br>O-ring,PTFEstuffing box O-ring, PTFE/<br>Silicone body O-ring, PTFE/Silicone cam<br>gasket,PTFE O-ring (for DBC63-200) |
| DBCx4-200RK1<br>(EPDM)                         | 4D, 5,<br>13D, 19D,<br>24 | replacement seal kit, EPDM crank shaft<br>O-ring,PTFE stuffing box O-ring,<br>EPDM body O-ring, EPR cam gasket,<br>PTFE O-ring (for DBC64-200)                      |
| DBCx6-200RK1<br>(Kalrez® & PTFE/<br>FKM)       | 4C, 5,<br>13E, 19E,<br>24 | replacement seal kit, Kalrez® crank shaft<br>O-ring,PTFE stuffing box O-ring, Kalrez®<br>body O-ring, PTFE/FKM cam gasket,<br>PTFE O-ring (for DBC66-200)           |
| DBCx7-200RK1<br>(Kalrez® &<br>PTFE/FKM)        | 4C, 5,<br>13F, 19E,<br>24 | replacement seal kit, Kalrez® crank shaft<br>O-ring,PTFE stuffing box O-ring, Kalrez®<br>body O-ring, PTFE/FKM cam gasket,<br>PTFE O-ring (for DBC67-200)           |
| DBC61-200RK2                                   | 9A, 10,<br>12             | replacement Buna seal cylinder,<br>PTFE buttons and PTFE bushing<br>(for DBC61-200)   |
| DBC62-200RK2                                   | 9B, 10,<br>12             | Replacement FKM seal cylinder,<br>PTFE buttons and PTFE bushing<br>(for DBC62-200)  |
| DBCx3-200RK2                                   | 10, 12, 31                | replacement PTFE nose seal,<br>PTFE buttons and PTFE bushing (for<br>DBC63-200, DBC66-200 & DBC67-200)  |
| DBC64-200RK2                                   | 9D, 10,<br>12             | replacement EPDM seal cylinder,<br>PTFE buttons and PTFE bushing<br>(for DBC64-200)   |
| DBCxx-200RK4                                   | 11, 14,<br>16, 22,<br>23  | replacement link kit, link rivet, cotter pins,<br>link washer, link arm and yoke<br>(for all 2" aluminium)  |
| DBCxx-200RK5                                   | 2, 5, 6                   | replacement stuffing box kit, stuffing box,<br>PTFE O-ring & large crank shaft bearing<br>(for all 2" aluminium)  |
| DBCxx-200RK6                                   | 8, 15, 28,<br>29          | replacement lever (handle) kit, lever,<br>groove pin, lock washer & socket head<br>cap screw (for all 2" aluminium)   |
| DBCxx-200RK7                                   | 16, 21, 23                | replacement crank shaft kit, crank shaft,<br>cotter pin & washer (for all 2" aluminium)   |
| DBCxx-200RK8                                   | 25                        | main cylinder spring  |
| DBCxx-200RK9                                   | 20, 24,<br>26, 27         | replacement poppet kit, poppet, round<br>head screw, set screw and PTFE O-Ring<br>(for all 2" aluminium)  |
| DBCL-200                                       | not<br>illustrated        | optional add on padlockable lever kit,<br>handle (for all 2")   |



## DBC Cam and Groove Dry Disconnects

### 2" Stainless Couplers

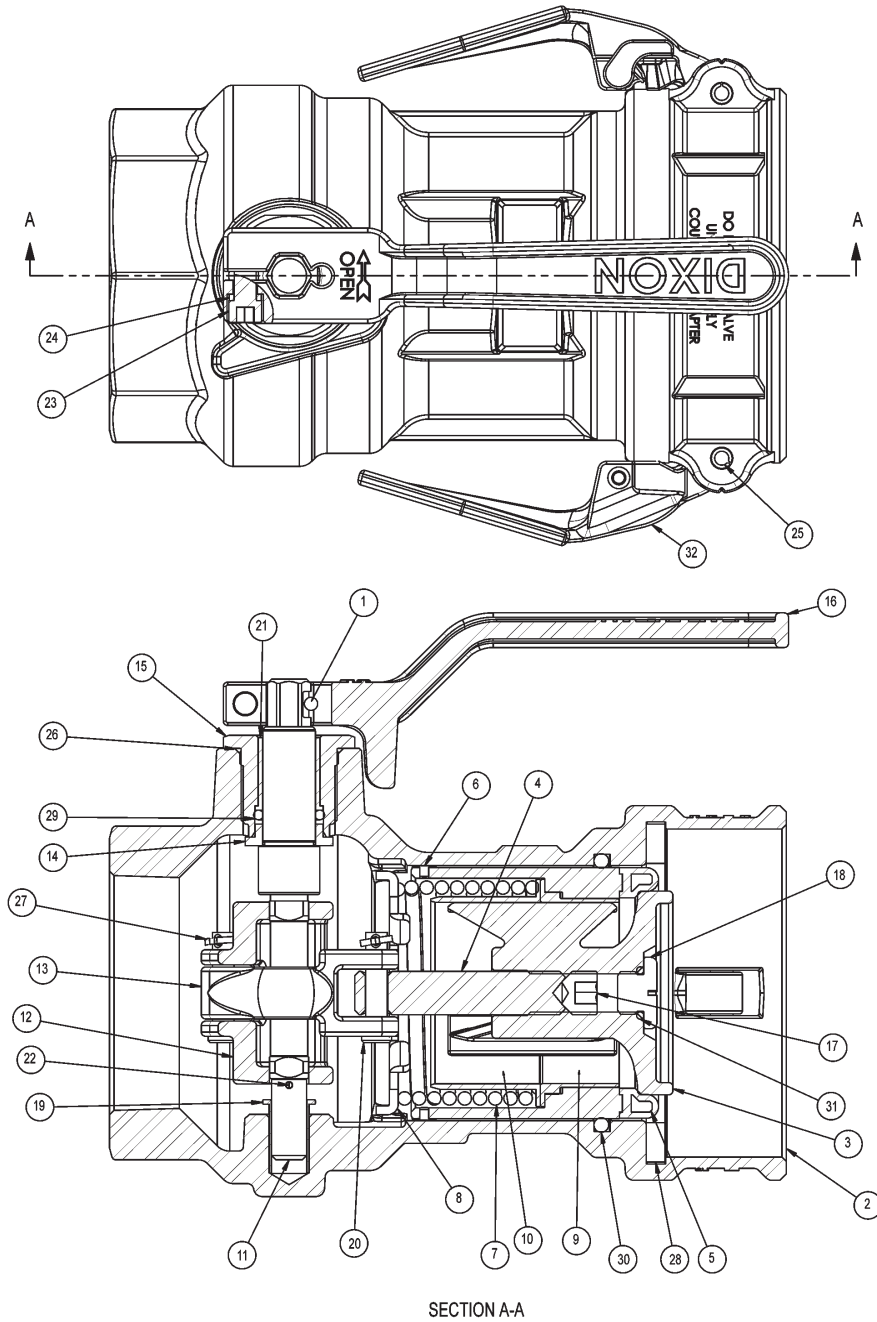
| 2" STAINLESS COUPLER<br>BILL OF MATERIALS DBC7X-200 |        |  |     | REPAIR KITS                                    |                              |  |
|---|--------|--|-----|--|------------------------------|--|
| PART NO.  | ITEM # | DESCRIPTION  | QTY | PART NO.                                       | INCL. ITEM #                 | DESCRIPTION  |
| ---   | 1      | body   | 1   | DBCx1-200RK1<br>(Buna-N)                       | 4A, 5,<br>13A, 19A,<br>24    | replacement seal kit, Buna crank shaft O-ring, PTFE stuffing box O-ring, Buna body O-ring, Buna cam gasket, PTFE O-ring (for DBC71-200)                      |
| 40074SS   | 2      | stuffing box   | 1   |  |                              |  |
| 40075TF   | 3      | back up ring   | 1   | DBCx2-200RK1<br>(FKM)                          | 4B, 5,<br>13B, 19B,<br>24    | replacement seal kit, FKM crank shaft O-ring, PTFE stuffing box O-ring, FKM body O-ring, FKM cam gasket, PTFE O-ring (for DBC72-200)                         |
| 40076BN   | 4A     | crank shaft O-ring Buna (for DBC71-200)                          | 1   |  |                              |  |
| 40076VI   | 4B     | crank shaft O-ring FKM (for DBC72-200)                           | 1   | DBCx3-200RK1<br>(PTFE/Silicone<br>and Kalrez®) | 4C,<br>5,13C,<br>19C, 24     | replacement seal kit, Kalrez® crank shaft O-ring, PTFE stuffing box O-ring, PTFE/Silicone body O-ring, PTFE/Silicone cam gasket, PTFE O-ring (for DBC73-200) |
| 40076KR   | 4C     | crank shaft O-ring Kalrez® (for DBC73-200, DBC77-200, DBC76-200) | 1   |  |                              |  |
| 40076EP   | 4D     | crank shaft O-ring EPDM (for DBC74-200)                          | 1   | DBCx4-200RK1<br>(EPDM)                         | 4D, 5,<br>13D, 19D,<br>24    | replacement seal kit, EPDM crank shaft O-ring, PTFE stuffing box O-ring, EPDM body O-ring, EPR cam gasket, PTFE O-ring (for DBC74-200)                       |
| 40077TF   | 5      | stuffing box PTFE O-ring   | 1   |  |                              |  |
| 40078FG   | 6      | large crank shaft bearing  | 1   | DBCx6-200RK1<br>(Kalrez® &<br>PTFE/FKM)        | 4C, 5,<br>13E, 19E,<br>24    | replacement seal kit, Kalrez® crank shaft O-ring, PTFE stuffing box O-ring, Kalrez® body O-ring, PTFE/FKM cam gasket, PTFE O-ring (for DBC76-200)            |
| 40079SS   | 7      | small crank shaft bearing  | 1   |  |                              |  |
| 40080SS   | 8      | lever (handle)   | 1   | DBCx7-200RK1<br>(PTFE/FKM and<br>Kalrez®)      | 4C, 5,<br>13F, 19E,<br>24    | replacement seal kit, Kalrez® crank shaft O-ring, PTFE stuffing box O-ring, Kalrez® body O-ring, PTFE/FKM cam gasket, PTFE O-ring (for DBC77-200)            |
| 40081SSBN   | 9A     | seal cylinder (for DBC71-200)                                    | 1   |  |                              |  |
| 40081SSVI   | 9B     | seal cylinder (for DBC72-200)                                    | 1   | DBC71-200RK2                                   | 9A, 10,<br>12                | replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBC71-200)  |
| 40168SS   | 9C     | seal cylinder (for DBC73-200, DBC76-200, DBC77-200)              | 1   |  |                              |  |
| 40081SSEP   | 9D     | seal cylinder (for DBC74-200)                                    | 6   | DBC72-200RK2                                   | 9B, 10,<br>12                | replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBC72-200)   |
| 40082TF   | 10     | PTFE button  | 1   |  |                              |  |
| 40083SS   | 11     | yoke   | 1   | DBCx3-200RK2                                   | 10, 12, 31                   | replacement PTFE nose seal, PTFE buttons and PTFE bushing (for DBC73-200, DBC76-200 & DBC77-200)   |
| 40084TF   | 12     | PTFE bushing   | 1   |  |                              |  |
| 40085BN   | 13A    | body O-ring Buna (for DBC71-200)                                 | 1   | DBC74-200RK2                                   | 9D, 10,<br>12                | replacement EPDM seal cylinder, PTFE buttons & PTFE bushing (for DBC74-200)  |
| 40085VI   | 13B    | body O-ring FKM (for DBC72-200)                                  | 1   |  |                              |  |
| 40085TS   | 13C    | body O-ring PTFE/Silicone (for DBC73-200)                        | 1   | DBCxx-200RK4                                   | 11, 14,<br>16, 17,<br>22, 23 | replacement link kit, link rivet, cotter pins, link washer, link arm, yoke (for all 2" SS)   |
| 40085EP   | 13D    | body O-ring EPDM (for DBC74-200)                                 | 1   |  |                              |  |
| 40085KR   | 13E    | body O-ring Kalrez® (for DBC76-200)                              | 1   | DBCxx-200RK5                                   | 2, 5, 6                      | replacement stuffing box kit, stuffing box, PTFE O-ring and large crank shaft bearing (for all 2" SS)  |
| 40085TV   | 13F    | body O-ring PTFE/FKM (DBC77-200)                                 | 1   |  |                              |  |
| 40086SS   | 14     | link rivet   | 1   | DBCxx-200RK6                                   | 8, 15, 28,<br>29             | replacement lever (handle) kit, lever, groove pin, lock washer and socket head cap screw (for all 2" SS)   |
| 40087SS   | 15     | groove pin   | 1   |  |                              |  |
| 40088SS   | 16     | crank shaft cotter pin   | 1   | DBCxx-200RK7                                   | 16, 21, 23                   | replacement crank shaft kit, crank shaft, cotter pin and washer (for all 2" SS)  |
| 40088SS   | 17     | link cotter pin  | 2   |  |                              |  |
| 40089SS   | 18     | EZ Boss-Lock™ cam arm  | 1   | DBCxx-200RK8                                   | 25                           | main cylinder spring   |
| 250-G-BU  | 19A    | cam gasket Buna (for DBC71-200)                                  | 1   |  |                              |  |
| 250-G-VI  | 19B    | cam gasket FKM (for DBC72-200)                                   | 1   | DBCxx-200RK9                                   | 20, 24,<br>26, 27            | replacement poppet kit, poppet, round head screw, set screw and PTFE O-ring (for all 2" SS)  |
| 250-G-TES   | 19C    | cam gasket PTFE/Silicone (for DBC73-200)                         | 1   |  |                              |  |
| 250-G-EPR   | 19D    | cam gasket EPR (for DBC74-200)                                   | 1   | DBCL-200                                       | not illustrated              | optional add on padlockable lever kit (handle) (for all 2")  |
| 250-G-TEV   | 19E    | cam gasket PTFE/FKM (for DBC76-200, DBC77-200)                   | 1   |  |                              |  |
| 40091SS   | 20     | poppet   | 1   |  |                              |  |
| 40092SS   | 21     | crank shaft  | 1   |  |                              |  |
| 40093SS   | 22     | link arm   | 1   |  |                              |  |
| 40094SS   | 23     | link washer  | 1   |  |                              |  |
| 40095TF   | 24     | poppet screw PTFE O-ring   | 1   |  |                              |  |
| 40096SS   | 25     | cylinder spring  | 1   |  |                              |  |
| 40097SS   | 26     | set screw  | 1   |  |                              |  |
| 40098SS   | 27     | poppet screw (round head)  | 1   |  |                              |  |
| 40099SS   | 28     | lock washer  | 1   |  |                              |  |
| 40100SS   | 29     | socket head cap screw  | 1   |  |                              |  |
| 40101SS   | 30     | cam arm spring pin   | 2   |  |                              |  |
| 40170TF   | 31     | nose seal (for DBC73-200, DBC76-200 and DBC77-200)               | 1   |  |                              |  |





## DBC Cam and Groove Dry Disconnects

### 3" Aluminium Couplers



## DBC Cam and Groove Dry Disconnects

### 3" Aluminium Couplers

| 3" ALUMINIUM COUPLER<br>BILL OF MATERIALS DBC6X-300 |        |   |     | REPAIR KITS                               |                             |  |
|---|--------|---|-----|---|-----------------------------|--|
| PART NO.  | ITEM # | DESCRIPTION   | QTY | PART NO.                                  | INCL. ITEM #                | DESCRIPTION  |
| 40087SS   | 1      | groove pin  | 1   | DBCx1-300RK1<br>(Buna-N)                  | 26, 28A,<br>29A, 30A,<br>31 | replacement seal kit, Buna stuffing box O-ring, PTFE stuffing box to body O-ring, Buna body O-ring, Buna cam gasket, PTFE Poppet screw O-ring (for DBC61-300)                      |
| ---   | 2      | body  | 1   |   |                             |  |
| 40195SS   | 3      | poppet  | 1   |   |                             |  |
| 40196SS   | 4      | stem  | 1   | DBCx2-300RK1<br>(FKM)                     | 26, 28B,<br>29B, 30B,<br>31 | replacement seal kit, FKM stuffing box O-ring, PTFE stuffing box to body O-ring, FKM body O-ring, FKM cam gasket, PTFE Poppet screw O-ring (for DBC62-300)                         |
| 40197ALBN   | 5A     | seal cylinder (for DBC61-300)                         | 1   |   |                             |  |
| 40197ALVI   | 5B     | seal cylinder (for DBC62-300)                         | 1   |   |                             |  |
| 40304SS   | 5C     | seal cylinder (for DBC63-300, DBC66-300 & DBC67-300)  | 1   | DBCx3-300RK1<br>(PTFE/Silicone & Kalrez®) | 26, 28C,<br>29C, 30C,<br>31 | replacement seal kit, Kalrez® stuffing box O-ring, PTFE stuffing box to body O-ring, PTFE/Silicone body O-ring, PTFE/Silicone cam gasket, PTFE Poppet screw O-ring (for DBC63-300) |
| 40197SSEP   | 5D     | seal cylinder (for DBC64-300)                         | 1   |   |                             |  |
| 40197SSVB   | 5E     | seal cylinder (for DBC69-300)                         | 1   |   |                             |  |
| 40198TF   | 6      | PTFE button   | 8   | DBCx4-300RK1<br>(EPDM)                    | 26, 28D<br>29D, 30D,<br>31  | replacement seal kit, EPDM stuffing box O-ring, PTFE stuffing box to body O-ring, EPDM body O-ring, EPDM cam gasket, PTFE Poppet screw O-ring (for DBC64-300)                      |
| DBCxx-300RK8  | 7      | cylinder spring                                       | 1   |   |                             |  |
| 40200AL   | 8      | poppet spring seat                                    | 1   |   |                             |  |
| 40201TF   | 9      | PTFE bushing  | 1   | DBCx6-300RK1<br>(Kalrez® and PTFE/FKM)    | 26, 28E<br>29C, 30E,<br>31  | replacement seal kit, Kalrez® stuffing box O-ring, PTFE stuffing box to body O-ring, Kalrez® body O-ring, PTFE/FKM cam gasket, PTFE poppet screw O-ring (for DBC66-300)            |
| 40202SS   | 10     | poppet spring guide                                   | 1   |   |                             |  |
| 40203SS   | 11     | shaft   | 1   |   |                             |  |
| 40204SS   | 12     | yoke  | 1   | DBCx7-300RK1<br>(PTFE/FKM and Kalrez®)    | 26, 28E<br>29C, 30F,<br>31  | replacement seal kit, Kalrez® stuffing box O-ring, PTFE stuffing box to body O-ring, PTFE/FKM body O-ring, PTFE/FKM cam gasket, PTFE Poppet screw O-ring (for DBC67-300)           |
| 40205SS   | 13     | link  | 1   |   |                             |  |
| 40206SS   | 14     | shaft retainer  | 1   |   |                             |  |
| 40207SS   | 15     | stuffing box  | 1   | DBCx9-300RK1<br>(FKM-B)                   | 26, 28F<br>29E, 30G,<br>31  | replacement seal kit, FKM-B stuffing box O-ring, PTFE stuffing box to body O-ring, FKM-B body O-ring, FKM-B cam gasket, PTFE Poppet screw O-ring (for DBC69-300)                   |
| 40208SS   | 16     | lever (handle)  | 1   |   |                             |  |
| 40209SS   | 17     | set screw   | 1   |   |                             |  |
| 40210SS   | 18     | poppet screw  | 1   | DBC61-300RK2                              | 5A, 6, 9                    | replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBC61-300)  |
| 40211TF   | 19     | PTFE bearing  | 1   |   |                             |  |
| 40212SS   | 20     | clevis pin  | 2   |   |                             |  |
| 40213FG   | 21     | bearing   | 1   | DBC62-300RK2                              | 5B, 6, 9                    | replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBC62-300)   |
| 40214SS   | 22     | cotter pin  | 1   |   |                             |  |
| 40216SS   | 23     | lever (handle) screw                                  | 1   |   |                             |  |
| 40217SS   | 24     | lever (handle) lock washer                            | 1   | DBCx3-300RK2                              | 6, 9, 33                    | replacement PTFE nose seal, PTFE buttons and PTFE bushing (for DBC63-300, DBC66-300 & DBC67-300)   |
| 40218SS   | 25     | cam arm pin   | 2   |   |                             |  |
| 40219TF   | 26     | PTFE O-ring   | 1   |   |                             |  |
| 40221SS   | 27     | cotter pin  | 2   | DBC64-300RK2                              | 5D, 6, 9                    | replacement EPDM seal cylinder, PTFE buttons and PTFE bushing (for DBC64-300)  |
| DBCx1-300RK3  | 28A    | Buna coupler gasket (for DBC61-300)                   | 1   |   |                             |  |
| DBCx2-300RK3  | 28B    | FKM coupler gasket (for DBC62-300)                    | 1   |   |                             |  |
| DBCx3-300RK3  | 28C    | PTFE/Silicone coupler gasket (for DBC63-300)          | 1   | DBC69-300RK2                              | 5E, 6, 9                    | replacement FKM-B seal cylinder, PTFE buttons and PTFE bushing (for DBC69-300)   |
| DBCx4-300RK3  | 28D    | EPDM coupler gasket (for DBC64-300)                   | 1   |   |                             |  |
| 40222TV   | 28E    | PTFE/FKM coupler gasket (for DBC66-300 & DBC67-300)   | 1   |   |                             |  |
| DBCx9-300RK3  | 28F    | FKM-B coupler gasket (for DBC69-300)                  | 1   | DBCx1-300RK3                              | 28A                         | replacement Buna coupler gasket  |
| 40223BN   | 29A    | Buna O-ring (for DBC61-300)                           | 1   |   |                             |  |
| 40223VI   | 29B    | FKM O-ring (for DBC62-300)                            | 1   |   |                             |  |
| 40223KR   | 29C    | Kalrez® O-ring (for DBC63-300, DBC66-300 & DBC67-300) | 1   | DBCx2-300RK3                              | 28B                         | replacement FKM coupler gasket   |
| 40223EP   | 29D    | EPDM O-ring (for DBC64-300)                           | 1   |   |                             |  |
| 40223VB   | 29E    | FKM-B O-ring (for DBC69-300)                          | 1   |   |                             |  |
| 40224BN   | 30A    | Buna O-ring (for DBC61-300)                           | 1   | DBCx3-300RK3                              | 28C                         | replacement PTFE/Silicone coupler gasket   |
| 40224VI   | 30B    | FKM O-ring (for DBC62-300)                            | 1   |   |                             |  |
| 40224TS   | 30C    | PTFE/Silicone O-Ring (for DBC63-300)                  | 1   |   |                             |  |
| 40224EP   | 30D    | EPDM O-ring (for DBC64-300)                           | 1   | DBCx4-300RK3                              | 28D                         | replacement EPDM coupler gasket  |
| 40224KR   | 30E    | Kalrez® O-ring (for DBC66-300)                        | 1   |   |                             |  |
| 40224TV   | 30F    | PTFE/FKM O-ring (for DBC67-300)                       | 1   |   |                             |  |
| 40224VB   | 30G    | FKM-B O-ring (for DBC69-300)                          | 1   | DBCx9-300RK3                              | 28F                         | replacement FKM-B coupler gasket   |
| 40235TF   | 31     | PTFE O-ring   | 1   |   |                             |  |
| 40285SSSS   | 32     | locking paddle arm                                    | 2   |   |                             |  |
| 40305TF   | 33     | nose seal (for DBC63-300, DBC66-300 & DBC67-300)      | 1   | DBCxx-300RK4                              | 4, 12, 13,<br>20, 22,<br>27 | replacement link kit, clevis pin, cotter pin, stem, link and yoke (for all 3" aluminium)   |
|   |        |   |     |   |                             |  |
|   |        |   |     |   |                             |  |
|   |        |   |     | DBCxx-300RK5                              | 15, 21, 26                  | replacement stuffing box kit, stuffing box, PTFE O-ring & bearing  |
|   |        |   |     |   |                             |  |
|   |        |   |     |   |                             |  |
|   |        |   |     | DBCxx-300RK6                              | 1, 16, 23,<br>24            | replacement lever (handle) kit, lever, groove pin, lock washer & socket head cap screw (for all 3" aluminium)  |
|   |        |   |     |   |                             |  |
|   |        |   |     |   |                             |  |
|   |        |   |     | DBCxx-300RK7                              | 11, 14,<br>19, 22           | replacement shaft kit. shaft, cotter pin, bearing, shaft retainer  |
|   |        |   |     |   |                             |  |
|   |        |   |     |   |                             |  |
|   |        |   |     | DBCxx-300RK8                              | 7                           | main cylinder spring   |
|   |        |   |     |   |                             |  |
|   |        |   |     |   |                             |  |
|   |        |   |     | DBCxx-300RK9                              | 3, 17, 18,<br>31            | replacement poppet kit, poppet and screw, set screw and PTFE O-ring  |
|   |        |   |     |   |                             |  |
|   |        |   |     |   |                             |  |



