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DIXON



The Right Connection®

## Tanker & Overfill Prevention Products

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## Tanker & Overfill Prevention Products

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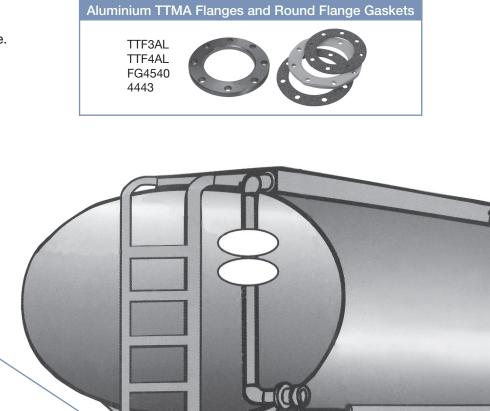


#### **Petroleum Tanker Products**

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.

Grounding Stud

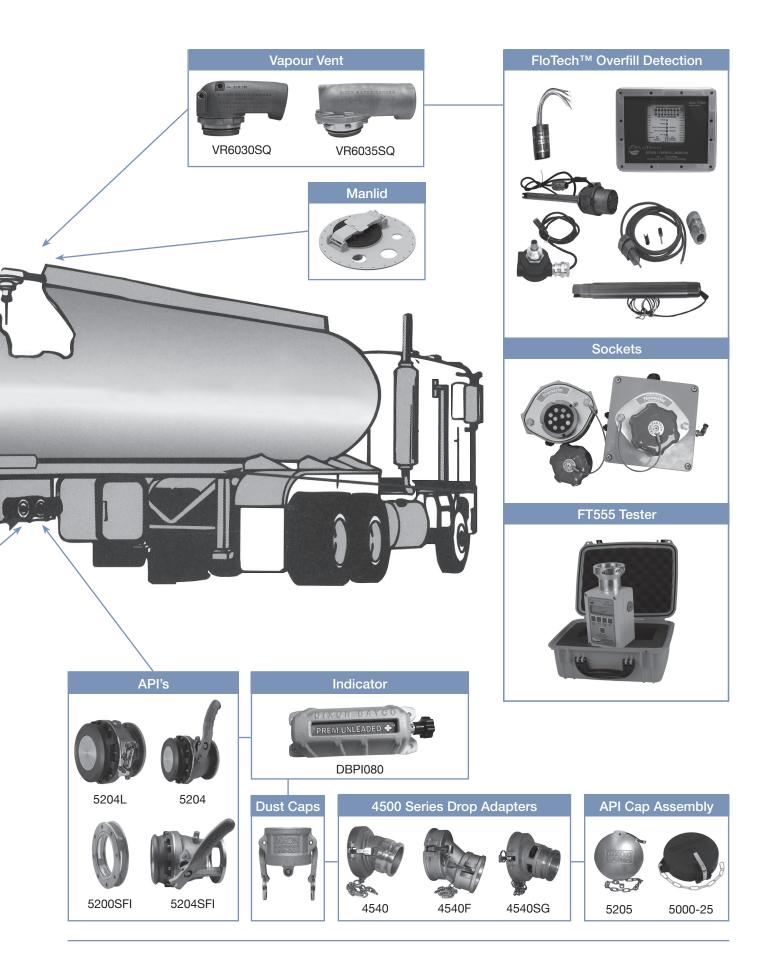
GS1 GS2





OC







## Dixon Bayco Fuel Compatibility Chart Siofuel Compatible



		FUEL PRODUCT*										
DIXON BAYCO PRODUCT	DESCRIPTION	GASO- LINE	DIESEL	NLSD	CRUDE OIL	E10	E20	E85	E100	B2	B20	B100
4500 Series	Two Piece API Drop Adapter With Sight Glass, Baylast Seals	1	1	1	1	1	1	1	1	1	1	1
4500V Series	Two Piece API Drop Adapter With Sight Glass, FKM Seals	1	1	1	1	NR	NR	NR	NR	1	1	1
4530 & 4540	API Drop Adapter Without Sight Glass, Baylast Seals	1	1	1	1	1	1	1	1	1	1	1
4530V & 4540V	API Drop Adapter Without Sight Glass, FKM Seals	1	1	1	1	NR	NR	NR	NR	1	1	1
4530SG & 4540SG	One Piece API Drop Adapter With Sight Glass, Baylast <sup>™</sup> Seals	1	1	1	1	1	1	1	1	1	1	1
4530SGV & 4540SGV	One Piece API Drop Adapter With Sight Glass, FKM Seals	1	1	1	$\checkmark$	NR	NR	NR	NR	1	1	1
5200SFI & 5200SFI-3	TTMA Flanged Sight Glass With Baylast <sup>™</sup> Seals	1	1	1	NR2	1	1	1	1	1	1	1
5200SFIV & 5200SFIV-3	TTMA Flanged Sight Glass With FKM Seals	1	1	1	NR2	NR	NR	NR	NR	1	1	1
5204	API Valve With Sight Glass, Baylast <sup>™</sup> Seals	1	1	1	NR2	1	1	NR	NR	1	1	1
5204C	API Valve With Sight Glass & Removable Handle, Baylast <sup>™</sup> Seals	1	1	1	NR2	1	1	NR	NR	1	1	1
5204L	API Load Only Valve With Sight Glass, Baylast <sup>™</sup> Seals	1	1	1	NR2	1	1	NR	NR	1	1	1
5204LNG	API Load Only Valve Without Sight Glass, Baylast <sup>™</sup> Seals	1	1	1	NR2	1	1	1	1	1	1	1
5204NG	API Valve Without Sight Glass, Baylast <sup>™</sup> Seals	1	1	1	NR2	1	1	1	1	1	1	1
5204NGC	API Valve Without Sight Glass, With Removable Handle, Bay- last <sup>™</sup> Seals	~	1	~	NR2	1	1	1	1	1	1	~
5204NGV	API Valve Without Sight Glass, FKM Seals	1	1	1	NR2	NR	NR	NR	NR	1	1	1
5204SFI	API Valve With Inline Tube Sight Glass, Baylast <sup>™</sup> Seals	1	$\checkmark$	1	NR2	$\checkmark$	1	1	1	1	$\checkmark$	1
5204SNG	API Valve Without Sight Glass, Baylast <sup>™</sup> Seals, Stainless Spring	1	1	1	1	1	1	1	1	1	1	1
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	1	1	1	NR	1	1	1	1	1	1	NR
5300B & 5400B	API Rack Coupling FKM-B Seals	1	1	1	NR	1	1	1	1	1	1	1
5300G & 5400G	API Rack Coupling FKM GFLT Seals	1	1	1	NR	1	1	1	1	1	1	1
Vapour or Product Hose Couplings	Petroleum Vapour Hose Couplings, Buna Seals	1	1	1	1	1	1	1	1	1	1	NR
Vapour or Product Hose Couplings	Petroleum Vapour Hose Couplings, FKM Seals	1	1	1	1	NR	NR	NR	NR	1	1	1
VR4000 & VR4100 Series Vapour Valves	Petroleum Vapour Valves	1	1	1	1	1	1	1	1	1	1	~
VR6100, VR6200 & VR6500 Vapour Elbows	Petroleum Vapour Elbows & Inlets	~	~	~	NA	~	~	~	NA	~	~	NA
VR6030SQ & VR6035SQ	Sequential Vapour Vent Valves, Baylast™ Seals	1	1	1	1	1	1	1	1	1	1	1
300GTTFCB & 400GTTFCB	Cork Buna TTMA gasket	~	$\checkmark$	1	1	$\checkmark$	NR	NR	NR	1	NR	NR
300GTTFBL & 400GTTFBL	TTMA Baylast™ Gasket	1	$\checkmark$	1	1	$\checkmark$	1	1	1	1	$\checkmark$	1
400GTTFK	Klinger <sup>®</sup> Style TTMA Gasket	1	1	1	1	1	1	1	1	1	1	~
40321TF, 40322TF & 40323TF	PTFE Soft Core TTMA Gaskets	1	1	1	1	1	1	1	1	1	1	1
40364BL & 40323BL	Baylast <sup>™</sup> Sump Gaskets	1	1	1	1	1	1	1	1	1	1	1
FT151,FT202,FT101	FloTech <sup>™</sup> Sensors	1	1	1	1	1	1	1	1	1	1	1
FT150S, FT100S	FloTech <sup>™</sup> Stainless Steel Sensors	1	1	1	1	1	1	1	1	1	1	1

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

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



## 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 5204 5204C 5204NGC 5204NGC 5204SNG 5204TNG 5204NGV	Fixed handle, without sight glass, ALH nose ring, Baylast <sup>™</sup> seal Fixed handle, sight glass, ALH nose ring, Baylast <sup>™</sup> seal Removable handle*, sight glass, ALH nose ring, Baylast <sup>™</sup> seal Removable handle*, without sight glass, ALH nose ring, Baylast <sup>™</sup> seal Fixed handle, without sight glass, ALH nose ring, stainless spring for crude oil, Baylast <sup>™</sup> seal Fixed handle, without sight glass, ALH nose ring, PTFE seals					
5204NGV 5204SFI-P	Fixed handle, without sight glass, Viton <sup>®</sup> seals Fixed handle, Baylast <sup>™</sup> seals and inline full body sight glass, drilled / tapped					

\* Removable handle for Canadian market

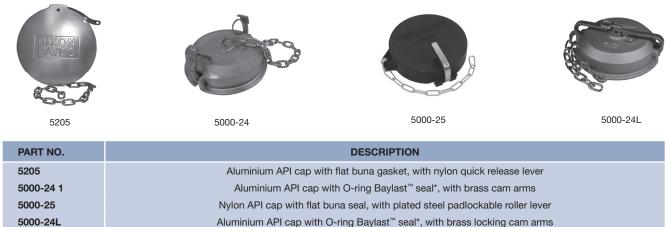


	API LOAD ONLY VALVE					
PART NO.	DESCRIPTION					
5204L 5204LNG 5204LSNG	Load only API valve with sight glass, ALH nose ring Load only API valve without sight glass, ALH nose rings Load only API valve without sight glass with stainless steel spring					



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### **API Dust Caps**



Aluminium API cap with O-ring Baylast<sup>™</sup> seal\*, with brass locking cam arms

\* FKM seal available.

### **API Drop Adapters**



PART NO.	DESCRIPTION
4530	API to 3" drop adapter, Baylast™ O-ring seal
4530SG	API to 3" drop adapter, Baylast <sup>™</sup> 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 <sup>™</sup> 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 <sup>™</sup> 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







31440-223AL		41440-225AL	4044731	
	PART NO.		DESCRIPTION	
*FKM seal available.	31440-225AL	4" API to 3"	drop adapter with Buna-N flat gasket	
See pages 88-90 for repair parts.	41440-225AL	4" API to 4"	drop adapter with Buna-N flat gasket	
Threaded connection available on request.	40447ST		Heavy duty chain	

## **TTMA Flanged Sight Flow Indicators**

#### Features & Benefits:



5200-SFI shown mounted on petroleum tank



5200-SFI

#### Features & Benefits:

- Due to the proprietary blending of petroleum products, Dixon<sup>™</sup> 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 fl ow, 134" width, 31/2" inside diametre
5200C-SFI-31	3" TTMA flange sight flow, 1 $\%$ " width, 3 $\%$ " inside diametre, stainless retain ring
5200-SFI	4" TTMA flange sight flow, 13/4" width, 4 " inside diametre
5200C-SFI1	4" TTMA flange sight flow, 1¾" width, 4 " inside diametre, stainless retain ring

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

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

- Due to the proprietary blending of petroleum products, Dixon<sup>™</sup> 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, 31/4" width, 4 " inside diametre
5201-SFI-3	3" TTMA flange sight flow, 31/4" width, 31/2" inside diametre



5201-SFI

## **TTMA Flanges**











TTF4AL-4MT

TTF4AL-4EMT

TTF4AL-4FT

TTF4AL

TTF400SP

PART NO.	DESCRIPTION
TTF3AL-3MT	3" TTMA flange x 3" male NPT, 21/2" overall length
TTF4AL-3MT	4" TTMA flange x 3" male NPT, 21/2" overall length
TTF4ALHC-3MT	4" TTMA flange x 3" male NPT, 21/2" overall length, hardcoated
TTF4AL-3EMT	4" TTMA flange x 3" male NPT, 5½" overall length
TTF4AL-3FT	4" TTMA flange x 3" female NPT, 21/2" overall length
TTF4AL-4MT	4" TTMA flange x 4" male NPT, 2½" overall length
TTF4ALHC-4MT	4" TTMA flange x 4" male NPT, 21/2" overall length, hardcoated
TTF4AL-4EMT	4" TTMA flange x 4" male NPT, 5½" overall length
TTF4AL-4FT	4" TTMA flange x 4" female NPT, 21/2" 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





400-DLT-AL



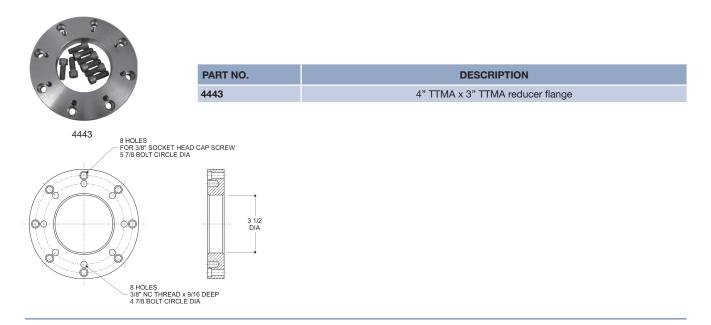
4022DLTAL

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 (221/2°)

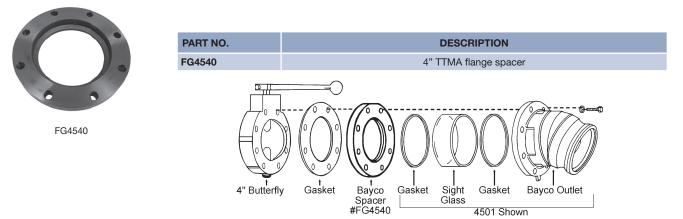
See page 11 for TTMA flange gaskets.



#### **TTMA Flange Reducer**



## **TTMA Butterfly Valve Spacer**



#### **API and TTMA Flange Gaskets**



PART NO.	SIZE	DESCRIPTION	OD	ID	THICKNESS	BOLT CIRCLE
300GTTFCB	3"	TTMA - Cork/Buna 5-5/8" 3½" "		н	4-7/8"	
300GTTFBL	3"	TTMA - Baylast™	5-5/8"	3-5/8"	н	4-7/8"
300GTTFK	3"	TTMA Klinger nylon	5-5/8"	31⁄2"	н	4-7/8"
40321TF	3"	TTMA - PTFE with soft fiber core	5-29/32"	31⁄2"	3/32"	4-7/8"
40364TF	3"	API Sump - PTFE with soft fiber core	71⁄4"	5"	5/32"	6¼"
40364BL	3"	API Sump - Baylast™	71⁄4"	5"	н	6¼"
400GTTFCB	4"	TTMA - Cork/Buna	6-5/8"	4-9/16"	н	5-7/8"
400GTTFBL	4"	4" TTMA - Baylast™		4-5/8"	н	5-7/8"
400GTTFK	4" TTMA Klinger nylon		6-5/8"	4-9/16"	н	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-		5-7/8"	5/32"	71⁄4"
40323BL	4"	API Sump - Baylast™	81⁄4"	6 "	н	71⁄4"



### **Vapour Return Valves**

#### Standards:

Materials:

#### Features & Benefits:



VR4000



VR3100



VR4100



VR4100F

VR4100F-SFI

## Vapour Hose Couplings

POPPET PART NO. **COUPLER SIZE CONNECTION TYPE & SIZE** PROBE VALVE VRC3000AL 3" 3" hose No Yes VR4030CS-AL1 4" 3" hose Yes Yes 4" VR4040CS-AL 4" hose Yes Yes VR4040CS-4MNPT 4" 4" male NPT Yes Yes VR4030CS-AL 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 4" 400-DVR-AL 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 4" Yes VR4030CS-NP 3" hose No VR4040CS-AL

Manufactured to connect to vapour hose couplings

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

- 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

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 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

Nº Lico	PART NO.	DESCRIPTION
	VR4050AL VR4050ALC 400-G-BU	Aluminium cap Aluminium cap with chain Replacement gasket
	PART NO.	DESCRIPTION

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







PART NO.DESCRIPTIONVR6030SQFor 16" manhole, mounting ring attachmentVR6035SQFor 20" manhole, 3" TTMA flange attachment40193ALVR6035SQ 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 <sup>™</sup> 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 <sup>™</sup> seals
5000AIHD	Heavy duty, high flow air ports, same foot print as 5000AI, Baylast <sup>™</sup> seals
5000AIRHD	Roller end for various angles, large air ports, Baylast <sup>™</sup> seals
5000AIVHD	Heavy duty air interlock with paddle plunger, Baylast <sup>™</sup> seals

## Heavy Duty 6-Port Air Interlock Valves



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



## **Petroleum Products**

## **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<sup>™</sup>, Viton-B<sup>®</sup>, Viton<sup>®</sup> GFLT

#### Chemical Compatibility (Baylast<sup>™</sup> 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<sup>®</sup> seals: -29°C (-20°F) to 204°C (+400°F) Baylast<sup>™</sup> 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<sup>®</sup> 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	5400	Baylast <sup>™</sup>
5300B	5400B	Viton-B <sup>®</sup>
5300G	5400G	Viton GFLT

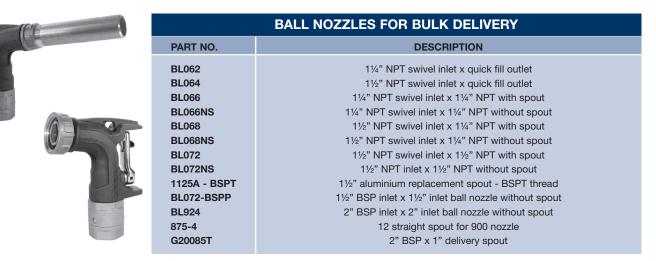


## **Ball Nozzles for Bulk Delivery**

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



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 withother manufacturers. For home fuel oil delivery.



SWIVEL NUT PIPE ADAPTERS FOR BALL NOZZLES				
PART NO.	DESCRIPTION			
BL002 BL001 BL005	1¼" male NPT 1½" male NPT fine thread			

Note: Some fuel additives are not compatible with certian 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.

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

Standards:

- Materials:
- Features & Benefits:
- Aluminium body, aluminium and stainless steel wetted parts, FPM (FKM and PTFE seals).
- High flow with low pressure drop
  Working pressure of 150 PSI at 21°C (70°F)
- Valve spindle can be disassembled with valve installed.



#### **Two Way-3 Port Diverting Ball Valves**

Application:Two way diverting ball valves are often used to diverting or mixing products between tanker<br/>compartments.

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

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

Materials:

Standards:

- 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

00SW



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"			
PTFF gaskets standard				

## **Gaskets & Washers**

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

## **Static Grounding Balls**

Application:	flammable product	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	Manufactured with 3/8" -16UN-3A thread.				
Materials:	Brass or stainless s	Brass or stainless steel.				
Features & Benefits:	I	<ul> <li>Helps eliminate static electricity sparking</li> <li>Valve spindle can be disassembled with valve installed.</li> </ul>				
	0					
II.	PART NO. DESCRIPTION					

GS1

GS2

GS1-2



GS2

GS1

18

Brass grounding ball

Brass grounding ball with nut

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
DBP1080	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<sup>™</sup> Overfill Prevention Products**

#### **FloTech<sup>™</sup> Overfill Prevention Products**



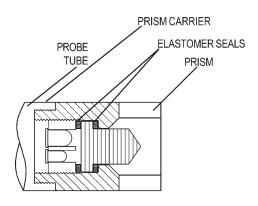
Overfill detection for road tankers is a secondary emergency shut-off system used to prevent overfilling of tanker compartments during the terminal loading process. When an overfill situation is detected, the system will override and shut down the terminal pump/metreing equipment filling the tanker compartment(s).