# Replacement Parts

## DBC Cam and Groove Dry Disconnects

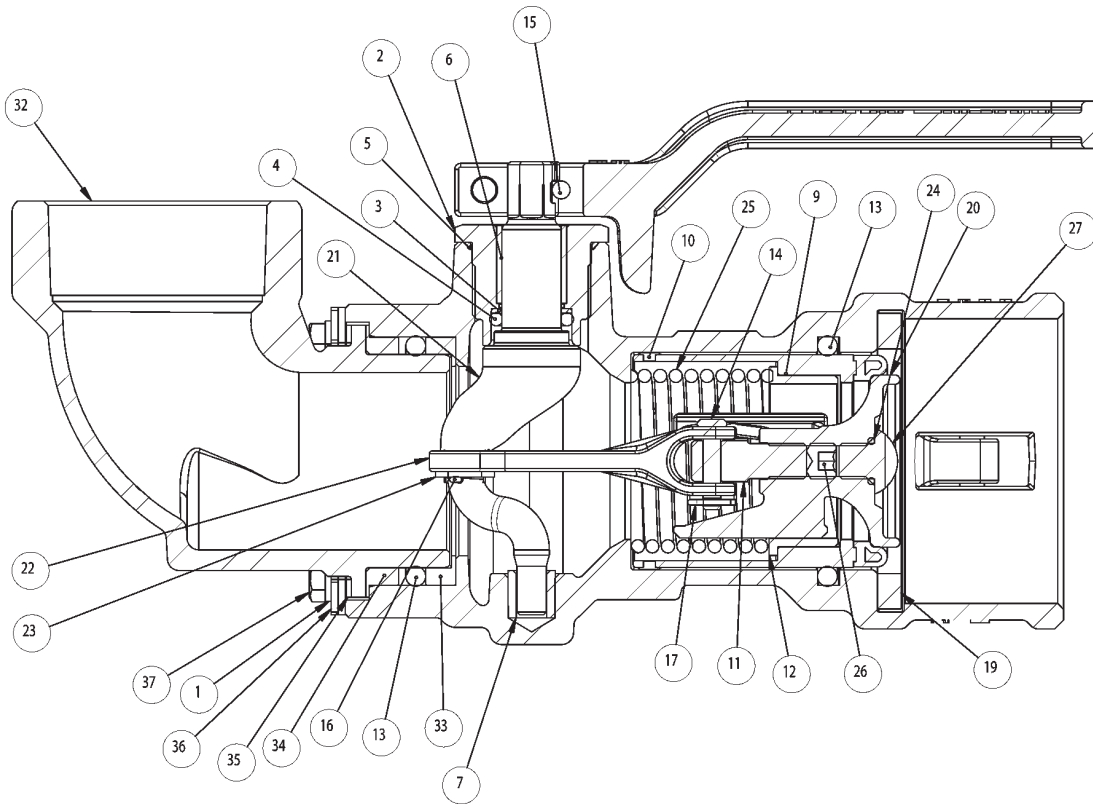
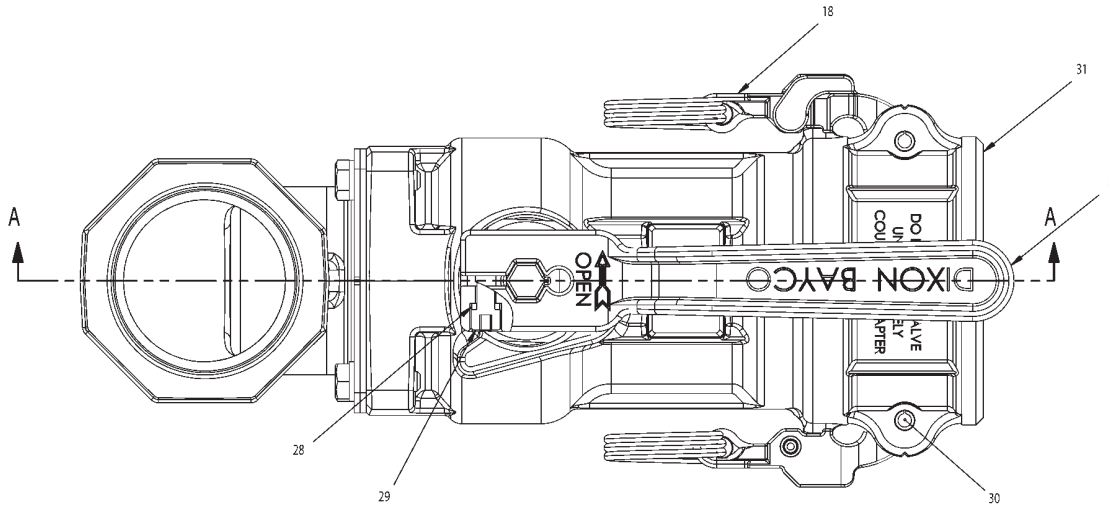
### 3" Stainless Couplers

| 3" STAINLESS COUPLER<br>BILL OF MATERIALS DBC7X-300 |        |   |     |
|---|--------|---|-----|
| PART NO.  | ITEM # | DESCRIPTION   | QTY |
| 40087SS   | 1      | groove pin  | 1   |
| ---   | 2      | body  | 1   |
| 40195SS   | 3      | poppet  | 1   |
| 40196SS   | 4      | stem  | 1   |
| 40197SSBN   | 5A     | seal cylinder Buna (for DBC71-300)                        | 1   |
| 40197SSVI   | 5B     | seal cylinder FKM (for DBC72-300)                         | 1   |
| 40304SS   | 5C     | stainless cylinder (for DBC73-300, DBC76-300 & DBC77-300) | 1   |
| 40197SSEP   | 5D     | seal cylinder EPDM (for DBC74-300)                        | 1   |
| 40197SSVB   | 5E     | seal cylinder FKM-B (for DBC79-300)                       | 1   |
| 40198TF   | 6      | PTFE button   | 8   |
| DBCxx-300RK8  | 7      | cylinder spring   | 1   |
| 40200SS   | 8      | spring seat   | 1   |
| 40201TF   | 9      | PTFE bushing  | 1   |
| 40202SS   | 10     | spring guide  | 1   |
| 40203SS   | 11     | shaft   | 1   |
| 40204SS   | 12     | yoke  | 1   |
| 40205SS   | 13     | link arm  | 1   |
| 40206SS   | 14     | shaft retainer  | 1   |
| 40207SS   | 15     | stuffing box  | 1   |
| 40208SS   | 16     | lever (handle)  | 1   |
| 40209SS   | 17     | set screw   | 1   |
| 40210SS   | 18     | poppet screw  | 1   |
| 40211TF   | 19     | PTFE bearing  | 1   |
| 40212SS   | 20     | clevis pin  | 2   |
| 40213FG   | 21     | bearing   | 1   |
| 40214SS   | 22     | cotter pin  | 1   |
| 40216SS   | 23     | lever (handle) screw                                      | 1   |
| 40217SS   | 24     | lever (handle) lock washer                                | 1   |
| 40218SS   | 25     | cam arm pin   | 2   |
| 40219TF   | 26     | PTFE O-ring   | 1   |
| 40221SS   | 27     | cotter pin  | 2   |
| DBCx1-300RK3  | 28A    | Buna coupler gasket (for DBC71-300)                       | 1   |
| DBCx2-300RK3  | 28B    | FKM coupler gasket (for DBC72-300)                        | 1   |
| 40222TS   | 28C    | PTFE/Silicone coupler gasket (for DBC73-300)              | 1   |
| 40222EP   | 28D    | EPDM coupler gasket (for DBC74-300)                       | 1   |
| 40222TV   | 28E    | PTFE/FKM coupler gasket (for DBC76-300 & DBC77-300)       | 1   |
| DBCx9-300RK3  | 28F    | FKM-B coupler gasket (for DBC79-300)                      | 1   |
| 40223BN   | 29A    | Buna O-ring (for DBC71-300)                               | 1   |
| 40223VI   | 29B    | FKM O-ring (for DBC72-300)                                | 1   |
| 40223KR   | 29C    | Kalrez® O-ring (for DBC73-300, DBC76-300 and DBC77-300)   | 1   |
| 40223EP   | 29D    | EPDM O-ring (for DBC74-300)                               | 1   |
| 40223VB   | 29E    | FKM-B O-ring (for DBC79-300)                              | 1   |
| 40224BN   | 30A    | Buna O-ring (for DBC71-300)                               | 1   |
| 40224VI   | 30B    | FKM O-ring (for DBC72-300)                                | 1   |
| 40224TS   | 30C    | PTFE/Silicone O-ring (for DBC73-300)                      | 1   |
| 40224EP   | 30D    | EPDM O-ring (for DBC74-300)                               | 1   |
| 40224KR   | 30E    | Kalrez® O-ring (for DBC76-300)                            | 1   |
| 40224TV   | 30F    | PTFE/FKM O-ring (for DBC77-300)                           | 1   |
| 40224VB   | 30G    | FKM-B O-ring (for DBC79-300)                              | 1   |
| 40235TF   | 31     | PTFE O-ring   | 1   |
| 40285SSSS   | 32     | locking paddle arm  | 2   |
| 40305TF   | 33     | PTFE nose seal (for DBC73-300, DBC76-300 and DBC77-300)   | 1   |

| REPAIR KITS                            |                       |  |
|--|-----------------------|--|
| PART NO.                               | INCL. ITEM #          | DESCRIPTION  |
| DBCx1-300RK1 (Buna-N)                  | 26, 28A, 29A, 30A, 31 | replacement seal kit, Buna stuffing box O-ring, PTFE stuffing box to body O-ring, Buna body O-ring, Buna cam gasket, PTFE poppet screw O-ring (for DBC71-300)                      |
| DBCx2-300RK1 (FKM)                     | 26, 28B, 29B, 30B, 31 | replacement seal kit, FKM stuffing box O-ring, PTFE stuffing box to body O-ring, FKM body O-ring, FKM cam gasket, PTFE poppet screw O-ring (for DBC72-300)                         |
| DBCx3-300RK1 (PTFE/Silicone & Kalrez®) | 26, 28C, 29C, 30C, 31 | replacement seal kit, Kalrez® stuffing box O-ring, PTFE stuffing box to body O-ring, PTFE/Silicone body O-ring, PTFE/Silicone cam gasket, PTFE poppet screw O-ring (for DBC73-300) |
| DBCx4-300RK1 (EPDM)                    | 26, 28D, 29D, 30D, 31 | replacement seal kit, EPDM stuffing box O-ring, PTFE stuffing box to body O-ring, EPDM body O-ring, EPDM cam gasket, PTFE poppet screw O-ring (for DBC74-300)                      |
| DBCx6-300RK1 (Kalrez® and PTFE/FKM)    | 26, 28E, 29C, 30E, 31 | replacement seal kit, Kalrez® stuffing box O-ring, PTFE stuffing box to body O-ring, Kalrez® body O-ring, PTFE/FKM cam gasket, PTFE poppet screw O-ring (for DBC76-300)            |
| DBCx7-300RK1 (PTFE/FKM & Kalrez®)      | 26, 28E, 29C, 30F, 31 | replacement seal kit, Kalrez® stuffing box O-ring, PTFE stuffing box to body O-ring, PTFE/FKM body O-ring, PTFE/FKM cam gasket, PTFE poppet screw O-ring (for DBC77-300)           |
| DBCx9-300RK1 (FKM-B)                   | 26, 28F, 29E, 30G, 31 | replacement seal kit, FKM-B stuffing box O-ring, PTFE stuffing box to body O-ring, FKM-B body O-ring, FKM cam gasket, PTFE poppet screw O-ring (for DBC79-300)                     |
| DBC69-300RK2                           | 5E, 6, 9              | replacement FKM-B seal cylinder, PTFE buttons and PTFE bushing (for DBC79-300)   |
| DBC71-300RK2                           | 5A, 6, 9              | replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBC71-300)  |
| DBC72-300RK2                           | 5B, 6, 9              | replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBC72-300)   |
| DBCx3-300RK2                           | 6, 9, 33              | replacement PTFE nose seal, PTFE buttons & PTFE bushing (for DBC73-300, DBC76-300 and DBC77-300)   |
| DBC74-300RK2                           | 5D, 6, 9              | replacement EPDM seal cylinder, PTFE buttons and PTFE bushing (for DBC74-300)  |
| DBCX1-300RK3                           | 28A                   | replacement Buna coupler gasket  |
| DBCx2-300RK3                           | 28B                   | replacement FKM coupler gasket   |
| DBCxx-300RK4                           | 4, 12, 13, 20, 22, 27 | replacement link kit, clevis pin, cotter pin, stem, link arm and yoke (for all 3" SS)  |
| DBCxx-300RK5                           | 15, 21, 26            | replacement stuffing box kit, stuffing box, PTFE O-ring & bearing (for all 3" SS)  |
| DBCxx-300RK6                           | 1, 16, 23, 24         | replacement lever (handle) kit, lever, groove pin, lock washer and socket head cap screw (for all 3" SS)   |
| DBCxx-300RK7                           | 11, 14, 19, 22        | replacement shaft kit. shaft, cotter pin bearing, shaft retainer, (for all 3" SS)  |
| DBCxx-300RK8                           | 7                     | main cylinder spring   |
| DBCxx-300RK9                           | 3, 17, 18, 31         | replacement poppet kit, poppet, poppet screw, set screw and PTFE O-ring (for all 3" SS)  |

# DBS 90° Swivel Cam and Groove Dry Disconnects

## 2" Aluminium 90° Swivel Couplers



Section A - A



# Replacement Parts

## DBS 90° Swivel Cam and Groove Dry Disconnects

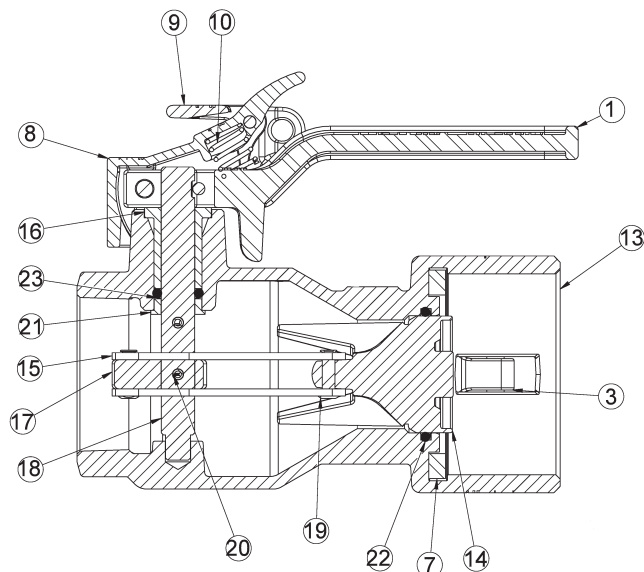
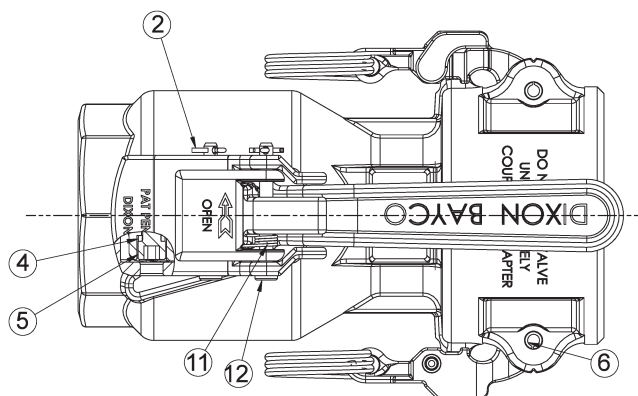
### 2" Aluminium 90° Swivel Couplers

| 2" ALUMINIUM 90° COUPLER<br>BILL OF MATERIALS DBS6X-200 |                 |   |     |
|---|-----------------|---|-----|
| PART NO.  | ITEM #          | DESCRIPTION   | QTY |
| 10111   | 1               | lock washer   | 4   |
| 40074SS   | 2               | stuffing box  | 1   |
| 40075TF   | 3               | back up ring  | 1   |
| 40076BN   | 4A              | crank shaft O-ring Buna (for DBS61-200)               | 1   |
| 40076VI   | 4B              | crank shaft O-ring FKM (for DBS62-200)                | 1   |
| 40076KR   | 4C              | crank shaft O-ring Kalrez® (for DBS63-200)            | 1   |
| 40077TF   | 5               | stuffing box PTFE O-ring                              | 1   |
| 40078FG   | 6               | large crank shaft bearing                             | 1   |
| 40079SS   | 7               | small crank shaft bearing                             | 1   |
| 40080SS   | 8               | lever (handle)  | 1   |
| 40081ALBN   | 9A              | seal cylinder (for DBS61-200)                         | 1   |
| 40081ALVI   | 9B              | seal cylinder (for DBS62-200)                         | 1   |
| 40168SS   | 9C              | seal cylinder (for DBS63-200)                         | 1   |
| 40082TF   | 10              | PTFE button   | 6   |
| 40083SS   | 11              | yoke  | 1   |
| 40084TF   | 12              | PTFE bushing  | 1   |
| 40085BN   | 13A             | body and swivel Buna O-ring (for DBS61-200)           | 2   |
| 40085VI   | 13B             | body and swivel FKM O-ring (for DBS62-200)            | 2   |
| 40085TS   | 13C             | body and swivel PTFE/Silicone® O-ring (for DBS63-200) | 2   |
| 40086SS   | 14              | link rivet  | 1   |
| 40087SS   | 15              | groove pin  | 1   |
| 40088SS   | 16              | crank shaft cotter pin                                | 1   |
| 40088SS   | 17              | link cotter pin                                       | 1   |
| 40089SS   | 18              | EZ Boss-Lock™ cam arm                                 | 2   |
| 250-G-BU  | 19A             | cam gasket Buna (for DBS61-200)                       | 1   |
| 250-G-VI  | 19B             | cam gasket FKM (for DBS62-200)                        | 1   |
| 250-G-TES   | 19C             | cam gasket PTFE/Silicone® (for DBS63-200)             | 1   |
| 40091SS   | 20              | poppet  | 1   |
| 40092SS   | 21              | crank shaft   | 1   |
| 40093SS   | 22              | link arm  | 1   |
| 40094SS   | 23              | link washer   | 1   |
| 40095TF   | 24              | poppet screw PTFE O-ring                              | 1   |
| DBCxx-200RK8  | 25              | cylinder spring                                       | 1   |
| 40097SS   | 26              | set screw   | 1   |
| 40098SS   | 27              | poppet screw (round head)                             | 1   |
| 40099SS   | 28              | lock washer   | 1   |
| 40100SS   | 29              | socket head cap screw                                 | 1   |
| 40101SS   | 30              | cam arm spring pin                                    | 2   |
| ---   | 31              | main body   | 1   |
| ---   | 32              | elbow body  | 1   |
| 40106AC   | 33              | bottom bearing  | 1   |
| 40108AC   | 34              | top bearing   | 1   |
| 40109AC   | 35              | washer  | 1   |
| 40110ST   | 36              | flange retainer                                       | 4   |
| 40111SS   | 37              | screw   | 4   |
| 40170TF   | not illustrated | nose seal (for DBS63-200)                             | 1   |

| REPAIR KITS   |                                 |  |
|---------------|---------------------------------|--|
| PART NO.      | INCL. ITEM #                    | DESCRIPTION  |
| DBS61-200RK1  | 4A, 5, 13A, 19A, 24             | replacement seal kit, Buna crank shaft O-ring, PTFE stuffing box O-ring, Buna and Swivel body O-rings, Buna cam gasket, PTFE O-ring (for DBS61-200)                        |
| DBS62-200RK1  | 4B, 5, 13B, 19B, 24             | replacement seal kit, FKM crank shaft O-ring, PTFE stuffing box O-ring, FKM body and swivel O-rings, FKM cam gasket, PTFE O-ring (for DBS62-200)                           |
| DBS63-200RK1  | 4C, 5, 13C, 19C, 24             | replacement seal kit, Kamrez® crank shaft O-ring, PTFE stuffing box O-ring, PTFE/Silicone® body and swivel O-rings, PTFE/Silicone® cam gasket, PTFE O-ring (for DBS63-200) |
| DBS61-200RK4  | 13A, 33, 34, 35, 36, 37         | swivel rebuild kit, Buna body O-ring, top and bottom bearings, washer, flange retainers and screws (for DBS61-200)   |
| DBS62-200RK4  | 13B, 33, 34, 35, 36, 37         | swivel rebuild kit, FKM body O-ring, top and bottom bearings, washer, flange retainers and screws (for DBS62-200)  |
| DBS63-200RK4  | 13C, 33, 34, 35, 36, 37         | swivel rebuild kit, PTFE/Silicone® body O-ring, top and bottom bearings, washer, flange retainers and screws (for DBS63-200)   |
| DBS61-200RK10 | 13A, 33, 34                     | replacement swivel seal kit, Buna body O-ring, top and bottom bearings (for DBS61-200)   |
| DBS62-200RK10 | 13B, 33, 34                     | replacement swivel seal kit, FKM body O-ring, top and bottom bearings (for DBS62-200)  |
| DBS63-200RK10 | 13C, 33, 34                     | replacement swivel seal kit, PTFE/Silicone® body O-ring, top and bottom bearings (for DBS63-200)   |
| DBC61-200RK2  | 9A, 10, 12                      | replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBS61-200)  |
| DBC62-200RK2  | 9B, 10, 12                      | replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBS62-200)   |
| DBCx3-200RK2  | 10, 12, + items not illustrated | replacement PTFE nose seal, PTFE buttons and PTFE bushing (for DBS63-200)  |
| DBCxx-200RK4  | 11, 14, 16, 17, 22, 23          | replacement link kit, link rivet, cotter pins, link washer, link arm and yoke (for all 2")   |
| DBCxx-200RK5  | 2, 5, 6                         | replacement stuffing box kit, stuffing box, PTFE O-ring and large crank shaft bearing (for all 2")   |
| DBCxx-200RK6  | 8, 15, 28, 29                   | replacement lever (handle) kit, lever, groove pin, lock washer and socket head cap screw (for all 2")  |
| DBCxx-200RK7  | 16, 21, 23                      | replacement crank shaft kit, crank shaft, cotter pin and washer (for all 2")   |
| DBCxx-200RK8  | 25                              | main cylinder spring (for all 2")  |
| DBCxx-200RK9  | 20, 24, 26, 27                  | replacement poppet kit, poppet, round head screw, set screw & PTFE O-ring (for all 2")   |
| DBCL-200      | not illustrated                 | optional add on padlockable lever kit, (handle) (for all 2")   |

## D2C Cam and Groove Actuator Style Dry Disconnects

### 1½” Stainless Couplers



#### 1½” STAINLESS COUPLER BILL OF MATERIALS D2C7X-150

| PART NO.   | ITEM # | DESCRIPTION                                | QTY |
|------------|--------|--|-----|
| 40080SS    | 1      | lever                                      | 1   |
| 40088SS    | 2      | lever cotter pin                           | 2   |
| 40089SS    | 3      | EZ-Boss lock cam arm                       | 2   |
| 40099SS    | 4      | lock washer                                | 1   |
| 40100SS    | 5      | socket head screw                          | 1   |
| 40101SS    | 6      | cam arm spring pin                         | 2   |
| 200-G-BU   | 7A     | cam gasket Buna (for D2C71-150)            | 1   |
| 200-G-VI   | 7B     | cam gasket FKM (for D2C72-150)             | 1   |
| 200-G-TES  | 7C     | cam gasket PTFE/Silicone® (for D2C73-150)  | 1   |
| 200-G-EPDM | 7D     | cam gasket EPDM (for D2C74-150)            | 1   |
| 40225SS    | 8      | lever latch                                | 1   |
| 40226SS    | 9      | lever lock                                 | 1   |
| 40230SS    | 10     | lever lock compression spring              | 1   |
| 40231SS    | 11     | lever lock torsion spring                  | 1   |
| 40232SS    | 12     | lever clevis pin                           | 2   |
| --         | 13     | body                                       | 1   |
| 40287SS    | 14     | poppet                                     | 1   |
| 40288SS    | 15     | poppet link arm                            | 2   |
| 40289FG    | 16     | bearing                                    | 1   |
| 40290SS    | 17     | poppet cam                                 | 1   |
| 40291SS    | 18     | poppet lever shaft                         | 1   |
| 40292SS    | 19     | poppet link rivet                          | 2   |
| 40293SS    | 20     | poppet lever shaft spring pin              | 2   |
| 40294SS    | 21     | spacer                                     | 1   |
| 40295TV    | 22     | poppet O-ring PTFE/FKM                     | 1   |
| 40296BN    | 23A    | lever shaft O-ring Buna (for D2C71-150)    | 1   |
| 40296VI    | 23B    | lever shaft O-ring FKM (for D2C72-150)     | 1   |
| 40296KR    | 23C    | lever shaft O-ring Kalrez® (for D2C73-150) | 1   |
| 40296EP    | 24D    | lever shaft O-ring EPDM (for D2C74-150)    | 1   |

#### 2” STAINLESS COUPLER BILL OF MATERIALS D2C7X-200

| PART NO.   | ITEM # | DESCRIPTION                                | QTY |
|------------|--------|--|-----|
| 40080SS    | 1      | lever                                      | 1   |
| 40088SS    | 2      | lever cotter pin                           | 2   |
| 40089SS    | 3      | EZ-Boss lock cam arm                       | 2   |
| 40099SS    | 4      | lock washer                                | 1   |
| 40100SS    | 5      | socket head screw                          | 1   |
| 40101SS    | 6      | cam arm spring pin                         | 2   |
| 250-G-BU   | 7A     | cam gasket Buna (for D2C71-200)            | 1   |
| 250-G-VI   | 7B     | cam gasket FKM (for D2C72-200)             | 1   |
| 250-G-TES  | 7C     | cam gasket PTFE/Silicone® (for D2C73-200)  | 1   |
| 250-G-EPDM | 7D     | cam gasket EPDM (for D2C74-200)            | 1   |
| 40225SS    | 8      | lever latch                                | 1   |
| 40226SS    | 9      | lever lock                                 | 1   |
| 40230SS    | 10     | lever lock compression spring              | 1   |
| 40231SS    | 11     | lever lock torsion spring                  | 1   |
| 40232SS    | 12     | lever clevis pin                           | 2   |
| --         | 13     | body                                       | 1   |
| 40298SS    | 14     | poppet                                     | 1   |
| 40299SS    | 15     | poppet link arm                            | 2   |
| 40289FG    | 16     | bearing                                    | 1   |
| 40300SS    | 17     | poppet cam                                 | 1   |
| 40291SS    | 18     | poppet lever shaft                         | 1   |
| 40292SS    | 19     | poppet link rivet                          | 2   |
| 40293SS    | 20     | poppet lever shaft spring pin              | 2   |
| 40294SS    | 21     | spacer                                     | 1   |
| 40301TV    | 22     | poppet O-ring PTFE/FKM                     | 1   |
| 40296BN    | 23A    | lever shaft O-ring Buna (for D2C71-200)    | 1   |
| 40296VI    | 23B    | lever shaft O-ring FKM (for D2C72-200)     | 1   |
| 40296KR    | 23C    | lever shaft O-ring Kalrez® (for D2C73-200) | 1   |
| 40296EP    | 24D    | lever shaft O-ring EPDM (for D2C74-200)    | 1   |

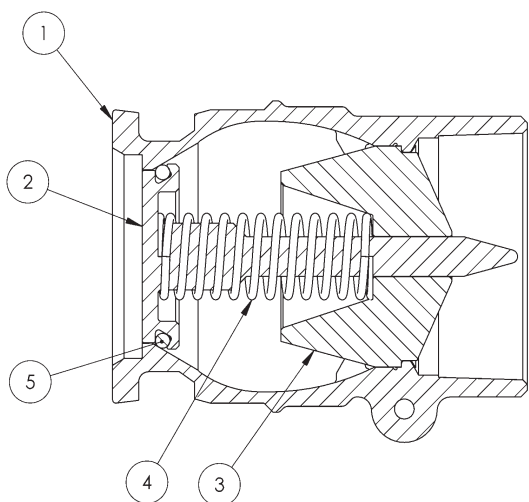




# Replacement Parts

## Dry Disconnect Bayonet Style Adapters

### 2" and 3" Adapters



#### 2" STAINLESS ADAPTER BILL OF MATERIALS BA3X-200

| PART NO.    | ITEM # | DESCRIPTION                | QTY |
|-------------|--------|----------------------------|-----|
| 40053SS     | 1      | stainless body             | 1   |
| 40054BR     | 2      | brass poppet               | 1   |
| 40055SS     | 3      | stainless deflector        | 1   |
| 40056SS     | 4      | stainless spring           | 1   |
| BA31-200RK1 | 5A     | Buna O-ring (for BA31-200) | 1   |
| BA32-200RK1 | 5B     | FKM O-ring (for BA32-200)  | 1   |

#### 3" ALUMINIUM ADAPTER BILL OF MATERIALS BA6X-300

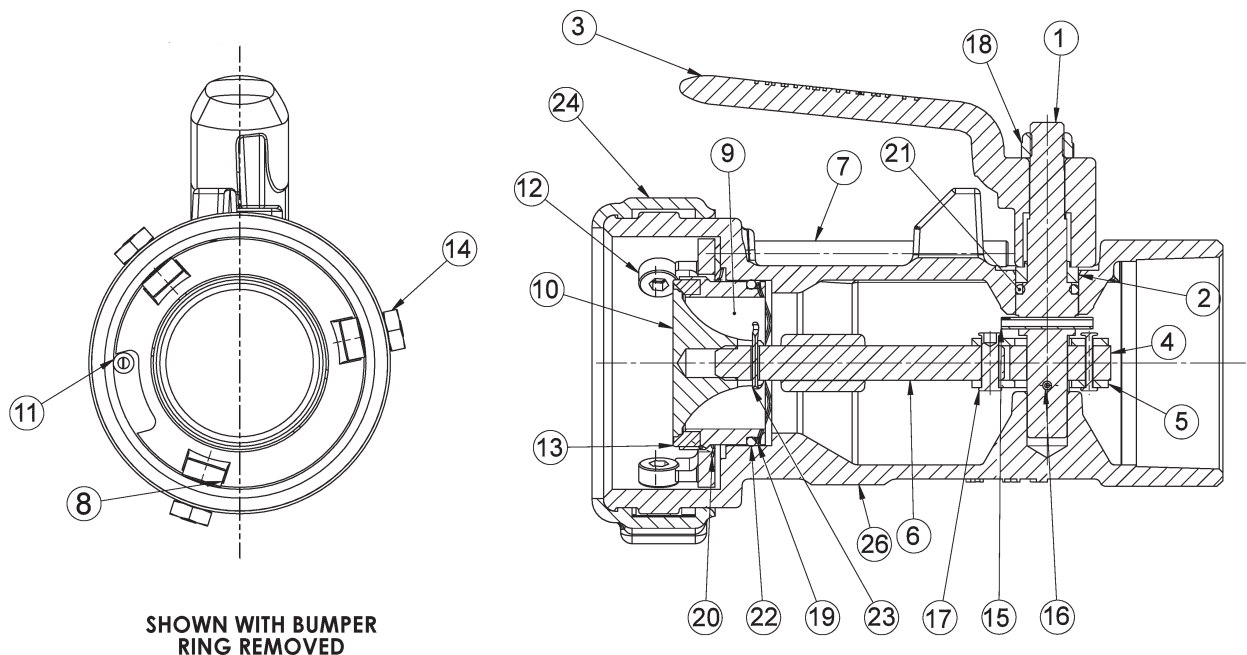
| PART NO.    | ITEM # | DESCRIPTION                | QTY |
|-------------|--------|----------------------------|-----|
| 40278AL     | 1      | aluminium body             | 1   |
| 40279AL     | 2      | aluminium poppet           | 1   |
| 40280AL     | 3      | aluminium deflector        | 1   |
| 40281SS     | 4      | SS spring                  | 1   |
| BA31-300RK1 | 5A     | Buna O-ring (for BA61-300) | 1   |
| BA32-300RK1 | 5B     | FKM O-ring (for BA62-300)  | 1   |

#### 3" BRONZE ADAPTER BILL OF MATERIALS BA3X-300

| PART NO.    | ITEM # | DESCRIPTION                | QTY |
|-------------|--------|----------------------------|-----|
| 40278BR     | 1      | bronze body                | 1   |
| 40279BR     | 2      | bronze poppet              | 1   |
| 40280BR     | 3      | bronze deflector           | 1   |
| 40281SS     | 4      | SS spring                  | 1   |
| BA31-300RK1 | 5A     | Buna O-ring (for BA31-300) | 1   |
| BA32-300RK1 | 5B     | FKM O-ring (for BA32-300)  | 1   |