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. FIoTech<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> brand has earned a reputation for reliable overfill components compatible with other common systems. FloTech<sup>™</sup> brand items are shipped with easy to follow installation instructions and manuals.

#### **Easy Installation**

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



## FloTech<sup>™</sup> 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 <sup>™</sup> has introduced the FloTech <sup>™</sup> .
	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:	<ul> <li>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.</li> </ul>
	<ul> <li>Secure and weather tight connections all the time remove the possibility of poor wiring connections. Sealed connectors pass IP67 and DIN40050 salt spray tests.</li> </ul>
	<ul> <li>Easy installation: literally Plug-n-Play, just mount the components and plug them all together.</li> </ul>
	<ul> <li>Biofuel compatible up to E100 (100% Ethanol) and B100 (100% bio diesel)</li> </ul>

#### **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<sup>™</sup> 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<sup>™</sup> Checkmate Overfill/Retain Plug-n-Play System Monitors with Integrated Dual Sockets (continued)



		N-PLAY CTIONS		AVAILABLE ACCESSORIES INSTALLED		SOCKETS			
PART NO.	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		
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	6 contact pins,	10 contact pins,
FT208-390PP	Yes	Yes	No	No	No	No	Standard	3 "J" slots	4 "J" slots
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		
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	6 contact pins,	10 contact pins
FT208-391PP	Yes	Yes	No	No	No	No	Standard	4 "J" slots	4 "J" slots
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<sup>™</sup> 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:	<ul> <li>Prewired and factory tested with Plug-n-Play cabling and plugs, eliminates hours of</li> </ul>
	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<sup>™</sup> 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.

PART NO.	DESCRIPTION
FT300P	Single socket with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots (U.S.)
FT300PG	Single socket with Plug-n-Play connector. API Optic, 6 contact pins and 3 J slots (U.S.). With internal ground wire.
FT301P	Single socket with Plug-n-Play connector. API Thermistor, 8 contact pins and $4 \ J$ slots (U.S.)
FT306P	Single socket with Plug-n-Play connector. Optic J560 type
FT390PG-20	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.)
FT394P	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.)
FT394PG	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.)
FT394VP	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.)
FT394VPG	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.)
FT395P-20	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)
FT395PG-20	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)
FT391P-20	Dual socket Plug-n-Play assembly with 4-J slots; 20 feet of Plug-n-Play cable



FT390PG-20



## FloTech<sup>™</sup> 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<sup>™</sup> 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 " 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
- 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<sup>™</sup> 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 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.



Biofuel Compatible







## FloTech<sup>™</sup> 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 TRAILERSLENGTH 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



DESCRIPTION
One compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections
Two compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections
Three compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections
Four compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections
Five compartment truck mounted tank. Overfill detection (top) cable harness with Plug-n-play connections

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

Biofuel Compatible



#### **Checkmate Overfill Detection Systems (Top Detection Only)**

Features & Benefits:

- FloTech<sup>™</sup> 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<sup>™</sup> Checkmate Overfill/Retain Black and White 2 Wire System Checkmate Overfill and Retain Detection Systems

#### Features & Benefits:

- FloTech<sup>™</sup> 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
FT2811	Checkmate, 1 compartment system (overfill & retain)
FT2812	Checkmate, 2 compartment system (overfill & retain)
FT2813	Checkmate, 3 compartment system (overfill & retain)
FT2814	Checkmate, 4 compartment system (overfill & retain)
FT2815	Checkmate, 5 compartment system (overfill & retain)
FT2816	Checkmate, 6 compartment system (overfill & retain)
FT2817	Checkmate, 7 compartment system (overfill & retain)
FT2818	Checkmate, 8 compartment system (overfill & retain)
FT2811-12	Checkmate, 1 compartment system (overfill & retain) - 12" probes
FT2812-12	Checkmate, 2 compartment system (overfill & retain) - 12" probes
FT2813-12	Checkmate, 3 compartment system (overfill & retain) - 12" probes
FT2814-12	Checkmate, 4 compartment system (overfill & retain) - 12" probes
FT2815-12	Checkmate, 5 compartment system (overfill & retain) - 12" probes
FT2816-12	Checkmate, 6 compartment system (overfill & retain) - 12" probes
FT2817-12	Checkmate, 7 compartment system (overfill & retain) - 12" probes
FT2818-12	Checkmate, 8 compartment system (overfill & retain) - 12" probes

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



## FloTech<sup>™</sup> 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<sup>™</sup> Data Link<sup>™</sup> 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 FT207	Checkmate programable monitor and housing 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<sup>™</sup> Checkmate Overfill/Retain Black and White 2 Wire System **Checkmate Overfill and Retain Detection Systems (Continued)**

#### **Overfill Detection Sensors**

Features & Benefits:

- The FloTech<sup>™</sup> 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

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 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 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.



**Biofuel Compatible** 





FT152

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

#### Features & Benefits:

- FloTech<sup>™</sup> 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<sup>™</sup> R/OM Type Overfill and Retain Red and Black 2 Wire Systems

Features & Benefits:

- FloTech<sup>™</sup> 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



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**Biofuel Compatible** 

#### FloTech<sup>™</sup> 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 programable monitor & housing.
FT203P	FloTech™ R/OM type programable replacement monitor only. (no housing)
FT203PSPEC	FloTech <sup>™</sup> R/OM type programable replacement monitor with 8-hole cover. (no housing)





### FloTech<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> 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 " 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.



FLOTECH <sup>™</sup> 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



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

#### Features & Benefits:

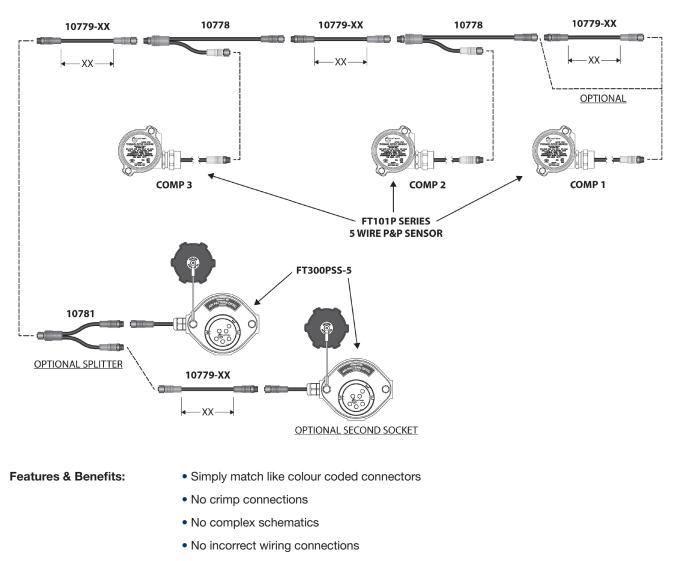
- The FT206 sensor is a retain detection sensor. Sensor is shipped with a ½" NPT weld-on aluminium half coupling for mounting. The main sensor portion is stainless steel to prevent galling in the tank. The wiring box is plastic to prevent corrosion and is removable to facilitate installation. The side 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<sup>™</sup> 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.

RETAIN SENSORS	
PART NO.	DESCRIPTION
FT206-ATEX	Housing with red and black 2 wire retain probe
1G Ex ia   B T4 Ga: Ta = $-40^{\circ}$ C to + 70°C	









### 5 Wire Plug-n-Play

- 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)



Biofuel Compatible



### FloTech<sup>™</sup> API Optic 5 Wire Overfill Detection Systems

Application:	The FloTech <sup>™</sup> 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 <sup>™</sup> 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:	<ul> <li>See the features and benefits of each of the system components</li> <li>Biofuel compatible up to E100 (100% Ethanol) and B100 (100% bio diesel)</li> </ul>

### FloTech<sup>™</sup> API Optic Overfill 5 Wire Systems (Top Detection Only)

Features & Benefits:

- FloTech<sup>™</sup> 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.

Biofuel Compatible



## FloTech<sup>™</sup> 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
FT103	FloTech <sup>™</sup> API Optic 5 wire monitor and housing
FT102	FloTech <sup>™</sup> API Optic 5 wire replacement monitor only (no housing)

See page 142 for repair kits and replacement parts

## FloTech<sup>™</sup> API Optic 5 Wire Overfill Detection System Overfill Sensors

Features & Benefits:

- The FloTech<sup>™</sup> 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 Availabke

PART NO.	DESCRIPTION
FT101-ATEX	Housing with 7" - 5 wire overfill detection probe NPT
FT101-12-ATEX	Housing with 12" - 5 wire overfill detection probe NPT
FT101-18-ATEX	Housing with 18" - 5 wire overfill detection probe NPT
FTE101-ATEX	Housing with 7" - 5 wire overfill detection probe BSPT
FTE101-12-ATEX	Housing with 12" - 5 wire overfill detection probe BSPT
FTE101-18-ATEX	Housing with 18" - 5 wire overfill detection probe BSPT
II 1G Ev ia IIB T/ Gai Ta	$40^{\circ}$ C to $+ 70^{\circ}$ C

II 1G, Ex ia IIB T4 Ga; Ta =  $-40^{\circ}$ C to +  $70^{\circ}$ C.

REPLACEMENT PROBES	
PART NO.	DESCRIPTION
FT100	Replacement 7" - 5 wire overfill detection probe
FT100-12	Replacement 12" - 5 wire overfill detection probe
FT100-18	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.



DIXON

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

Features & Benefits:

- The FloTech<sup>™</sup> 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<sup>™</sup> 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

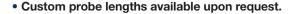
PART NO.	DESCRIPTION
FT150S	7" 316 stainless steel-black and white 2 wire, overfill detection probe only (no housing)
FT191S	Stainless steel probe housing. 3" female NPS thread (housing only, order probe separately)

### **Stainless Steel 5 Wire Probes and Sensor Housings**

Features & Benefits:

- The FloTech<sup>™</sup> 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 ¾" NPT pipe nipples
- All FloTech<sup>™</sup> 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





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

ALUMINIUM HARDCOAT J SLOT	
PART NO.	DESCRIPTION
FT300	Optic socket API / WOGA, 6 pin and 3 J-slots (US)
FT300E	Optic Socket API/WOGA, as above c/w M20x1.5 cable entry holes
FT300GW	Optic Socket API / WOGA, 6 pin and 3 J-Slots with ground wire
FT300VI	Optic Socket API/WOGA, 6 pin and 3 J-slots with vapour recovery interlock
FT307	Optic socket, 6 pin and 4 J-slots (Canada)
FT306	Optic socket, J560 pin type
FT301GW	Thermistor socket, API, 8 pin and 4-J slots with ground wire
FT304	Thermistor socket, 10 pin and 4 J-slots (Canada, Europe)
FT304BVI	Square Housing 10pin and 4 J-Slots c/w brake and vapour interlock (Canada, Europe)
FT304E	Thermistor socket, as above c/w M20x1.5 cable entry holes
FT305	Thermistor socket, J560 pin type
FT302	Float, API, J560 pin type socket
Replacement face	plates and dust caps
FT310	API optic face plate assembly, 6 pin. 3-J slots (US)
FT313	Optic pattern contact assembly with thermistor, 6 pin, 4-J slots (US)
FT317	Optic pattern face plate assembly ,6 pin, 4-J slots (Canada)
FT316	Optic replacement face plate, J560 type
FT311	API thermistor face plate assembly, 8 pin, 4-J slots (US)
FT314	Thermistor face plate assembly, 10 pin 4-J slots. (Canada/Europe)
FT315	Thermistor replacement face plate, J560 type
FT320	Replacement blue optic dust cap
FT321	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		
FT300SS	Optic socket API / WOGA, 6 pin and 3 J-slots, GFL stainless J slot wear ring (US)		
FT300SSGW	Optic socket API / WOGA, 6 pin and 3-J slots, GFL stainless J slot wear ring with ground wire		
FT303SS	Optic socket, 6 pin and 4 J-slots, GFL stainless J slot wear ring (US)		
FT307SS	Optic socket, 6 pin and 4 J-slots, GFL stainless J slot wear ring (Canada)		
FT301SS	Thermistor socket, API, 8 pin and 4 J-slots, GFL stainless J slot wear ring (US)		
FT301SSGW	Thermistor socket, API, 8 pin and 4-J slots, GFL stainless J slot wear ring with ground wire		
FT304SS	Thermistor socket, 10 pin and 4 J-slot, GFL stainless J slot wear ring (Canada, Europe)		
Replacement face	plates and dust caps		
FT310SS	API optic face plate assembly, 6 pin, 3-J slots, GFL stainless J slot wear ring (US)		
FT313SS	Optic pattern contact assembly, 6 pin, 4-J slots, GFL stainless J slot wear ring (US)		
FT317SS	Optic pattern face plate assembly,6 pin, 4-J slots, GFL stainless J slot wear ring (Canada)		
FT311SS	API thermistor face plate assembly, 8 pin, 4-J slots, GFL stainless J slot wear ring (US)		
FT314SS	Thermistor face plate assembly 10 pin 4-J slots, GFL stainless J slot wear ring (Canada, Europe)		
FT320	Replacement blue optic dust cap		
FT321	Replacement green thermistor dust cap		



Biofuel Compatible



FT300



FT300GW



FT301



FT304BVI



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.



### **EZ-Cept Double and Triple Sockets**

Features & Benefits:



FT390



- 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<sup>™</sup> 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<sup>™</sup> 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**



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<sup>™</sup> Checkmate Overfill/Retain Black & White 2 Wire System Sensor Dummy

	PART NO.	DESCRIPTION
	TAIL NO.	
FT205	FT155	Thermistor sensor dummy (each dummy adds up to 5 compartments)
	FT205	R/OM terminator
TICON THERMISTOR & MEEFOR CL. DW MACCORD. WITH WIT		

DESCRIPTION

100' of 5 conductor cable

**Biofuel Compatible** 

### **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<sup>™</sup> cable is specially produced with tin plated wire, which when connected correctly using crimp connections, will provide years of trouble free service.

SYSTEM TYPE

5 wire API optic



FT400



FT400-500 500' of 5 conductor cable 5 wire API optic FT400-1000 5 wire API optic 1000' of 5 conductor cable Red and black 2 wire R/OM type FT401 100' of 7 conductor cable 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 silcone for sealing crimped wired connections FT9025 Terminal pins, 14-16 AWG, 100 pieces



PART #

FT400

### **Optic System Testers**

#### **Application:**

- Standards:
- Materials:

Features & Benefits:



FT520



FT520WOGA

- Used to trouble shoot overfill system circuits.
- Will work with any optic overfill system.
- Durable plastic case, heavy duty cable connectors and test leads.
- 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).

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

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

#### **Application:**

- Features & Benefits:
- Designed to read and test Scully type T.I.M. modules mounted inside API compatible overfill sockets.
- 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. FT530

FT520 Optic system tester, 4 pc set of test leads, batteries and instructions



Biofuel Compatible

DESCRIPTION



### FloTech<sup>™</sup> Truck Tester

Application:

#### Features & Benefits:





FT555PW

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

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

### **FloTech<sup>™</sup> Trailer Identification Module**

#### Application:

Features & Benefits:

- Designed as a drop in replacement for the Scully VIP module, providing you with longer life and reduced costs.
- FloTech<sup>™</sup> TI Module has the same installation and serial number configuration as the Scully design.



PART NO.	DESCRIPTION
FT470	Trailer Identification Module



Biofuel Compatible

attack.

### FloTech<sup>™</sup> FT151RL ROM Link Replacement Sensor

Application:	<ul> <li>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<sup>™</sup> FT151RL or FT151RL-12. Plug the FT151RL into the wiring harness using our connector adapter and the change out is complete.</li> </ul>			
Standards:	<ul> <li>Drop in replacement for the Civacon ROM Link sensors 1554-007 &amp; 1554-0012.</li> </ul>			
Materials:	<ul> <li>Aluminium housing with stainless steel hardware</li> </ul>			
Features & Benefits:	<ul> <li>Trouble free probes: FloTech<sup>™</sup> brand probes incorporate a double elastomer design w 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</li> </ul>			

- Unlike our competitors, FloTech<sup>™</sup> probes do not use internal coil cord connectors which consistently fail in moisture. All FloTech<sup>™</sup> Plug-n-Play probes are prewired to our harness connector, which has proven itself in moisture.
- FloTech<sup>™</sup> 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<sup>™</sup> 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			
FT151RL	Housing with 7" Plug-n-Play overfill detection probe, with Plug-n-Play harness and ROM link jumper cable connector			
FT151RL-12	Housing with 12" Plug-n-Play overfill detection probe, with Plug-n-Play harness and ROM link jumper cable connector			
FT152RL	Retain sensor with Plug-n-Play harness and ROM link jumper cable			
Replacement Probes				
FT150P	Replacement 7" Plug-n-Play probe for FT151RL only			
FT150P-12	Replacement 12" Plug-n-Play probe for FT151RL-12 only			
FT152RL	Replacement Plug-n-Play probe for FT152P			
10688	Gender adapter			
10605PL	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 FT620S FT621 FT622 FT623	21831 - 21766 27211 08235	7120SR - 7110 - -	plug with 30' coiled cable plug with 20' straight cable replacement plug body replacement 30' coiled cable plug hanger

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



# **Comparison Reference Chart**

Listed is a cross reference between FloTech<sup>™</sup> brand "Drop In" replacement parts and competitor products.

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

Civacon and R/OM are registered trademarks of Civacon/Dover Corp. Intellicheck 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						
	FLOTECH <sup>™</sup> PART NO.	CIVACON PART NO.	SCULLY PART NO.	DESCRIPTION		
F F F F F F F F F F F F F F F F F F F	FT1004 FT1005 FT2004 FT2005 FT2104 FT2105 FT2801 FT2802 FT2803 FT2804 FT2805 FT2806 FT2807 FT2806 FT2807 FT2808 FT2811 FT2812 FT2813 FT2814 FT2815 FT2816 FT2817	2004 2005 3024 3025 3034 3035 - - - - - - - - - - - - - - - - - - -	08305 08306 - - - 08251 08352 08353 08354 08355 08356 08356 08380 08381 08361 08361 08362 08363 08364 08365 08366 08382	API compatible 4 compartment system API compatible 5 compartment system R/OM type, 4 compartment system R/OM type, 5 compartment system R/OM type, 5 compartment system (top only) R/OM type, 5 compartment system (top only) Checkmate system, one compartment, top only Checkmate system, one compartment, top only Checkmate system, two compartment, top only Checkmate system, four compartment, top only Checkmate system, four compartment, top only Checkmate system, five compartment, top only Checkmate system, six compartment, top only Checkmate system, six compartment, top only Checkmate system, six compartment, top only Checkmate system, one compartment, top only Checkmate system, one compartment, top and bottom sensors Checkmate system, five compartment, top and bottom sensors Checkmate system, five compartment, top and bottom sensors Checkmate system, five compartment, top and bottom sensors Checkmate system, six compartment, top and bottom sensors		
F F F F F F F F F F F F F F F F F F F	FT2005 FT2104 FT2105 FT2801 FT2802 FT2803 FT2804 FT2805 FT2806 FT2807 FT2808 FT2810 FT2812 FT2811 FT2812 FT2813 FT2814 FT2815 FT2816	3025 3034	08352 08353 08354 08355 08356 08380 08381 08361 08362 08363 08364 08365 08366	R/OM type, 4 compartment sys R/OM type, 5 compartment sys R/OM type, 5 compartment system R/OM type, 5 compartment system Checkmate system, one compartmer Checkmate system, two compartmer Checkmate system, five compartmer Checkmate system, five compartmer Checkmate system, six compartmen Checkmate system, six compartmen Checkmate system, seven compartmen Checkmate system, seven compartmen Checkmate system, one compartment, top at Checkmate system, two compartment, top at Checkmate system, four compartment, top at Checkmate system, four compartment, top at Checkmate system, five compartment, top at Checkmate system, five compartment, top at Checkmate system, five compartment, top at Checkmate system, six compartment system, six compartment system, six compartment Checkmate system system system system system system sys		

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

Dixon Valve and Coupling Company warrants the FloTech<sup>™</sup> 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.



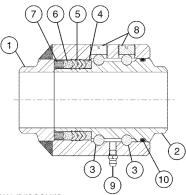
Telephone: +44 (0)1772 323529

## **V-Ring Swivel Joints**

- 1. Body
- 2. Sleeve
- 3. Ball bearings
- 4. Seal retainer
- 5. V-Ring (pressure) seal

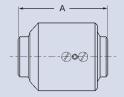
### **V-Ring Features**

- 6. Spring retainer
- 7. Spring
- 8. Ball retainer screw
- 9. Grease fitting
- 10. O-Ring (dust) seal



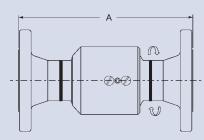
- The spring-loaded triple V-ring sealing system ensures a leak proof seal at either high or low pressure and an extended seal life compared to the conventional single O-ring design
- The 3" 8" carbon steel swivels are manufactured from a special grade of carbon steel with flame hardened dual raceways 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

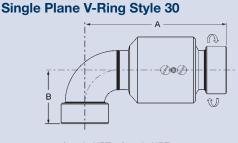


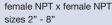
weld end x weld end sizes 2" - 8"

female NPT x female NPT sizes 2" - 8"

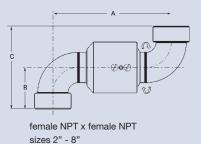


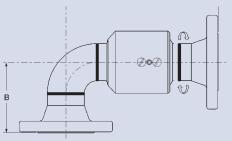
150# ASA flange x 150# ASA flange sizes 2" - 8"



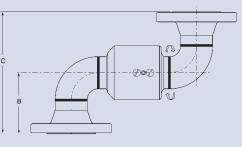


#### Single Plane V-Ring Style 40





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

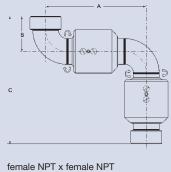


150# ASA flange x 150# ASA flange sizes 2" - 8"



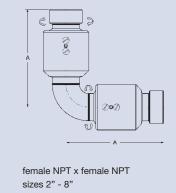
# **Swivel Joints**

#### **Double Plane V-Ring Style 50**

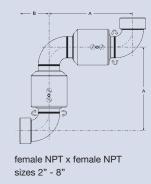


sizes 2" - 8"

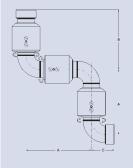
### Double Plane V-Ring Style 60

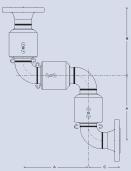


#### **Double Plane V-Ring Style 70**



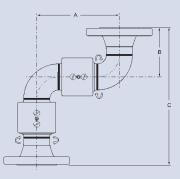
#### Triple Plane V-Ring Style 80



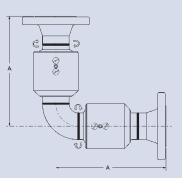


female NPT x female NPT sizes 2" - 8"

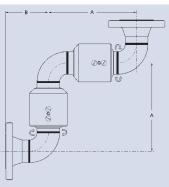
150# ASA flange x 150# ASA flange sizes 2" - 8"



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

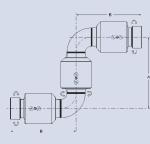


150# ASA flange x 150# ASA flange sizes 2" - 8"

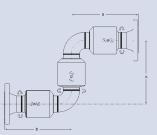


150# ASA flange x 150# ASA flange sizes 2" - 8"

### Triple Plane V-Ring Style 10



female NPT x female NPT sizes 2" - 8"

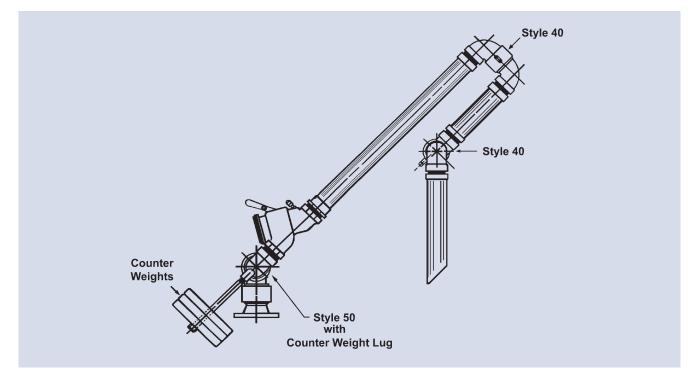


150# ASA flange x 150# ASA flange sizes 2" - 8"



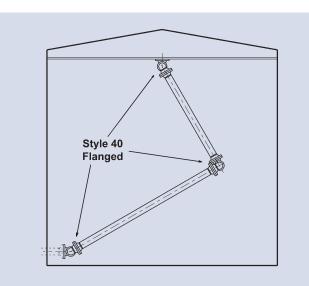
# **Typical Applications for V-Ring Swivels**

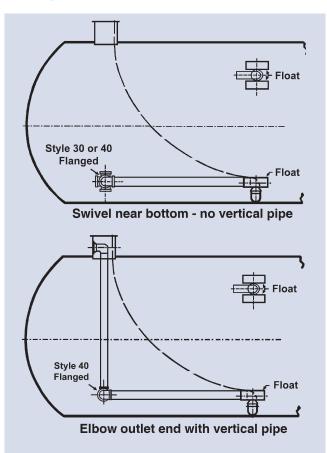
### Loading Arms



#### **Floating Roof Drains**

**Floating Suction** 







# **Swivel Joints**

### **O-Ring Swivel Joints**

- 1. O-Ring (dust) seal
- 4. Grease fitting

Ball bearings

- 2. Ball retainer screw
- З. O-Ring (pressure) seal

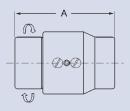
#### **O-Ring Features**

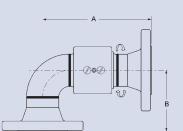
- The O-ring pressure seal ensures a leak-proof seal at either high or low pressure and smoother rotation at lower torque than multiple seal designs
- Spring-loaded PTFE pressure seals are available up through 3"

5.

- 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





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

tank truck flange x tank truck flange

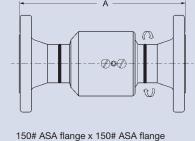
tank truck flange x tank truck flange sizes 2" - 4"



sizes 1" - 4"

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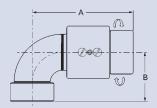
3



sizes 1" - 4"

female NPT x female NPT sizes 1" - 4"

#### Single Plane O-Ring Style 30

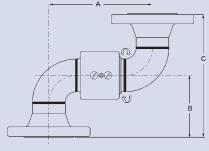


female NPT x female NPT sizes 1" - 4"

#### Single Plane O-Ring Style 40

And

female NPT x female NPT

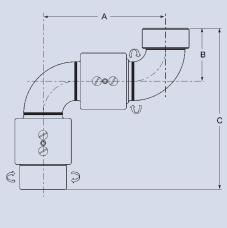


150# ASA flange x 150# ASA flange sizes 1" - 4"



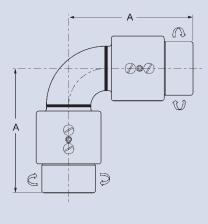
C

#### **Double Plane O-Ring Style 50**



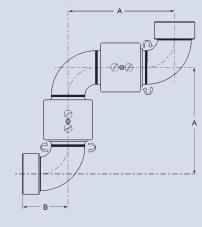
female NPT x female NPT sizes 1" - 4"

#### **Double Plane O-Ring Style 60**

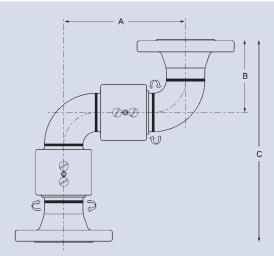


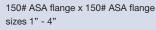
female NPT x female NPT sizes 1" - 4"

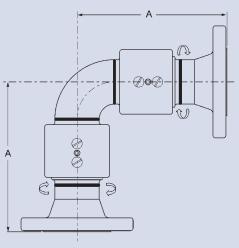
#### Triple Plane O-Ring Style 70



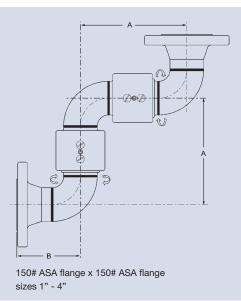
female NPT x female NPT sizes 1" - 4"







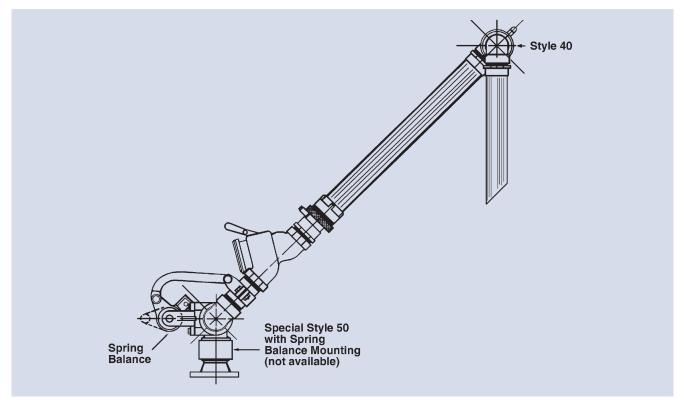
150# ASA flange x 150# ASA flange sizes 1" - 4"



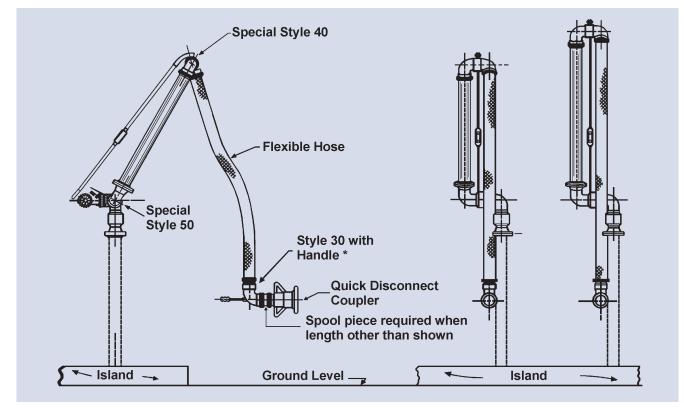


### **Typical Applications for O-Ring Swivels**

#### **Loading Arms**



#### **Hose Loaders**

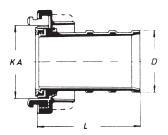


\* style 60 may also be found in this application



# **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

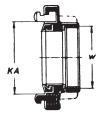




SUCTION COUPLINGS						
PART NO.	NOMINAL SIZE	D (mm)	KA (mm)	L (mm)		
2/D-25 AL	Storz 25 (D) = DIN 14301	25	31	50		
2/32-19 AL	Storz 32	19	44	65		
2/32-25 AL	Storz 32	25	44	65		
2/32-32 AL	Storz 32	32	44	75		
2/38-38 AL	Storz 38	38	52	75		
2/C-32 AL	Storz 52 (C)	25	66	90		
2/C-38 AL	Storz 52 (C)	32	66	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)

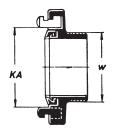






BSPP FEMALE THREADED ADAPTERS						
PART NO. NOMINAL SIZE DIN ISO 228		PIPE THREAD	KA (mm)	MATERIAL		
3/D-050 AL	Storz 25 (D) - DS*	1/2"	31	Aluminium Alloy		
3/D-075 AL	Storz 25 (D) - DS*	3/4"	31	Aluminium Alloy		
3/D-100 AL	Storz 25 (D) - DS* = DIN14306	1"	31	Aluminium Alloy		
3/32-100 AL	Storz 32 - DS*	1"	44	Aluminium Alloy		
3/32-125 AL	Storz 32 - DS*	1 <sup>1</sup> /4"	44	Aluminium Alloy		
3/38-150 AL	Storz 38 - DS*	1 <sup>1</sup> /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 <sup>1</sup> /4"	66	Aluminium Alloy		
3/C-150 AL	Storz 52 (C)	1 <sup>1</sup> /2"	66	Aluminium Alloy		
3/C-200 AL	Storz 52 C = DIN14307	2"	66	Aluminium Alloy		
3/C-250 AL	Storz 52 (C)	2 <sup>1</sup> /2" 2"	66	Aluminium Alloy		
3/65-200 AL	65-200 AL Storz 65		81	Aluminium Alloy		
3/65-250 AL	/65-250 AL Storz 65		81	Aluminium Alloy		
3/B-200 AL	3/B-200 AL Storz 75 (B)		89	Aluminium Alloy		
3/B-250 AL	3/B-250 AL Storz 75 B = DIN 14308		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 <sup>1</sup> /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





BSPP MALE THREADED ADAPTERS					
PART NO.	NOMINAL SIZE DIN ISO 228	PIPE THREAD	KA (mm)	MATERIAL	
4/D-100 AL 4/D-32-100 AL 4/32-125 AL 4/38-150 AL 4/C-125 AL 4/C-200 AL 4/B-250 AL 4/B-250 AL 4/B-300 AL 4/A-400 AL	Storz 25 (D) - DS* Storz 32 DS* Storz 32 DS* Storz 38 - DS* Storz 52 (C) Storz 75(B) Storz 75(B) Storz 75(B) Storz 110(A)	$ \begin{array}{c} 1"\\ 1"\\ 1^{1}/4"\\ 1^{1}/2"\\ 1^{1}/4"\\ 2"\\ 2^{1}/2"\\ 3"\\ 4" \end{array} $	31 44 52 66 66 89 89 133	Aluminium Alloy Aluminium Alloy Aluminium Alloy Aluminium Alloy Aluminium Alloy Aluminium Alloy Aluminium Alloy 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 7/B-C AL 7/A-B AL	C - D = DIN 14341 B - C = DIN 14342 A - A = DIN 14343	66/31 89/66 133/89	Aluminium Alloy Aluminium Alloy Aluminium Alloy			





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





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

\*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*			
69/100 PB	Storz 110 A = DIN 14313			
69/A PB	Storz 145			
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*			

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



# Tank Wagon Couplings BS EN 14420-6:2004

	STAINLESS STEEL TANKWAGON COUPLINGS				
	PART NO.	SIZE	MATERIAL		
P.	MK50SS	DN50	Stainless Steel		
	MK80SS	DN80	Stainless Steel		
	MK100SS	DN100	Stainless Steel		
	VK50SS	DN50	Stainless Steel		
	VK80SS	DN80	Stainless Steel		
	VK100SS	DN100	Stainless Steel		
	VB50SS	DN50	Stainless Steel		
dia tal	VB80SS	DNS0	Stainless Steel		
	400033	DNOU	Stamess Steel		
	MB50SS	DN50	Stainless Steel		
	MB80SS	DN80	Stainless Steel		

		FORGED BRASS TANKWAGON COUPLINGS					
	PART NO.	SIZE	MATERIAL				
4							
	MK50BR MK80BR MK100BR	DN50 DN80 DN100	Forged Brass Forged Brass Forged Brass				
	VK50BR VK80BR VK100BR	DN50 DN80 DN100	Forged Brass Forged Brass Forged Brass				



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

STAINLESS STEEL TANKWAGON SPARE PARTS		
PART NO.	SIZE	DESCRIPTION
MKLR 50SS	DN50	Locking Ring
MKLR 80SS	DN80	Locking Ring
MKLR 100SS	DN100	Locking Ring
MKSR 50SS	DN50	Sealing Ring Section
MKSR 80SS	DN80	Sealing Ring Section
MKSR 100SS	DN100	Sealing Ring Section

FORGED BRASS TANKWAGON SPARE PARTS		
PART NO.	SIZE	DESCRIPTION
MKLR50BR MKLR80BR MKLR100BR	DN50 DN80 DN100	Locking Ring Locking Ring Locking Ring
MKER100BR MKSR50BR MKSR80BR MKSR100BR	DN100 DN50 DN80 DN100	Sealing Ring Section Sealing Ring Section Sealing Ring Section

	SEALS AND GASKETS FOR TANKWAGON COUPLINGS		
	PART NO.	SIZE	DESCRIPTION
	MBG50	DN50	Female Blanking Gasket
	MBG80	DN80	Female Blanking Gasket
	MBG100	DN100	Female Blanking Gasket
$\frown$	TWHS50	DN50	Hypalon Seal
	TWHS80	DN80	Hypalon Seal
	TWHS100	DN100	Hypalon Seal
$\bigcirc$	TS 50T TS 80T	DN50 DN80	PTFE Thread Seal PTFE Thread Seal
	TS 100T	DN100	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

Interchanges with Avery Hardoll and Todo-matic®

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 -

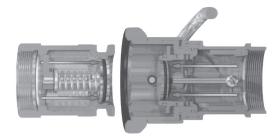
Aluminium:	260 psi / 18 bar
Brass/ Gunmetal:	360 psi / 25 bar
Stainless Steel:	360 psi / 25 bar

 Optional Seals-EPDM BR - nitrile Kalrez<sup>®</sup> Chemraz<sup>®</sup> Perlast<sup>®</sup>

360 psi / 25 k BR - nitrile

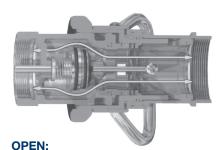
## How it works

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



#### CLOSED:

 Turn and pull It's released - no spillage



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<sup>™</sup> C276 on the stainless steel shaft
- Rollers for the Aluminium and Brass units are Aluminium-bronze on the stainless steel shaft

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DRY QUICK DISCONNECT COUPLERS x FEMALE THREAD WITH VITON® SEALS			
PART NO.	FEMALE NTP/BSP	BODY SIZE	BODY MATERIAL
DDC150SS	1 <sup>1</sup> /2"	70mm	316 Stainless Steel
DDC200SS	2"	70mm	316 Stainless Steel
DDC300SS105	3"	105mm	316 Stainless Steel
DDC300SS	3"	119mm	316 Stainless Steel
DDC400SS	4"	164mm	316 Stainless Steel
DDC150AL	1 <sup>1</sup> /2"	70mm	Anodised Aluminium
DDC200AL	2"	70mm	Anodised Aluminium
DDC300AL105	3"	105mm	Anodised Aluminium
DDC300AL	3"	119mm	Anodised Aluminium
DDC400AL	4"	164mm	Anodised Aluminium
DDC150BR	1 <sup>1</sup> /2"	70mm	Brass
DDC200BR	2"	70mm	Brass
DDC300GM105	3"	105mm	Gunmetal
DDC300GM	3"	119mm	Gunmetal
DDC400GM	4"	164mm	Gunmetal



COMPOSITE DUST PLUGS FOR COUPLERS			
PART NO.	SIZE	BODY SIZE	
DDDP150 DDDP300105 DDDP300 DDDP400	1 <sup>1</sup> /2" and 2" 3" 3" 4"	70mm 105mm 119mm 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

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

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

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



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## **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  $1 \ensuremath{\frac{1}{2}}$ " 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.

11/2" and 2" coupler x female NPT



11/2" 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 DBC61-200 DBC61-300	DBC71-150 DBC71-200 DBC71-300	1½" 2" 3"	2" 2½" 4"	Buna	210 150 120
DBC62-150 DBC62-200 DBC62-300	DBC72-150 DBC72-200 DBC72-300	1½" 2" 3"	2" 2½" 4"	Viton®	210 150 120
DBC63-150 DBC63-200 DBC63-300	DBC73-150 DBC73-200 DBC73-300	1½" 2" 3"	2" 2½" 4"	PTFE Encapsulated Silicone & Kalrez®	210 150 120
DBC64-150 DBC64-200 DBC64-300	DBC74-150 DBC74-200 DBC74-300	1½" 2" 3"	2" 2½" 4"	EPT Kalrez®	210 150 120
 DBC66-200 	DBC76-150 DBC76-200 DBC76-300	1½" 2" 3"	2" 2½" 4"	and PTFE** PTFE Encapsulated	210 150 120
  	DBC77-150 DBC77-200 DBC77-300	1½" 2" 3"	2" 2½" 4"	Viton <sup>®</sup> & Kalrez <sup>®</sup> Viton <sup>®</sup> B	210 150 120
DBC69-300	DBC79-300	3"	4"		120

GREASELESS COUPLER x FEMALE NPT				
STAINLESS STEEL*FEMALECOUPLERSEALMAX. PSIPART NO.NPTSIZEMATERIALAT 70°C				
DBC77-150-GL DBC77-200-GL	1½" 2"	2" 2½"	PTFE Encapsulated Viton <sup>®</sup> & Kalrez <sup>®</sup> PTFE Encapsulated Viton <sup>®</sup> & Kalrez <sup>®</sup>	210 150

\* 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.