## Dry Disconnect Bayonet Style Couplers

### 2" Straight Non-Swiveling Couplers



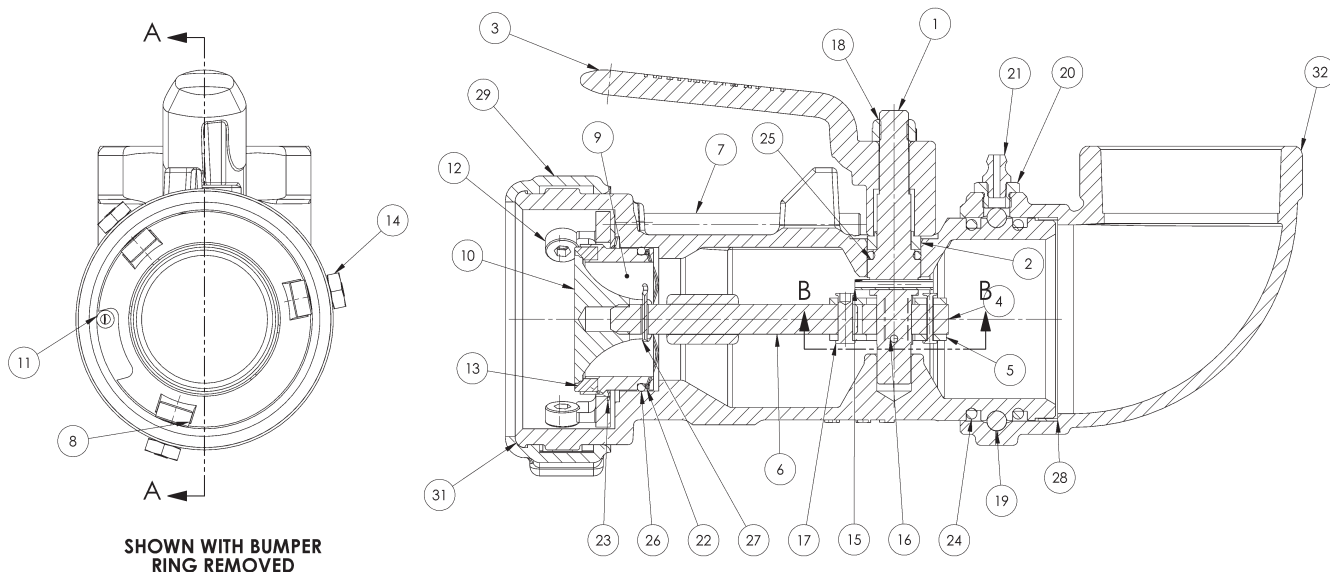
SHOWN WITH BUMPER RING REMOVED

| 2" STAINLESS COUPLER<br>BILL OF MATERIALS BC6X-200 |        |                                   |     |
|--|--------|-----------------------------------|-----|
| PART NO.   | ITEM # | DESCRIPTION                       | QTY |
| 40138SS  | 1      | lever shaft                       | 1   |
| 40139SS  | 2      | lever shaft follower              | 1   |
| 40140SS  | 3      | lever                             | 1   |
| 40141SS  | 4      | poppet link arm                   | 1   |
| 40142SS  | 5      | bent link                         | 2   |
| 40143SS  | 6      | stem                              | 1   |
| 40144SS  | 7      | interlocking pin                  | 1   |
| 40145SS  | 8      | lock ring                         | 1   |
| 40146HC  | 9      | nose piece                        | 1   |
| 40147CA  | 10     | poppet                            | 1   |
| 40148SS  | 11     | coiled pin                        | 1   |
| 40149SS  | 12     | bayonet stud                      | 3   |
| 40150BN  | 13A    | nose seal Buna (for BC61-200)     | 1   |
| 40150VI  | 13B    | nose seal FKM (for BC62-200)      | 1   |
| 40151SS  | 14     | jam nut                           | 3   |
| 40152SS  | 15     | spring pin                        | 1   |
| 40153SS  | 16     | coiled pin                        | 1   |
| 40154SS  | 17     | rivet                             | 2   |
| 40155SS  | 18     | lock nut                          | 1   |
| 40159SS  | 19     | wave spring                       | 2   |
| 40160SS  | 20     | wave spring washer                | 1   |
| 40162BN  | 21A    | shaft O-ring Buna (for BC61-200)  | 1   |
| 40162VI  | 21B    | shaft O-ring FKM (for BC62-200)   | 1   |
| 40163BN  | 22A    | poppet O-ring Buna (for BC61-200) | 1   |
| 40163VI  | 22B    | poppet O-ring FKM (for BC62-200)  | 1   |
| 40164SS  | 23     | cotter pin                        | 1   |
| 40166VY  | 24     | bumper ring                       | 1   |
| 40167AL  | 25     | label                             | 1   |

# Replacement Parts

## Dry Disconnect Bayonet Style Couplers

### 2" 90° Straight Swivel Couplers



The 90° swivel coupler (BS series) is illustrated above. The straight swivel coupler (BSS series) uses the same components, except it does not have #21A grease nipple, it utilises a #21B set screw plug.

#### BILL OF MATERIALS BS6X-200 AND BSS6X-200

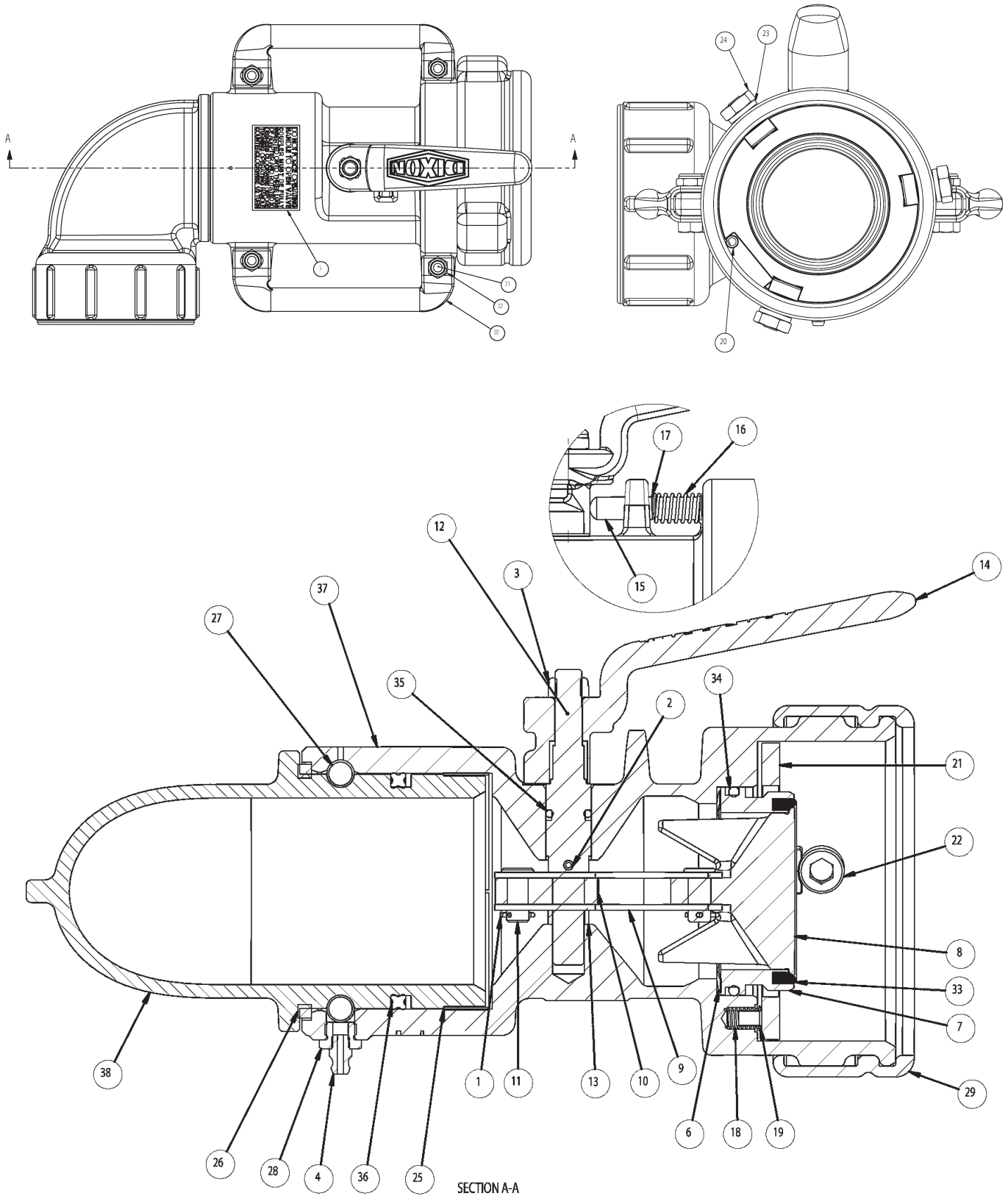
| PART NO. | ITEM # | DESCRIPTION               | QTY | PART NO. | ITEM # | DESCRIPTION                         | QTY |
|----------|--------|---------------------------|-----|----------|--------|-------------------------------------|-----|
| 40138SS  | 1      | lever shaft               | 1   | 40156SS  | 19     | ball bearing                        | 32  |
| 40139SS  | 2      | follower                  | 1   | 40157BR  | 20     | ball plug                           | 1   |
| 40140SS  | 3      | lever (handle)            | 1   | 40158ST  | 21A    | grease fitting (BS6x-200)           | 1   |
| 40141SS  | 4      | link                      | 1   | 40178SS  | 21B    | set screw (BSS6x-200)               | 1   |
| 40142SS  | 5      | belt link                 | 2   | 40159SS  | 22     | wave spring                         | 2   |
| 40143SS  | 6      | stem                      | 1   | 40160SS  | 23     | wave spring washer                  | 1   |
| 40144SS  | 7      | interlocking pin          | 1   | 40161BN  | 24A    | Buna swivel O-ring (BS & BSS61-200) | 2   |
| 40145SS  | 8      | lock rink                 | 1   | 40161VI  | 24B    | FKM swivel O-ring (BS & BSS62-200)  | 2   |
| 40146HC  | 9      | nose piece                | 1   | 40162BN  | 25A    | Buna stem O-ring (BS & BSS61-200)   | 1   |
| 40147CA  | 10     | poppet                    | 1   | 40162VI  | 25B    | FKM stem O-ring (BS & BSS62-200)    | 1   |
| 40148SS  | 11     | coiled pin                | 1   | 40163BN  | 26A    | Buna nose O-ring (BS & BSS61-200)   | 1   |
| 40149SS  | 12     | bayonet stud              | 3   | 40163VI  | 26B    | FKM nose O-ring (BS & BSS62-200)    | 1   |
| 40150BN  | 13A    | Buna nose seal (BS61-200) | 1   | 40164SS  | 27     | cotter pin                          | 1   |
| 40150VI  | 13B    | FKM nose seal (BS62-200)  | 1   | 40165NY  | 28     | bearing strip                       | 1   |
| 40151SS  | 14     | jam nut                   | 3   | 40166VY  | 29     | bumper ring                         | 1   |
| 40152SS  | 15     | spring pin                | 1   | 40161AL  | 30     | label                               | 1   |
| 40153SS  | 16     | grooved pin               | 1   | ---      | 31     | main body                           | 1   |
| 40154SS  | 17     | rivet                     | 2   | ---      | 32     | swivel body                         | 1   |
| 40155SS  | 18     | lock nut                  | 1   |          |        |                                     |     |

#### REPAIR KITS

| PART NO.    | INCLUDES ITEM #                        | DESCRIPTION   |
|-------------|--|---|
| BS61-200RK1 | 13A, 15, 16, 24A, 25A, 26A, 27, 28, 29 | Seal repair kit, Buna nose seal, spring pin, grooved pin, Buna swivel O-rings, Buna stem O-ring, Buna nose body O-ring, cotter pin, bearing strip & bumper ring |
| BS62-200RK1 | 13B, 15, 16, 24B, 25B, 26B, 27, 28, 29 | Seal repair kit, FKM nose seal, spring pin, grooved pin, FKM swivel O-rings, FKM stem O-ring, FKM nose body O-ring, cotter pin, bearing strip & bumper ring     |
| BS61-200RK2 | 24A, 28                                | Swivel seal repair kit, Buna swivel O-rings & bearing strip   |
| BS62-200RK2 | 24B, 28                                | Swivel seal repair kit, FKM swivel O-rings & bearing strip  |

# BA/BS/BSS Series Bayonet Style Dry Disconnects

3" 90° and Straight Swivel Couplers



# Replacement Parts

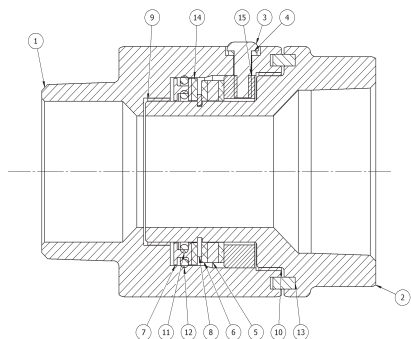
## BA/BS/BSS Series Bayonet Style Dry Disconnects

### 3" 90° and Straight Swivel Couplers

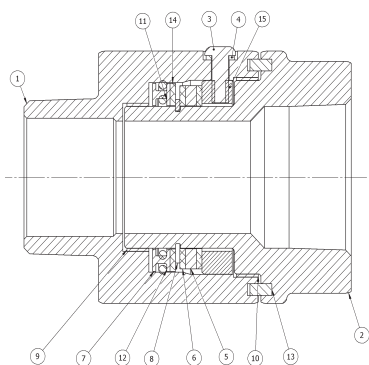
The straight swivel coupler (BSS series) uses the same components.

| 3" SWIVEL ALUMINIUM COUPLER<br>BILL OF MATERIALS BS6X-300 AND BSS6X-300 |        |                       |     | REPAIR KITS |                             |  |
|---|--------|-----------------------|-----|-------------|-----------------------------|--|
| PART NO.  | ITEM # | DESCRIPTION           | QTY | PART NO.    | INCL. ITEM #                | DESCRIPTION  |
| 40088SS   | 1      | cotter pin            | 2   | BS61-300RK1 | 1, 2, 25, 29, 33A, 34A, 35A | seal repair kit, Buna nose seal, spring pin, Buna swivel O-rings, Buna stem O-ring, Buna nose body O-ring, cotter pin, bearing strip and bumper ring |
| 40152SS   | 2      | spring pin            | 1   |             |                             |  |
| 40155SS   | 3      | lock nut              | 1   |             |                             |  |
| 40158ST   | 4      | grease fitting        | 1   | BS62-300RK1 | 1, 2, 25, 29, 33B, 34B, 35B | seal repair kit, FKM nose seal, spring pin, FKM swivel O-rings, FKM stem O-ring, FKM nose body O-ring, cotter pin, bearing strip and bumper ring     |
| 40167AL   | 5      | label                 | 1   |             |                             |  |
| 40246SS   | 6      | wave spring           | 1   |             |                             |  |
| 40247HC   | 7      | nose piece            | 1   | BS61-300RK2 | 25, 26, 36A                 | swivel seal repair kit, Buna swivel O-rings and bearing strip  |
| 40248CA   | 8      | poppet                | 1   |             |                             |  |
| 40249SS   | 9      | bent link             | 2   | BS62-300RK2 | 25, 26, 36B                 | swivel seal repair kit, FKM swivel O-rings and bearing strip   |
| 40250SS   | 10     | drive link            | 1   |             |                             |  |
| 40251SS   | 11     | clevis pin            | 2   |             |                             |  |
| 40252SS   | 12     | stem                  | 1   |             |                             |  |
| 40253AL   | 13     | stem spacer           | 1   |             |                             |  |
| 40254SS   | 14     | lever (handle)        | 1   |             |                             |  |
| 40255SS   | 15     | interlock pin         | 1   |             |                             |  |
| 40256SS   | 16     | compression spring    | 1   |             |                             |  |
| 40257ST   | 17     | retaining ring        | 1   |             |                             |  |
| 40258SS   | 18     | compression spring    | 3   |             |                             |  |
| 40259BR   | 19     | eyelet                | 3   |             |                             |  |
| 40260SS   | 20     | spring pin            | 1   |             |                             |  |
| 40261SS   | 21     | lock ring             | 1   |             |                             |  |
| 40262SS   | 22     | bayonet stud          | 3   |             |                             |  |
| 40263SS   | 23     | lock washer           | 3   |             |                             |  |
| 40264SS   | 24     | nut                   | 3   |             |                             |  |
| 40265NY   | 25     | bearing strip         | 1   |             |                             |  |
| 40266FL   | 26     | dust seal             | 1   |             |                             |  |
| 40267SS   | 27     | ball bearings         | 27  |             |                             |  |
| 40268BR   | 28     | ball plug             | 1   |             |                             |  |
| 40269VY   | 29     | bumper ring           | 1   |             |                             |  |
| 40270SS   | 30     | grip handle           | 2   |             |                             |  |
| 40271SS   | 31     | bolt                  | 4   |             |                             |  |
| 40272SS   | 32     | lock nut              | 4   |             |                             |  |
| 40273BN   | 33A    | Buna nose seal        | 1   |             |                             |  |
| 40273VI   | 33B    | FKM nose seal         | 1   |             |                             |  |
| 40274BN   | 34A    | Buna nose body O-ring | 1   |             |                             |  |
| 40274VI   | 34B    | FKM nose body O-ring  | 2   |             |                             |  |
| 40275BN   | 35A    | Buna stem O-ring      | 1   |             |                             |  |
| 40275VI   | 35B    | FKM stem O-ring       | 1   |             |                             |  |
| 40276BN   | 36A    | Buna quad ring        | 1   |             |                             |  |
| 40276VI   | 36B    | FKM quad ring         | 1   |             |                             |  |
| ---   | 37     | main body             | 1   |             |                             |  |
| ---   | 38     | swivel body           | 1   |             |                             |  |

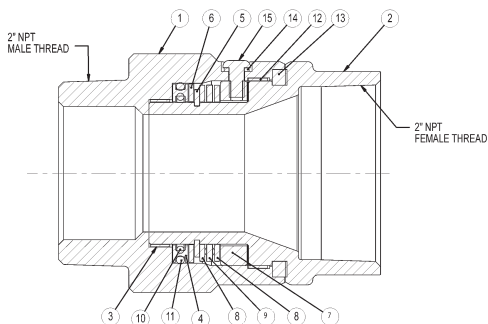
### SWMF125, SWMF150 and SWMF200 Swivels



SWMF150



SWMF125



SWMF200

#### SWMF125 & SWMF150 BILL OF MATERIALS

| PART NO.                     | ITEM # | DESCRIPTION    | QTY |
|------------------------------|--------|----------------|-----|
| ---                          | 1      | female body    | 1   |
| ---                          | 2      | male body      | 1   |
| use kit SWMF-RK3             | 3      | screw          | 1   |
| use kit SWMF-RK3             | 4      | lock washer    | 1   |
| use kit SWMF-RK3             | 5      | thrust bearing | 1   |
| use kit SWMF-RK3             | 6      | thrust washer  | 2   |
| use kit SWMF-RK2 or SWMF-RK3 | 7      | O-ring holder  | 1   |
| use kit SWMF-RK3             | 8      | retaining ring | 1   |
| use kit SWMF-RK2 or SWMF-RK3 | 9      | front bearing  | 1   |
| use kit SWMF-RK2 or SWMF-RK3 | 10     | rear bearing   | 1   |
| use kit SWMF-RK2 or SWMF-RK3 | 11     | O-ring         | 1   |
| use kit SWMF-RK2 or SWMF-RK3 | 12     | O-ring         | 1   |
| use kit SWMF-RK2 or SWMF-RK3 | 13     | felt ring      | 1   |
| use kit SWMF-RK3             | 14     | support washer | 1   |
| use kit SWMF-RK3             | 15     | support ring   | 1   |

#### SWMF200 BILL OF MATERIALS

| PART NO.                      | ITEM # | DESCRIPTION    | QTY |
|-------------------------------|--------|----------------|-----|
| ---                           | 1      | female body    | 1   |
| ---                           | 2      | male body      | 1   |
| use kit SWMF-RK22 or SWMFRK32 | 3      | front bearing  | 1   |
| use kit SWMF-RK22 or SWMFRK32 | 4      | O-ring holder  | 1   |
| use kit SWMF-RK32             | 5      | retaining ring | 1   |
| use kit SWMF-RK32             | 6      | support washer | 1   |
| use kit SWMF-RK32             | 7      | support ring   | 1   |
| use kit SWMF-RK32             | 8      | thrust washer  | 2   |
| use kit SWMF-RK32             | 9      | thrust bearing | 1   |
| use kit SWMF-RK22 or SWMFRK32 | 10     | O-ring         | 1   |
| use kit SWMF-RK22 or SWMFRK32 | 11     | large O-ring   | 1   |
| use kit SWMF-RK22 or SWMFRK32 | 12     | rear bearing   | 1   |
| use kit SWMF-RK22 or SWMFRK32 | 13     | felt ring      | 1   |
| use kit SWMF-RK32             | 14     | lock washer    | 3   |
| use kit SWMF-RK32             | 15     | screw          | 3   |

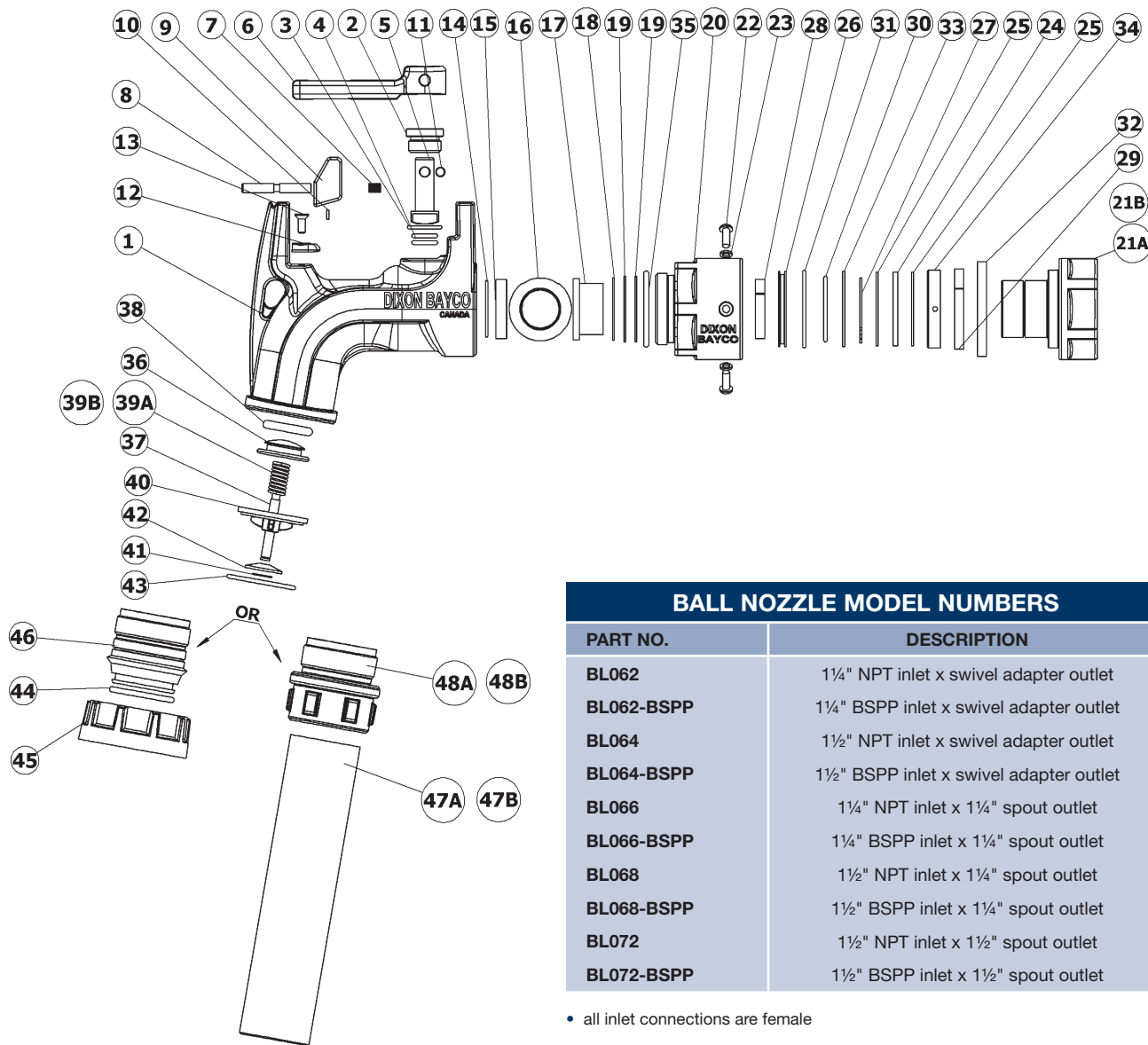
#### REPAIR KITS

| PART NO.  | ITEM #                                      | DESCRIPTION                 |
|-----------|---|-----------------------------|
| SWMF-RK1  | ---   | swivel grease nipple kit    |
| SWMF-RK2  | 7, 9, 10, 11, 12, 13                        | swivel seal and wear kit    |
| SWMF-RK3  | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | complete swivel rebuild kit |
| SWMF-RK22 | 3, 4, 10, 11, 12, 13                        | swivel seal and wear kit    |
| SWMF-RK32 | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | complete rebuild kit        |



# Replacement Parts

## BL Ball Nozzles



### BALL NOZZLE MODEL NUMBERS

| PART NO.   | DESCRIPTION                            |
|------------|--|
| BL062      | 1¼" NPT inlet x swivel adapter outlet  |
| BL062-BSPP | 1¼" BSPP inlet x swivel adapter outlet |
| BL064      | 1½" NPT inlet x swivel adapter outlet  |
| BL064-BSPP | 1½" BSPP inlet x swivel adapter outlet |
| BL066      | 1¼" NPT inlet x 1¼" spout outlet       |
| BL066-BSPP | 1¼" BSPP inlet x 1¼" spout outlet      |
| BL068      | 1½" NPT inlet x 1¼" spout outlet       |
| BL068-BSPP | 1½" BSPP inlet x 1¼" spout outlet      |
| BL072      | 1½" NPT inlet x 1½" spout outlet       |
| BL072-BSPP | 1½" BSPP inlet x 1½" spout outlet      |

• all inlet connections are female

### REPAIR KITS

| PART NO. | INCLUDES ITEM #  | DESCRIPTION                               |
|----------|--|---|
| SWMF-RK1 | not illustrated  | inlet swivel grease nipple kit (optional) |
| SWMF-RK2 | 26, 28, 29, 30, 31, 32   | inlet swivel seal and wear kit            |
| SWMF-RK3 | 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34                       | complete inlet swivel rebuild kit         |
| SWMF-RK4 | 20, 21B, 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 | 1½" FNPT replacement inlet swivel         |
| SWMF-RK5 | 20, 21A, 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 | 1¼" FNPT replacement inlet swivel         |
| SWMF-RK6 | 20, 21C, 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 | 1½" BSPP replacement inlet swivel         |
| BL005    | 43, 44, 45, 46   | replacement swivel outlet (BL062, BL064)  |
| BL-RK4   | 2, 3, 4, 5   | ball valve shaft seal kit                 |
| BL-RK10  | 3, 4, 14, 15, 17, 35, 38, 43, 44   | complete ball nozzle seal kit             |
| BL-RK11  | 39B, 43  | optional check valve 5 PSI spring kit     |
| BL-RK12  | 36, 37, 38, 39a, 40, 41, 42, 43  | standard check valve 3 PSI cartridge kit  |
| BL-RK13  | 6, 7, 8, 9, 10, 11, 12, 13(2)  | replacement trigger kit                   |