	COUPLER x 90° SWIVEL FEMALE NPT			
ALUMINIUM	FEMALE	COUPLER	SEAL	MAX. PSI
PART NO.	NPT	SIZE	MATERIAL	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 250-DP-AL 400-DP-AL	200-DP-SS 250-DP-SS 400-DP-SS	2" 2½" 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 DBCL-300	for use with 1½" and 2" dry disconnect couplers 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 Bay and groove type dry		-	red to interchange	with other cam
Materials:	316 Stainless steel EPT (EPDM)*, Kalre selection. Contact I than 21°C (70°F) an	z®, PTFE encapsu Dixon™ at 800-355	lated FKM seals, s -1991 for working	ee part number ch pressures at tempe	art for full seal eratures other
Features & Benefits:	<ul> <li>Helps eliminate the possibility of costly spills</li> <li>Compatible with most other brands of cam and groove style dry disconnects</li> <li>Special configurations can be designed for your application</li> <li>Female NPT</li> <li>Couplers below are used with the DBA adapters shown on page 69</li> <li>Use standard cam and groove dust plugs, sized one size larger than the dry disconnect size, see chart below for dust plug size selection</li> <li>Stainless steel valve handle locking kit included on valve handle</li> <li>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).</li> <li>* Dependent upon part #, see part number list below for more details.</li> </ul>				
		STAINLESS STE	EEL FEMALE N	PT COUPLERS	
D2C71-150	PART NO.	FEMALE	COUPLER SIZE	SEAL MATERIAL	MAX PSI @ 21°C (70°F)
	D2C71-150 D2C71-200	1½" 2"	2" 2½"	Buna Buna	210 150
had?	D2C72-150	1½" 2"	2"	FKM	210
C LEn	D2C72-200 D2C73-150	2" 1½"	2½" 2"	FKM PTFE Encapsulated Silicone	150 210
	D2C73-200	2"	21⁄2"	PTFE Encapsulated Silicone	150
D2C71-200	D2C74-150 D2C74-200	1½" 2"	2" 2½"	EPT (EPDM) EPT (EPDM)	210 150
	02014-200	2	L /2		130

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



### **Adapters**

- Two-piece adapter design for easy rebuilding of adapters
- Fully interchangeable with Kamvalok (OPW trademark) style fittings

ALUMINIUM

PART NO.

**DBA11-150** 

DBA11-200



11/2" and 2" adapter



3" adapter



the factory

**STAINLESS STEEL\*** 

PART NO.

DBA71-150

DBA71-200

**ADAPTER X FEMALE NPT** 

FEMALE

NPT

2"

• Aluminium fittings have aluminium nose piece and brass piston

SEAL

MATERIAL

Buna

MAX. PSI

AT 70°C

210

150

120

210

150

120

210

150

120

210

150

120

210

150

120

210

150

120

120

· For pressure ratings at other temperatures, contact

ADAPTER

SIZE

2"

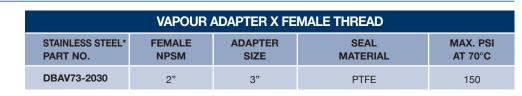
21/2"

JUMP SIZE ADAPTER X FEMALE NPT				
ALUMINIUM	FEMALE	ADAPTER	SEAL	MAX. PSI
PART NO.	NPT	SIZE	MATERIAL	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*	FLANGE	ADAPTER	SEAL	MAX. PSI	
PART NO.	SIZE	SIZE	MATERIAL	AT 70°C	
DBAF72-1520	2"	2"	Viton <sup>®</sup>	150	
DBAF73-1520	2"	2"	PTFE Encapsulated Silicone	150	
DBAF74-1520	2"	2"	EPT	150	
DBAF76-1520	2"	2"	Kalrez <sup>®</sup>	150	
DBAF72-200	2"	2"	Viton®	150	
DBAF73-200	2"	2"	PTFE Encapsulated Silicone	150	
DBAF74-200	2"	2½"	EPT	150	
DBAF76-200	2"	2½"	Kalrez®	150	
DBAF72-300	2"	2½"	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



\* 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:	<ul> <li>Helps eliminate the possibility of costly spills</li> </ul>
	<ul> <li>Compatible with most other brands of bayonet style dry disconnects</li> </ul>
	Female NPT
	<ul> <li>Rubber dust caps and plugs with stainless steel chains are available to protect the</li> </ul>

- adapters and couplers from contamination and damage
- Maximum operating pressure: 85 PSI at 75°F, for pressure ratings at other temperatures contact Dixon<sup>™</sup>.
- \* 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



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# **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:** 

Materials:

Features & Benefits:

The plugs have a stainless steel chain to secure them to the coupler. • 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

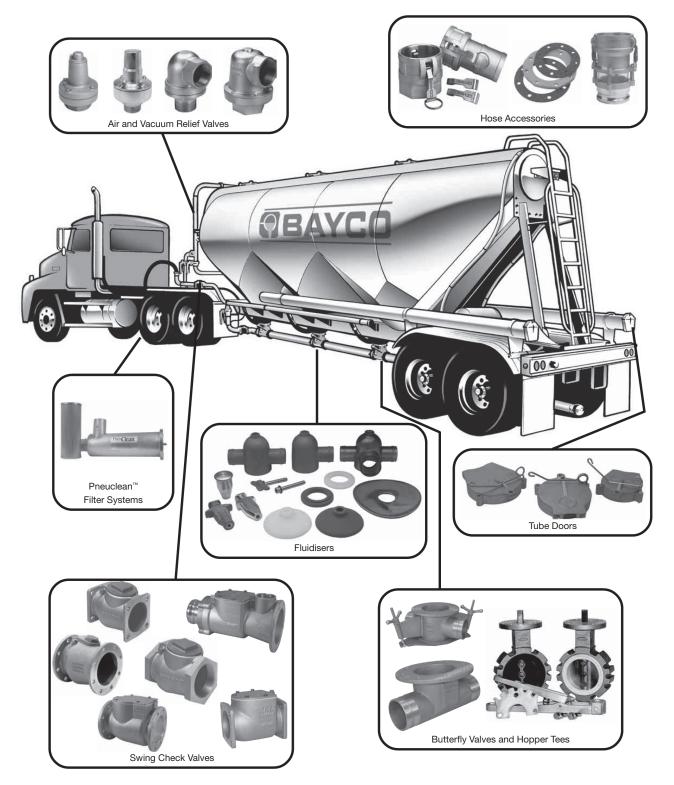
Bayonet dry disconnect caps and plugs keep dirt, debris and water out of couplers preventing build up on the sealing surface that will cause seals to fail prematurely.

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



#### **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 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

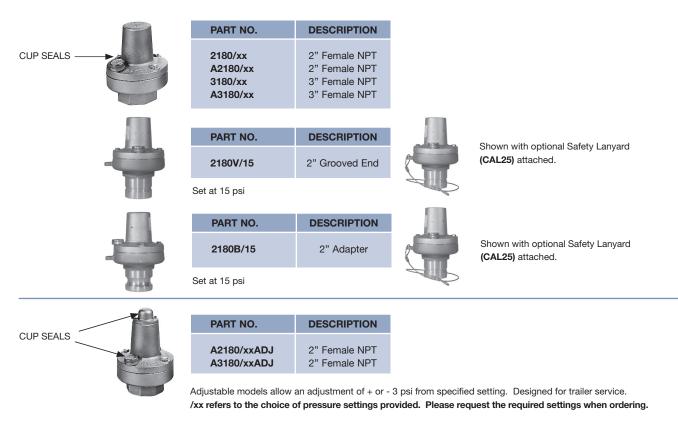
Relief Valve Flow Rates vary depending on the preset relief pressure, for specific relief rates contact Dixon.

#### 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**





# **Dry Bulk Products**

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

#### Designed for high capacity blower or trailer service

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

#### Pneuclean<sup>™</sup> Pneumatic Filtration System

The Pneuclean<sup>™</sup> 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.

to 3" by use of	tainless Steel artridge with	PART NO.	DESCRIPTION
4" x 3" adapter) mi	microporous, semi-permeable PTFE membrane filter element.	PC5000	4" Pneuclean complete housing with filter
		PART NO.	REPLACEMENT PARTS DESCRIPTION
4" outlet (can be conver		PC5001 PC5003 PC5004 PC5005 PC5006 PC5007	Filter Mounting Bracket V-clamp Lid O-ring Bottom Gasket Lid w/Adjusting nut
by use of 4" x 3" adapte	er)		

#### 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)



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#### 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



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

 3000SSP
 Silicon Rubber seal

 3000BSP
 Buna seal & spring loaded flapper

 3000SSP
 Silicon Rubber seal



# **Dry Bulk Products**



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



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

Gaskets should be purchased separately.





#### 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 3020TE	2" Square Flange 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)



PART NO.         DESCRIPTION           SWCV50         1/2"           SWCV75         3/4"           SWCV100         1"
SWCV75 3/4" SWCV100 1"
SWCV100 1"
SWCV100
SWCV125 1 <sup>1</sup> /4"
<b>SWCV150</b> 1 <sup>1</sup> /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 3-400-1500 4-400-1500 4A-400-1500 5-400-1500 6-400-1500	2" 3" 4" 4" 4" 5" 6"	2-400-422237F 3-400-422237F 4-400-422237U 5-400-422237U 6-400-422237U	2" 3" 4" 5" 6"	2-400-422500 3-400-422500 4-400-422500 4A-400-422500 5-400-422500 6-400-422500	2" 3" 4" 4" TTMA 5" 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 4-400-3501 5-400-3501 6-400-3501	3" 4" 5" 6"	2-400-422209F 3-400-422209F 4-400-422209U 5-400-422209U 6-400-422209U	2" 3" 4" 5" 6"	2-400-422501 3-400-422501 4-400-422501 4A-400-422501 5-400-422501 6-400-422501	2" 3" 4" 4" TTMA 5" 6"	

Handles should be ordered separately.



#### **Butterfly Valves - 390 Series**

Housing:	Aluminium
Discs:	Type 316 Stainles
Body Screws:	Cadmium Plated Steel
Stem Packing:	Buna
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 Alloy

#### Features:

• 2 Piece Aluminium Body

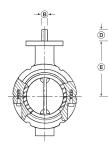


STAINLESS STEEL							
COMPLETE VALVE WITH 316 SS DISC		316 STAINLESS STEEL REPLACEMENT DISCS		WHITE REPLACEMENT NITRILE SEATS			
PART NO.	SIZE	PART NO.	SIZE	PART NO.	SIZE		
3-390-828501 4-390-828U501 5-390-828U501 6-390-828U501	3" 4" 5" 6"	3-390-209F 4-390-209U 5-390-209U 6-390-209U	3" 4" 5" 6"	3-400-422501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

One piece 316 SS Disc and Stem
 Nitrile, FDA approved White Seat

Handles should be ordered separately.

For 6" 390 series valve, use special handle 400-206-65.



80

	DIMENSIONS & WEIGHTS										
DIMENSIONS									WEIGHT		
SIZE	Α	в	С	D	Е	F	G	н	Q	IN LBS.	
2"	4.000	.375	.563	1.250	3.938	4.125	2.125	1.625	1.688	3	
3" 4"	4.000 4.000	.375 .438	.563 .625	1.250 1.250	4.875 6.000	5.375 6.875	3.125 4.125	1.750 2.000	2.875 3.875	4 7	
5" 6"	4.000 4.000	.438 .438	.625 .625	1.250 1.250	6.000 6.500	7.625 8.750	5.188 6.125	2.125 2.125	5.000 6.000	9 9	

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



# **Butterfly Valve Accessories**



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

BUSHING & PACKING KITS					
PART NO.	SIZE				
2-3-400-99-BPKIT 4-6-400-99-BPKIT 6-99-400BPKIT*	2" and 3" 4" thru 6" 6"				

316 STAINLESS SCREW SETS					
PART NO.	SIZE				
2-3-213 4-5-6-213	2" and 3" 4" thru 6"				

17-4 STAINLESS STEMS					
PART NO.	SIZE				
2-400-422240 3-400-422240 4-400-422240 5-400-422240 6-400-422240	2" 3" 4" 5" 6"				

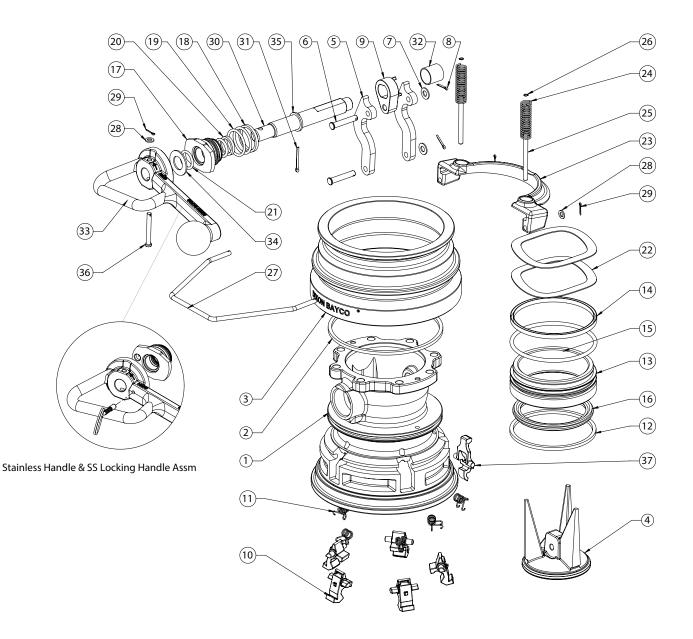
Includes handle plate kit and handle/lever assembly.

\*Use on 6" 390 series valves



#### 5300/5400 Series API Couplers

#### **API Bottom Rack Loading Fittings**





# **Replacement Parts**

BILL OF MATERIALS			C	TY 0		ΙΡΟΝΙ	ENTS	PER		
PART NO.	ITEM NO.	DESCRIPTION	5300	5300B		5300BCL	5300G	5400	5400B	5400G
-	1	body	1	1	1	1	1	1	1	1
- 112173	2	body 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 Use kit 5354K1, 5354K2 or 5354K20	18 19A	PTFE U-Seal 220 (Optional) <sup>1</sup> O-ring 2-220, Buna	1	1 N/A	1 N/A	1 N/A	1 N/A	1	1 N/A	1 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"



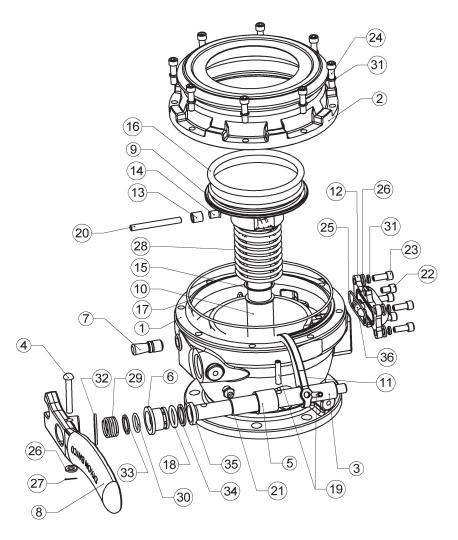
# **Replacement Parts**

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 <sup>™</sup> O-rings, bearings	6,10, 13, 14, 16A, 17A, 18A, 25A, 30, 35						
5204KV2	complete rebuild kit: FKM poppet O-ring, Baylast <sup>™</sup> O-rings, bearings	6,10, 13, 14, 16B, 17B, 18B, 25B, 30, 35						
5204K3	replacement anodized nose ring with Baylast $^{\scriptscriptstyle{\ensuremath{\boxtimes}}}$ 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**

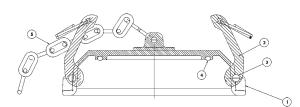
BILL OF MAT	BILL OF MATERIALS QTY OF COMPONENTS PER UNIT										
PART NO.	ITEM NO.	DESCRIPTION	5204	5204NG	5204TNG	5204SNG	5204NGV	5204C	5204NGC	5204L	5204LN0
use kit 5204K3	2	nose ring	1	1	1	1	1	1	1	1	1
390812	3	shaft	1	1	1	1	1	1	1	N/A	N/A
111559	4	handle pin	1	1	1	1	1	N/A	N/A	N/A	N/A
390813	5	shaft 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	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 1	N/A	N/A	N/A 1	N/A	N/A
111554	17A	nose ring O-ring	1		N/A 1		1	1	I N/A	1 N/A	1 N/A
use kit 5204K6 111552	17B	PTFE nose O-ring	N/A 1	N/A 1	N/A	N/A 1	N/A 1	N/A 1	N/A	N/A	
use kit 5204K6	18A 18B	shaft O-ring PTFE shaft O-ring	N/A	N/A	1 N/A	N/A	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 <sup>™</sup> 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								
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 1/4"	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								
use kit 5204K13	39 1	SFI sight glass	N/A								

1 Not illustrated, parts for 5204-SFI

N/A = Not Applicable



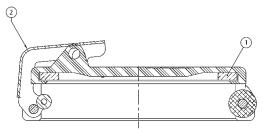
# 5000-24 API Dust Caps



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 <sup>™</sup> O-ring (standard)	1				
4500-7	4B	FKM O-ring (optional)	1				
5205-RK4	5	replacement 18" chain and S hook	1				

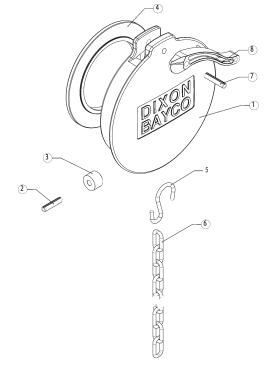
REPAIR KITS							
PART NO.	ITEM NO.	DESCRIPTION					
4500RK	2, 3, 4A	replacement cam arms, pins and Baylast™ O-ring seal (standard)					
4500RK-V	2, 3, 4B	replacement cam arms, pins and FKM O-ring seal (optional)					
5205-RK4	5	replacement 18" chain and S hook					

#### 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

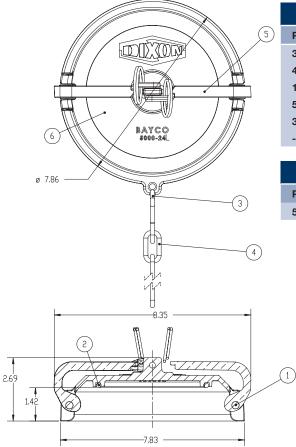


BILL OF MATERIALS						
PART NO.	ITEM NO.	DESCRIPTION	QTY			
	1	body	1			
use kit 5205-RK3	2	slotted pin	1			
use kit 5205-RK3	3	roller	1			
5205-RK1	4	gasket	1			
use kit 5205-RK4	5	S hook	1			
use kit 5205-RK4	6	18" chain	1			
use kit 5205-RK2	7	spring pin	1			
use kit 5205-RK2	8	plastic cam arm	1			

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	



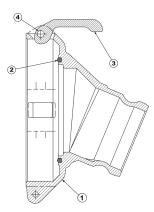
# 5000-24L Lockable API Cap



BILL OF MATERIALS						
PART NO. ITEM # DESCRIPTION						
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

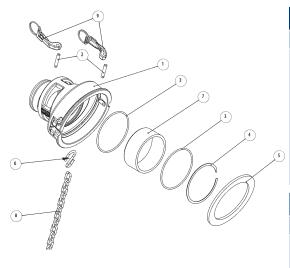


BILL OF MATERIALS						
PART NO. ITEM # DESCRIPTION QTY						
	1	body	1			
4500-5	2A	Baylast™ O-ring (standard)	1			
4500-7	2B	FKM O-ring (standard)	1			
300-HRP-BR	3	cam arm and ring	2			
300-HRP-BR	4	cam pin	2			
5205-RK4		replacement 18" chain and S hook	1			

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



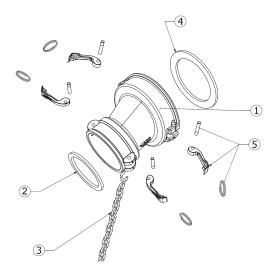
# 4530SG and 4540SG (with Sight Glass) Gravity Drop Adapters



BILL OF MATERIALS						
PART NO. ITEM # DESCRIPTION QTY						
	1	body	1			
L519-15	2	cam arm pin	2			
112052	3	Baylast <sup>™</sup> O-ring	2			
112053	4	retaining ring	1			
4540SG-RK2	5	Baylast <sup>™</sup> 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 <sup>™</sup> 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

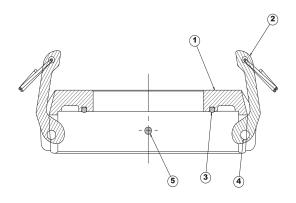


BILL OF MATERIALS					
PART NO. ITEM # DESCRIPTION					
	1	body	1		
400-G-BF	2	4" Buna fuel gasket	1		
5205-RK4	3	18" chain with S hook	1		
4540SG-RK2	4	Baylast™ main gasket	1		
300-HRP-BR	5	brass cam arm, pin and finger ring (kit)	4		



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

#### 4500, 4502 and 4504 Main Body Inlet

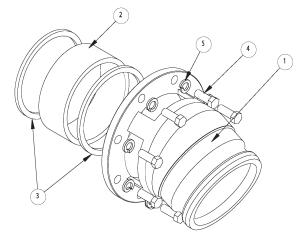


BILL OF MATERIALS						
PART NO.	PART NO. ITEM # DESCRIPTION					
	1	body	1			
300-HRP-BR	2	cam arm and ring	2			
4500-5	ЗA	Baylast™ O-ring (standard)	1			
4500-7	3B	FKM O-ring (optional)	1			
300-HRP-BR	4	cam arm pin	2			
390564	5	rivet	1			

REPAIR KITS			
PART NO.	ITEM #	DESCRIPTION	
4500RK	2, 3A, 4	replacement cam arms, rings, pins and Baylast <sup>™</sup> 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

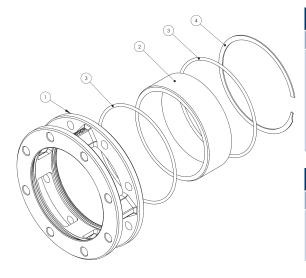


BILL OF MATERIALS						
PART NO. ITEM # DESCRIPTION						
	1	body	1			
see below	2	sight glass	2			
4433	ЗA	Baylast <sup>™</sup> gasket	2			
4426	3B	FKM gasket	1			
4427	4	stainless bolt	8			
WASHER.375-SS	5	stainless washer	8			
400-G-BF	not illustrated	coupler gasket for 4504	1			
ACAR34BZ	not illustrated	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	



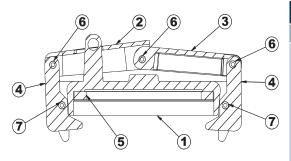
# 5200-SFI Series, Sight Glass



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	ЗA	3" Baylast™ O-ring	n/a	1	n/a
use repair kit below	3B	4" Baylast <sup>™</sup> 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		

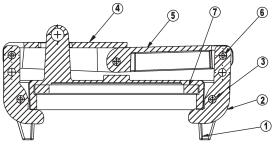
#### SA4050AL Caps



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

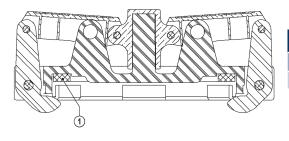
#### **VR4050AL**



	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	
1	VR4076	5	minor lever	1	
)	4066	6	lever pin	3	
	400-G-BU	7	Buna gasket	1	

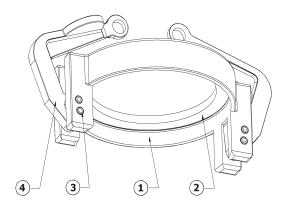


# VR4050PL Series 4" Nylon Vapour Caps



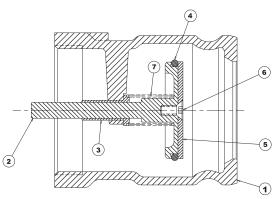
BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
VR4050PLRK1	1	gasket	1

#### **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

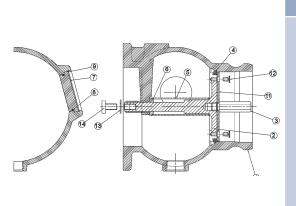


BILL OF MATERIALS				
PART NO.	ITEM #	DESCRIPTION	QTY	
	1	body	1	
341827	2	valve	1	
VR6000-3	3	bushing	1	
O-RING-AS-334	4	FKM O-ring	1	
VR4100-3	5	valve plate	1	
SC5-16NCX.75FSS	6	screw	1	
SPRING-L5123	7	valve spring	1	

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

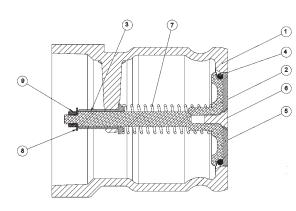


# VR4000 Series 4" Vapour Hose Valves



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

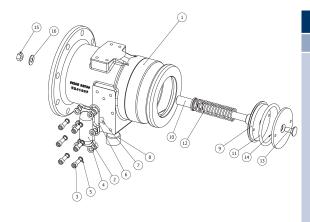


BILL OF MATERIALS					
PART NO.	ITEM #	DESCRIPTION	QTY		
	1	body	1		
341827	2	valve	1		
VR6000-3	3	bushing	1		
O-RING-AS-334	4	FKM O-ring	1		
VR4100-3	5	valve plate	1		
SC5-16NCX.75FSS	6	screw	1		
SPRING-L5123	7	valve spring	1		
112270	8	washer	1		

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



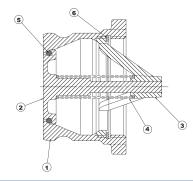
#### **VR4100F Series Vapour Hose Valves**



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	¾" 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		

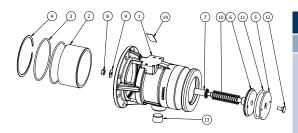
REPAIR KITS				
PART NO.	ITEM #	DESCRIPTION		
5204K8 5204K12	2, 6, 7 3, 4, 5	sight glass, O-ring, float ball hex bolts (6), lock washers (6), washers (4) kit		

#### **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	

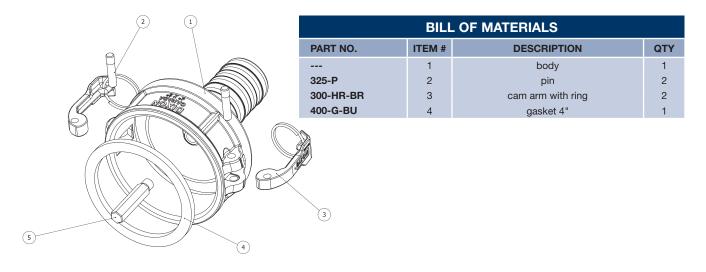
#### VR4100-SFI Series Vapour Hose Coupler



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		

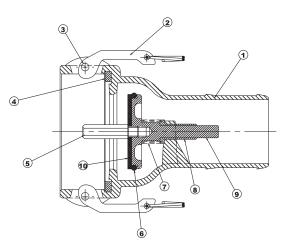


#### 4020-CVR-AL Vapour Hose Couplers



#### VR4030CS-AL Vapour Hose Couplers

#### 4" x 3" with poppet

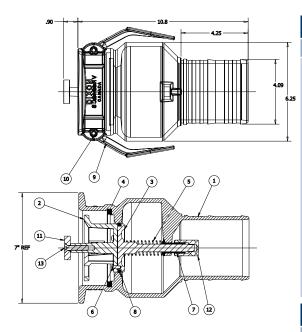


BILL OF MATERIALS					
PART NO.	ITEM #	DESCRIPTION	QTY		
	1	body	1		
300-HRP-BR	2	cam arm and ring	2		
300-HRP-BR	3	cam pin	2		
400-G-BU	4	Buna coupler gasket	1		
VR6000-7	5	probe	1		
O-RING-AS-334	6	FKM valve O-ring	1		
SPRG/L4238	7	spring	1		
VR6000-3	8	bushing	1		
VR4030CS-1	9	valve	1		
VR4030CS-4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



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

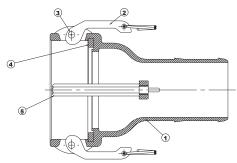


BILL OF MATERIALS						
PART NO.	ITEM #	DESCRIPTION	QTY			
	1	body	1			
341819	2	cage	1			
341820	3	poppet	1			
112262	4	gasket Buna -N	1			
112263	5	spring	1			
112264	6	machine screw	3			
VR6000-3	7	bushing	1			
O-RING-AS-334	8	O-ring FKM	1			
use kit VR4040CSRK2	9	paddle arm	2			
use kit						
VR4040CSRK2	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

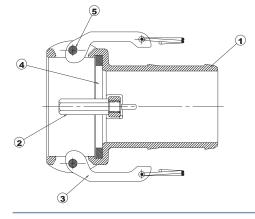
#### 4" x 3" without poppet



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**

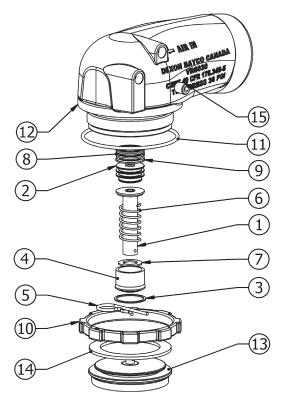
#### 3" x 3" without poppet



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**

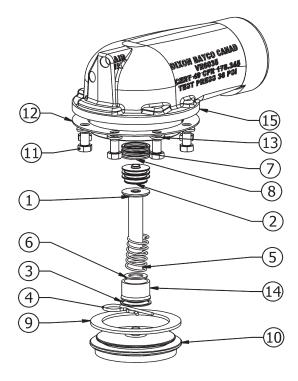


BILL OF MATERIALS					
PART NO.	ITEM #	DESCRIPTION	QTY		
400636	1	stem	1		
use kit VR6030RK2	2	piston	1		
111681	3	retaining ring	1		
390822	4	bearing	1		
111680	5	hitch pin	1		
111679	6	spring	1		
111683	7	bearing seal washer	1		
111686	8	top lip seal	2		
111687	9	bottom lip seal	1		
390826	10A	mounting 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 <sup>™</sup> 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 <sup>™</sup> poppet gasket			
VR6030RKV3	14	replacement FKM poppet gasket			



# **VR6035Q Series Sequential Vapour Vents**

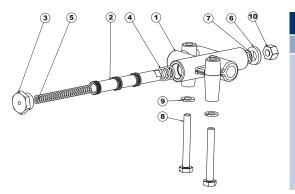


BILL OF MATERIALS						
PART NO.	ITEM # DESCRIPTION QTY					
400636	1	stem assembly	1			
use kit VR6030RK2	2	piston	1			
111681	3	retaining ring	1			
111680	4	cotter pin	1			
111679	5	spring	1			
111683	6	bearing seal washer	1			
111686	7	lip seal	2			
111687	8	lip seal	1			
VR6035RK3	9A	Baylast <sup>™</sup> 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 <sup>™</sup> poppet gasket	
VR6035RKV3	9B	replacement FKM poppet gasket	
VR6035RK4	11, 13	replacement (8) bolts & lock washers	



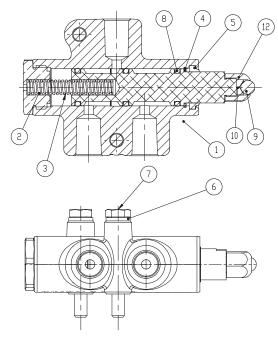
# **5000AIR Series Roller Ball End Air Interlock Valves**



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 kit5000AIRSK	6	urethane wiper	1	
RING-WH-50	7	retaining ring	1	
use kit5000AIHK	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



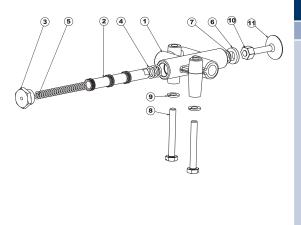
BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
	1	body	1
391848	2	end plug	1
112260	3	wiper	1
112261	4	retaining ring	1
110897	5	spring	1
110928	6	lock washer	2
111196	7	mounting bolts	2
111SS3	8	O-ring	3
100202	9	ball	1
390104	10	bearing	1
391858	11	piston	1
390105	12	roller head cap	1

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		



#### **5000AI Series Button Plunger End Air Interlock Valves**

#### 5000AI, 5000AIS and AIST

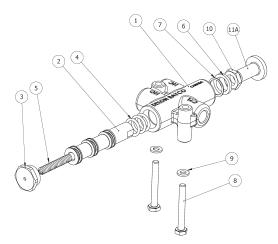


BILL OF MATERIALS					
PART NO.	ITEM #	TEM # DESCRIPTION G			
	1	body	1		
use kit 5000AISK	2	piston	1		
use kit 5000AISK	ЗA	end plug (5000AI, 5000AIST	1		
5000S	3B	electronic switch kit (not illustrated, for 5000AIS)	1		
use kit 5000AISK	4	Buna O-ring	3		
use kit 5000AISK	5	spring	1		
use kit 5000AISK	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 (5000Al)	1		
use kit 5000ST	11B	11/2" 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 11/2" 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

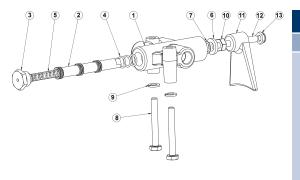


BILL OF MATERIALS				
PART NO.	ITEM # DESCRIPTION G			
	1	body	1	
use kit 5000AIHDSK	2	piston	1	
use kit 5000AIHDSK	3	end plug	1	
use kit 5000AIHDSK	4	O-ring	3	
use kit 5000AIHDSK	5	spring	1	
use kit 5000AIHDSK	6	wiper	1	
112251	7	retaining ring	1	
use kit 5000AIHK	8	mounting bolts	2	
use kit 5000AIHK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

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		



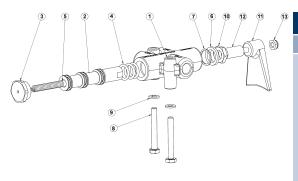
#### **5000AIV Series Paddle End Air Interlock Valves**



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**

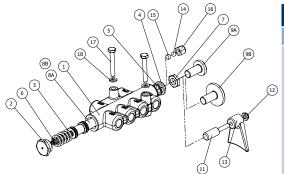


BILL OF MATERIALS					
PART NO. ITEM # DESCRIPTION Q					
	1	body	1		
use kit 5000AIHDSK	2	piston	1		
use kit 5000AIHDSK	3	end plug	1		
use kit 5000AIHDSK	4	O-ring	1		
use kit 5000AIHDSK	5	spring	1		
use kit 5000AIHDSK	6	wiper	1		
WH-77	7	retaining ring	1		
use kit 5000AIHK	8	mounting bolts	2		
use kit 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	replacement piston and seal kit							



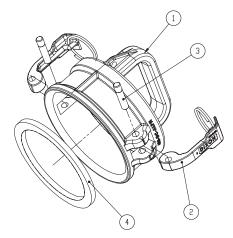
# 5006AIHD Series Heavy Duty Air Interlock Valve



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

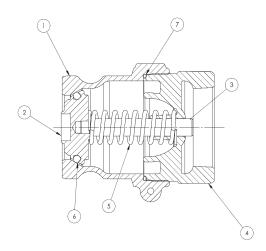


BILL OF MATERIALS				
PART NO.	ITEM #	DESCRIPTION	QTY	
400-DC-ALPH	1	dust cap with handle	1	
300-HR-BR	2	cam arm with ring	2	
325-P	3	pin	2	
400-G-BU	4	4" gasket	1	



#### **DBA Cam and Groove Dry Disconnects**

#### **Aluminium and Stainless Adapters**

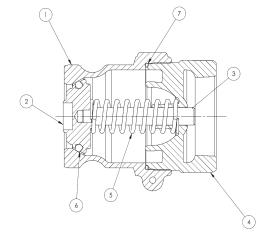


# 11½" ALUMINIUM ADAPTER (DBA6X), ZINC ADAPTER (DBA1X) BILL OF MATERIALS DBA1X-150, DBA6X-150 & DBA1X-1520 PART NO. ITEM # DESCRIPTION QTY 40129AL 1A aluminium adapter body (DBA6x-150) 1

40129AL	1A	aluminium adapter body (DBA6x-150)	1
40129 <b>ZA</b>	1B	zinc adapter body (DBA1x-150 & DBA1x-1520)	1
40130AL	2	poppet	1
40133BR	ЗA	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	
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" ALUMINIUM ADAPTER(DBA6X), ZINC ADAPTER (DBA1X) BILL OF MATERIALS DBA1X-200, DBA6X-200

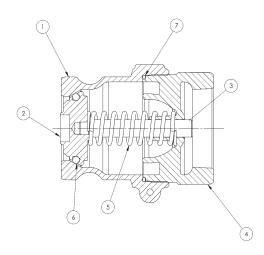
PART NO.	ITEM #	DESCRIPTION	QTY
40001AL	1A	aluminium adapter body (DBA6x-200)	1
40001ZA	1B	zinc adapter Body (DBA1x-200)	1
40002AL	2	poppet	1
40005BR	ЗA	stem (for DBA1x-200)	1
40005SS-001	3B	stem (for DBA6x-200)	1
40003AL	4	thread end body	1
40004SS	5	poppet spring	1
use kit DBAK1-200	6A	poppet O-ring 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



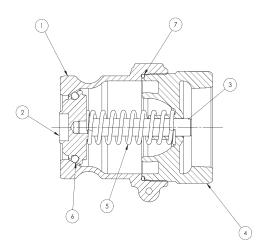


# **DBA Cam and Groove Dry Disconnects (continued)**

#### **Aluminium and Stainless Adapters**



1½" 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	

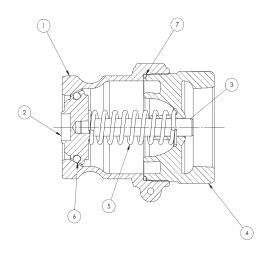


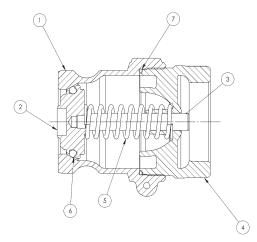
2" STAINLESS ADAPTER, BILL OF MATERIALS DBA7X-200				
PART NO.	ITEM #	DESCRIPTION	QTY	
40001SS	1	stainless adapter body	1	
40002SS	2	poppet	1	
40005SS-002	3	stem	1	
40003SS	4	thread end body	1	
40004SS	5	poppet spring	1	
use kit DBAK1-200	6A	poppet O-ring Buna®	1	
use kit DBAK2-200	6B	poppet O-ring FKM	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**





#### 3" ALUMINIUM ADAPTER (DBA6X), ZINC ADAPTER(DBA1X) BILL OF MATERIALS DBA1X-300, DBA6X-300

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®	
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
	70		-
use kit DBAK4-300	7D	body O-ring EPDM	
use kit DBAK9-300	7E	body O-ring FKM-B	1