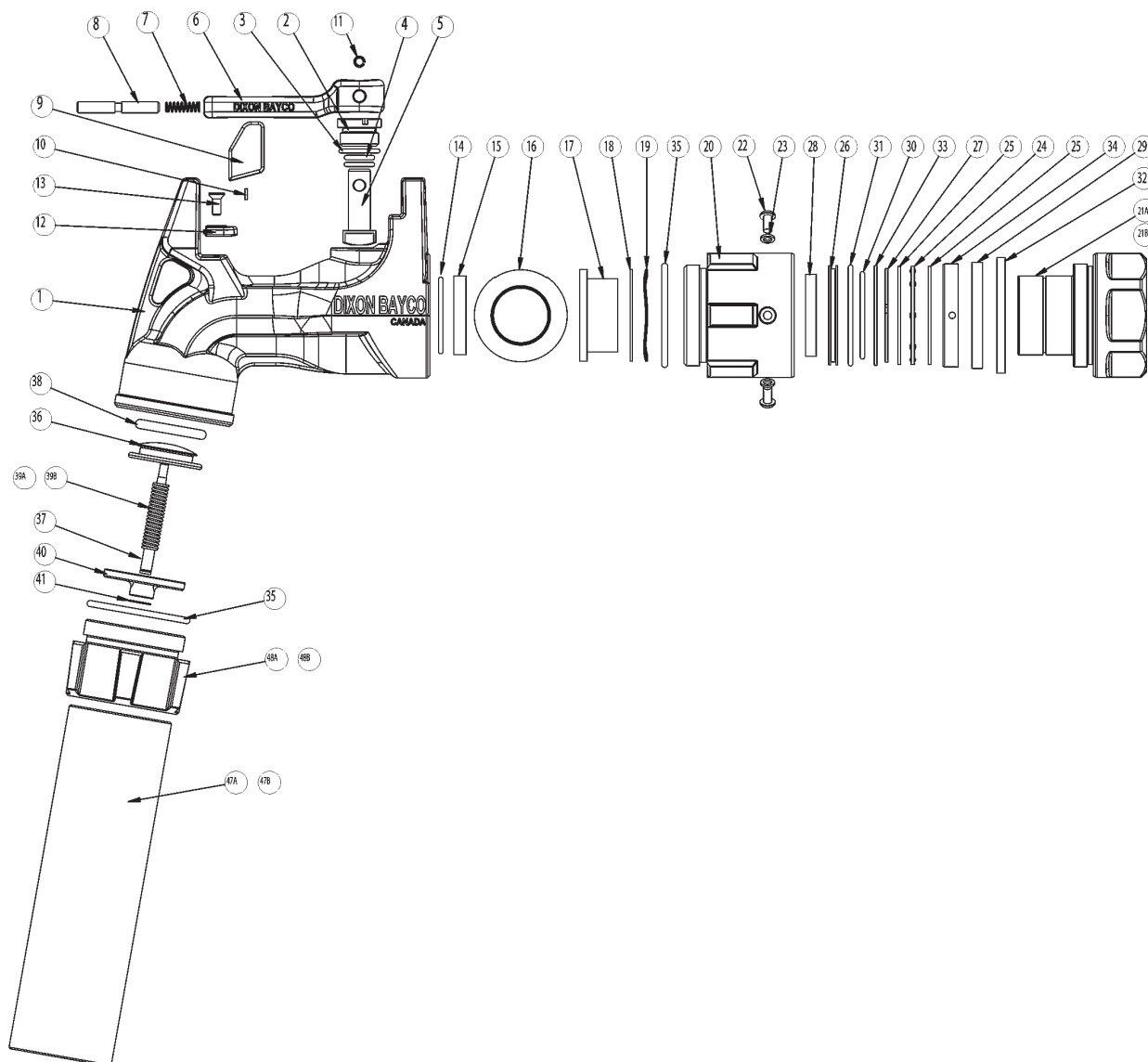
## BL Ball Nozzles

| BILL OF MATERIALS  |        |                            |     |
|--|--------|----------------------------|-----|
| PART NO.   | ITEM # | DESCRIPTION                | QTY |
| ---  | 1      | body                       | 1   |
| use kit BL-RK4   | 2      | bronze guide shaft         | 1   |
| use kit BL-RK4 or BL-RK10                                  | 3      | O-ring                     | 1   |
| use kit BL-RK4 or BL-RK10                                  | 4      | O-ring                     | 2   |
| use kit BL-RK4   | 5      | shaft lever                | 1   |
| use kit BL-RK13  | 6      | lever                      | 1   |
| use kit BL-RK13  | 7      | compression spring         | 1   |
| use kit BL-RK13  | 8      | shaft latch                | 1   |
| use kit BL-RK13  | 9      | latch                      | 1   |
| use kit BL-RK13  | 10     | screw                      | 1   |
| use kit BL-RK13  | 11     | pin                        | 1   |
| use kit BL-RK13  | 12     | lever plate                | 1   |
| use kit BL-RK13  | 13     | screw                      | 2   |
| use kit BL-RK10  | 14     | O-ring                     | 1   |
| use kit BL-RK10  | 15     | seal                       | 1   |
| BL062-2  | 16     | ball                       | 1   |
| use kit BL-RK10  | 17     | ball seat                  | 1   |
| 111719   | 18     | washer                     | 1   |
| 110902   | 19     | wave spring                | 2   |
| use kit SWMF-RK4, SWMF-RK5 or SWMF-RK6                     | 20     | swivel body                | 1   |
| use kit SWMF-RK5   | 21A    | swivel inlet 1¼" NPT       | 1   |
| use kit SWMF-RK4   | 21B    | swivel inlet 1½" NPT       | 1   |
| use kit SWMF-RK6   | 21C    | swivel inlet 1½" BSPP      | 1   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 22     | screw                      | 3   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 23     | lock washer                | 3   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 24     | thrust bearing             | 1   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 25     | thrust washer              | 2   |
| use kit SWMF-RK2, SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6 | 26     | O-ring holder              | 1   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 27     | retaining ring             | 1   |
| use kit SWMF-RK2, SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6 | 28     | font bearing               | 1   |
| use kit SWMF-RK2, SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6 | 29     | rear bearing               | 1   |
| use kit SWMF-RK2, SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6 | 30     | O-ring                     | 1   |
| use kit SWMF-RK2, SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6 | 31     | O-ring                     | 1   |
| use kit SWMF-RK2, SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6 | 32     | dust seal                  | 1   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 33     | support washer             | 1   |
| use kit SWMF-RK3, SWMF-RK4, SWMF-RK5 or SWMF-RK6           | 34     | support ring               | 1   |
| use kit SWMF-RK4, SWMF-RK5 or SWMF-RK6                     | 35     | O-ring                     | 1   |
| use kit BL-RK12  | 36     | poppet                     | 1   |
| use kit BL-RK12  | 37     | stem                       | 1   |
| use kit BL-RK10 or BL-RK12                                 | 38     | O-ring                     | 1   |
| use kit BL-RK12  | 39A    | compression spring (3 PSI) | 1   |
| use kit BL-RK11  | 39B    | compression spring (5 PSI) | 1   |
| use kit BL-RK12  | 40     | bridge                     | 1   |
| use kit BL-RK12  | 41     | retaining ring             | 1   |
| use kit BL005, BL-RK10, BL-RK11 or BL-RK12                 | 42     | washer                     | 1   |
| use kit BL005, BL-RK10 or BL-RK12                          | 43     | O-ring                     | 1   |
| use kit BL005  | 44     | O-ring                     | 1   |
| use kit BL005  | 45     | swivel nut                 | 1   |
| use kit BL005  | 46     | swivel adapter             | 1   |
| 1143A  | 47A    | spout 1¼"                  | 1   |
| 1125A  | 47B    | spout 1½"                  | 1   |
| 341703   | 48A    | spout adapter 1¼" NPT      | 1   |
| BL007  | 48B    | spout adapter 1½" NPT      | 1   |

# Replacement Parts

## BL Super Ball Nozzles

### 3" 90° and Straight Swivel Couplers



### REPAIR KITS

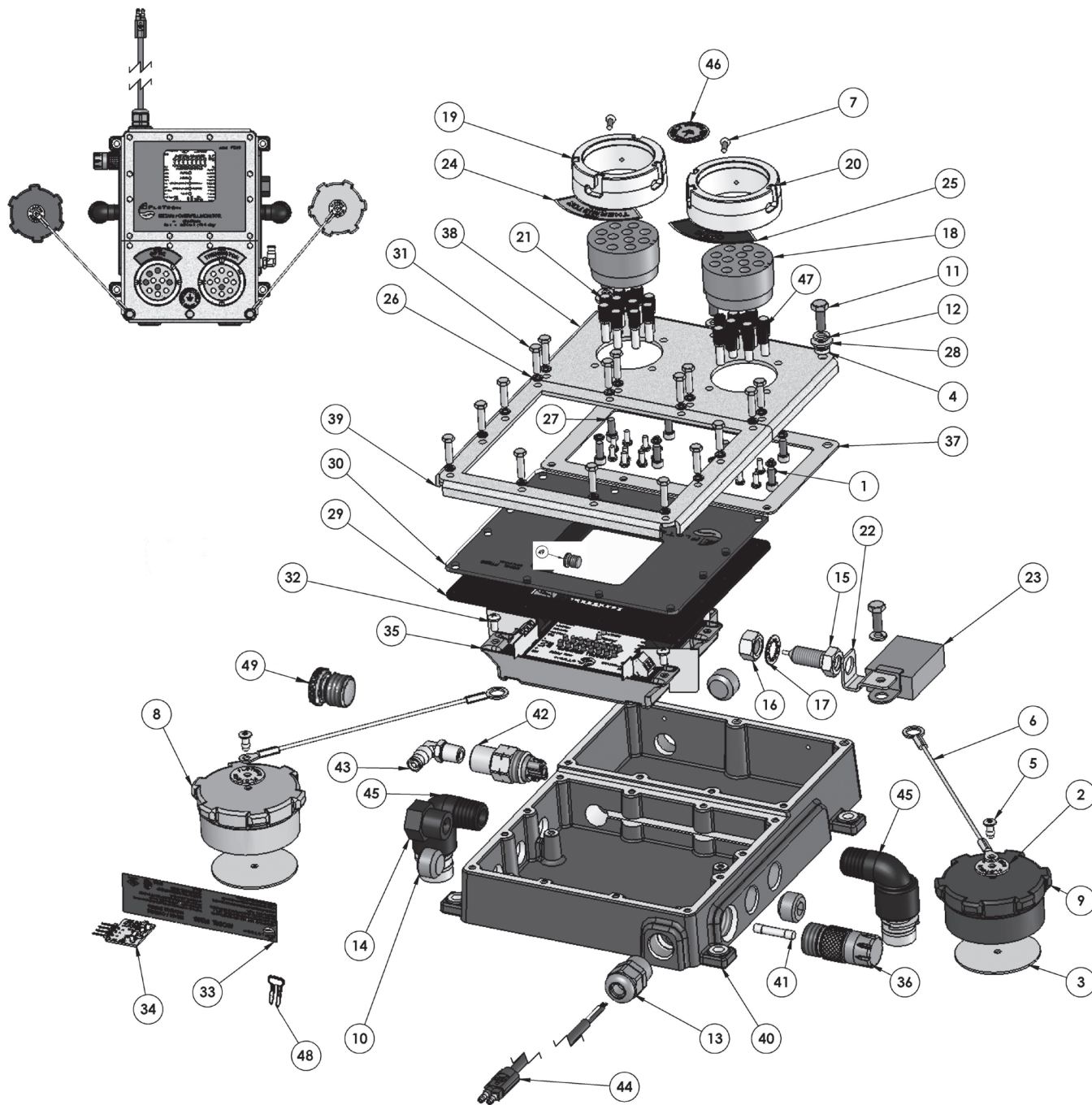
| PART NO.         | INCLUDES ITEM #  | DESCRIPTION                               |
|------------------|--|---|
| <b>SWMF-RK1</b>  | not illustrated  | inlet swivel grease nipple kit (optional) |
| <b>SWMF-RK22</b> | 26, 28, 29, 30, 31, 32   | inlet swivel seal and wear kit            |
| <b>SWMF-RK32</b> | 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34                       | complete inlet swivel rebuild kit         |
| <b>SWMF-RK42</b> | 20, 21A, 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 | 2" FNPT replacement inlet swivel          |
| <b>SWMF-RK52</b> | 20, 21B, 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 | 1½" FNPT replacement inlet swivel         |
| <b>BL-RK42</b>   | 2, 3, 4, 5   | ball valve shaft seal kit                 |
| <b>BL-RK102</b>  | 3, 4, 14, 15, 17, 35, 38   | complete ball nozzle seal kit             |
| <b>BL-RK112</b>  | 35, 39B  | optional check valve 5 PSI spring kit     |
| <b>BL-RK122</b>  | 35, 36, 37, 38, 39A, 40, 41  | standard check valve 3 PSI cartridge kit  |
| <b>BL-RK13</b>   | 6, 7, 8, 9, 10, 11, 12, 13(2)  | replacement trigger kit                   |

## BL Super Ball Nozzles

| BILL OF MATERIALS  |         |                    |     |
|--|---------|--------------------|-----|
| PART NO.   | ITEM #  | DESCRIPTION        | QTY |
| ---  | 1       | body               | 1   |
| use kit BL-RK42  | 2       | bronze guide shaft | 1   |
| use kit BL-RK42 or BL-RK102 (includes item 35)                                   | 3       | O-ring             | 2   |
| use kit BL-RK42 or BL-RK102 (includes item 35)                                   | 4       | O-ring             | 1   |
| use kit BL-RK42  | 5       | shaft lever        | 1   |
| use kit BL-RK13  | 6       | lever              | 1   |
| use kit BL-RK13  | 7       | compression spring | 1   |
| use kit BL-RK13  | 8       | shaft latch        | 1   |
| use kit BL-RK13  | 9       | latch              | 1   |
| use kit BL-RK13  | 10      | screw              | 1   |
| use kit BL-RK13  | 11      | pin                | 1   |
| use kit BL-RK13  | 12      | lever plate        | 1   |
| use kit BL-RK13  | 13      | screw              | 2   |
| use kit BL-RK102   | 14      | O-ring             | 1   |
| use kit BL-RK102   | 15      | seal               | 1   |
| 112091   | 16      | ball               | 1   |
| use kit BL-RK102   | 17      | ball seat          | 1   |
| 112092   | 18      | washer             | 1   |
| 112090   | 19      | wave spring        | 2   |
| use kit SWMF-RK42 or SWMF-RK52   | 20      | swivel body        | 1   |
| use kit SWMF-RK42 or SWMF-RK52   | 21A/B   | swivel inlet       | 1   |
| use kit SWMF-RK42 or SWMF-RK52   | 22      | screw              | 3   |
| use kit SWMF-RK42 or SWMF-RK52   | 23      | lock washer        | 3   |
| use kit SWMF-RK42 or SWMF-RK52   | 24      | thrust bearing     | 1   |
| use kit SWMF-RK42 or SWMF-RK52   | 25      | thrust washer      | 2   |
| use kit SWMF-RK22, SWMF-RK32, SWMF-RK42 or SWMF-RK52                             | 26      | O-ring holder      | 1   |
| use kit SWMF-RK32 (includes items 22,23, 24, 25, 33, 34), SWMF-RK42 or SWMF-RK52 | 27      | retaining ring     | 1   |
| use kit SWMF-RK22, SWMF-RK32, SWMF-RK42 or SWMF-RK52                             | 28      | front bearing      | 1   |
| use kit SWMF-RK22, SWMF-RK32, SWMF-RK42 or SWMF-RK52                             | 29      | rear bearing       | 1   |
| use kit SWMF-RK22, SWMF-RK32, SWMF-RK42 or SWMF-RK52                             | 30      | O-ring             | 1   |
| use kit SWMF-RK22, SWMF-RK32, SWMF-RK42 or SWMF-RK52                             | 31      | O-ring             | 1   |
| use kit SWMF-RK22, SWMF-RK32, SWMF-RK42 or SWMF-RK52                             | 32      | dust seal          | 1   |
| use kit SWMF-RK42 or SWMF-RK52   | 33      | support washer     | 1   |
| use kit SWMF-RK42 or SWMF-RK52   | 34      | support ring       | 1   |
| use kit SWMF-RK42 or SWMF-RK52   | 35      | O-ring             | 1   |
| use kit BL-RK122   | 36      | poppet             | 1   |
| use kit BL-RK122   | 37      | stem               | 1   |
| use kit BL-RK102 (includes item 35) or BL-RK122                                  | 38      | O-ring             | 1   |
| use kit BL-RK112 or BL-RK122   | 39A/B   | compression spring | 1   |
| use kit BL-RK122   | 40      | bridge             | 1   |
| use kit BL-RK122   | 41      | retaining ring     | 1   |
| 391137 (2") / 1125A (1½")  | 47A/47B | spout              | 1   |
| 341780 (NPT) / 341781 (BSPP)   | 48A/48B | spout adapter      | 1   |

# Replacement Parts

## FT208 - 39xP Series Plug-n-Play Monitors with Integrated Dual Sockets



### REPAIR KITS

| PART NO. | INCLUDES ITEM #  | DESCRIPTION  |
|----------|------------------|--|
| FT320    | 2, 3, 5, 6, 9    | replacement blue (optic) vinyl cap assembly                        |
| FT321    | 2, 3, 5, 6, 8    | replacement green (thermistor) vinyl cap assembly                  |
| FT9051   | 1, 7, 18, 21     | replacement contact assembly for FT390/393 Optic 6 pin             |
| FT9052   | 1, 7, 18, 21     | replacement contact assembly for FT390/393 Thermistor 10 pin       |
| FT9062   | 1, 7, 18, 19, 21 | replacement nose ring contact assembly, Thermistor 4J slot, 10 pin |
| FT9063   | 1, 7, 18, 20, 21 | replacement nose ring contact assembly, Optic 3 J slot, 6 pin      |
| FT9068   | 26, 27           | replacement contact block attachment screws and washers (4 each)   |

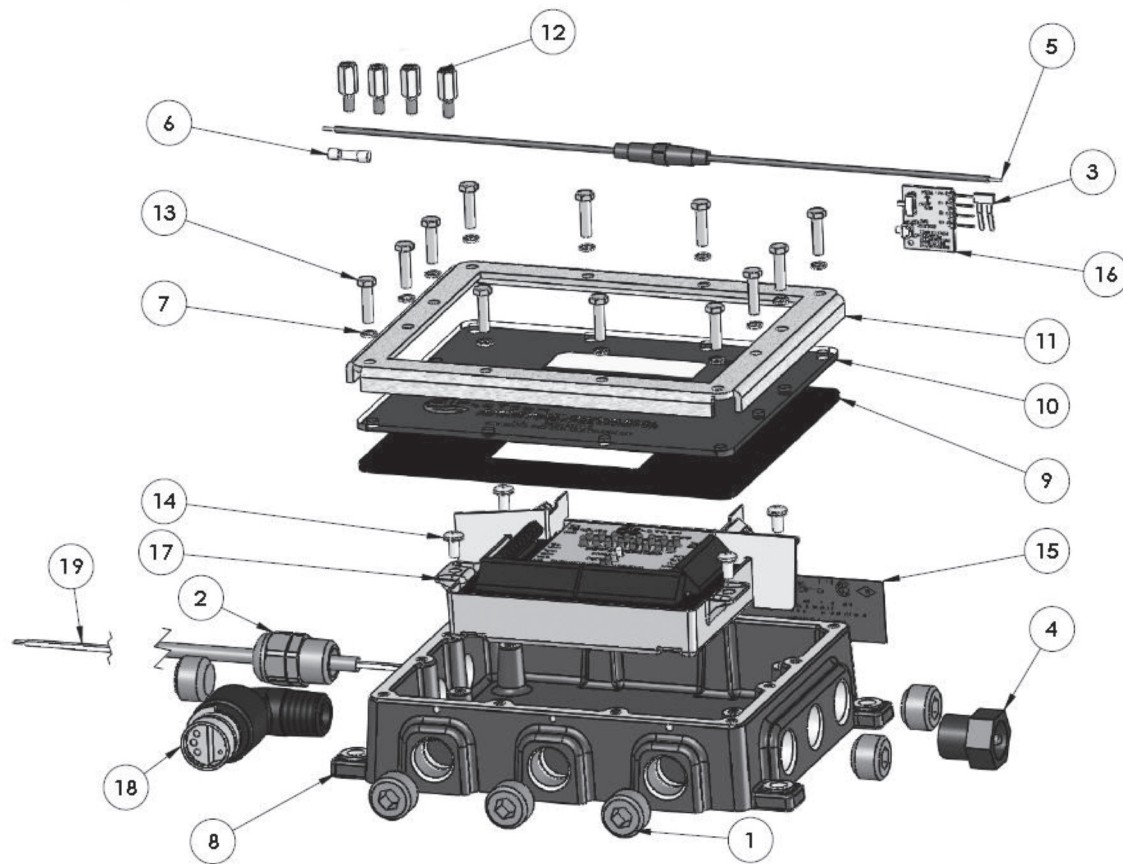
### Plug-n-Play Monitors with Integrated Dual Sockets

| PLUG-N-PLAY MONITORS WITH INTEGRATED DUAL SOCKETS |        |                                       |            |             |              |               |               |                |               |             |              |               |                |                |                 |                |            |             |              |               |               |             |              |               |                |                |     |
|---|--------|---------------------------------------|------------|-------------|--------------|---------------|---------------|----------------|---------------|-------------|--------------|---------------|----------------|----------------|-----------------|----------------|------------|-------------|--------------|---------------|---------------|-------------|--------------|---------------|----------------|----------------|-----|
| PART #  | ITEM # | DESCRIPTION                           | FT208-390P | FT208-390PG | FT208-390PGS | FT208-390PGSO | FT208-390PGST | FT208-390PGSTO | FT208-390PGET | FT208-390PP | FT208-390PPG | FT208-390PPGS | FT208-390PPGSO | FT208-390PPGST | FT208-390PPGSTO | FT208-390PPGET | FT208-391P | FT208-391PG | FT208-391PGS | FT208-391PGST | FT208-391PGET | FT208-391PP | FT208-391PPG | FT208-391PPGS | FT208-391PPGSO | FT208-391PPGST |     |
| 10086   | 1      | stainless steel screw                 | 16         | 16          | 16           | 16            | 16            | 16             | 16            | 16          | 16           | 16            | 16             | 16             | 16              | 16             | 16         | 16          | 16           | 16            | 16            | 16          | 16           | 16            | 16             | 16             | 16  |
| use kit FT320 or FT321                            | 2      | aluminium name plate - socket washer  | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| use kit FT320 or FT321                            | 3      | aluminium washer 2.500 x .0625        | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| 10089   | 4      | stainless steel spacer                | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| use kit FT320 or FT321                            | 5      | aluminium rivet .1875                 | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| use kit FT320 or FT321                            | 6      | stainless steel cable - socket 8"     | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| 10094   | 7      | stainless steel screw - contact block | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| use kit FT321                                     | 8      | vinyl dust cap - thermistor (green)   | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| use kit FT320                                     | 9      | vinyl dust cap - optic (blue)         | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10103   | 10     | polypropylene pipe plug               | 4          | 4           | 4            | 4             | 4             | 4              | 4             | 3           | 3            | 3             | 3              | 3              | 3               | 3              | 3          | 4           | 4            | 4             | 4             | 4           | 3            | 3             | 3              | 3              | 3   |
| 10110   | 11     | stainless steel screw                 | 4          | 4           | 4            | 4             | 4             | 4              | 4             | 4           | 4            | 4             | 4              | 4              | 4               | 4              | 4          | 4           | 4            | 4             | 4             | 4           | 4            | 4             | 4              | 4              | 4   |
| 10111   | 12     | stainless steel lock washer           | 4          | 4           | 4            | 4             | 4             | 4              | 4             | 4           | 4            | 4             | 4              | 4              | 4               | 4              | 4          | 4           | 4            | 4             | 4             | 4           | 4            | 4             | 4              | 4              | 4   |
| 10139   | 13     | polyamide strain relief               | n/a        | n/a         | n/a          | 1             | n/a           | 1              | n/a           | n/a         | n/a          | 1             | n/a            | 1              | n/a             | n/a            | n/a        | n/a         | n/a          | n/a           | n/a           | n/a         | n/a          | n/a           | n/a            | n/a            | n/a |
| 10200A  | 14     | reset switch assy                     | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10735-002   | 15     | ground wire assembly                  | n/a        | 1           | 1            | 1             | 1             | 1              | n/a           | 1           | 1            | n/a           | 1              | 1              | 1               | n/a            | 1          | 1           | 1            | 1             | 1             | n/a         | 1            | 1             | 1              | 1              | 1   |
| 10735-002   | 16     | ground wire assembly                  | n/a        | 1           | 1            | 1             | 1             | 1              | n/a           | 1           | 1            | n/a           | 1              | 1              | 1               | n/a            | 1          | 1           | 1            | 1             | 1             | n/a         | 1            | 1             | 1              | 1              | 1   |
| 10735-002   | 17     | ground wire assembly                  | n/a        | 1           | 1            | 1             | 1             | 1              | n/a           | 1           | 1            | n/a           | 1              | 1              | 1               | n/a            | 1          | 1           | 1            | 1             | 1             | n/a         | 1            | 1             | 1              | 1              | 1   |
| 10254   | 18     | plastic contact block - socket short  | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| 10366SS-001 (was FT9044)                          | 19     | stainless steel ring 4 J slots        | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| 10366SS-002 (was FT9043)                          | 20     | stainless steel ring 3 J slots        | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | n/a        | n/a         | n/a          | n/a           | n/a           | n/a         | n/a          | n/a           | n/a            | n/a            | n/a |
| 10368SS (was FT9061)                              | 21     | stainless steel socket pin - short    | 16         | 16          | 16           | 16            | 16            | 16             | 16            | 16          | 16           | 16            | 16             | 16             | 16              | 16             | 16         | 16          | 16           | 16            | 16            | 16          | 16           | 16            | 16             | 16             | 16  |
| 10735-002   | 22     | ground wire assembly                  | n/a        | 1           | 1            | 1             | 1             | 1              | n/a           | 1           | 1            | n/a           | 1              | 1              | 1               | 1              | n/a        | 1           | 1            | 1             | 1             | n/a         | 1            | 1             | 1              | 1              | 1   |
| 10372   | 23     | T.I.M. module                         | n/a        | n/a         | n/a          | n/a           | 1             | 1              | 1             | n/a         | n/a          | n/a           | 1              | 1              | 1               | n/a            | n/a        | n/a         | n/a          | 1             | 1             | n/a         | n/a          | n/a           | 1              | 1              | 1   |
| 10373AL   | 24     | aluminium name plate - thermistor     | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10374AL   | 25     | aluminium name plate - optic          | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10375SS   | 26     | stainless steel lock washer           | 24         | 24          | 24           | 24            | 24            | 24             | 24            | 24          | 24           | 24            | 24             | 24             | 24              | 24             | 24         | 24          | 24           | 24            | 24            | 24          | 24           | 24            | 24             | 24             | 24  |
| 10376SS   | 27     | stainless steel screw                 | 8          | 8           | 8            | 8             | 8             | 8              | 8             | 8           | 8            | 8             | 8              | 8              | 8               | 8              | 8          | 8           | 8            | 8             | 8             | 8           | 8            | 8             | 8              | 8              | 8   |
| 10382SS   | 28     | stainless steel washer                | 2          | 2           | 2            | 2             | 2             | 2              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 2          | 2           | 2            | 2             | 2             | 2           | 2            | 2             | 2              | 2              | 2   |
| 10432NP (was FT9045)                              | 29     | neoprene gasket                       | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10433PL   | 30     | acrylic bezel                         | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10436SS   | 31     | stainless steel screw                 | 16         | 16          | 16           | 16            | 16            | 16             | 16            | 16          | 16           | 16            | 16             | 16             | 16              | 16             | 16         | 16          | 16           | 16            | 16            | 16          | 16           | 16            | 16             | 16             | 16  |
| 10437SS   | 32     | stainless steel screw - sems          | 4          | 4           | 4            | 4             | 4             | 4              | 4             | 4           | 4            | 4             | 4              | 4              | 4               | 4              | 4          | 4           | 4            | 4             | 4             | 4           | 4            | 4             | 4              | 4              | 4   |
| 10438A  | 33     | chrome mylar label                    | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10459 (was FT9035)                                | 34     | programming board assembly            | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10465   | 35     | potted OBM                            | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10596PLAC   | 36     | fuse holder assembly                  | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10597CK   | 37     | cork gasket - lid                     | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10598AL   | 38     | aluminium faceplate                   | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10599AL   | 39     | aluminium frame                       | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10600AL   | 40     | aluminium housing                     | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10601   | 41     | glass fuse .5 amp                     | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| 10602BR   | 42     | brass pressure switch                 | n/a        | n/a         | 1            | 1             | 1             | n/a            | n/a           | n/a         | 1            | 1             | 1              | 1              | n/a             | n/a            | n/a        | 1           | 1            | n/a           | n/a           | n/a         | 1            | 1             | 1              | 1              | n/a |
| 10603BR   | 43     | brass dot air brake swivel fitting    | n/a        | n/a         | 1            | 1             | 1             | n/a            | n/a           | n/a         | 1            | 1             | 1              | 1              | n/a             | n/a            | n/a        | 1           | 1            | n/a           | n/a           | n/a         | 1            | 1             | 1              | 1              | n/a |
| 10612   | 44     | power wire Plug-N-Play                | n/a        | n/a         | n/a          | 1             | n/a           | 1              | n/a           | n/a         | n/a          | 1             | n/a            | 1              | n/a             | n/a            | n/a        | n/a         | n/a          | n/a           | n/a           | n/a         | n/a          | n/a           | n/a            | n/a            | n/a |
| 10616PLBN   | 45     | OBM plug elbow assy (Plug-n-Play)     | 1          | 1           | 1            | 1             | 1             | 1              | 2             | 2           | 2            | 2             | 2              | 2              | 2               | 2              | 1          | 1           | 1            | 1             | 1             | 1           | 2            | 2             | 2              | 2              | 2   |
| 10621AL   | 46     | aluminium label - ground bolt         | 1          | 1           | 1            | 1             | 1             | 1              | 1             | 1           | 1            | 1             | 1              | 1              | 1               | 1              | 1          | 1           | 1            | 1             | 1             | 1           | 1            | 1             | 1              | 1              | 1   |
| BLACK BUTTON INSERT                               | 47     | plastic black button insert           | 6          | 6           | 6            | 6             | 6             | 6              | 6             | 6           | 6            | 6             | 6              | 6              | 6               | 6              | 6          | 6           | 6            | 6             | 6             | 6           | 6            | 6             | 6              | 6              | 6   |
| 10196   | 48     | jumper cross connector                | 1          | 1           | n/a          | n/a           | n/a           | n/a            | 1             | 1           | 1            | n/a           | n/a            | n/a            | n/a             | 1              | 1          | 1           | n/a          | n/a           | 1             | 1           | 1            | n/a           | n/a            | 1              | 1   |
| 10606AC-002                                       | 49     | acetal plug                           | 1          | 1           | n/a          | n/a           | n/a           | n/a            | 1             | 1           | 1            | n/a           | n/a            | n/a            | n/a             | 1              | 1          | 1           | n/a          | n/a           | 1             | 1           | 1            | n/a           | n/a            | 1              | 1   |