#### 3" STAINLESS ADAPTER BILL OF MATERIALS DBA7X-300

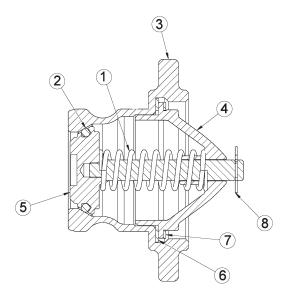
PART NO.	ITEM #	DESCRIPTION	QTY
40180SS	1	stainless adapter body	1
40182SS	2	poppet	1
40183SS	3	stem	1
40181SS	4	thread end body	1
40184SS	5	poppet spring	1
use kit DBAK1-300	6A	poppet O-ring Buna	1
use kit DBAK2-300	6B	poppet O-ring FKM	1
use kit DBAK3-300	6C	poppet O-ring PTFE/Silicone®	1
use kit DBAK4-300	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	11/2" replacement Buna seals	DBAK6-200	6E, 7C	2" replacement PTFE/Kalrez® seals				
DBAK2-150	6B, 7B	11/2" replacement FKM seals®	DBAK7-200	6F, 7C	2" replacement PTFE/FKM seals				
DBAK3-150	6C, 7C	11/2" replacement PTFE/Silicone® seals	DBAK1-300	6A, 7A	3" replacement Buna seals				
DBAK4-150	6D, 7D	11/2" replacement EPDM seals	DBAK2-300	6B, 7B	3" replacement FKM seals				
DBAK6-150	6E, 7C	11/2" replacement PTFE/Kalrez® seals	DBAK3-300	6C, 7C	3" replacement PTFE/Silicone <sup>®</sup> seals				
DBAK7-150	6F, 7C	11/2" 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							



#### **DBVA Cam and Groove Dry Disconnects**

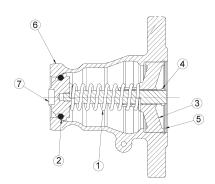
#### **Stainless Vapour Adapter**



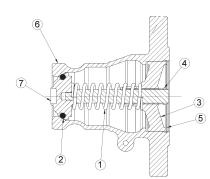
2" X 3" STAINLESS VAPOUR ADAPTER BILL OF MATERIALS DBVA73-200				
PART NO.	ITEM #	DESCRIPTION	QTY	
40004SS	1	spring	1	
40006TS	2	poppet O-ring PTFE/Silicone	1	
	3	adapter body	1	
40175SS	4	bridge	1	
40187SSSS	5	poppet assembly	1	
40190TF	6	large body gasket	1	
40191TF	7	small body gasket	1	
40192SS	8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

#### **DBAF Cam and Groove Dry Disconnects**

#### **Stainless Flange Adapter**



2" FLANGE X 1½" STAINLESS ADAPTER 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		



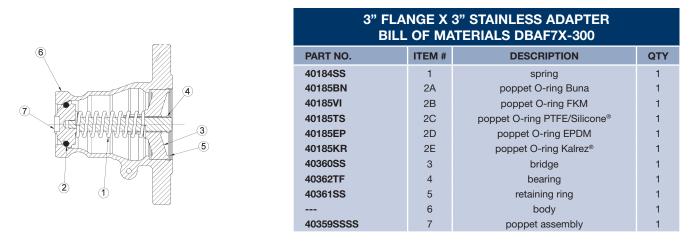
#### 2" FLANGE X 2" STAINLESS ADAPTER BILL OF MATERIALS DBAF7X-200

PART NO.	ITEM #	DESCRIPTION	QTY
40004SS	1	spring	1
40006BN	2A	poppet O-ring Buna	1
40006VI	2B	poppet O-ring FKM	
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



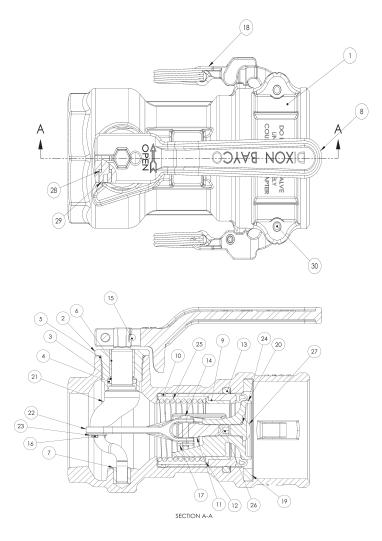
#### **DBAF Cam and Groove Dry Disconnects (continued)**

#### **Stainless Flange Adapter**



#### **DBC Cam and Groove Dry Disconnects**

#### **Aluminium and Stainless Couplers**





# **DBC Cam and Groove Dry Disconnects**

#### 1<sup>1</sup>/<sub>2</sub>" Aluminium Couplers

1½" ALUMINIUM COUPLER BILL OF MATERIALS DBC6X-150			REPAIR KITS				
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	INCL. ITEM #	DESCRIPTION	
	1	body	1		10 E	replacement seal kit, Buna crank shaft	
40074SS	2	stuffing box	1	DBCx1-150RK1	4A, 5, 13A, 19A,	O-ring, PTFE stuffing box O-ring,	
40075TF	3	back up ring	1	(Buna-N)	24	Buna body O-ring, Buna cam gasket,	
40076BN	4A	crank shaft O-ring Buna (for DBC61-150)	1			PTFE O-ring (for DBC61-150) replacement seal kit, FKM crank shaft	
40076VI	4B	crank shaft O-ring FKM (for DBC62-150)	1	DBCx2-150RK1	4B, 5, 13B, 19B, 24	O-ring, PTFE stuffing box O-ring, FKM body O-ring, FKM cam gasket, PTFE O-ring (for DBC62-150)	
40076KR	4C	crank shaft O-ring Kalrez <sup>®</sup> (for DBC63-150)	1	(FKM)			
40076EP	4D	crank shaft O-ring EPDM (for DBC63-150, DBC66-150 & DBC67-150)	1	DBCx3-150RK1 (PTFE and	4C, 5, 13C,	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring, PTFE stuffing box O-ring, PTFE/ Silicone <sup>®</sup> body O-ring, PTFE/Silicone <sup>®</sup> can gasket, PTFE O-ring (for DBC63-150)	
40077TF	5	stuffing box PTFE O-ring	1	Kalrez <sup>®</sup> )	19C, 24		
40078FG	6	large crank shaft bearing	1				
40079SS	7	small crank shaft bearing	1		4D, 5,	replacement seal kit, EPDM crank shaft	
40080SS	8	lever (handle)	1	DBCx4-150RK1	4D, 5, 13D, 19D,	O-ring, PTFE stuffing box O-ring, EPDM	
40117ALBN	9A	seal cylinder (for DBC61-150)	1	(EPDM)	24	body O-ring, EPR cam gasket, PTFE, O-ring (for DBC64-150)	
40117ALVI	9B	seal cylinder (for DBC62-150)	1			,	
40169SS	9C	seal cylinder (for DBC63-150, DBC66-150 & DBC67-150)	1	DBCx6-150RK1 (Kalrez <sup>®</sup> & PTFE/FKM)	4C, 5, 13E, 19E, 24	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring, PTFE stuffing box O-ring, Kalrez <sup>®</sup> body O-ring, PTFE/FKM cam gasket,	
40117ALEP	9D	seal cylinder (for DBC64-150)	1	FIFE/FRWIJ	24	PTFE O-ring (for DBC66-150)	
40082TF	10	PTFE button	6			replacement seal kit, Kalrez <sup>®</sup> crank	
40118SS	11	yoke	1	DBCx7-150RK1	4C, 5, 13F, 19E, 24	shaft O-ring, PTFE stuffing box O-ring, PTFEFKM body O-ring, PTFE/FKM cam	
40119TF	12	PTFE bushing	1				
40120BN	13A	body O-ring Buna (for DBC61-150)	1			gasket, PTFE O-ring (for DBC67-150)	
40120VI 40120TS	13B 13C	body O-ring FKM (for DBC62-150) body O-ring PTFE/Silicone <sup>®</sup> - (for DBC63-150)	1 1	DBC61-150RK2	9A, 10, 12	replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBC61-150)	
40120EP	13D	body O-ring EPDM (for DBC64-150)	1			replacement FKM seal cylinder,	
40120KR	13E	body O-ring Kalrez® (for DBC66-150)	1	DBC62-150RK2	9B, 10, 12	PTFE buttons and PTFE bushing (for DBC62-150)	
40120TV	13F	body O-ring PTFE/FKM (for DBC67-150)	1		10, 12, 31	replacement PTFE nose seal, PTFE buttons and PTFE bushing (for DBC63-150, DBC66-150 & DBC67-150)	
40086SS	14	link rivet	1	DBCx3-150RK2			
40087SS	15	groove pin	1				
40088SS	16	crank shaft cotter pin	1		9D, 10, 12	replacement EPDM seal cylinder, PTFE buttons and PTFE bushing (for DBC64-150)	
40088SS	17	link cotter pin	1	DBC64-150RK2			
40089SS	18	EZ Boss-Lock <sup>™</sup> cam arm	2				
200-G-BU	19A	cam gasket Buna (for DBC61-150)	1		11, 14,	replacement link kit, link rivet, cotter pins,	
200-G-VI	19B	cam gasket FKM (for DBC62-150)	1	DBCxx-150RK4	16, 17, 22, 23	link washer, link arm and yoke (for all 1½" aluminium)	
200-G-TES	19C	cam gasket PTFE/Silicone® (for DBC63-150)	1		,0	· · · · ·	
200-G-EPR	19D	cam gasket EPR (for DBC64-150)	1	DBCxx-150RK5	2, 5, 6	replacement stuffing box kit, stuffing box, PTFE O-ring and large crank shaft	
200-G-TFVI	19E	cam gasket PTFE/FKM (for DBC66-150 & DBC67-150)	1	DBOXX-1001110	2, 3, 0	bearing (for all 1½" aluminium)	
40114SS	20	poppet	1	DBCxx-150RK6	8, 15, 28, 29	replacement lever (handle) kit, lever, groove pin, lock washer and socket head	
40115SS	21	crank shaft	1		29	cap screw (for all 1½" aluminium)	
40116SS	22	link arm	1		16, 21, 23	replacement crank shaft kit, crank shaft,	
40094SS	23	link washer	1	DBCxx-150RK7		cotter pin and washer	
40122TF	24	poppet screw PTFE O-ring	1			(for all 11/2" aluminium)	
DBCxx-150RK8	25	cylinder spring	1	DBCxx-150RK8	25	main cylinder spring	
40124SS	26	set screw	1	BBOX-ISUNKO	20	main cynnder spring	
40125SS	27	poppet screw (round head)	1		20, 24, 26, 27	replacement poppet kit, poppet, round	
40099SS	28	lock washer	1	DBCxx-150RK9		head screw, set screw and PTFE washer	
40100SS	29	socket head cap screw	1		.,	(for all 1½"aluminium)	
40101SS	30	cam arm spring pin	2		not	optional add on padlockable lever kit,	
40171TF	31	nose seal (for DBC63-150, DBC66-150 & DBC67-150)	1	DBCL-200	illustrated	handle (for all 1½")	



### 1<sup>1</sup>/<sub>2</sub>" Stainless Couplers

11/2" STAINLESS COUPLER BILL OF MATERIALS DBC7X-150				REPAIR KITS			
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	INCL. ITEM #	DESCRIPTION	
	1	body	1		4A, 5,	replacement seal kit, Buna crank shaft	
40074SS	2	stuffing box	1	DBCx1-150RK1	13A, 19A,	O-ring, PTFE stuffing box O-ring,	
40075TF	3	back up ring	1	(Buna-N)	24	Bunabody O-ring, Buna cam gasket, PTFE O-ring (for DBC71-150)	
40076BN	4A	crank shaft O-ring Buna (for DBC71-150)					
40076VI 40076KR	4B 4C	crank shaft O-ring FKM (for DBC72-150) crank shaft O-ring Kalrez <sup>®</sup> (for DBC73-150, DBC76-150 and DBC77-150)	1	DBCx2-150RK1 (FKM)	4B, 5, 13B, 19B,	replacement seal kit, FKM crank shaft O-ring,PTFE stuffing box O-ring, FKM body O-ring, FKM cam gasket, PTFE	
40076EP	4D	crank shaft O-ring EPDM (for DBC74-150)	1	()	24	O-ring (for DBC72-150)	
40077TF	5	stuffing box PTFE O-ring	1	DBCx3-150RK1 (PTFE/Silicone	4C, 5, 13C,	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring,PTFE stuffing box O-ring, PTFE/	
40078FG	6	large crank shaft bearing	1	& Chemrez <sup>®</sup> )	19C, 24	Silicone body O-ring, PTFE/Silicone cam	
40079SS	7	small crank shaft bearing	1	,	,	gasket, PTFE O-ring (for DBC73-150)	
40080SS	8	lever (handle)	1		10.5	replacement seal kit, EPDM crank shaft	
40117SSBN	9A	seal cylinder (for DBC71-150)	1	DBCx4-150RK1	4D, 5, 13D, 19D,	O-ring,PTFE stuffing box O-ring, EPDM	
40117SSVI	9B	seal cylinder (for DBC72-150)	1	(EPDM)	24 24	body O-ring, EPR cam gasket, PTFE O-ring (for DBC74-150)	
40169SS	9C	seal cylinder (for DBC73-150, DBC76-150 and DBC77-150)	1	DBCx6-150RK1	4C, 5,	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring, PTFE stuffing box O-ring, Kalrez <sup>®</sup>	
40117SSEP	9D	seal cylinder (for DBC74-150)	1	(Kalrez <sup>®</sup> & PTFE/FKM)	13E, 19E, 24	body O-ring, PTFE/FKM cam gasket,	
40082TF	10	PTFE button	6		24	PTFE O-ring (for DBC76-150)	
40118SS	11	yoke	1			replacement seal kit, Kalrez® crank shaft	
40119TF	12	PTFE bushing	1		4C, 5,	O-ring, PTFE stuffing box O-ring, PTFE/	
40120BN	13A	body O-ring Buna (for DBC71-150)	1	DBCx7-150RK1	13F, 19E, 24	FKM body O-ring, PTFE/FKM cam gasket	
40120VI	13B	body O-ring FKM (for DBC72-150)	1		24	PTFE O-ring (for DBC77-150)	
40120TS	13C	body O-ring PTFE/Silicone® (for DBC73-150)	1	DBC71-150RK2	9A, 10, 12	replacement Buna seal cylinder, PTFE buttons & PTFE bushing (for DBC71-150)	
40120EP	13D	body O-ring EPDM (for DBC74-150)	1		12	buttons at the busining (for bborn 190)	
40120KR	13E	body O-ring Kalrez <sup>®</sup> (for DBC76-150)	1		0R 10	replacement EKM and onlinder DTEE	
40120TV	13F	body O-ring PTFE/FKM (for DBC77-150)		DBC72-150RK2	9B, 10, 12	replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBC72-150	
40086SS	14	link rivet	1				
40087SS	15	groove pin	1			replacement PTFE nose seal, PTFE	
40088SS	16	crank shaft cotter pin	1	DBCx3-150RK2	10, 12, 31	buttons & PTFE bushing (for DBC73-150,	
40088SS	17	link cotter pin	1			DBC76-150 & DBC77-150)	
40089SS	18	EZ Boss-Lock™ cam arm	2		9D, 10,	replacement EPDM seal cylinder, PTFE	
200-G-BU	19A	cam gasket Buna (for DBC71-150)	1	DBC74-150RK2	12	buttons & PTFE bushing (for DBC74-150)	
200-G-VI	19B	cam gasket FKM (for DBC72-150)	1				
200-G-TES	19C	cam gasket PTFE/Silicone®			11, 14,	replacement link kit, link rivet, cotter pins,	
(for DBC73-150)				DBCxx-150RK4	16, 17, 22, 23	link washer, link arm & yoke (for all 1½" stainless steel)	
200-G-EPR	19D	cam gasket EPDM (for DBC74-150)	1		22,20	,	
200-G-TFVI (for DBC76-150	19E 1	cam gasket PTFE/FKM		DBCxx-150RK5	2, 5, 6	replacement stuffing box kit, stuffing box, PTFE O-ring & large crank shaft bearing (for all 1½" stainless steel)	
and DBC77-150)						replacement lever (handle) kit, lever,	
40114SS	20	poppet	1	DBCxx-150RK6	8, 15, 28,	groove pin, lock washer & socket head	
40115SS	21	crank shaft	1		29	cap screw (for all 11/2" stainless steel)	
40116SS	22	link arm	1			replacement crank shaft kit, crank shaft,	
40094SS	23	link washer	1	DBCxx-150RK7	16, 21, 23	cotter pin & washer (for all 1½"	
40122TF	24	poppet screw PTFE O-ring	1			stainless steel)	
DBCxx-150RK8		cylinder spring	1	DROWN 450DKO	05		
40124SS	26	set screw	1	DBCxx-150RK8	25	main cylinder spring	
40125SS	27	poppet screw (round head)	1		00.04	replacement poppet kit, poppet, round	
40099SS	28	lock washer	1	DBCxx-150RK9	20, 24,	head screw, set screw & PTFE O-ring	
40100SS	29	socket head cap screw	1		26, 27	(for all 11/2" stainless steel)	
40101SS	30	cam arm spring pin	2				
40171TF	31	nose seal (for DBC73-150, DBC76-150 and DBC77-150)	1	DBCL-200	not illustrated	Optional add on padlockable lever kit (handle) (for all 1½")	



### 2" Aluminium Couplers

BIL		UMINIUM COUPLER MATERIALS DBC6X-200		REPAIR KITS		
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	INCL. ITEM #	DESCRIPTION
	1	body	1		4A, 5,	replacement seal kit, Buna crank shaft
40074SS	2	stuffing box	1	DBCx1-200RK1	13A, 19A,	O-ring, PTFE stuffing box O-ring,
40075TF	3	back up ring	1	(Buna-N)	24	Buna body O-ring, Buna cam gasket, PTFE O-ring (for DBC61-200)
40076BN	4A	crank shaft O-ring Buna (for DBC61-200)				
40076VI 40076KR	4B 4C	crank shaft O-ring FKM (for DBC62-200) crank shaft O-ring Kalrez® (for DBC63-200 ,DBC66-200 & DBC67-200)	1	DBCx2-200RK1 (FKM)	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 DBC62-200)
40076EP	4D	crank shaft O-ring EPDM (for DBC64-200)	1	DBCx3-200RK1 (PTFE/Silicone	4C, 5, 13C,	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring,PTFEstuffing box O-ring, PTFE/
40077TF	5	stuffing box PTFE O-ring	1	and Kalrez <sup>®</sup> )	19C, 24	Silicone body O-ring, PTFE/Silicone cam
40078FG	6	large crank shaft bearing	1	,	,	gasket,PTFE O-ring (for DBC63-200)
40079SS	7	small crank shaft bearing	1		4D, 5,	replacement seal kit, EPDM crank shaft
40080SS	8	lever (handle)	1	DBCx4-200RK1	13D, 19D,	O-ring,PTFE stuffing box O-ring, EPDM body O-ring, EPR cam gasket,
40081ALBN	9A	seal cylinder (for DBC61-200)	1	(EPDM)	24	PTFEO-ring (for DBC64-200)
40081ALVI	9B	seal cylinder (for DBC62-200)	1			
40168SS	9C	seal cylinder (for DBC63-200, DBC66-200 & DBC67-200)	1	DBCx6-200RK1 (Kalrez & PTFE/ FKM)	4C, 5, 13E, 19E, 24	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring,PTFE stuffing box O-ring, Kalrez <sup>®</sup> body O-ring, PTFE/FKM cam gasket,
40081ALEP	9D	seal cylinder (for DBC64-200)	1	T KWI	24	PTFE O-ring (for DBC66-200)
40082TF	10	PTFE button	6		10.5	replacement seal kit, Kalrez® crank shaft
40083SS	11	yoke	1	DBCx7-200RK1 (Kalrez <sup>®</sup> &	4C, 5, 13F, 19E,	O-ring,PTFE stuffing box O-ring, Kalrez®
40084TF	12	PTFE bushing	1	PTFE/FKM)	24	body O-ring, PTFE/FKM cam gasket, PTFE O-ring (for DBC67-200)
40085BN 40085VI	13A 13B	body O-ring Buna (for DBC61-200)	1			
40085VI	13D	body O-ring FKM (for DBC62-200) body O-ring PTFE/Silicone (for DBC63-200)	1	DBC61-200RK2	9A, 10, 12	replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBC61-200)
40085EP	13D	body O-ring EPDM (for DBC64-200)	1		9B, 10,	Replacement FKM seal cylinder,
40085KR	13E	body O-ring Kalrez <sup>®</sup> (for DBC66-200)	1	DBC62-200RK2	12	PTFE buttons and PTFE bushing
40085TV	13F	body O-ring PTFE/FKM (for DBC67-200)	1			(for DBC62-200)
40086SS	14	link rivet	1	DBCx3-200RK2	10 12 21	replacement PTFE nose seal, PTFE buttons and PTFE bushing (for
40087SS	15	groove pin	1	DDCX3-200HR2	10, 12, 51	DBC63-200, DBC66-200 & DBC67-200)
40088SS	16	crank shaft cotter pin	1			replacement EPDM seal cylinder,
40088SS	17	link cotter pin	1	DBC64-200RK2	9D, 10, 12	PTFE buttons and PTFE bushing
40089SS	18	EZ Boss-Lock <sup>™</sup> cam arm	2		12	(for DBC64-200)
250-G-BU	19A	cam gasket Buna (for DBC61-200)	1		11, 14,	replacement link kit, link rivet, cotter pins,
250-G-VI	19B	cam gasket FKM (for DBC62-200)	1	DBCxx-200RK4	16, 22,	link washer, link arm and yoke
250-G-TES	19C	cam gasket PTFE/Silicone (for DBC63-200)	1		23	(for all 2" aluminium)
250-G-EPR 250-G-TFVI	19D 19E	cam gasket EPR (for DBC64-200) cam gasket PTFE/FKM (for DBC66-200 & DBC67-200)	1	DBCxx-200RK5	2, 5, 6	replacement stuffing box kit, stuffing box, PTFE O-ring & large crank shaft bearing (for all 2" aluminium)
40091SS	20	poppet	1		0.45.00	replacement lever (handle) kit, lever,
40092SS	21	crank shaft	1	DBCxx-200RK6	8, 15, 28, 29	groove pin, lock washer & socket head
40093SS	22	link arm	1		23	cap screw (for all 2" aluminium)
40094SS	23	link washer	1			replacement crank shaft kit, crank shaft,
40095TF	24	poppet screw PTFE O-ring	1	DBCxx-200RK7	16, 21, 23	cotter pin & washer (for all 2" aluminium)
DBCxx-200RK8	25	cylinder spring	1			
40097SS	26	set screw	1	DBCxx-200RK8	25	main cylinder spring
40098SS	27	poppet screw (round head)	1			replacement poppet kit, poppet, round
40099SS	28	lock washer	1	DBCxx-200RK9	20, 24,	head screw, set screw and PTFE O-Ring
40100SS	29	socket head cap screw	1		26, 27	(for all 2" aluminium)
40101SS	30	cam arm spring pin	2		not	optional add on podlookoble lover kit
40170TF	31	nose seal (for DBC63-200, DBC66-200 & DBC67-200)	1	DBCL-200	not illustrated	optional add on padlockable lever kit, handle (for all 2")