# Replacement Parts

## FT 208P Series Plug-n-Play Stand Alone Monitors



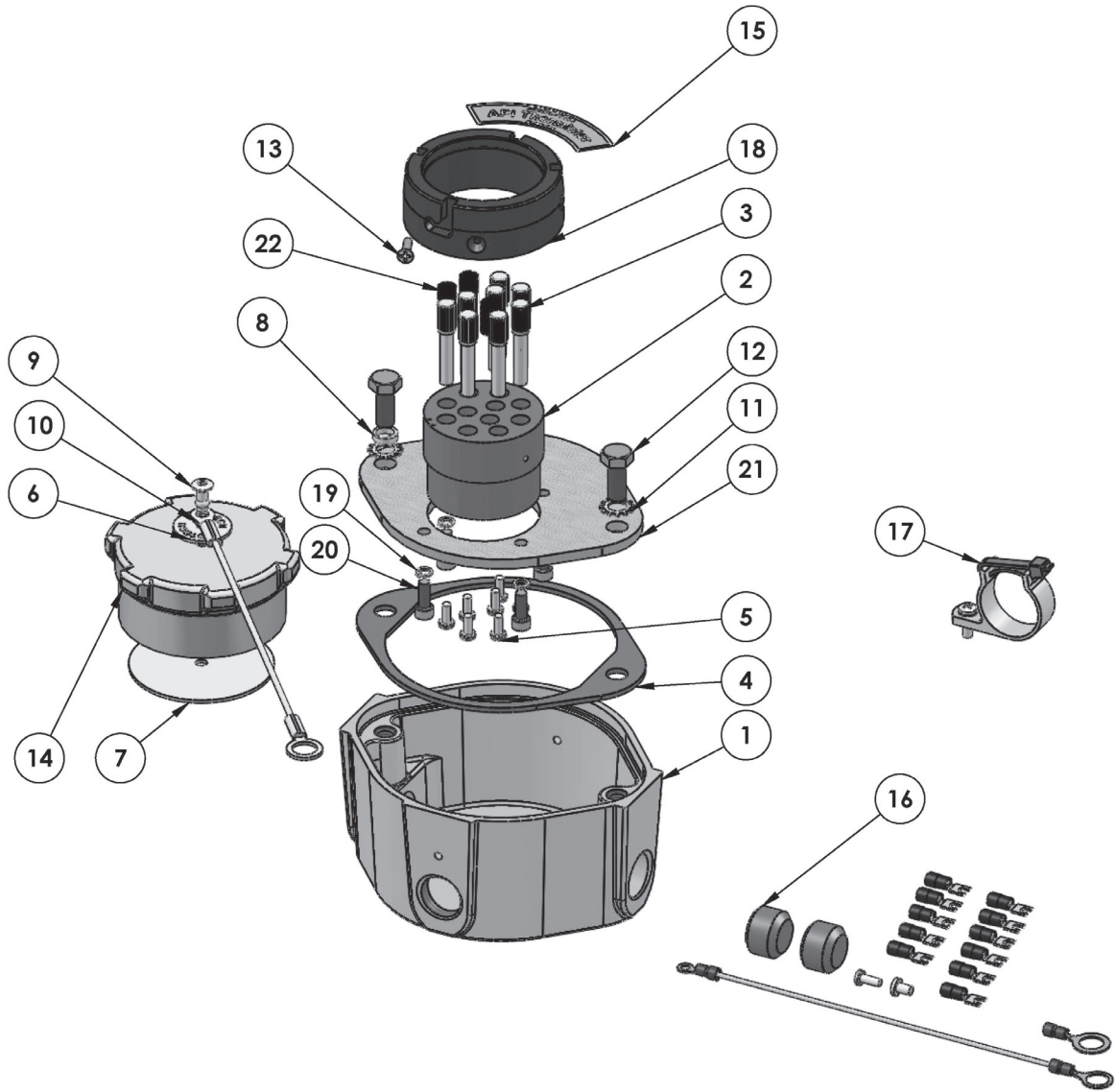
### BILL OF MATERIALS

| PART NO.             | ITEM # | DESCRIPTION                          | FT208P | FT208PP | FT208PPC |
|----------------------|--------|--------------------------------------|--------|---------|----------|
| 10103                | 1      | polypropylene pipe plug              | 6      | 4       | 3        |
| 10139                | 2      | polyamide strain relief              | 1      | 1       | 2        |
| 10196                | 3      | jumper - cross connector             | 1      | 1       | 1        |
| 10200A               | 4      | reset switch assembly                | 1      | 1       | 1        |
| 10356                | 5      | plastic fuse holder                  | 1      | 1       | 1        |
| 10358 (was FT9039)   | 6      | brass/glass fuse - 1/2 amp           | 1      | 1       | 1        |
| 10375SS              | 7      | stainless steel lock washer          | 12     | 12      | 12       |
| 10430AL              | 8      | aluminium box                        | 1      | 1       | 1        |
| 10432NP (was FT9045) | 9      | neoprene gasket                      | 1      | 1       | 1        |
| 10433PL              | 10     | acrylic bezel                        | 1      | 1       | 1        |
| 10434AL              | 11     | aluminium frame                      | 1      | 1       | 1        |
| 10435AL              | 12     | aluminium standoff (old style boxes) | 4      | 4       | n/a      |
| 10436SS              | 13     | stainless steel screw                | 12     | 12      | 12       |
| 10437SS              | 14     | stainless steel screw - stems        | 4      | 4       | 4        |
| 10438A               | 15     | chrome mylar label                   | 1      | 1       | 1        |
| 10459 (was FT9035)   | 16     | programming board assembly           | 1      | 1       | 1        |
| 10465                | 17     | potted OBM                           | 1      | 1       | 1        |
| 10616PLBN            | 18     | OBM plug elbow assy (Plug-n-Play)    | 1      | 3       | 3        |
| 10639                | 19     | power cable                          | 1      | 1       | n/a      |

### REPAIR KITS

| PART NO. | INCLUDES ITEM #  | DESCRIPTION                                  |
|----------|------------------|--|
| FT9036   | 7, 9, 10, 11, 13 | replacement lid, bezel, screws & lockwashers |
| FT9040   | 1, 7-14          | replacement checkmate housing with lid       |

Plug-n-Play Stand Alone Sockets FT300P & FT301P



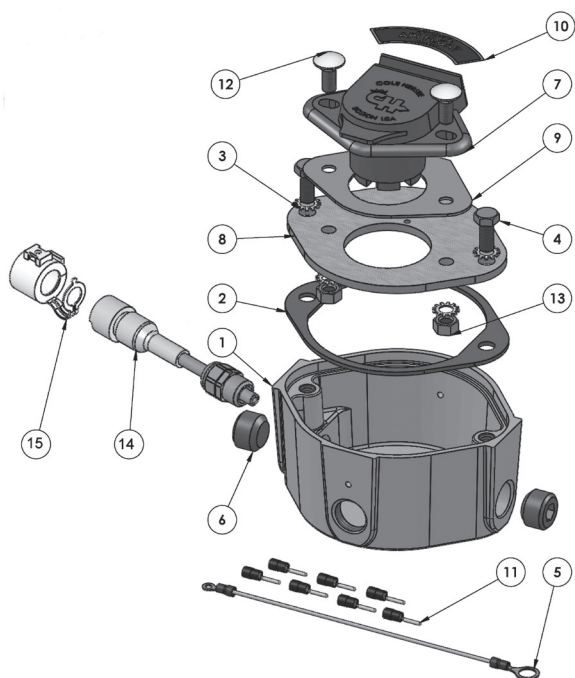
| REPAIR KITS |                             |  |
|-------------|-----------------------------|--|
| PART NO.    | INCLUDES ITEM #             | DESCRIPTION  |
| FT320       | 6, 7, 9, 10, 14B            | replacement blue (optic) vinyl cap assembly                                |
| FT321       | 6, 7, 9, 10, 14A            | replacement green (thermistor) vinyl cap assembly                          |
| FT310       | 2 - 16, 18 - 22             | face plate assembly - API optic ALH wear ring 6 pin 3 J Slots (US)         |
| FT310SS     | 2 - 16, 18 - 22             | face plate assembly - API optic SS GFL wear ring 6 pin 3 J Slots (US)      |
| FT311       | 2 - 22                      | face plate assembly - API Thermistor ALH wear ring 8 pin 4 J Slots (US)    |
| FT311SS     | 2 - 22                      | face plate assembly - API Thermistor SS GFL wear ring 8 pin 4 J Slots (US) |
| FT9008      | 2, 3, 5, 13                 | replacement contact block for FT300 Optic                                  |
| FT9009      | 2, 3, 5, 13                 | replacement contact block for FT301 Thermistor                             |
| FT9013      | 4, 15B, 18A, 19-21          | replacement faceplate 4 J slot (without contact block or hardware)         |
| FT9020      | 3, 5                        | replacement socket pin, screw & crimp lug                                  |
| FT9034      | 4, 15A, 18B, 19-21          | replacement 3 J slot (without contact block and hardware)                  |
| FT9046      | 3, 5                        | replacement socket contact pins and screws                                 |
| FT9068      | 19, 20                      | replacement contact block attachment screws and washers (4 each)           |
| 10387P-20   | Refer to page 134 for image | wiring harness (Plug-n-Play) 20 ft.  |
| 10605PL     | Refer to page 134 for image | plastic clip   |

# Replacement Parts

## Plug-n-Play Stand Alone Sockets FT300P & FT301P

| BILL OF MATERIALS          |        |                                       |        |        |       |         |       |         |
|----------------------------|--------|---------------------------------------|--------|--------|-------|---------|-------|---------|
| PART NO.                   | ITEM # | DESCRIPTION                           | FT300P | FT301P | FT310 | FT310SS | FT311 | FT311SS |
| 10031 (was FT9007)         | 1      | aluminium housing                     | 1      | 1      | n/a   | n/a     | n/a   | n/a     |
| 10690PL-001                | 2      | plastic contact block                 | 1      | 1      | 1     | 1       | 1     | 1       |
| 10368SS                    | 3      | stainless steel socket pin            | 6      | 8      | 6     | 6       | 8     | 8       |
| 10038 (was FT9032)         | 4      | neoprene gasket                       | 1      | 1      | 1     | 1       | 1     | 1       |
| 10086                      | 5      | stainless steel screw                 | 6      | 8      | 6     | 6       | 8     | 8       |
| Use cap kit FT320 or FT321 | 6      | aluminium name plate - socket washer  | 1      | 1      | 1     | 1       | 1     | 1       |
| Use cap kit FT320 or FT321 | 7      | aluminium washer 2.500 x .0625        | 1      | 1      | 1     | 1       | 1     | 1       |
| 10089                      | 8      | stainless steel spacer                | 1      | 1      | 1     | 1       | 1     | 1       |
| Use cap kit FT320 or FT321 | 9      | aluminium rivet .1875                 | 1      | 1      | 1     | 1       | 1     | 1       |
| Use cap kit FT320 or FT321 | 10     | stainless steel cable - socket 8"     | 1      | 1      | 1     | 1       | 1     | 1       |
| 10092                      | 11     | stainless steel lock washer           | 2      | 2      | 2     | 2       | 2     | 2       |
| 10093                      | 12     | stainless steel screw                 | 2      | 2      | 2     | 2       | 2     | 2       |
| 10094                      | 13     | stainless steel screw - contact block | 1      | 1      | 1     | 1       | 1     | 1       |
| Use cap kit FT321          | 14A    | vinyl dust cap - thermistor (green)   | n/a    | 1      | n/a   | n/a     | 1     | 1       |
| Use cap kit FT320          | 14B    | vinyl dust cap - optic (blue)         | 1      | n/a    | 1     | 1       | n/a   | n/a     |
| 10099                      | 15A    | aluminium name plate - FT300          | 1      | n/a    | 1     | 1       | n/a   | n/a     |
| 10100                      | 15B    | aluminium name plate - FT301          | n/a    | 1      | n/a   | n/a     | 1     | 1       |
| 10106                      | 16     | assembly hardware                     | 1      | 1      | 1     | 1       | 1     | 1       |
| 10264                      | 17     | nylon clamp assembly                  | n/a    | 1      | n/a   | n/a     | 1     | 1       |
| 10366HC-001 (was FT9042)   | 18A    | ALH wear ring - 4 J slots             | n/a    | 1      | n/a   | n/a     | 1     | n/a     |
| 10366HC-002 (was FT9041)   | 18B    | ALH wear ring - 3 J slots             | 1      | n/a    | 1     | n/a     | n/a   | n/a     |
| 10366SS-001 (was FT9044)   | 18C    | stainless steel wear ring - 4 J slots | n/a    | n/a    | n/a   | n/a     | n/a   | 1       |
| 10366SS-002 (was FT9043)   | 18D    | stainless steel wear ring - 3 J slots | n/a    | n/a    | n/a   | 1       | n/a   | n/a     |
| 10375SS                    | 19     | stainless steel lock washer           | 4      | 4      | 4     | 4       | 4     | 4       |
| 10376SS                    | 20     | stainless steel screw                 | 4      | 4      | 4     | 4       | 4     | 4       |
| 10431AL                    | 21     | aluminium socket plate                | 1      | 1      | 1     | 1       | 1     | 1       |
| BLACK BUTTON INSERT        | 22     | plastic black button insert           | 6      | 6      | 6     | 6       | 6     | 6       |
| 10387P-20                  | 23     | wiring harness (Plug-n-Play) 20 ft.   | 1      | 1      | n/a   | n/a     | n/a   | n/a     |
| 10605PL                    | 24     | plastic clip                          | 1      | 1      | n/a   | n/a     | n/a   | n/a     |

**Plug-n-Play Stand Alone Sockets FT306P**

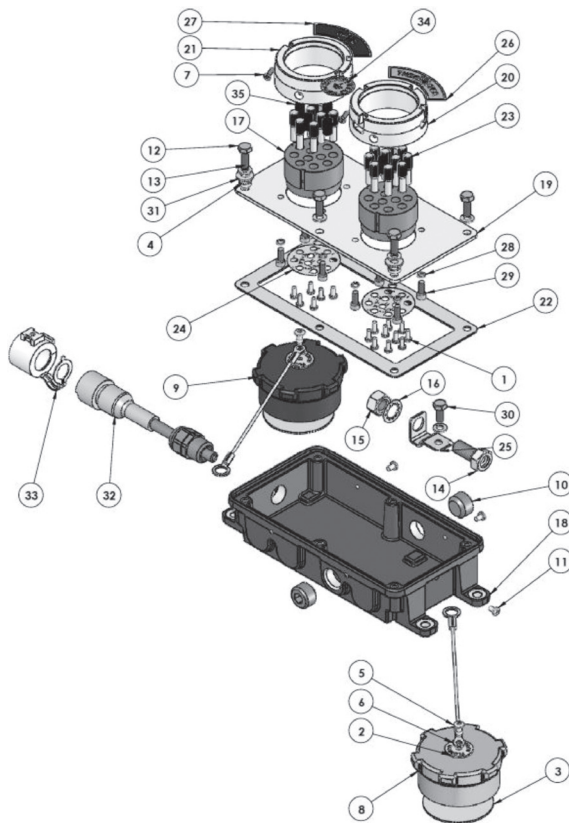


| BILL OF MATERIALS     |        |                                     |        |          |
|-----------------------|--------|-------------------------------------|--------|----------|
| PART NO.              | ITEM # | DESCRIPTION                         | FT208P | FT208PPC |
| 10031<br>(was FT9007) | 1      | aluminium housing                   | 1      | n/a      |
| 10038<br>(was FT9032) | 2      | neoprene gasket                     | 1      | 1        |
| 10092                 | 3      | stainless steel lock washer         | 4      | 4        |
| 10093                 | 4      | stainless steel screw               | 2      | 2        |
| 10095                 | 5      | wire, assembly, socket              | 1      | 1        |
| 10103                 | 6      | polypropylene pipe plug             | 2      | 2        |
| 10119<br>(was FT9029) | 7      | J560 type socket                    | 1      | 1        |
| 10120                 | 8      | aluminium face plate                | 1      | 1        |
| 10121                 | 9      | neoprene gasket                     | 1      | 1        |
| 10235                 | 10     | aluminium name plate - optic        | 1      | 1        |
| 10123                 | 11     | terminal pin                        | 7      | 7        |
| 10507SS               | 12     | stainless steel carriage bolt       | 2      | 2        |
| 10508SS               | 13     | stainless steel nut                 | 2      | 2        |
| 10387P-20             | 14     | wiring harness (Plug-n-Play) 20 ft. | 1      | n/a      |
| 10605PL               | 15     | plastic clip                        | 1      | n/a      |

| REPAIR KITS |        |  |
|-------------|--------|--|
| PART NO.    | ITEM # | DESCRIPTION                            |
| FT316       | 2 - 13 | face plate assembly- Optic J560 socket |

# Replacement Parts

## Plug-n-Play Stand Alone Sockets FT390PG-20



### BILL OF MATERIALS

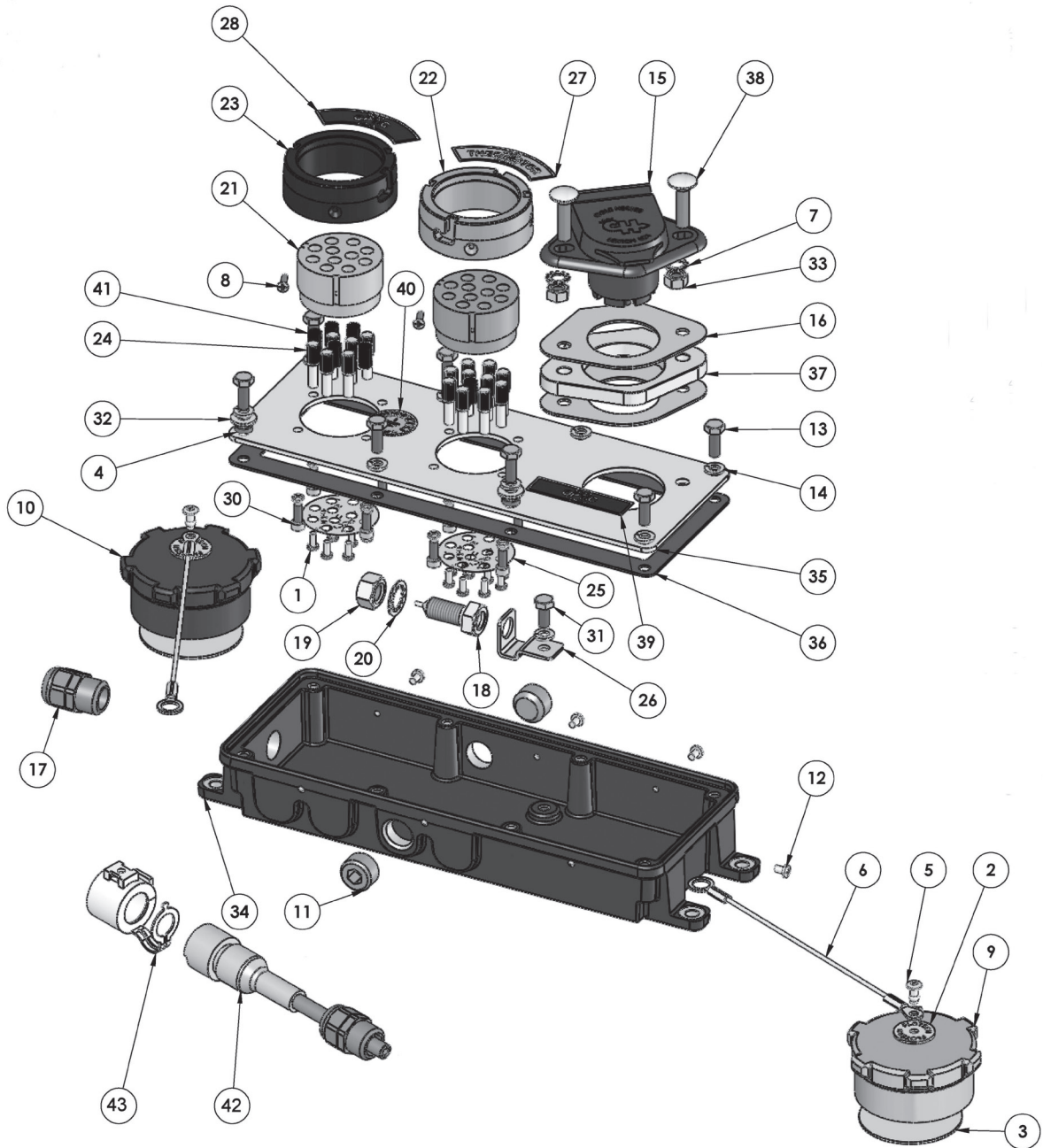
| PART NO.               | ITEM # | DESCRIPTION                                | QTY |
|------------------------|--------|--|-----|
| 10086                  | 1      | stainless steel screw                      | 16  |
| use kit FT320 or FT321 | 2      | aluminium name plate - socket washer       | 2   |
| use kit FT320 or FT321 | 3      | aluminium washer 2.500 x .0625             | 2   |
| 10089                  | 4      | stainless steel spacer                     | 2   |
| use kit FT320 or FT321 | 5      | aluminium rivet .1875                      | 2   |
| use kit FT320 or FT321 | 6      | stainless steel cable - socket 8"          | 2   |
| 10094                  | 7      | stainless steel screw - contact block      | 2   |
| use kit FT321          | 8      | vinyl dust cap - green                     | 1   |
| use kit FT320          | 9      | vinyl dust cap - blue                      | 1   |
| 10103                  | 10     | polypropylene pipe plug                    | 2   |
| 10105                  | 11     | steel screw - plug                         | 3   |
| 10110                  | 12     | stainless steel screw                      | 6   |
| 10111                  | 13     | stainless steel lock washer - 1/4"         | 7   |
| 10223                  | 14     | stainless steel ground bolt                | 1   |
| 10224                  | 15     | stainless steel nut - ground bolt 1/2"-13  | 1   |
| 10225                  | 16     | stainless steel lock washer internal tooth | 1   |
| 10254                  | 17     | plastic contact block - socket short       | 2   |
| 10364AL-001            | 18     | aluminium box - dual socket                | 1   |
| 10365AL                | 19     | aluminium faceplate - dual socket          | 1   |
| 10366SS-001            | 20     | stainless steel socket -                   |     |
| 10366SS-002            | 21     | stainless steel socket - optic             | 1   |
| 10367CK                | 22     | cork gasket - lid                          | 1   |
| 10368SS (was FT9061)   | 23     | stainless steel socket pin - short         | 16  |
| 10369VY                | 24     | vinyl label - socket contact               | 2   |
| 10370SS                | 25     | stainless steel bracket - ground bolt      | 1   |
| 10373AL                | 26     | aluminium name plate - thermistor          | 1   |
| 10374AL                | 27     | aluminium name plate - optic               | 1   |
| 10375SS                | 28     | stainless steel lock washer                | 8   |
| 10376SS                | 29     | stainless steel screw                      | 8   |
| 10377SS                | 30     | stainless steel screw                      | 1   |
| 10382SS                | 31     | stainless steel washer                     | 2   |
| 10387P-20              | 32     | wiring harness (Plug-n-Play) 20 ft.        | 1   |
| 10605PL                | 33     | plastic clip                               | 1   |
| 10621AL                | 34     | aluminium label - ground bolt              | 1   |
| BLACK BUTTON INSERT    | 35     | plastic black button insert                | 6   |

### REPAIR KITS

| PART NO. | ITEM #               | DESCRIPTION  |
|----------|----------------------|--|
| FT320    | 2, 3, 5, 6, 9        | replacement blue (optic) vinyl cap assembly                          |
| FT321    | 2, 3, 5, 6, 8        | replacement green (thermistor) vinyl cap assembly                    |
| FT9051   | 1, 7, 17, 23, 24     | replacement contact block assembly for FT390/FT393 Optic 6 pin       |
| FT9052   | 1, 7, 17, 23, 24     | replacement contact block assembly for FT390/FT393 Thermistor 10 pin |
| FT9062   | 1, 7, 17, 20, 23, 24 | replacement nose ring, contact assembly, Thermistor 4J slot, 10 pin  |
| FT9063   | 1, 7, 17, 21, 23, 24 | replacement nose ring, contact assembly, Optic 3J slot, 6 pin        |
| FT9068   | 28, 29               | replacement contact block attachment screws and washers (4 each)     |



### Plug-n-Play Stand Alone Sockets FT394P & FT395P Series



#### REPAIR KITS

| PART NO. | INCLUDES ITEM #      | DESCRIPTION  |
|----------|----------------------|--|
| FT320    | 2, 3, 5, 6, 10       | replacement blue (optic) vinyl cap assembly                          |
| FT321    | 2, 3, 5, 6, 9        | replacement green (thermistor) vinyl cap assembly                    |
| FT9051   | 1,8, 21, 24, 25      | replacement contact block assembly for FT390/FT393 Optic 6 pin       |
| FT9052   | 1,8, 21, 24, 25      | replacement contact block assembly for FT390/FT393 Thermistor 10 pin |
| FT9062   | 1, 8, 21, 22, 24, 25 | replacement nose ring contact assembly, Thermistor 4J slot, 10 pin   |
| FT9063   | 1,8, 21, 23, 24, 25  | replacement nose ring contact assembly, Optic 3J slot, 6 pin         |
| FT9068   | 29, 30               | replacement contact block attachment screws and washers (4 each)     |



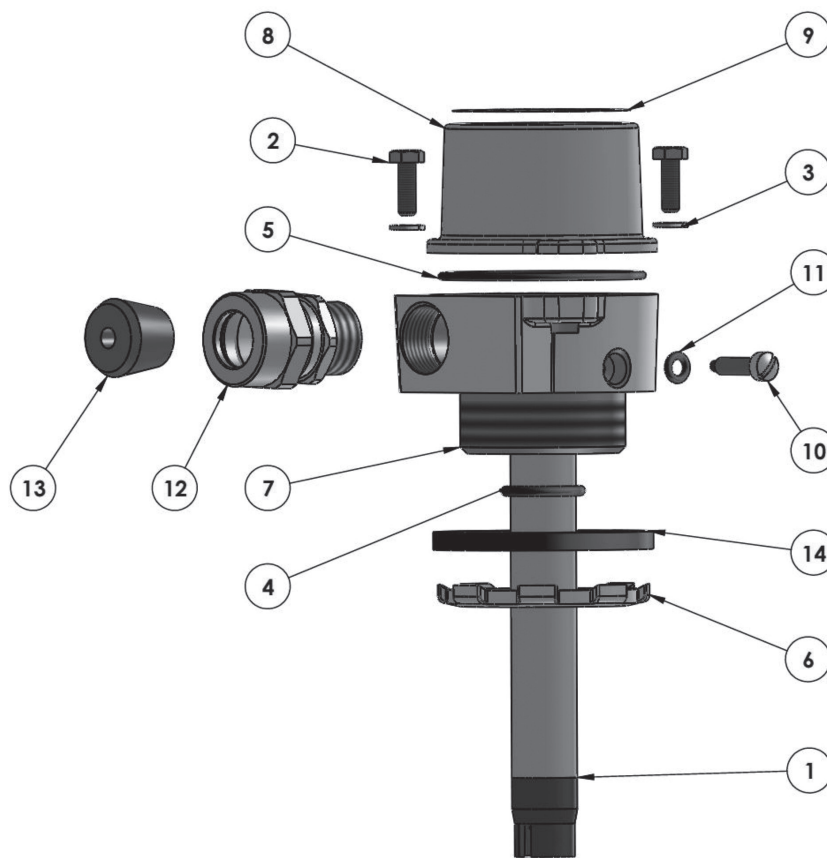


# Replacement Parts

## Plug-n-Play Stand Alone Sockets FT394P & FT395P Series

| BILL OF MATERIALS        |        |  |        |         |         |          |            |
|--------------------------|--------|--|--------|---------|---------|----------|------------|
| PART NO.                 | ITEM # | DESCRIPTION                                | FT394P | FT394VP | FT394PG | FT394VPG | FT395PG-20 |
| 10086                    | 1      | stainless steel screw                      | 16     | 16      | 16      | 16       | 16         |
| 10087                    | 2      | aluminium name plate - socket washer       | 2      | 2       | 2       | 2        | 2          |
| use kit FT320 or FT321   | 3      | aluminium washer 2.500 x .0625             | 2      | 2       | 2       | 2        | 2          |
| use kit FT320 or FT321   | 4      | stainless steel spacer                     | 2      | 2       | 2       | 2        | 2          |
| use kit FT320 or FT321   | 5      | aluminium rivet .1875                      | 2      | 2       | 2       | 2        | 2          |
| use kit FT320 or FT321   | 6      | stainless steel cable - socket 8"          | 2      | 2       | 2       | 2        | 2          |
| 10092                    | 7      | stainless steel lock washer                | 2      | 2       | 2       | 2        | 2          |
| 10094                    | 8      | stainless steel screw - contact block      | 2      | 2       | 2       | 2        | 2          |
| use kit FT321            | 9      | vinyl dust cap - thermistor (green)        | 1      | 1       | 1       | 1        | 1          |
| use kit FT320            | 10     | vinyl dust cap - optic (blue)              | 1      | 1       | 1       | 1        | 1          |
| 10103                    | 11     | polypropylene pipe plug                    | 2      | 2       | 2       | 2        | 2          |
| 10105                    | 12     | steel screw - plug                         | 4      | 4       | 4       | 4        | 4          |
| 10110                    | 13     | stainless steel screw                      | 8      | 8       | 8       | 8        | 8          |
| 10111                    | 14     | stainless steel lock washer - 1/4"         | 9      | 9       | 9       | 9        | 9          |
| 10119 (was FT9029)       | 15     | J560 socket                                | 1      | 1       | 1       | 1        | 1          |
| 10121                    | 16     | neoprene gasket, float socket              | 2      | 2       | 2       | 2        | 2          |
| 10139                    | 17     | polyamide strain relief                    | 1      | 1       | 1       | 1        | 1          |
| 10223                    | 18     | stainless steel ground bolt                | n/a    | n/a     | 1       | 1        | n/a        |
| 10224                    | 19     | stainless steel nut - ground bolt 1/2"- 13 | n/a    | n/a     | 1       | 1        | n/a        |
| 10225                    | 20     | stainless steel lock washer internal tooth | n/a    | n/a     | 1       | 1        | n/a        |
| 10254                    | 21     | plastic contact block - socket short       | 2      | 2       | 2       | 2        | 2          |
| 10366SS-001 (was FT9044) | 22     | stainless steel wear ring - 4 J Slot       | 1      | 1       | 1       | 1        | 2          |
| 10366SS-002 (was FT9043) | 23     | stainless steel wear ring - 3 J Slot       | 1      | 1       | 1       | 1        | n/a        |
| 10368SS (was FT9061)     | 24     | stainless steel socket pin - short         | 16     | 16      | 16      | 16       | 16         |
| 10369VY                  | 25     | vinyl label - socket contact               | 2      | 2       | 2       | 2        | 2          |
| 10370SS                  | 26     | stainless steel bracket - ground bolt      | 1      | 1       | 1       | 1        | 1          |
| 10373AL                  | 27     | aluminium name plate - thermistor          | 1      | 1       | 1       | 1        | 1          |
| 10374AL                  | 28     | aluminium name plate - optic               | 1      | 1       | 1       | 1        | 1          |
| 10375SS                  | 29     | stainless steel lock washer                | 8      | 8       | 8       | 8        | 8          |
| 10376SS                  | 30     | stainless steel screw                      | 8      | 8       | 8       | 8        | 8          |
| 10377SS                  | 31     | stainless steel screw                      | 1      | 1       | 1       | 1        | 1          |
| 10382SS                  | 32     | stainless steel washer                     | 2      | 2       | 2       | 2        | 2          |
| 10508SS                  | 33     | stainless steel nut                        | 2      | 2       | 2       | 2        | 2          |
| 10525AL                  | 34     | aluminium box - 3 socket                   | 1      | 1       | 1       | 1        | 1          |
| 10526AL                  | 35     | aluminium faceplate - three socket         | 1      | 1       | 1       | 1        | 1          |
| 10527CK                  | 36     | cork gasket - lid                          | 1      | 1       | 1       | 1        | 1          |
| 10529AC                  | 37     | acetal spacer                              | 1      | 1       | 1       | 1        | 1          |
| 10530SS                  | 38     | stainless steel carriage bolt              | 2      | 2       | 2       | 2        | 2          |
| 10558AL                  | 39     | aluminium name plate - optic (blue)        | 1      | 1       | 1       | 1        | 1          |
| 10621AL                  | 40     | aluminium label - ground bolt              | n/a    | n/a     | 1       | 1        | n/a        |
| BLACK BUTTON INSERT      | 41     | plastic black button insert                | 6      | 6       | 6       | 6        | 6          |
| 10387P-20                | 42     | wiring harness (Plug-n-Play) 20 ft.        | 1      | 1       | 1       | 1        | 1          |
| 10605PL                  | 43     | plastic clip                               | 1      | 1       | 1       | 1        | 1          |

**Plug-n-Play Sensors FT151P Series, Overfill Sensor Housings**



**BILL OF MATERIALS**

| PART NO.              | ITEM # | DESCRIPTION                             | QTY |
|-----------------------|--------|---|-----|
| 10110                 | 2      | stainless steel screw                   | 2   |
| 10111                 | 3      | stainless steel lock washer - 1/4"      | 2   |
| 10125 (was FT9027)    | 4      | FKM O-ring                              | 1   |
| 10126 (was FT9049)    | 5      | Buna O-ring                             | 1   |
| 10128 (was FT9012)    | 6      | steel locknut                           | 1   |
| 10183-P&P             | 7      | aluminium sensor housing                | 1   |
| 10185                 | 8      | aluminium sensor housing cap            | 1   |
| 10204                 | 9      | mylar label                             | 1   |
| 10212                 | 10     | stainless steel screw with nylon insert | 1   |
| 10213                 | 11     | Buna-N O-ring                           | 1   |
| 10248                 | 12     | cord grip assembly                      | 1   |
| 10638                 | 13     | rubber bushing                          | 1   |
| 250-G-BU (was FT9026) | 14     | Buna-N gasket                           | 1   |

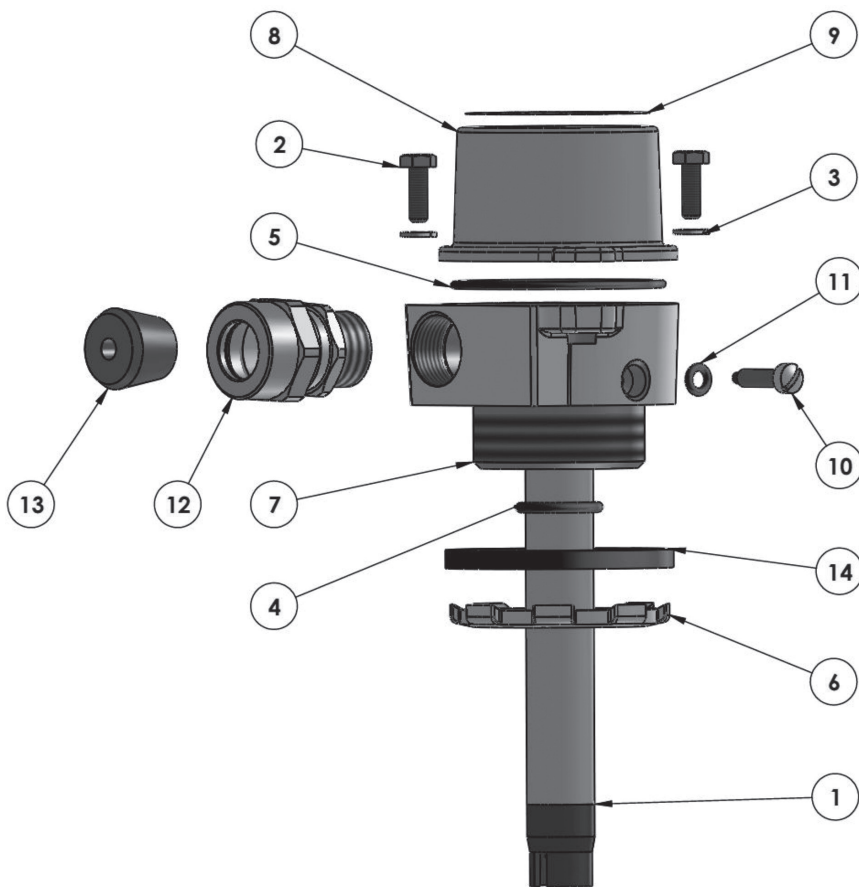
**REPAIR KITS**

| PART NO.  | INCLUDES ITEM # | DESCRIPTION   |
|-----------|-----------------|---|
| FT150P    | 1               | replacement Plug-n-Play overfill detection probe. - 7"          |
| FT150-12P | 1               | replacement Plug-n-Play overfill detection probe. - 12"         |
| FT150-18P | 1               | replacement Plug-n-Play overfill detection probe. - 18"         |
| FT9000P   | 2-14            | complete replacement Plug-n-Play sensor housing (without probe) |
| FT9001    | 5, 6, 7, 13     | sensor housing gasket & O-ring kit                              |
| FT9011    | 2, 3, 8         | sensor housing cap with screws & lock washers                   |



# Replacement Parts

## Plug-n-Play Sensors FT151P Series, Overfill Sensor Housings



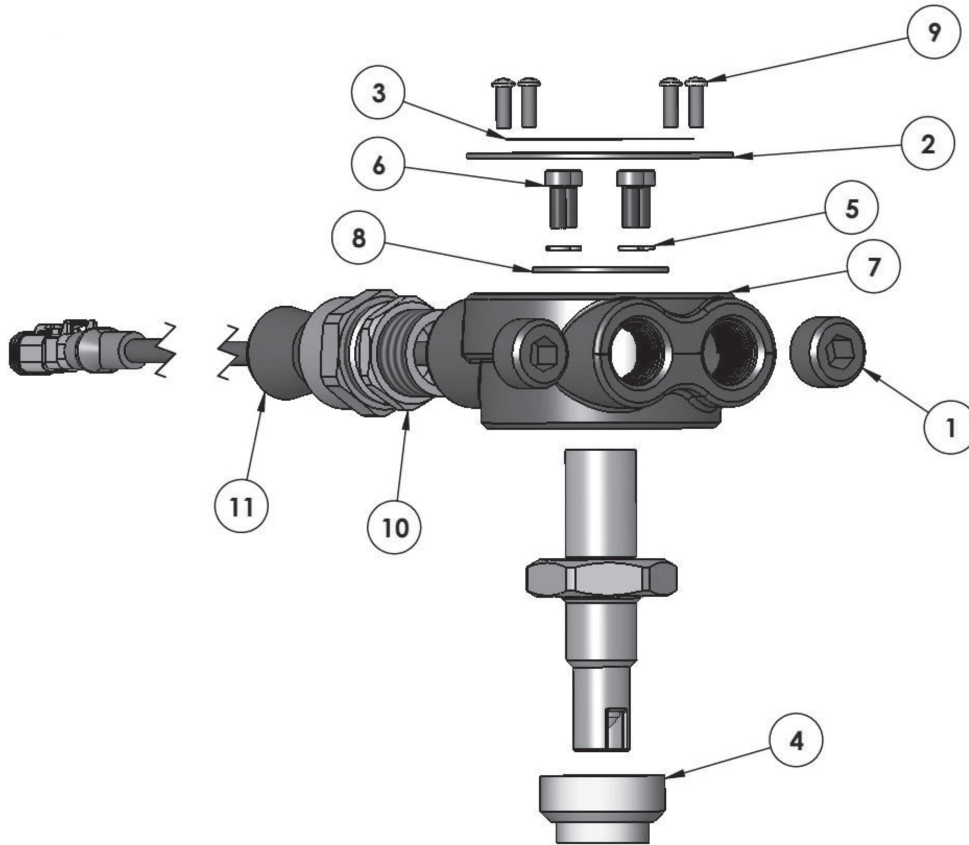
### BILL OF MATERIALS

| PART NO.           | ITEM # | DESCRIPTION                             | QTY |
|--------------------|--------|---|-----|
| See repair kits    | 1      | Plug-n-Play probe                       | 1   |
| 10110              | 2      | stainless steel screw                   | 2   |
| 10111              | 3      | stainless steel lock washer - 1/4"      | 2   |
| 10125 (was FT9027) | 4      | FKM O-ring                              | 1   |
| 10126 (was FT9049) | 5      | Buna O-ring                             | 1   |
| 10128 (was FT9012) | 6      | steel locknut                           | 1   |
| 10183-P&P          | 7      | aluminium sensor housing                | 1   |
| 10185              | 8      | aluminium sensor housing cap            | 1   |
| 10204              | 9      | mylar label                             | 1   |
| 10212              | 10     | stainless steel screw with nylon insert | 1   |
| 10213              | 11     | Buna-N O-ring                           | 1   |
| 10248              | 12     | cord grip assembly                      | 1   |
| 10638              | 13     | rubber bushing                          | 1   |

### REPAIR KITS

| PART NO.  | INCLUDES ITEM # | DESCRIPTION   |
|-----------|-----------------|---|
| FT150P    | 1               | replacement Plug-n-Play overfill detection probe. - 7"          |
| FT150-12P | 1               | replacement Plug-n-Play overfill detection probe. - 12"         |
| FT150-18P | 1               | replacement Plug-n-Play overfill detection probe. - 18"         |
| FT9000P   | 2-14            | complete replacement Plug-n-Play sensor housing (without probe) |
| FT9001    | 5, 6, 7, 13     | sensor housing gasket & O-ring kit                              |
| FT9011    | 2, 3, 8         | sensor housing cap with screws & lock washers                   |

### Plug-n-Play Sensors FT152P Retain Sensor Housings



#### BILL OF MATERIALS

| PART NO.           | ITEM # | DESCRIPTION                  | QTY |
|--------------------|--------|------------------------------|-----|
| 10103              | 1      | polypropylene pipe plug      | 2   |
| 10134              | 2      | aluminium retain sensor lid  | 1   |
| 10343              | 3      | mylar label - retain sensor  | 1   |
| 10347 (was FT9050) | 4      | aluminium threaded collar    | 1   |
| 10375SS            | 5      | stainless steel lock washer  | 4   |
| 10376SS            | 6      | stainless steel screw        | 4   |
| 10471NY-P&P        | 7      | nylon retain sensor housing  | 1   |
| 10476AL            | 8      | aluminium back-up plate      | 1   |
| 10477SS            | 9      | stainless steel screw        | 4   |
| 10248              | 10     | aluminium cord grip assembly | 1   |
| 10638              | 11     | rubber bushing               | 1   |

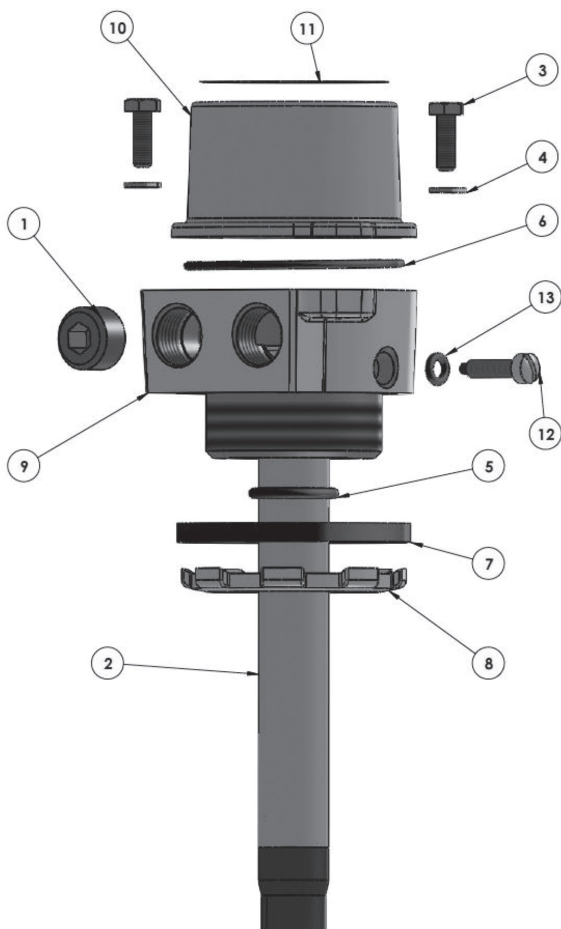
#### REPAIR KITS

| PART NO. | INCLUDES ITEM # | DESCRIPTION  |
|----------|-----------------|--|
| FT9068   | 5,6             | replacement contact block attachment screws and washers (4 each) |

Note: Probe is not replaceable, if probe needs replacing a complete FT152P needs to be ordered.

# Replacement Parts

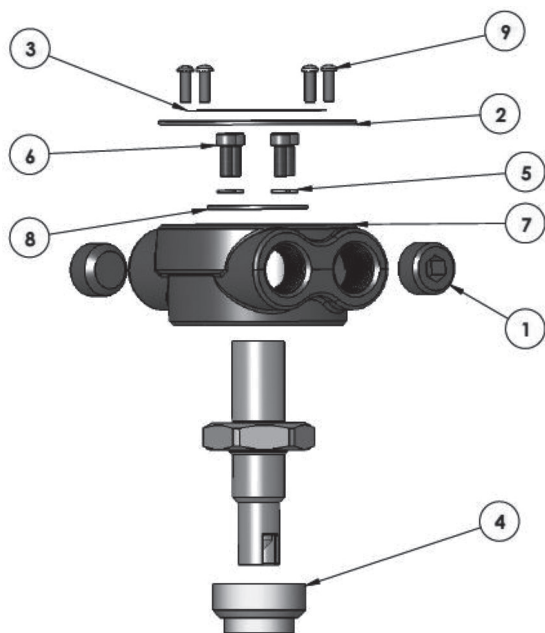
## FT101, FT151 & FT202 Series Overfill Sensor Housings



| BILL OF MATERIALS     |        |   |     |
|-----------------------|--------|---|-----|
| PART NO.              | ITEM # | DESCRIPTION                             | QTY |
| 10103                 | 1      | polypropylene pipe plug                 | 1   |
| see repair kits       | 2      | probe                                   | 1   |
| 10110                 | 3      | stainless steel screw                   | 2   |
| 10111                 | 4      | stainless steel lock washer, 1/4"       | 2   |
| 10125 (was FT9027)    | 5      | FKM O-ring                              | 1   |
| 10126 (was FT9049)    | 6      | Buna O-ring                             | 1   |
| 250-G-BU (was FT9026) | 7      | Buna-n gasket                           | 1   |
| 10128 (was FT9012)    | 8      | steel lock nut                          | 1   |
| 10183 (was FT9033)    | 9      | aluminium sensor housing                | 1   |
| 10945AL               | 9      | plug and play sensor housing BSPT       | 1   |
| 10185                 | 10     | aluminium sensor housing cap            | 1   |
| 10203                 | 11     | mylar label - overfill sensor           | 1   |
| 10212                 | 12     | stainless steel screw with nylon insert | 1   |
| 10213                 | 13     | Buna-N O-ring                           | 1   |

| REPAIR KITS |                |  |
|-------------|----------------|--|
| PART NO.    | ITEM #         | DESCRIPTION  |
| FT100       | 2              | replacement 5 wire overfill detection probe, 7"                |
| FT100-12    | 2              | replacement 5 wire overfill detection probe, 12"               |
| FT100-18    | 2              | replacement 5 wire overfill detection probe, 18"               |
| FT150       | 2              | replacement black & white 2 wire overfill detection probe, 7"  |
| FT150-12    | 2              | replacement black & white 2 wire overfill detection probe, 12" |
| FT150-18    | 2              | replacement black & white 2 wire overfill detection probe, 18" |
| FT201       | 2              | replacement red & black 2 wire overfill detection probe, 7"    |
| FT201-12    | 2              | replacement red & black 2 wire overfill detection probe, 12"   |
| FT201-18    | 2              | replacement red & black 2 wire overfill detection probe, 18"   |
| FT9000      | 1, 3 -13       | complete replacement sensor housing (without probe)            |
| FT9001      | 5-7, 13        | sensor housing gasket & O-ring kit                             |
| FT9002      | 1, 3-8, 12, 13 | sensor housing gasket, O-ring & hardware kit                   |
| FT9011      | 3, 4, 10       | sensor housing cap with screws & lock washers                  |

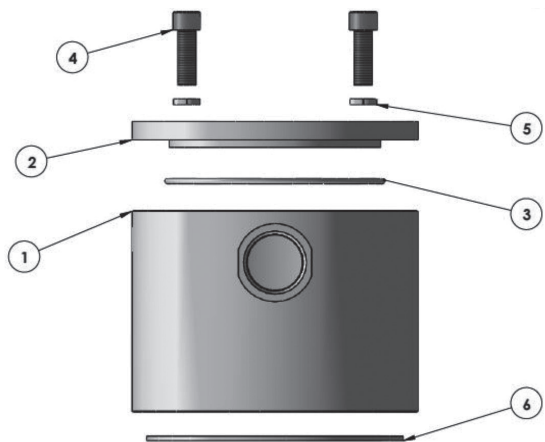
**FT152 & FT206 Retain Sensor Housings**



| BILL OF MATERIALS     |        |                             |     |
|-----------------------|--------|-----------------------------|-----|
| PART NO.              | ITEM # | DESCRIPTION                 | QTY |
| 10103                 | 1      | polypropylene pipe plug     | 2   |
| 10134                 | 2      | aluminium retain sensor lid | 1   |
| 10343                 | 3      | mylar label - retain sensor | 1   |
| 10347<br>(was FT9050) | 4      | aluminium threaded collar   | 1   |
| 10375SS               | 5      | stainless steel lockwasher  | 4   |
| 10376SS               | 6      | stainless steel screw       | 4   |
| 10471NY               | 7      | nylon retain sensor housing | 1   |
| 10476AL               | 8      | aluminium back-up plate     | 1   |
| 10477SS               | 9      | stainless steel screw       | 4   |

| REPAIR KITS |        |  |
|-------------|--------|--|
| PART NO.    | ITEM # | DESCRIPTION  |
| FT9055      | 2, 3   | replacement hardware kit   |
| FT9068      | 5, 6   | replacement contact block attachment screws and washers (4 each) |

**FT191S Overfill Sensor Housing**



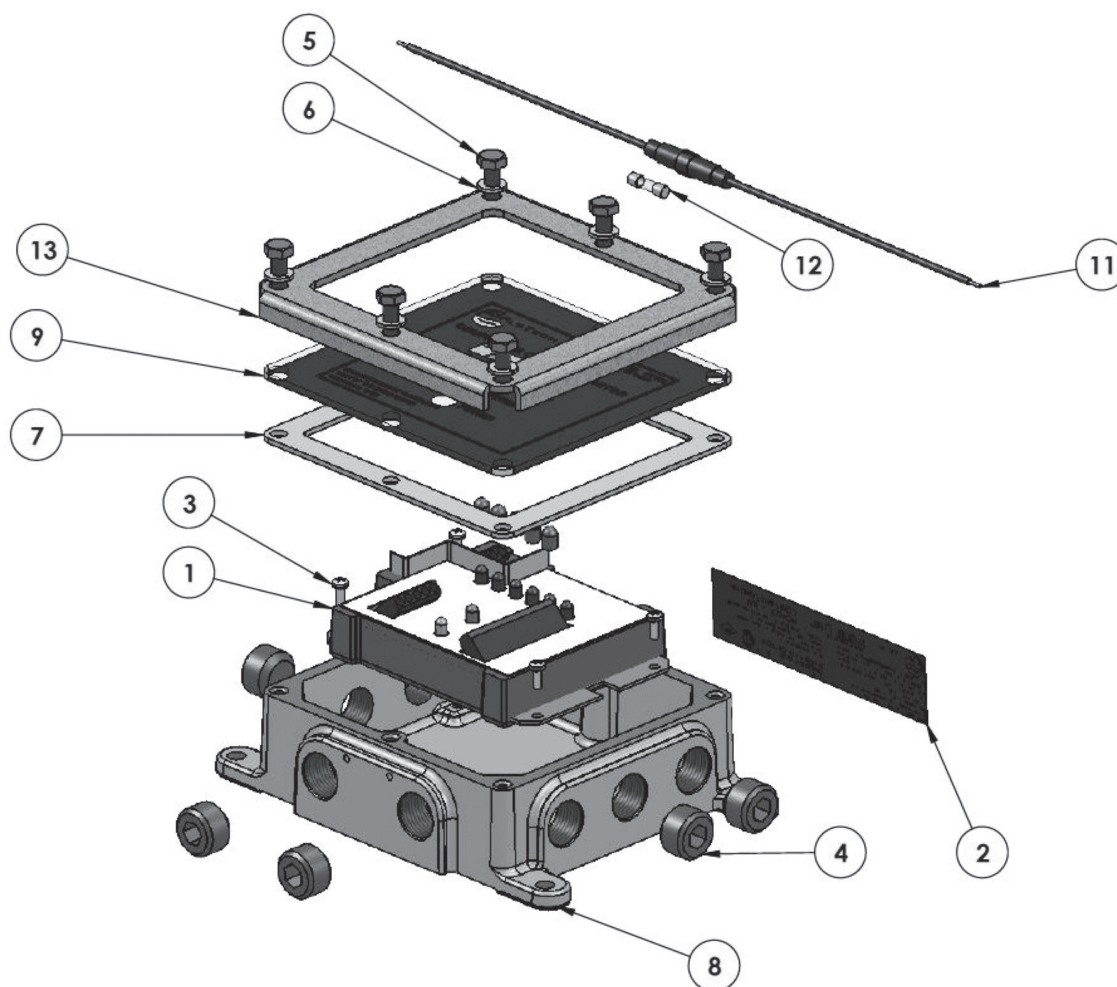
| BILL OF MATERIALS |        |                                 |     |
|-------------------|--------|---------------------------------|-----|
| PART NO.          | ITEM # | DESCRIPTION                     | QTY |
| 10540SS           | 1      | 3" stainless steel NPSM housing | 1   |
| 10541AL           | 2      | aluminium housing lid           | 1   |
| 10542BN           | 3      | Buna-N O-ring                   | 1   |
| 10554SS           | 4      | stainless steel screw           | 4   |
| 40099SS           | 5      | stainless steel lock washer     | 4   |
| 40190TF           | 6      | PTFE gasket                     | 1   |

| STAINLESS STEEL PROBES |  |
|------------------------|--|
| PART NO.               | DESCRIPTION  |
| FT100S                 | 5 wire overfill detection, 316 stainless steel probe only 7"               |
| FT150S                 | black & white 2 wire overfill detection, 316 stainless steel probe only 7" |



# Replacement Parts

## FT102/FT103 5 Wire, API Optic On-Board Monitor



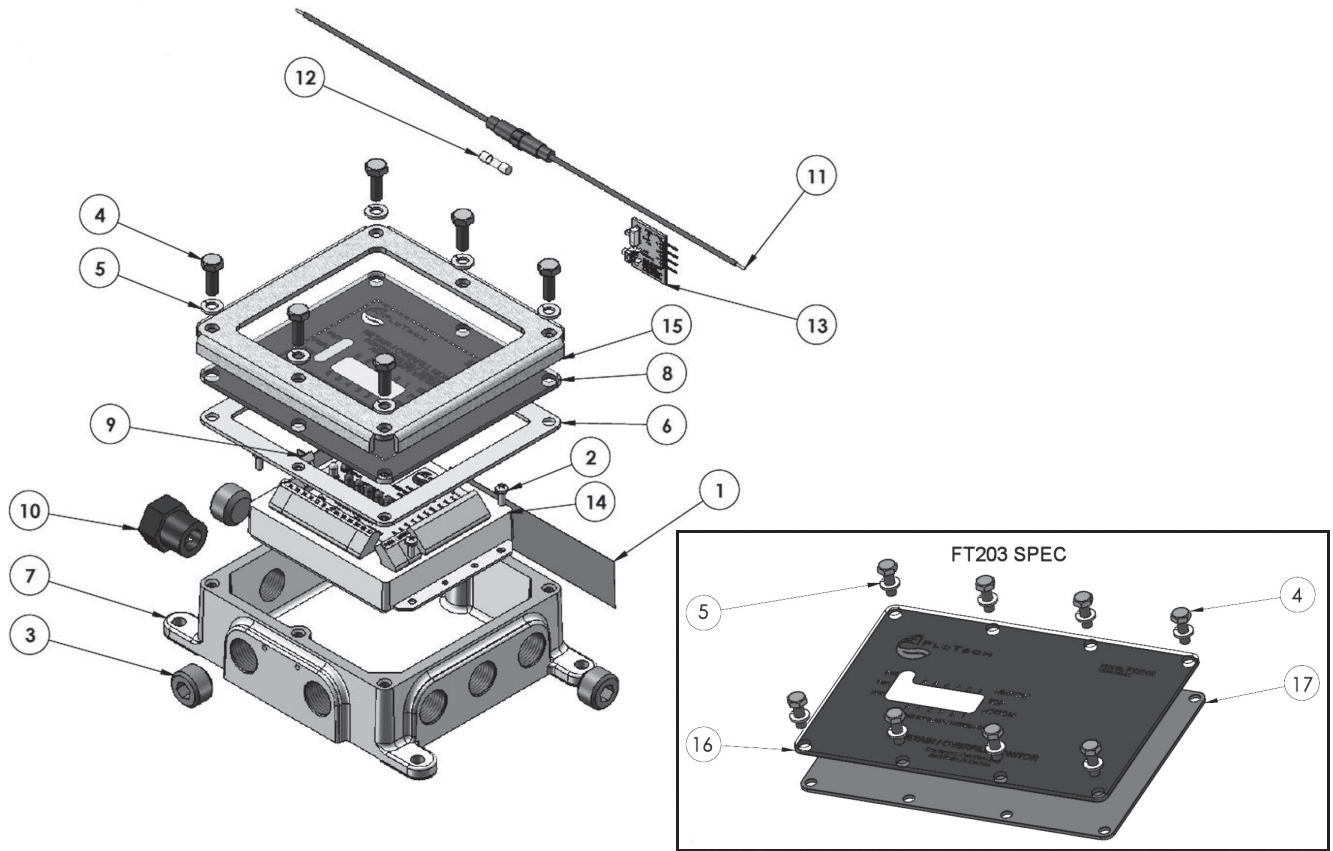
### BILL OF MATERIALS

| PART NO.           | ITEM # | DESCRIPTION                       | FT102 | FT103 |
|--------------------|--------|-----------------------------------|-------|-------|
| 10077              | 1      | 5 wire onboard monitor assembly   | 1     | 1     |
| 10079              | 2      | chrome mylar label                | n/a   | 1     |
| 10086              | 3      | stainless steel screw             | 4     | 4     |
| 10103              | 4      | polypropylene pipe plug           | n/a   | 5     |
| 10110              | 5      | stainless steel screw             | 6     | 6     |
| 10111              | 6      | stainless steel lockwasher - 1/4" | 6     | 6     |
| 10131 (was FT9053) | 7      | neoprene gasket                   | 1     | 1     |
| 10136              | 8      | aluminium onboard monitor housing | n/a   | 1     |
| 10142 (was FT9005) | 9      | acrylic bezel                     | 1     | 1     |
| 10207              | 10     | PVC L.E.D. cover                  | 5     | 5     |
| 10356              | 11     | plastic fuse holder               | 1     | 1     |
| 10357 (was FT9039) | 12     | brass/glass fuse - 1/4 amp        | 1     | 1     |
| 10470AL            | 13     | aluminium frame lid               | 1     | 1     |