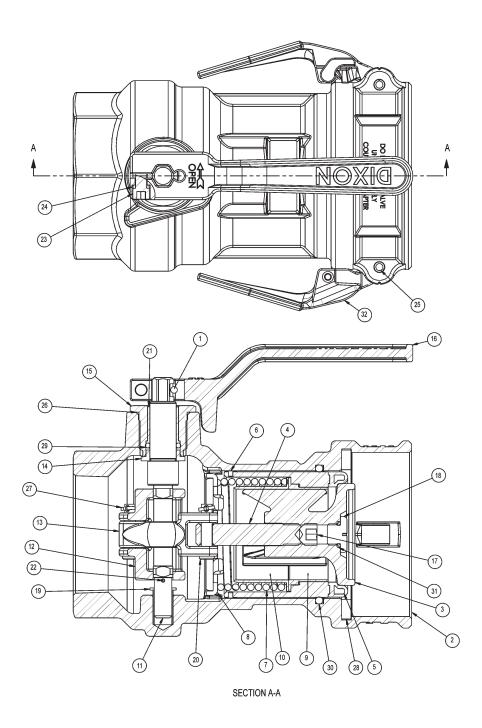


### 2" Stainless Couplers

BI		AINLESS COUPLER MATERIALS DBC7X-200			REPAIR KITS		
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	INCL. ITEM #	DESCRIPTION	
	1	body	1		<b>4A 5</b>	replacement seal kit, Buna crank shaft	
40074SS	2	stuffing box	1	DBCx1-200RK1	4A, 5, 13A, 19A,	O-ring, PTFE stuffing box O-ring,	
40075TF	3	back up ring	1	(Buna-N)	24	Buna body O-ring, Buna cam gasket,	
40076BN	4A	crank shaft O-ring Buna (for DBC71-200)	1			PTFE O-ring (for DBC71-200)	
40076VI	4B	crank shaft O-ring FKM (for DBC72-200)	1			replacement seal kit, FKM crank shaft	
40076KR	4C	crank shaft O-ring Kalrez <sup>®</sup> (for DBC73-200, DBC77-200, DBC76-200)	1	DBCx2-200RK1 (FKM)	4B, 5, 13B, 19B, 24	O-ring, PTFE stuffing box O-ring, FKM body O-ring, FKM cam gasket, PTFE O-ring (for DBC72-200)	
40076EP	4D	crank shaft O-ring EPDM (for DBC74-200)	1	DBCx3-200RK1	4C,	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring, PTFE stuffing box O-ring, PTFE/	
40077TF	5	stuffing box PTFE O-ring	1	(PTFE/Silicone	5,13C,	Silicone body O-ring, PTFE/Silicone cam	
40078FG	6	large crank shaft bearing	1	and Kalrez <sup>®</sup> )	19C, 24	gasket, PTFE O-ring (for DBC73-200)	
40079SS	7	small crank shaft bearing	1				
40080SS	8	lever (handle)	1	DBCx4-200RK1	4D, 5,	replacement seal kit, EPDM crank shaft	
40081SSBN	9A	seal cylinder (for DBC71-200)	1	(EPDM)	13D, 19D,	O-ring, PTFE stuffing box O-ring, EPDM body O-ring, EPR cam gasket,	
40081SSVI	9B	seal cylinder (for DBC72-200)	1	()	24	PTFE O-ring (for DBC74-200)	
40168SS	9C	seal cylinder (for DBC73-200, DBC76-200, DBC77-200)	1	DBCx6-200RK1 (Kalrez <sup>®</sup> &	4C, 5, 13E, 19E,	replacement seal kit, Kalrez <sup>®</sup> crank shaft O-ring, PTFE stuffing box O-ring,	
40081SSEP	9D	seal cylinder (for DBC74-200)	6	PTFE/FKM)	24	Kalrez®body O-ring, PTFE/FKM cam	
40082TF	10	PTFE button	1			gasket, PTFE O-ring (for DBC76-200)	
40083SS	11	yoke	1		10 F	replacement seal kit, Kalrez <sup>®</sup> crank shaft	
40084TF	12	PTFE bushing	1	DBCx7-200RK1 (PTFE/FKM and	4C, 5,	O-ring, PTFE stuffing box O-ring, Kalrez®	
40085BN	13A	body O-ring Buna (for DBC71-200)	1	Kalrez <sup>®</sup> )	24	body O-ring, PTFE/FKM cam gasket,	
40085VI	13A 13B	body O-ring FKM (for DBC72-200)	1	,		PTFE O-ring (for DBC77-200)	
40085TS	13C	body O-ring PTFE/Silicone (for DBC73-200)	1	DBC71-200RK2	9A, 10, 12	replacement Buna seal cylinder, PTFE buttons and PTFE bushing (for DBC71-200)	
40085EP	13D	body O-ring EPDM (for DBC74-200)	1			, , , , , , , , , , , , , , , , , , ,	
40085KR	13E	body O-ring Kalrez <sup>®</sup> (for DBC76-200)	1		9B, 10,	replacement FKM seal cylinder,	
40085TV	13F	body O-ring PTFE/FKM (DBC77-200)	1	DBC72-200RK2	12	PTFE buttons and PTFE bushing (for DBC72-200)	
40086SS	14	link rivet	1			, ,	
40087SS	15	groove pin	1	DBCx3-200RK2	10 12 21	replacement PTFE nose seal, PTFE buttons and PTFE bushing (for	
40088SS	16	crank shaft cotter pin	1	DBCX3-200HK2	10, 12, 31	DBC73-200, DBC76-200 & DBC77-200)	
40088SS	17	link cotter pin	2			,,,,,	
40089SS	18	EZ Boss-Lock <sup>™</sup> cam arm	1	DBC74-200RK2	9D, 10,	replacement EPDM seal cylinder, PTFE	
250-G-BU	19A	cam gasket Buna (for DBC71-200)	1	DD014-2001112	12	buttons & PTFE bushing (for DBC74-200)	
250-G-VI	19A	cam gasket FKM (for DBC72-200)	1				
250-G-TES	19D	cam gasket PTFE/Silicone (for DBC73-200)	1	DBCxx-200RK4	11, 14, 16, 17, 22, 23	replacement link kit, link rivet, cotter pins link washer, link arm, yoke (for all 2" SS)	
250-G-EPR	19D	cam gasket EPR (for DBC74-200)	1			replacement stuffing box kit, stuffing box	
250-G-TEV	19E	cam gasket PTFE/FKM (for DBC76-200, DBC77-200)	1	DBCxx-200RK5	2, 5, 6	PTFE O-ring and large crank shaft bearing (for all 2" SS)	
40091SS	20	poppet	1		8, 15, 28,	replacement lever (handle) kit, lever,	
40092SS	21	crank shaft	1	DBCxx-200RK6	29	groove pin, lock washer and socket head	
40093SS	22	link arm	1			cap screw (for all 2" SS)	
40094SS	23	link washer	1			replacement crank shaft kit, crank shaft,	
40095TF	24	poppet screw PTFE O-ring	1	DBCxx-200RK7	16, 21, 23	cotter pin and washer (for all 2" SS)	
40096SS	25	cylinder spring	1				
4009033 40097SS	26	set screw	1	DBCxx-200RK8	25	main cylinder spring	
4009755 40098SS	20	poppet screw (round head)	1				
4009955	28	lock washer	1		20, 24,	replacement poppet kit, poppet, round	
4009933 40100SS	28	socket head cap screw	1	DBCxx-200RK9	26, 27	head screw, set screw and PTFE O-ring (for all 2" SS)	
	29 30		2			(101 all 2 33)	
40101SS	30	cam arm spring pin	2		not	optional add on padlockable lever kit	
40170TF	31	nose seal (for DBC73-200, DBC76-200 and DBC77-200)	1	DBCL-200	illustrated	(handle) (for all 2")	



### **3" Aluminium Couplers**





### **3" Aluminium Couplers**

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



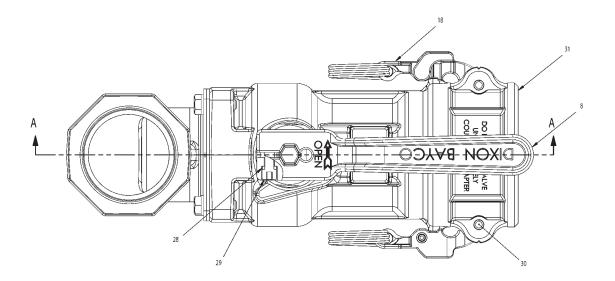
### **3" Stainless Couplers**

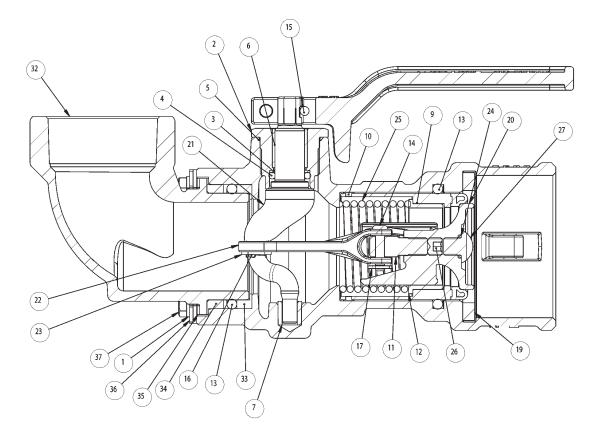
BIL	AINLESS COUPLER MATERIALS DBC7X-300		REPAIR KITS			
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	INCL. ITEM #	DESCRIPTION
40087SS	1	groove pin	1	DBCx1-300RK1	26, 28A,	replacement seal kit, Buna stuffing box
 40195SS	2 3	body	1	(Buna-N)	29A, 30A, 31	O-ring, PTFE stuffing box to body O-ring, Buna body O-ring, Buna cam gasket, PTFE
40196SS	4	stem	1		01	poppet screw O-ring (for DBC71-300)
40197SSBN	- 5A	seal cylinder Buna (for DBC71-300)	1		26, 28B,	replacement seal kit, FKM stuffing box
40197SSVI	5B	seal cylinder FKM (for DBC72-300)	1	DBCx2-300RK1 (FKM)	29B, 30B, 31	O-ring, PTFE stuffing box to body O-ring, FKM body O-ring, FKM cam gasket, PTFE poppet screw O-ring (for DBC72-300)
40304SS	5C	stainless cylinder (for DBC73-300, DBC76-300 & DBC77-300)	1		00,000	replacement seal kit, Kalrez® stuffing box
40197SSEP	5D	seal cylinder EPDM (for DBC74-300)	1	DBCx3-300RK1 (PTFE/Silicone	26, 28C, 29C,	O-ring, PTFE stuffing box to body O-ring, PTFE/Silicone body O-ring, PTFE/Silicone
40197SSVB	5E	seal cylinder FKM-B (for DBC79-300)	1	& Kalrez <sup>®</sup> )	30C, 31	cam gasket, PTFE poppet screw O-ring
40198TF	6	PTFE button	8			(for DBC73-300)
DBCxx-300RK8		cylinder spring	1			replacement seal kit, EPDM stuffing box
40200SS	8	spring seat	1	DBCx4-300RK1	26, 28D,	O-ring, PTFE stuffing box to body O-ring,
40201TF	9	PTFE bushing	1	(EPDM)	29D, 30D, 31	EPDM body O-ring, EPDM cam gasket,
40202SS	10	spring guide	1		31	PTFE poppet screw O-ring (for DBC74-300)
40203SS	11	shaft	1			replacement seal kit, Kalrez <sup>®</sup> stuffing box
40204SS	12	yoke	1	DBCx6-300RK1	26. 28E.	O-ring, PTFE stuffing box to body O-ring,
40205SS	13	link arm	1	(Kalrez <sup>®</sup> and	29C, 30E,	Kalrez <sup>®</sup> body O-ring, PTFE/FKM cam
40206SS	14	shaft retainer	1	PTFE/FKM)	31	gasket, PTFE poppet screw O-ring (for
40207SS	15	stuffing box	1			DBC76-300)
40208SS	16	lever (handle)	1			replacement seal kit, Kalrez® stuffing box
40209SS	17	set screw	1	DBCx7-300RK1 (PTFE/FKM &	26, 28E,	O-ring, PTFE stuffing box to body O-ring, PTFE/FKM body O-ring, PTFE/FKM cam
40210SS	18	poppet screw	1	(PIFE/FRIM & Kalrez <sup>®</sup> )	29C, 30F, 31	gasket, PTFE poppet screw O-ring (for
40211TF	19	PTFE bearing	1		01	DBC77-300)
40212SS	20	clevis pin	2			replacement seal kit, FKM-B stuffing box
40213FG	21	bearing	1	DBCx9-300RK1	26, 28F, 29E, 30G,	O-ring, PTFE stuffing box to body O-ring,
40214SS	22	cotter pin	1	(FKM-B)	29E, 30G, 31	FKM-B body O-ring, FKM cam gasket, PTFE
40216SS 40217SS	23 24	lever (handle) screw	1		•	poppet screw O-ring (for DBC79-300)
4021755 40218SS	24 25	lever (handle) lock washer	1 2	DBC69-300RK2	5E, 6, 9	replacement FKM-B seal cylinder, PTFE
4021855 40219TF	25	cam arm pin PTFE O-ring	1	DD000 00011112	02, 0, 0	buttons and PTFE bushing (for DBC79-300)
40221SS	20	cotter pin	2	DB071 2000K0		replacement Buna seal cylinder, PTFE
DBCx1-300RK3		Buna coupler gasket (for DBC71-300)	1	DBC71-300RK2	5A, 6, 9	buttons and PTFE bushing (for DBC71-300)
DBCx2-300RK3		FKM coupler gasket (for DBC72-300)	1	DBC72-300RK2	5B, 6, 9	replacement FKM seal cylinder, PTFE buttons and PTFE bushing (for DBC72-300)
40222TS	28C	PTFE/Silicone coupler gasket (for DBC73-300)	1			replacement PTFE nose seal, PTFE
40222EP 40222TV	28D 28E	EPDM coupler gasket (for DBC74-300) PTFE/FKM coupler gasket	1	DBCx3-300RK2	6, 9, 33	buttons & PTFE bushing (for DBC73-300, DBC76-300 and DBC77-300)
402221V DBCx9-300RK3		(for DBC76-300 & DBC77-300) FKM-B coupler gasket (for DBC79-300)	1	DBC74-300RK2	5D, 6, 9	replacement EPDM seal cylinder, PTFE buttons and PTFE bushing (for DBC74-300)
40223BN	29A	Buna O-ring (for DBC71-300)	1	DBCX1-300RK3	28A	replacement Buna coupler gasket
40223VI	29B	FKM O-ring (for DBC72-300)	1			
40223KR	29C	Kalrez <sup>®</sup> O-ring (for DBC73-300, DBC76-300 and DBC77-300)	1	DBCx2-300RK3	28B 4, 12, 13,	replacement FKM coupler gasket
40223EP	29D	EPDM O-ring (for DBC74-300)	1	DBCxx-300RK4	20, 22,	replacement link kit, clevis pin, cotter pin, stem, link arm and yoke (for all 3" SS)
40223VB	29E	FKM-B O-ring (for DBC79-300)	1		27	
40224BN	30A	Buna O-ring (for DBC71-300)	1		15 01 00	replacement stuffing box kit, stuffing box,
40224VI	30B	FKM O-ring (for DBC72-300)	1	DBCxx-300RK5	15, 21, 26	PTFE O-ring & bearing (for all 3" SS)
40224TS	30C	PTFE/Silicone O-ring (for DBC73-300)	1			replacement lever (handle) kit, lever,
40224EP	30D	EPDM O-ring (for DBC74-300)	1	DBCxx-300RK6	1, 16, 23, 24	groove pin, lock washer and socket head
40224KR	30E	Kalrez <sup>®</sup> O-ring (for DBC76-300)	1		24	cap screw (for all 3" SS)
40224TV	30F	PTFE/FKM O-ring (for DBC77-300)	1		11, 14,	replacement shaft kit. shaft, cotter pin
40224VB	30G	FKM-B O-ring (for DBC79-300)	1	DBCxx-300RK7	19, 22	bearing, shaft retainer, (for all 3" SS)
40235TF	31	PTFE O-ring	1	DBCxx-300RK8	7	main cylinder spring
40285SSSS	32	locking paddle arm	2	DBOXX-SUURK8	1	man cynnuer spring
40305TF	33	PTFE nose seal (for DBC73-300, DBC76-300 and DBC77-300)	1	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