### REPAIR KITS

| PART NO. | INCLUDES ITEM # | DESCRIPTION                               |
|----------|-----------------|---|
| FT9003   | 3-10, 13        | replacement monitor housing               |
| FT9004   | 5, 6, 7, 9, 13  | replacement monitor hardware kit          |
| FT9030   | 11, 12          | replacement fuse holder with 1/4 amp fuse |

**FT203/FT204 Series R/OM Type Red & Black 2 Wire, Onboard Monitor**



**BILL OF MATERIALS**

| PART NO.             | ITEM # | DESCRIPTION                         | FT203P | FT203SPEC | FT204P |
|----------------------|--------|-------------------------------------|--------|-----------|--------|
| 10078                | 1      | chrome mylar label                  | n/a    | n/a       | 1      |
| 10086                | 2      | stainless steel screw               | 4      | 4         | 4      |
| 10103                | 3      | polypropylene pipe plug             | n/a    | n/a       | 3      |
| 10110                | 4      | stainless steel screw               | 6      | 8         | 6      |
| 10111                | 5      | stainless steel lock washer - 1/4"  | 6      | 8         | 6      |
| 10131 (was FT9053)   | 6      | neoprene gasket                     | 1      | n/a       | 1      |
| 10136                | 7      | aluminium onboard monitor housing   | n/a    | n/a       | 1      |
| 10143 (was FT9006)   | 8      | acrylic bezel                       | 1      | n/a       | 1      |
| 10196                | 9      | jumper - cross connector            | 1      | 1         | 1      |
| 10200A               | 10     | reset switch assembly               | n/a    | n/a       | 1      |
| 10356                | 11     | plastic fuse holder                 | 1      | 1         | 1      |
| 10358 (was FT9039)   | 12     | brass/glass fuse - 1/2 amp          | 1      | 1         | 1      |
| 10459 (was FT9035)   | 13     | programming board assembly          | 1      | 1         | 1      |
| 10460                | 14     | OBM assy potted                     | 1      | 1         | 1      |
| 10470AL (was FT9054) | 15     | aluminium frame lid                 | 1      | n/a       | 1      |
| 10520PL              | 16     | bezel for Civacon 3250 & 3252 boxes | n/a    | 1         | n/a    |
| 10521NP (was FT9065) | 17     | neoprene gasket for 10520PL         | n/a    | 1         | n/a    |

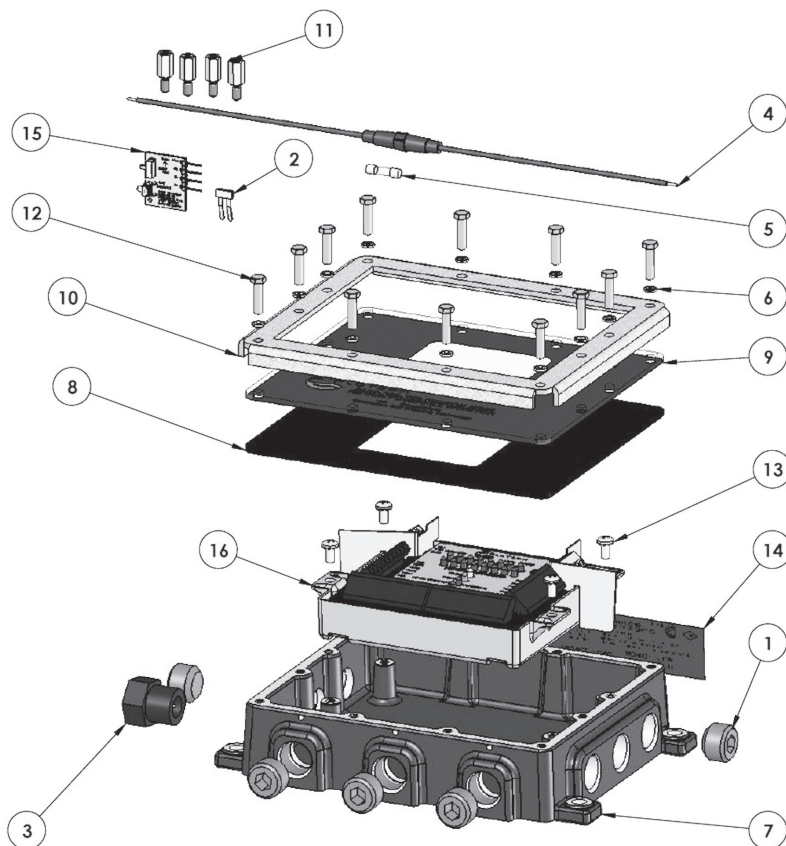
**REPAIR KITS**

| PART NO. | INCLUDES ITEM # | DESCRIPTION                                 |
|----------|-----------------|---|
| FT9003   | 2-8, 15         | replacement monitor housing                 |
| FT9004   | 4-6, 8, 15      | replacement monitor hardware kit            |
| FT9031   | 11, 12          | replacement fuse holder with 1/2 amp fuse   |
| FT9059   | 4, 5, 6, 8, 15  | replacement faceplate and bezel for FT204P  |
| FT9064   | 16, 17          | replacement gasket and bezel for FT203 SPEC |



# Replacement Parts

## FT207/FT208 Series Checkmate Black & White 2 Wire, Programmable Onboard Monitor



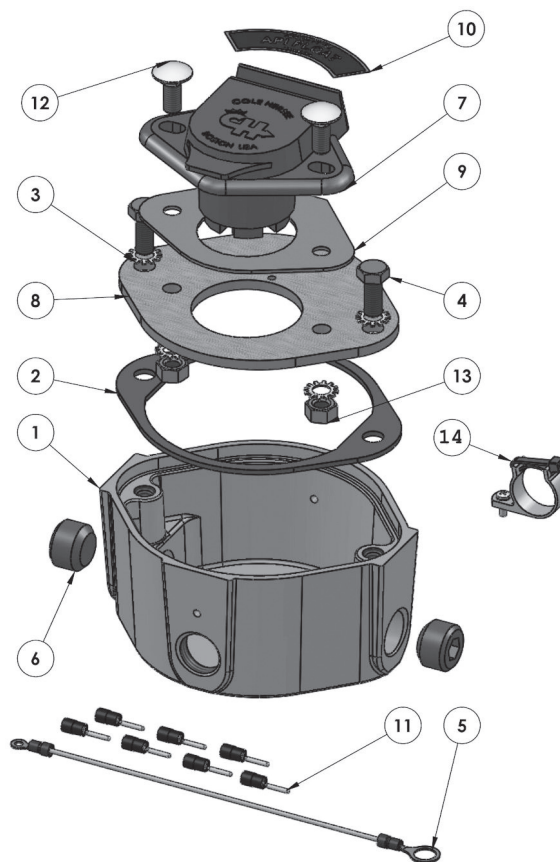
### BILL OF MATERIALS

| PART NO.             | ITEM # | DESCRIPTION                                   | FT102 | FT103 |
|----------------------|--------|---|-------|-------|
| 10103                | 1      | polypropylene pipe plug                       | n/a   | 5     |
| 10196                | 2      | jumper - cross connector                      | 1     | 1     |
| 10200A               | 3      | reset switch assembly                         | n/a   | 1     |
| 10356                | 4      | plastic fuse holder                           | 1     | 1     |
| 10358 (was FT9039)   | 5      | brass/glass fuse - 1/2 amp                    | 1     | 5     |
| 10375SS              | 6      | stainless steel lock washer                   | 12    | 12    |
| 10430AL              | 7      | aluminium box                                 | n/a   | 1     |
| 10432NP (was FT9045) | 8      | neoprene gasket                               | 1     | 1     |
| 10433PL (was FT9036) | 9      | acrylic bezel                                 | 1     | 1     |
| 10434AL              | 10     | aluminium frame                               | 1     | 1     |
| 10435AL              | 11     | aluminium standoff (Only used in older units) | n/a   | 4     |
| 10436SS              | 12     | stainless steel screw                         | 12    | 12    |
| 10437SS              | 13     | stainless steel screw - stems                 | 4     | 4     |
| 10438A               | 14     | chrome mylar label                            | n/a   | 1     |
| 10459 (was FT9035)   | 15     | programming board assembly                    | 1     | 1     |
| 10465                | 16     | potted OBM                                    | 1     | 1     |

### REPAIR KITS

| PART NO. | INCLUDES ITEM # | DESCRIPTION                                  |
|----------|-----------------|--|
| FT9031   | 11, 12          | replacement fuse holder with 1/2 amp fuse    |
| FT9036   | 6, 8, 9, 10, 12 | replacement lid, bezel, screws & lockwashers |
| FT9040   | 1, 6-13         | replacement Checkmate housing with lid       |

### Single J560 Sockets



#### BILL OF MATERIALS

| PART NO.           | ITEM # | DESCRIPTION                       | FT302 | FT305 | FT306 | FT312 | FT315 | FT316 |
|--------------------|--------|-----------------------------------|-------|-------|-------|-------|-------|-------|
| 10031 (was FT9007) | 1      | aluminium housing                 | 1     | 1     | 1     | n/a   | n/a   | n/a   |
| 10038 (was FT9032) | 2      | neoprene gasket                   | 1     | 1     | 1     | 1     | 1     | 1     |
| 10092              | 3      | stainless steel lock washer       | 4     | 4     | 4     | 4     | 4     | 4     |
| 10093              | 4      | stainless steel screw             | 2     | 2     | 2     | 2     | 2     | 2     |
| 10095              | 5      | wire, assembly, socket            | 1     | 1     | 1     | 1     | 1     | 1     |
| 10103              | 6      | polypropylene pipe plug           | 2     | 2     | 2     | 2     | 2     | 2     |
| 10119 (was FT9029) | 7      | J560 type socket                  | 1     | 1     | 1     | 1     | 1     | 1     |
| 10120              | 8      | aluminium face plate              | 1     | 1     | 1     | 1     | 1     | 1     |
| 10121              | 9      | neoprene gasket                   | 1     | 1     | 1     | 1     | 1     | 1     |
| 10122              | 10A    | aluminium name plate - float      | 1     | n/a   | n/a   | n/a   | n/a   | n/a   |
| 10235              | 10B    | aluminium name plate - optic      | n/a   | n/a   | 1     | n/a   | 1     | 1     |
| 10244              | 10C    | aluminium name plate - thermistor | n/a   | 1     | n/a   | n/a   | n/a   | n/a   |
| 10123              | 11     | terminal pin                      | 7     | 7     | 7     | 7     | 7     | 7     |
| 10507SS            | 12     | stainless steel carriage bolt     | 2     | 2     | 2     | 2     | 2     | 2     |
| 10508SS            | 13     | stainless steel nut               | 2     | 2     | 2     | 2     | 2     | 2     |
| 10264              | 14     | nylon clamp assembly              | n/a   | 1     | n/a   | n/a   | 1     | n/a   |

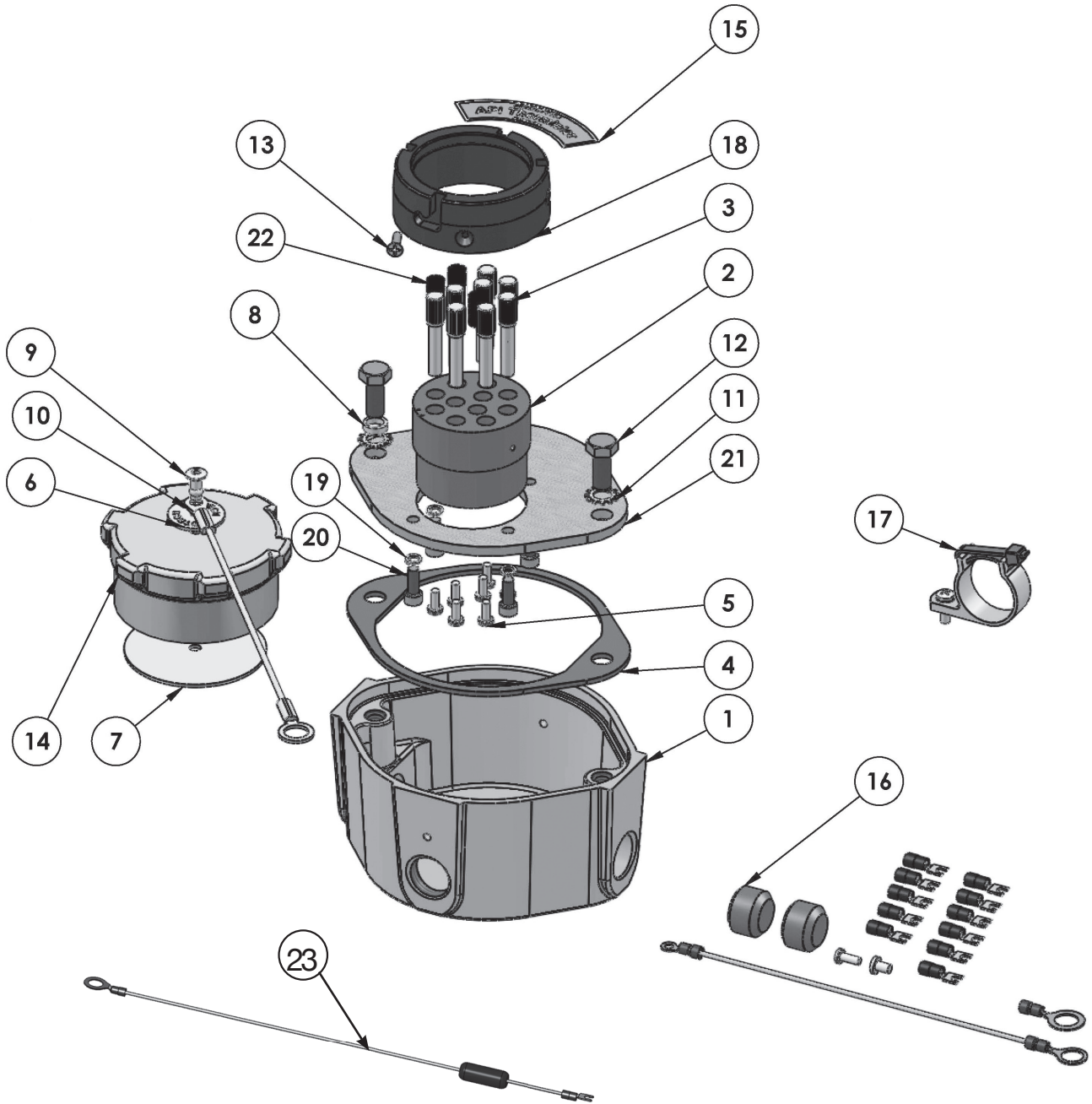
#### REPAIR KITS

| PART NO. | INCLUDES ITEM # | DESCRIPTION                                 |
|----------|-----------------|---|
| FT312    | 2 - 14          | face plate assembly- API float J560 socket  |
| FT315    | 2 - 14          | face plate assembly- Thermistor J560 socket |
| FT316    | 2 - 14          | face plate assembly- Optic J560 socket      |



# Replacement Parts

## FT30x Series Single J Slot Sockets





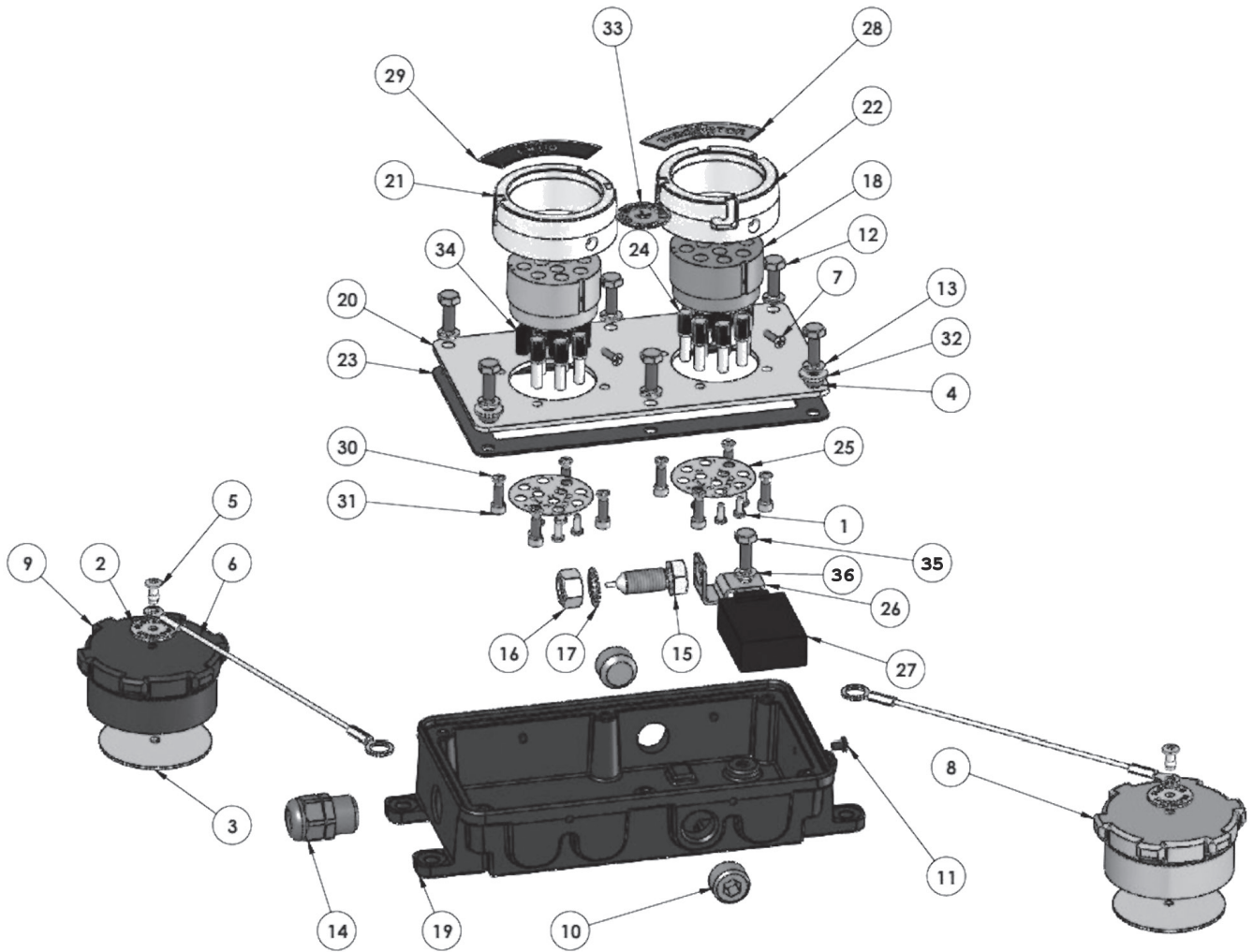
| BILL OF MATERIALS          |          |                                       |                    |         |                   |       |         |       |         |       |         |       |         |       |         |       |         |       |         |       |         |       |         |     |
|----------------------------|----------|---------------------------------------|--------------------|---------|-------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-----|
| PART NO.                   | ITEM NO. | DESCRIPTION                           | FT300              | FT300SS | FT300GW           | FT301 | FT301SS | FT303 | FT303SS | FT304 | FT304SS | FT307 | FT307SS | FT310 | FT310SS | FT311 | FT311SS | FT313 | FT313SS | FT314 | FT314SS | FT317 | FT317SS |     |
|                            |          |                                       | 10031 (was FT9007) | 1       | aluminium housing | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10944AL                    | 1        | aluminium housing BSPT                | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10690PL-001                | 2        | plastic contact block                 | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| 10368SS                    | 3        | stainless steel socket pin            | 6                  | 6       | 6                 | 8     | 8       | 6     | 6       | 10    | 10      | 6     | 6       | 6     | 6       | 8     | 8       | 6     | 6       | 10    | 10      | 6     | 6       | 6   |
| 10038 (was FT9032)         | 4        | neoprene gasket                       | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| 10086                      | 5        | stainless steel screw                 | 6                  | 6       | 6                 | 8     | 8       | 6     | 6       | 10    | 10      | 6     | 6       | 6     | 6       | 8     | 8       | 6     | 6       | 10    | 10      | 6     | 6       | 6   |
| Use cap kit FT320 or FT321 | 6        | aluminium name plate - socket washer  | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| Use cap kit FT320 or FT321 | 7        | aluminium washer 2.500 x .0625        | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| 10089                      | 8        | stainless steel spacer                | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| Use cap kit FT320 or FT321 | 9        | aluminium rivet .1875                 | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| Use cap kit FT320 or FT321 | 10       | stainless steel cable - socket 8"     | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| 10092                      | 11       | stainless steel lock washer           | 2                  | 2       | 2                 | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2   |
| 10093                      | 12       | stainless steel screw                 | 2                  | 2       | 2                 | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2     | 2       | 2   |
| 10094                      | 13       | stainless steel screw - contact block | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| Use cap kit FT321          | 14A      | vinyl dust cap - thermistor (green)   | n/a                | n/a     | n/a               | 1     | 1       | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a |
| Use cap kit FT320          | 14B      | vinyl dust cap - optic (blue)         | 1                  | 1       | 1                 | n/a   | n/a     | 1     | 1       | n/a   | n/a     | 1     | 1       | 1     | 1       | n/a   | n/a     | 1     | 1       | n/a   | n/a     | 1     | 1       | 1   |
| 10099                      | 15A      | aluminium name plate - FT300          | 1                  | 1       | n/a               | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10100                      | 15B      | aluminium name plate - FT301          | n/a                | n/a     | n/a               | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10228                      | 15C      | aluminium name plate - FT303          | n/a                | n/a     | n/a               | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a |
| 10101                      | 15D      | aluminium name plate - FT304          | n/a                | n/a     | n/a               | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a |
| 10283                      | 15E      | aluminium name plate - FT307          | n/a                | n/a     | n/a               | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | 1       | 1   |
| 10099-002                  | 15F      | aluminium name plate-FT300GW          | n/a                | n/a     | 1                 | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10106                      | 16       | assembly hardware                     | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| 10264                      | 17       | nylon clamp assembly                  | n/a                | n/a     | n/a               | 1     | 1       | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a   | n/a     | 1     | 1       | n/a   | n/a     | 1     | 1       | n/a   | n/a     | n/a |
| 10366HC-001 (was FT9042)   | 18A      | ALH wear ring - 4 J slots             | n/a                | n/a     | n/a               | 1     | n/a     | 1     | n/a     | 1     | n/a     | 1     | n/a     | n/a   | n/a     | 1     | n/a     | 1     | n/a     | 1     | n/a     | 1     | n/a     | n/a |
| 10366HC-002 (was FT9041)   | 18B      | ALH wear ring - 3 J slots             | 1                  | n/a     | 1                 | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10366SS-001 (was FT9043)   | 18C      | stainless steel wear ring - 4 J slots | n/a                | n/a     | n/a               | n/a   | 1       | n/a   | 1       | n/a   | 1       | n/a   | 1       | n/a   | n/a     | n/a   | 1       | n/a   | 1       | n/a   | 1       | n/a   | 1       | 1   |
| 10366SS-002 (was FT9044)   | 18D      | stainless steel wear ring - 3 J slots | n/a                | 1       | n/a               | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | 1     | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a   | n/a     | n/a |
| 10375SS                    | 19       | stainless steel lock washer           | 4                  | 4       | 4                 | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4   |
| 10376SS                    | 20       | stainless steel screw                 | 4                  | 4       | 4                 | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4     | 4       | 4   |
| 10431AL                    | 21       | aluminium socket plate                | 1                  | 1       | 1                 | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1     | 1       | 1   |
| BLACK BUTTON INSERT        | 22       | plastic black button insert           | 6                  | 6       | 6                 | 6     | 6       | 6     | 6       | 6     | 6       | 6     | 6       | 6     | 6       | 6     | 6       | 6     | 6       | 6     | 6       | 6     | 6       | 6   |

| REPAIR KITS |                   |   |
|-------------|-------------------|---|
| PART NO.    | INCLUDES ITEM #   | DESCRIPTION   |
| FT320       | 6, 7, 9, 10, 14B  | replacement blue (optic) vinyl cap assembly                                 |
| FT321       | 6, 7, 9, 10, 14A  | replacement green (thermistor) vinyl cap assembly                           |
| FT310       | 2 - 16, 18 - 22   | face plate assembly - API optic ALH wear ring 6 pin 3 J Slots (US)          |
| FT310SS     | 2 - 16, 18 - 22   | face plate assembly - API optic SS GFL wear ring 6 pin 3 J Slots (US)       |
| FT311       | 2 - 22            | face plate assembly - API Thermistor ALH wear ring 8 pin 4 J Slots (US)     |
| FT311SS     | 2 - 22            | face plate assembly - API Thermistor SS GFL wear ring 8 pin 4 J Slots (US)  |
| FT313       | 2 - 16, 18 - 22   | face plate assembly - optic ALH wear ring 6 pin 4 J Slots (US)              |
| FT313SS     | 2 - 16, 18 - 22   | face plate assembly - optic SS GFL wear ring 6 pin 4 J Slots (US)           |
| FT314       | 2 - 22            | face plate assembly - Thermistor ALH wear ring 10 pin 4 J Slots (Canada)    |
| FT314SS     | 2 - 22            | face plate assembly - Thermistor SS GFL wear ring 10 pin 4 J Slots (Canada) |
| FT317       | 2 - 16, 18 - 22   | face plate assembly - optic ALH wear ring 6 pin 4 J Slots (Canada)          |
| FT317SS     | 2 - 16, 18 - 22   | face plate assembly - optic SS GFL wear ring 6 pin 4 J Slots (Canada)       |
| FT9008      | 2, 3, 5, 13       | replacement contact block for FT300 Optic                                   |
| FT9009      | 2, 3, 5, 13       | replacement contact block for FT301 Thermistor                              |
| FT9010      | 2, 3, 5, 13       | replacement contact block for FT304 10 pin Thermistor                       |
| FT9013      | 4, 15B, 18A, 1921 | replacement faceplate 4 J slot (no contact block or hardware)               |
| FT9020      | 3, 5              | replacement socket pin, screw & crimp lug                                   |
| FT9034      | 4, 15A, 18B, 1921 | replacement faceplate 3 J slot, (without contact block and hardware)        |
| FT9046      | 3, 5              | replacement socket contact pins, and screws                                 |
| FT9068      | 19, 20            | replacement contact block attachment screws and washers (4 each)            |



# Replacement Parts

## FT390/FT391 Series EZ-Cept Double Sockets



## BILL OF MATERIALS

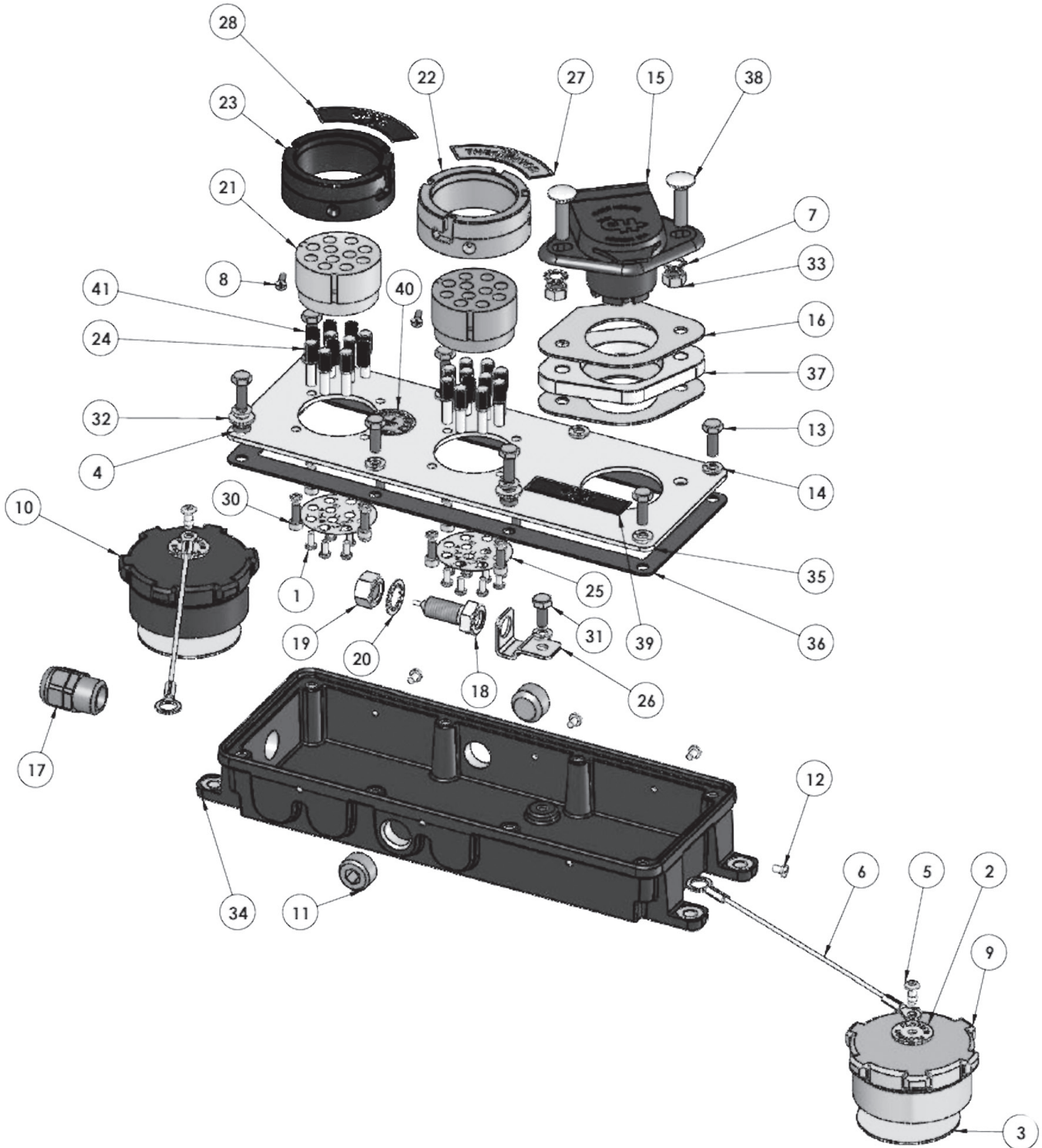
| PART NO.               | ITEM NO.        | DESCRIPTION                                | FT390 | FT390V | FT390G | FT390GT | FT390T | FT390-20 | FT390G-20 | FT391 | FT391V |
|------------------------|-----------------|--|-------|--------|--------|---------|--------|----------|-----------|-------|--------|
| 10086                  | 1               | stainless steel screw                      | 16    | 16     | 16     | 16      | 16     | 16       | 16        | 16    | 16     |
| use kit FT320 or FT321 | 2               | aluminium name plate - socket washer       | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| use kit FT320 or FT321 | 3               | aluminium washer 2.500 x .0625             | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| 10089                  | 4               | stainless steel spacer                     | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| use kit FT320 or FT321 | 5               | aluminium rivet .1875                      | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| use kit FT320 or FT321 | 6               | stainless steel cable - socket 8"          | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| 10094                  | 7               | stainless steel screw - contact block      | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| use kit FT321          | 8               | vinyl dust cap - thermistor (green)        | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| use kit FT320          | 9               | vinyl dust cap - optic (blue)              | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10103                  | 10              | polypropylene pipe plug                    | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| 10105                  | 11              | steel screw - plug                         | 3     | 3      | 3      | 3       | 3      | 3        | 3         | 3     | 3      |
| 10110                  | 12              | stainless steel screw                      | 6     | 6      | 6      | 6       | 6      | 6        | 6         | 6     | 6      |
| 10111                  | 13              | stainless steel lock washer - 1/4"         | 6     | 6      | 6      | 6       | 6      | 6        | 6         | 6     | 6      |
| 10139                  | 14              | polyamide strain relief                    | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10223                  | 15              | stainless steel ground bolt                | n/a   | n/a    | 1      | 1       | n/a    | n/a      | 1         | n/a   | n/a    |
| 10224                  | 16              | stainless steel nut - ground bolt 1/2"-13  | n/a   | n/a    | 1      | 1       | n/a    | n/a      | 1         | n/a   | n/a    |
| 10225                  | 17              | stainless steel lock washer internal tooth | n/a   | n/a    | 1      | 1       | n/a    | n/a      | 1         | n/a   | n/a    |
| 10254                  | 18              | plastic contact block - socket short       | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| 10364AL-001            | 19              | aluminium box - dual socket                | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10365AL                | 20              | aluminium faceplate - dual socket          | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10366SS-002            | 21              | stainless steel wear ring - 3 J Slot       | 1     | 1      | 1      | 1       | 1      | 1        | 1         | n/a   | n/a    |
| 10366SS-001            | 22              | stainless steel wear ring - 4 J Slot       | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 2     | 2      |
| 10367CK                | 23              | cork gasket - lid                          | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10368SS (was FT9061)   | 24              | stainless steel socket pin - short         | 16    | 16     | 16     | 16      | 16     | 16       | 16        | 16    | 16     |
| 10369VY                | 25              | vinyl label - socket contact               | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| 10370SS                | 26              | stainless steel bracket - ground bolt      | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10372                  | 27              | T.I.M. Module                              | n/a   | n/a    | n/a    | 1       | 1      | n/a      | n/a       | n/a   | n/a    |
| 10373AL                | 28              | aluminium name plate - thermistor          | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10374AL                | 29              | aluminium name plate - optic               | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10375SS                | 30              | stainless steel lock washer                | 8     | 8      | 8      | 8       | 8      | 8        | 8         | 8     | 8      |
| 10376SS                | 31              | stainless steel screw                      | 8     | 8      | 8      | 8       | 8      | 8        | 8         | 8     | 8      |
| 10382SS                | 32              | stainless steel washer                     | 2     | 2      | 2      | 2       | 2      | 2        | 2         | 2     | 2      |
| 10621AL                | 33              | ground bolt label                          | n/a   | n/a    | 1      | 1       | n/a    | n/a      | 1         | n/a   | n/a    |
| BLACK BUTTON INSERT    | 34              | plastic black button insert                | 6     | 6      | 6      | 6       | 6      | 6        | 6         | 6     | 6      |
| 10110                  | 35A             | stainless steel screw                      | n/a   | n/a    | n/a    | 1       | 1      | n/a      | n/a       | n/a   | n/a    |
| 10377SS                | 35B             | stainless steel screw                      | 1     | 1      | 1      | n/a     | n/a    | 1        | 1         | 1     | 1      |
| 10111                  | 36              | stainless steel lock washer - 1/4"         | 1     | 1      | 1      | 1       | 1      | 1        | 1         | 1     | 1      |
| 10387-20               | not illustrated | 20 ft cable, factory wired to sockets      | n/a   | n/a    | n/a    | n/a     | n/a    | 1        | 1         | n/a   | n/a    |

## REPAIR KITS

| PART NO. | INCLUDES ITEM #      | DESCRIPTION  |
|----------|----------------------|--|
| FT320    | 2, 3, 5, 6, 9        | replacement blue (optic) vinyl cap assembly                          |
| FT321    | 2, 3, 5, 6, 8        | replacement green (thermistor) vinyl cap assembly                    |
| FT9051   | 1,7, 18, 24, 25      | replacement contact block assembly for FT390/FT393 Optic 6 pin       |
| FT9052   | 1,7, 18, 24, 25      | replacement contact block assembly for FT390/FT393 Thermistor 10 pin |
| FT9062   | 1, 7, 18, 22, 24, 25 | replacement nose ring,contact assembly, Thermistor 4J slot, 10 pin   |
| FT9063   | 1, 7, 18, 21, 24, 25 | replacement nose ring,contact assembly, Optic 3J slot, 6 pin         |
| FT9068   | 30, 31               | replacement contact block attachment screws and washers (4 each)     |

# Replacement Parts

## FT393/394/395 Series EZ-Cept Triple Sockets



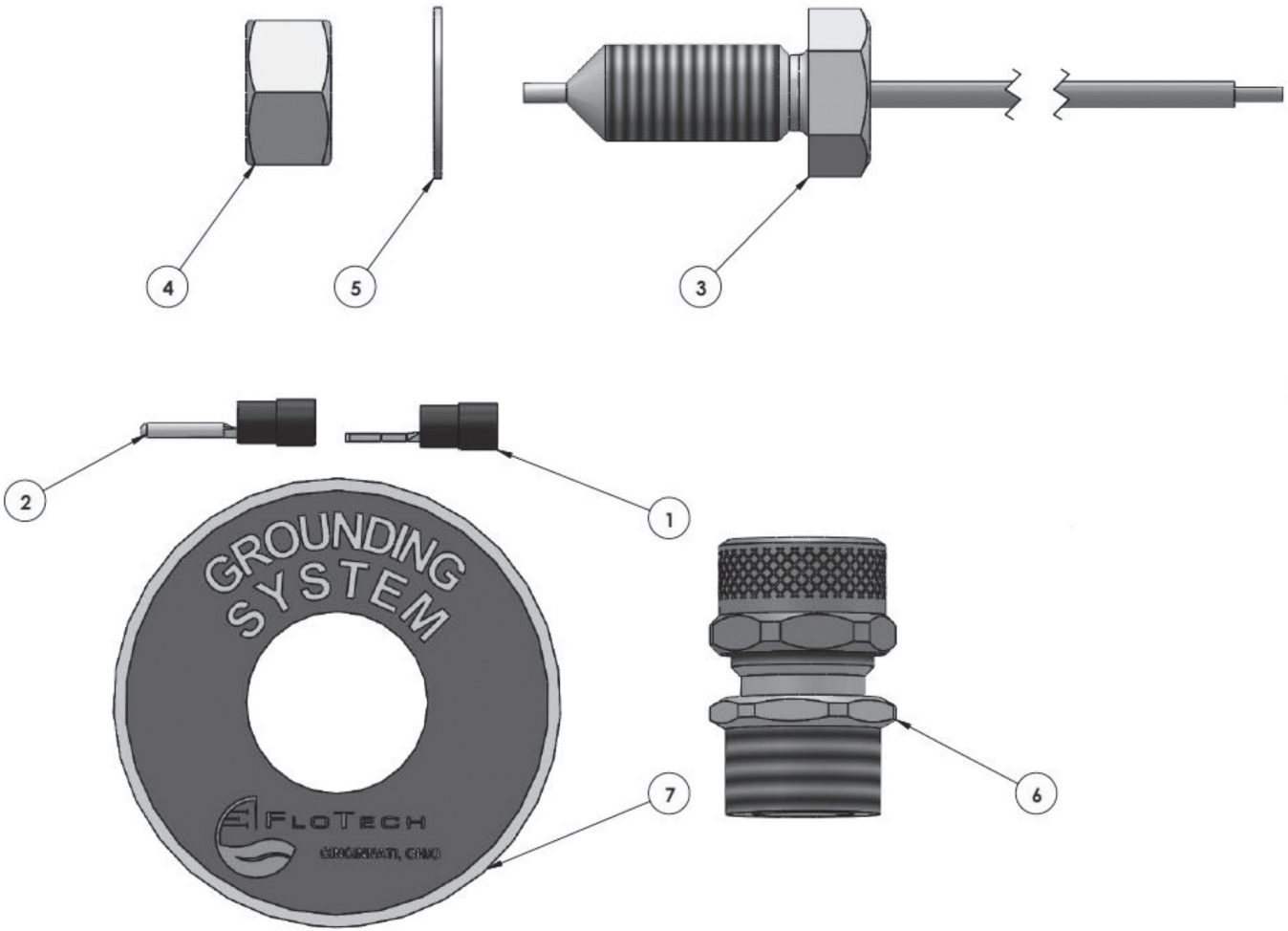
| BILL OF MATERIALS        |          |  |       |       |        |          |       |        |        |          |
|--------------------------|----------|--|-------|-------|--------|----------|-------|--------|--------|----------|
| PART NO.                 | ITEM NO. | DESCRIPTION                                | FT393 | FT394 | FT394G | FT394V-G | FT395 | FT395V | FT395G | FT395V-G |
| 10086                    | 1        | stainless steel screw                      | 16    | 16    | 16     | 16       | 16    | 16     | 16     | 16       |
| 10087                    | 2        | aluminium name plate - socket washer       | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| use kit FT320 or FT321   | 3        | aluminium washer 2.500 x .0625             | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| use kit FT320 or FT321   | 4        | stainless steel spacer                     | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| use kit FT320 or FT321   | 5        | aluminium rivet .1875                      | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| use kit FT320 or FT321   | 6        | stainless steel cable - socket 8"          | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10092                    | 7        | stainless steel lock washer                | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10094                    | 8        | stainless steel screw - contact block      | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| use kit FT321            | 9        | vinyl dust cap - thermistor (green)        | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| use kit FT320            | 10       | vinyl dust cap - optic (blue)              | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10103                    | 11       | polypropylene pipe plug                    | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10105                    | 12       | steel screw - plug                         | 4     | 4     | 4      | 4        | 4     | 4      | 4      | 4        |
| 10110                    | 13       | stainless steel screw                      | 8     | 8     | 8      | 8        | 8     | 8      | 8      | 8        |
| 10111                    | 14       | stainless steel lock washer - 1/4"         | 9     | 9     | 9      | 9        | 9     | 9      | 9      | 9        |
| 10119 (was FT9029)       | 15       | J560 socket                                | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10121                    | 16       | neoprene gasket, float socket              | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10139                    | 17       | polyamide strain relief                    | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10223                    | 18       | stainless steel ground bolt                | n/a   | n/a   | 1      | 1        | n/a   | n/a    | 1      | 1        |
| 10224                    | 19       | stainless steel nut - ground bolt 1/2"- 13 | n/a   | n/a   | 1      | 1        | n/a   | n/a    | 1      | 1        |
| 10225                    | 20       | stainless steel lock washer internal tooth | n/a   | n/a   | 1      | 1        | n/a   | n/a    | 1      | 1        |
| 10254                    | 21       | plastic contact block - socket short       | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10366SS-001 (was FT9044) | 22       | stainless steel wear ring - 4 J Slot       | 1     | 1     | 1      | 1        | 2     | 2      | 2      | 2        |
| 10366SS-002 (was FT9043) | 23       | stainless steel wear ring - 3 J Slot       | 1     | 1     | 1      | 1        | n/a   | n/a    | n/a    | n/a      |
| 10368SS (was FT9061)     | 24       | stainless steel socket pin - short         | 16    | 16    | 16     | 16       | 16    | 16     | 16     | 16       |
| 10369VY                  | 25       | vinyl label - socket contact               | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10370SS                  | 26       | stainless steel bracket - ground bolt      | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10373AL                  | 27       | aluminium name plate - thermistor          | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10374AL                  | 28       | aluminium name plate - optic               | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10376SS                  | 30       | stainless steel screw                      | 8     | 8     | 8      | 8        | 8     | 8      | 8      | 8        |
| 10377SS                  | 31       | stainless steel screw                      | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10382SS                  | 32       | stainless steel washer                     | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10508SS                  | 33       | stainless steel nut                        | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10525AL                  | 34       | aluminium box - 3 socket                   | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10526AL                  | 35       | aluminium faceplate - three socket         | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10527CK                  | 36       | cork gasket - lid                          | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10529AC                  | 37       | acetal spacer                              | 1     | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10530SS                  | 38       | stainless steel carriage bolt              | 2     | 2     | 2      | 2        | 2     | 2      | 2      | 2        |
| 10558AL                  | 39A      | aluminium name plate - optic (blue)        | n/a   | 1     | 1      | 1        | 1     | 1      | 1      | 1        |
| 10531AL                  | 39B      | aluminium name plate - float (red)         | 1     | n/a   | n/a    | n/a      | n/a   | n/a    | n/a    | n/a      |
| 10621AL                  | 40       | aluminium label - ground bolt              | n/a   | n/a   | 1      | 1        | n/a   | n/a    | 1      | 1        |
| BLACK BUTTON INSERT      | 41       | plastic black button insert                | 6     | 6     | 6      | 6        | 6     | 6      | 6      | 6        |

| REPAIR KITS |                      |  |
|-------------|----------------------|--|
| PART NO.    | INCLUDES ITEM #      | DESCRIPTION  |
| FT320       | 2, 3, 5, 6, 9        | replacement blue (optic) vinyl cap assembly                          |
| FT321       | 2, 3, 5, 6, 10       | replacement green (thermistor) vinyl cap assembly                    |
| FT9051      | 1,8, 21, 24, 25      | replacement contact block assembly for FT390/FT393 Optic 6 pin       |
| FT9052      | 1,8, 21, 24, 25      | replacement contact block assembly for FT390/FT393 Thermistor 10 pin |
| FT9062      | 1, 8, 21, 22, 24, 25 | replacement nose ring,contact assembly, Thermistor 4J slot, 10 pin   |
| FT9063      | 1, 8, 21, 22, 24, 25 | replacement nose ring,contact assembly, Optic 3J slot, 6 pin         |
| FT9068      | 29, 30               | replacement contact block attachment screws and washers (4 each)     |



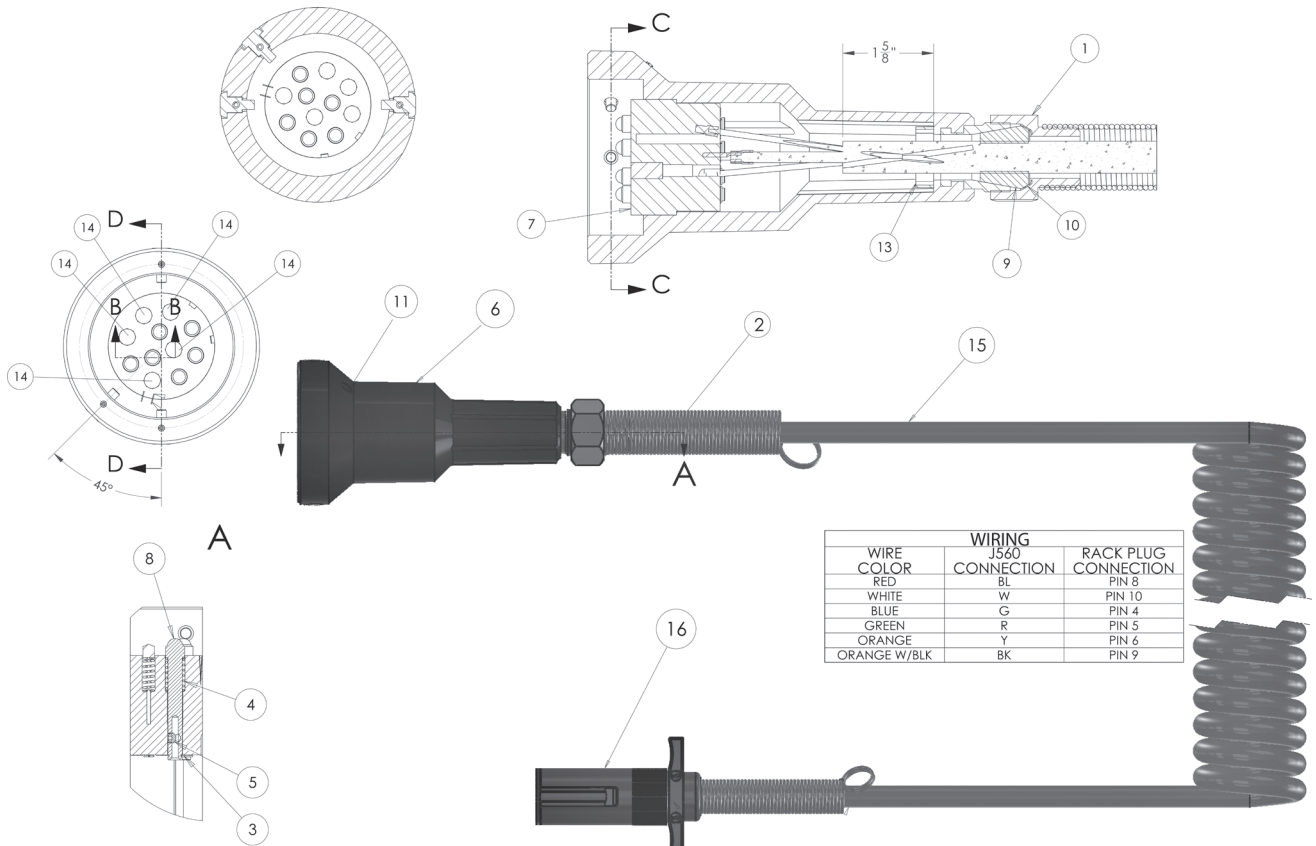
# Replacement Parts

## FT450 Ground Bolt



| BILL OF MATERIALS |        |  |  |     |
|-------------------|--------|--|--|-----|
| PART NO.          | ITEM # | DESCRIPTION                                |  | QTY |
| 10102             | 1      | locking spade                              |  | 1   |
| 10123             | 2      | terminal pin                               |  | 1   |
| 10223             | 3      | stainless steel ground bolt                |  | 1   |
| 10224             | 4      | stainless steel nut - ground bolt 1/2"-13  |  | 1   |
| 10225             | 5      | stainless steel lock washer internal tooth |  | 1   |
| 10229             | 6      | strain relief 1/2" NPT                     |  | 1   |

**Rack Cords-FT620P**



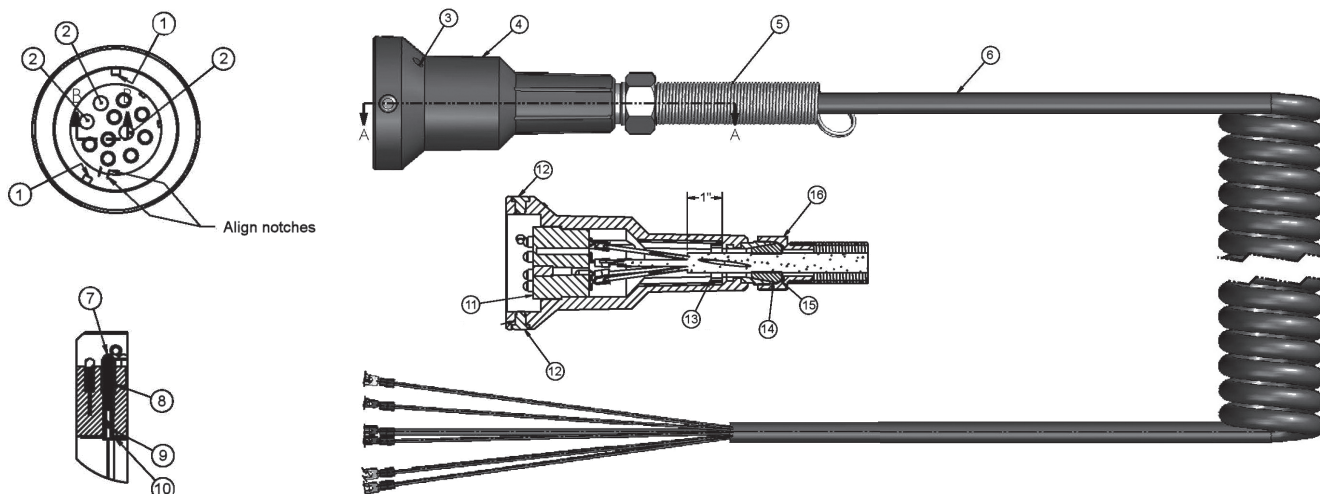
**BILL OF MATERIALS**

| PART NO.            | ITEM # | DESCRIPTION               | QTY | MATERIAL     |
|---------------------|--------|---------------------------|-----|--------------|
| 10249               | 1      | strain relief nut         | 1   | aluminium    |
| 10250               | 2      | spring                    | 1   | SST          |
| 10252               | 3      | retaining ring            | 6   | steel        |
| 10253               | 4      | spring                    | 6   | SST          |
| 10260               | 5      | set screw                 | 6   | SST          |
| 10523NY-003         | 6      | body                      | 1   | nylon        |
| 10524PL-001         | 7      | contact block-long        | 1   | plastic      |
| 10550SS             | 8      | plug pin                  | 6   | SST          |
| 10715NP             | 9      | cord grip bushing         | 1   | neoprene     |
| 10716ST             | 10     | cord grip washer          | 1   | plated steel |
| 10717SS             | 11     | screw                     | 1   | SST          |
| 1518R               | 13     | pinch-on double ear clamp | 1   | SST          |
| BLACK BUTTON INSERT | 14     | black button insert       | 5   | plastic      |
| 10290-002           | 15     | assembly 30' coil         | 1   | -            |
| 10285-003           | 16     | J560 plug                 | 1   | -            |



# Replacement Parts

## Rack Cords



### BILL OF MATERIALS

| PART NO.            | ITEM NO. | DESCRIPTION   | FT600 | FT600C | FT600S | FT600SC | FT620 | FT620S |
|---------------------|----------|---|-------|--------|--------|---------|-------|--------|
| 10718SS             | 1        | bayonet stud  | 2     | 4      | 2      | 4       | 3     | 3      |
| BLACK BUTTON INSERT | 2        | plastic black pin insert                            | 3     | 1      | 3      | 1       | 5     | 5      |
| 10717SS             | 3        | stainless screw                                     | 1     | 1      | 1      | 1       | 5     | 1      |
| 10523NY-004         | 4A       | green "thermistor" glass reinforced nylon plug body | 1     | 1      | 1      | 1       | n/a   | n/a    |
| 10523NY-003         | 4B       | blue "optic" glass reinforced nylon plug body       | n/a   | n/a    | n/a    | n/a     | 1     | 1      |
| 10250               | 5        | stainless, cable bend restrictor spring             | 1     | 1      | 1      | 1       | 1     | 1      |
| 10259               | 6A       | thermistor cable assembly 30' coiled (US)           | 1     | n/a    | n/a    | n/a     | n/a   | n/a    |
| 10259-C             | 6B       | thermistor cable assembly 30' coiled (Canada)       | n/a   | 1      | n/a    | n/a     | n/a   | n/a    |
| 10259-S             | 6C       | thermistor cable assembly 20' straight (US)         | n/a   | n/a    | 1      | n/a     | n/a   | n/a    |
| 10259-CS            | 6D       | thermistor cable assembly 20' straight (Canada)     | n/a   | n/a    | n/a    | 1       | n/a   | n/a    |
| 10290               | 6E       | optic cable assembly 30' coiled (US)                | n/a   | n/a    | n/a    | n/a     | 1     | n/a    |
| 10290-S             | 6F       | optic cable assembly 30' straight (US)              | n/a   | n/a    | n/a    | n/a     | n/a   | 1      |
| 10550SS             | 7        | plug pin  | 8     | 10     | 8      | 10      | 6     | 6      |
| 10253               | 8        | stainless plug spring                               | 8     | 10     | 8      | 10      | 6     | 6      |
| 10260               | 9        | set screw   | 8     | 10     | 8      | 10      | 6     | 6      |
| 10252               | 10       | retaining ring                                      | 8     | 10     | 8      | 10      | 6     | 6      |
| 10524PL-001         | 11       | long plastic contact block                          | 1     | 1      | 1      | 1       | 1     | 1      |
| 10718PLUG           | 12       | aluminium bayonet pin plug                          | 2     | 4      | 2      | 4       | n/a   | n/a    |
| SINGLE1518R         | 13       | stainless double ear pinch on clamp                 | 1     | 1      | 1      | 1       | 1     | 1      |
| 10715NP             | 14       | cord grip bushing                                   | 1     | 1      | 1      | 1       | 1     | 1      |
| 10716ST             | 15       | cord grip washer                                    | 1     | 1      | 1      | 1       | 1     | 1      |
| 10249               | 16       | aluminium strain relief nut                         | 1     | 1      | 1      | 1       | 1     | 1      |

### REPAIR KITS

| PART NO. | INCLUDES ITEM #   | DESCRIPTION  |
|----------|-------------------|--|
| FT601    | 1-4A,5,7-11,14-16 | Replacement thermistor plug assembly, 8 pin 4 J slot (US)      |
| FT601-10 | 1-4A,5,7-11,14-16 | Replacement thermistor plug assembly, 10 pin 4 J slot (Canada) |
| FT602    | 6B, 13            | Replacement 30' orange coiled cord, Thermistor 10 conductor    |
| FT604    | 6D, 13            | Replacement 20' orange straight cord, Thermistor 10 conductor  |
| FT621    | 1-4B,5,7-11,14-16 | Replacement optic plug assembly, 6 pin 3 J slot (US)           |
| FT622    | 6E, 13            | Replacement 30' orange coiled cord, Optic 6 conductor          |
| FT624    | 6F, 13            | Replacement 20' orange straight cord, Optic 6 conductor        |

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