# DBS 90° Swivel Cam and Groove Dry Disconnects

#### 2" Aluminium 90° Swivel Couplers

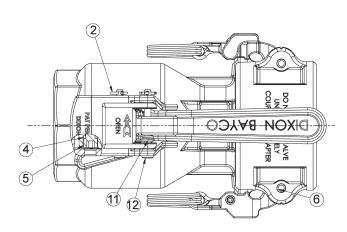
		MINIUM 90° COUPLER MATERIALS DBS6X-200			
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	INCL ITEM
10111	1	lock washer	4		4A, 5
40074SS	2	stuffing box	1	DBS61-200RK1	13A, 19 24
40075TF	3	back up ring	1		
40076BN	4A	crank shaft O-ring Buna (for DBS61-200)			
40076VI	4B	crank shaft O-ring FKM (for DBS62-200)		DBS62-200RK1	4B, 5
40076KR	4C	crank shaft O-ring Kalrez <sup>®</sup> (for DBS63-200)	1	DBS02-200RK1	24
40077TF	5	stuffing box PTFE O-ring	1		4C, 5
40078FG	6 large crank shaft bearing		1	DBS63-200RK1	13C
40079SS	7	small crank shaft bearing	1		19C, 2
40080SS	8	lever (handle)	1		
40081ALBN	9A	seal cylinder (for DBS61-200)	1		13A, 3
40081ALVI	9B	seal cylinder (for DBS62-200)	1	DBS61-200RK4	34, 35 36, 3
40168SS	9C	seal cylinder (for DBS63-200)	1		
40082TF	10	PTFE button	6		13B, 3
40083SS	11	yoke	1	DBS62-200RK4	34, 39 36, 3
40084TF	12	PTFE bushing	1		00, 0
40085BN	13A	body and swivel Buna O-ring (for DBS61-200)	2	DBS63-200RK4	13C, 3 34, 3 36, 3
40085 <b>VI</b>	13B	body and swivel FKM O-ring (for DBS62-200)	2	DBS61-	13A, 3
40085TS	13C	body and swivel PTFE/Silicone® O-ring (for DBS63-200)	2	200RK10	34
40086SS	6SS 14 link rivet		1	DBS62- 200RK10	13B, 3 34
40087SS	15	groove pin		2008810	54
40088SS	16	crank shaft cotter pin	1	DBS63-	13C, 3
40088SS	17	link cotter pin	1	200RK10	34
40089SS	18	EZ Boss-Lock <sup>™</sup> cam arm	2		
250-G-BU	19A	cam gasket Buna (for DBS61-200)	1		9A, 1
250-G-VI	19B	cam gasket FKM (for DBS62-200)	1	DBC61-200RK2	12
250-G-TES	19C	cam gasket PTFE/Silicone® (for DBS63-200)	1	DBC62-200RK2	9B, 1
40091SS	20	poppet	1	DDOUL LOUTINE	12
40092SS	21	crank shaft	1		10, 12
40093SS	22	link arm	1	DBCx3-200RK2	
40094SS	23	link washer	1		illustrat
40095TF	24	poppet screw PTFE O-ring	1		11, 14
DBCxx-200RK8	25	cylinder spring	1	DBCxx-200RK4	16, 1
40097SS	26	set screw	1		22, 2
40098SS	27	poppet screw (round head)	1		
4009955	28	lock washer	1	DBCxx-200RK5	2, 5,
40100SS	29	socket head cap screw	1		
40101SS					8, 15, 2
			2	DBCxx-200RK6	29
	31	main body	1		
	32	elbow body	1	DBCxx-200RK7	16, 21.
40106AC	33	bottom bearing	1		
40108AC	34	top bearing	1	DBCxx-200RK8	25
40109AC	35	washer			00.0
40110ST 40111SS	36 37	flange retainer screw	4	DBCxx-200RK9	20, 24 26, 2
40170TF	not illustrated	nose seal (for DBS63-200)	1	DBCL-200	not illustrat
	musilateu				

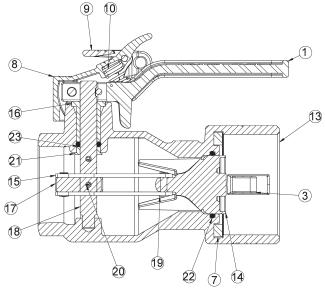
	F	EPAIR KITS
PART NO.	INCL. ITEM #	DESCRIPTION
DBS61-200RK1	4A, 5, 13A, 19A, 24	replacement seal kit, Buna crank shaft O-ring,PTFE stuffing box O-ring, Buna and Swivel body O-rings, Buna cam gasket, PTFE O-ring (for DBS61-200)
DBS62-200RK1	4B, 5, 13B, 19B, 24	replacement seal kit, FKM crank shaft O-ring,PTFE 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 <sup>®</sup> crank shaft O-ring,PTFE stuffing box O-ring, PTFE/Silicone <sup>®</sup> body and swivel O-rings, PTFE/Silicone <sup>®</sup> 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 <sup>®</sup> 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**

#### 11/2" Stainless Couplers





	STAINLESS COUPLER MATERIALS D2C7X-150	2" STAINLESS COUPLER BILL OF MATERIALS D2C7X-200				
PART NO.	ITEM	# DESCRIPTION	QTY	PART NO.	ITEM #	DESCRIPTION
40080SS	1	lever	1	40080SS	1	lever
40088SS	2	lever cotter pin	2	40088SS	2	lever cotter pin
40089SS	3	EZ-Boss lock cam arm	2	40089SS	3	EZ-Boss lock cam arm
40099SS	4	lock washer	1	40099SS	4	lock washer
40100SS	5	socket head screw	1	40100SS	5	socket head screw
40101SS	6	cam arm spring pin	2	40101SS	6	cam arm spring pin
200-G-BU	7A	cam gasket Buna (for D2C71-150)	1	250-G-BU	7A	cam gasket Buna (for D2C71-200)
200-G-VI	7B	cam gasket FKM (for D2C72-150)	1	250-G-VI	7B	cam gasket FKM (for D2C72-200)
200-G-TE	<b>s</b> 7C	cam gasket PTFE/Silicone® (for D2C73-150)	1	250-G-TES	7C	cam gasket PTFE/Silicone <sup>®</sup> (for D2C73-200)
200-G-EP	DM 7D	cam gasket EPDM (for D2C74-150)	1	250-G-EPDM	7D	cam gasket EPDM (for D2C74-200)
40225SS	8	lever latch	1	40225SS	8	lever latch
40226SS	9	lever lock	1	40226SS	9	lever lock
40230SS	10	lever lock compression spring	1	40230SS	10	lever lock compression spring
40231SS	11	lever lock torsion spring	1	40231SS	11	lever lock torsion spring
40232SS	12	lever clevis pin	2	40232SS	12	lever clevis pin
	13	body	1		13	body
40287SS	14	poppet	1	40298SS	14	poppet
40288SS	15	poppet link arm	2	40299SS	15	poppet link arm
40289FG	16	bearing	1	40289FG	16	bearing
40290SS	17	poppet cam	1	40300SS	17	poppet cam
40291SS	18	poppet lever shaft	1	40291SS	18	poppet lever shaft
40292SS	19	poppet link rivet	2	40292SS	19	poppet link rivet
40293SS	20	poppet lever shaft spring pin	2	40293SS	20	poppet lever shaft spring pin
40294SS	21	spacer	1	40294SS	21	spacer
40295TV	22	poppet O-ring PTFE/FKM	1	40301 <b>TV</b>	22	poppet O-ring PTFE/FKM
40296BN	23A	lever shaft O-ring Buna (for D2C71-150	) 1	40296BN	23A	lever shaft O-ring Buna (for D2C71-200)
40296VI	23B	lever shaft O-ring FKM (for D2C72-150)	1	40296VI	23B	lever shaft O-ring FKM (for D2C72-200)
40296KR	23C	lever shaft O-ring Kalrez <sup>®</sup> (for D2C73-150)	1	40296KR	23C	lever shaft O-ring Kalrez <sup>®</sup> (for D2C73-200)
40296EP	24D	lever shaft O-ring EPDM (for D2C74-150	)) 1	40296EP	24D	lever shaft O-ring EPDM (for D2C74-200)

#### ER 7X-200

QTY 

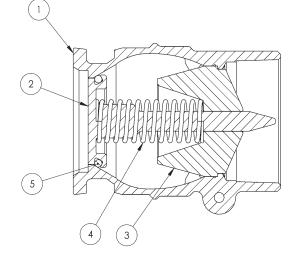
(for D2C74-200) 1



# **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				



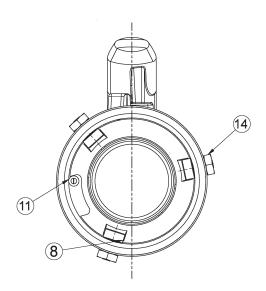
3" ALUMINIUM ADAPTER BILL OF MATERIALS BA6X-300							
PART NO.	ITEM #	DESCRIPTION	QTY				
40278AL	1	aluminium body	1				
40279AL	2	aluminium poppet	1				
40280AL	3	aluminium deflector	1				
40281SS	4	SS spring	1				
BA31-300RK1	5A	Buna O-ring (for BA61-300)	1				
BA32-300RK1	5B	FKM O-ring (for BA62-300)	1				

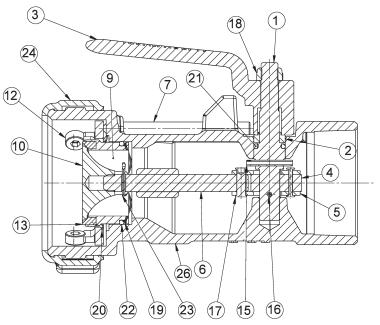
3" BRONZE ADAPTER BILL OF MATERIALS BA3X-300							
PART NO.	ITEM #	DESCRIPTION	QTY				
40278BR	1	bronze body	1				
40279BR	2	bronze poppet	1				
40280BR	3	bronze deflector	1				
40281SS	4	SS spring	1				
BA31-300RK1	5A	Buna O-ring (for BA31-300)	1				
BA32-300RK1	5B	FKM O-ring (for BA32-300)	1				



## **Dry Disconnect Bayonet Style Couplers**

### 2" Straight Non-Swiveling Couplers





#### SHOWN WITH BUMPER RING REMOVED

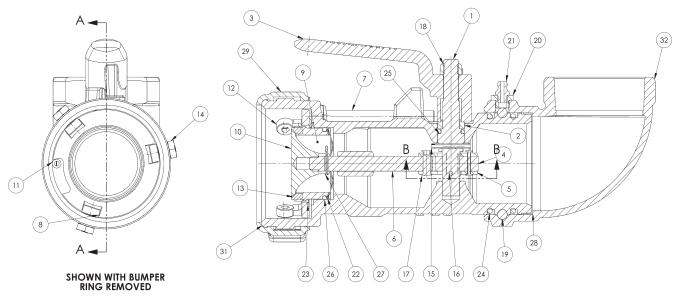
2" STAINLESS COUPLER BILL OF MATERIALS BC6X-200							
PART NO.	ITEM #	DESCRIPTION	QTY				
40138SS	1	lever shaft	1				
40139SS	2	lever shaft follower	1				
40140SS	3	lever	1				
40141SS	4	poppet link arm	1				
40142SS	5	bent link	2				
40143SS	6	stem	1				
40144SS	7	interlocking pin	1				
40145SS	8	lock 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	bumber ring	1				
40167AL	25	label	1				

O" STAINI ESS COUDI ES



## **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.

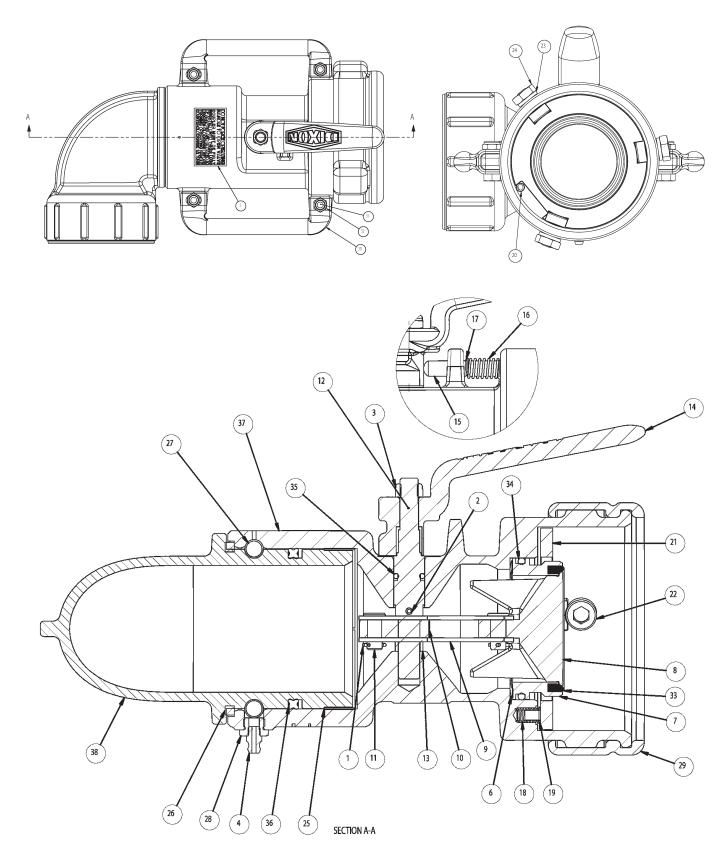
BILL OF MATERIALS BS6X-200 AND BSS6X-200							
PART NO.	ITEM #	DESCRIPTION	QTY	PART NO.	ITEM #	DESCRIPTION	QTY
40138SS	1	lever shaft	1	40156SS	19	ball bearing	32
40139SS	2	follower	1	40157BR	20	ball plug	1
40140SS	3	lever (handle)	1	40158ST	21A	grease fitting (BS6x-200)	1
40141SS	4	link	1	40178SS	21B	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





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

#### 3" 90° and Straight Swivel Couplers

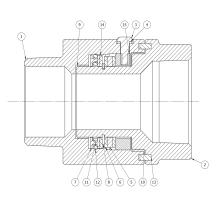
The straight swivel coupler (BSS series) uses the same components.

3" SWIVEL ALUMINIUM COUPLER BILL OF MATERIALS BS6X-300 AND BSS6X-300			
PART NO.	ITEM #	DESCRIPTION	QTY
40088SS	1	cotter pin	2
40152SS	2	spring pin	1
40155SS	3	lock nut	1
40158ST	4	grease fitting	1
40167AL	5	label	1
40246SS	6	wave spring	1
40247HC	7	nose piece	1
40248CA	8	poppet	1
40249SS	9	bent link	2
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
		,	

REPAIR KITS			
PART NO.	INCL. ITEM #	DESCRIPTION	
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	
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	
BS61-300RK2	25, 26, 36A	swivel seal repair kit, Buna swivel O-rings and bearing strip	
BS62-300RK2	25, 26, 36B	swivel seal repair kit, FKM swivel O-rings and bearing strip	



### SWMF125, SWMF150 and SWMF200 Swivels

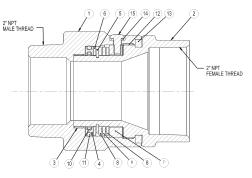


SWMF150



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SWMF125



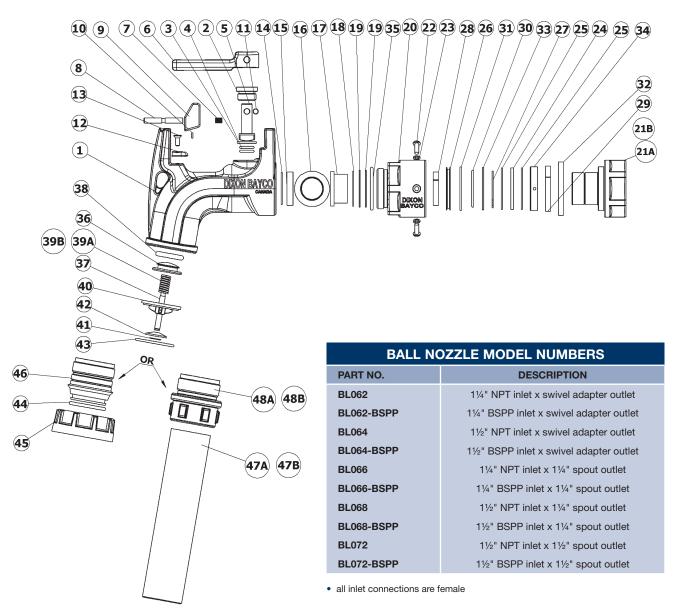
SWMF200

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		



### **BL Ball Nozzles**



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	11/2" 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	11/4" 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	11/2" 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	



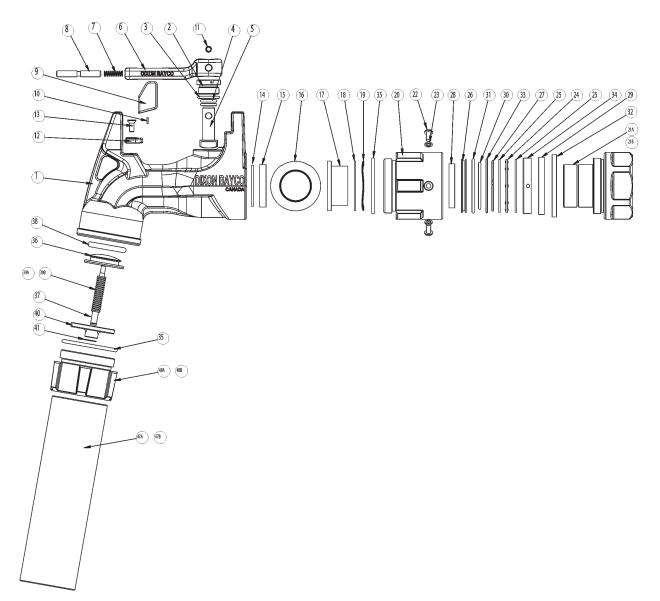
## **BL Ball Nozzles**

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 11/2" NPT	1
use kit SWMF-RK6	21C	swivel inlet 11/2" 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 11/4" NPT	1
BL007	48B	spout adapter 1½" NPT	1



## **BL Super Ball Nozzles**

### 3" 90° and Straight Swivel Couplers



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

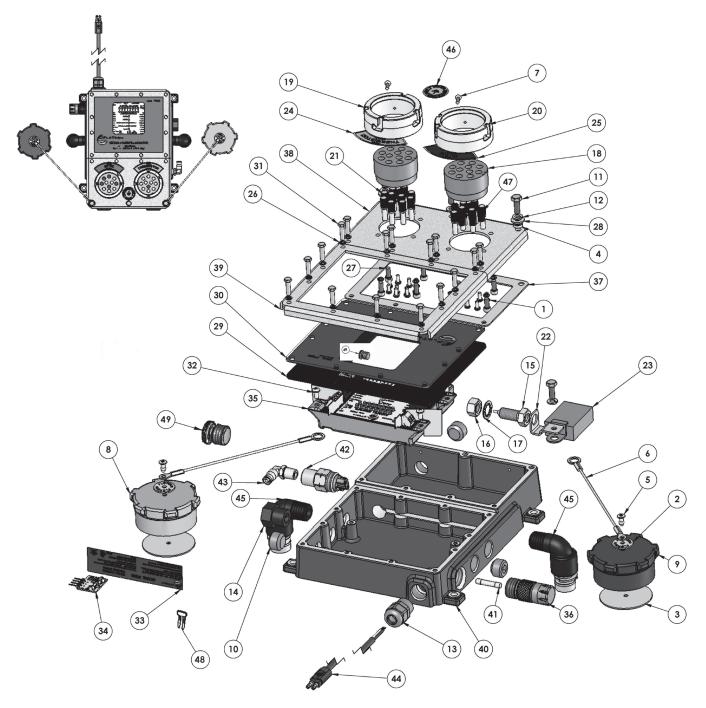


# **BL Super Ball Nozzles**

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



## 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)	

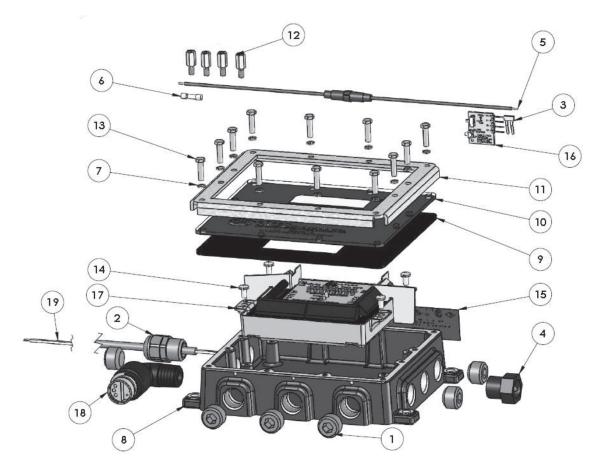


# **Plug-n-Play Monitors with Integrated Dual Sockets**

		PLUG-N-PLAY MC	NI	то	RS	W	ITH	1	NT	EG	RA	TE	DI	DU,	AL	sc	OCk	<b>(E</b> ]	rs							
PART #	ITEM #	DESCRIPTION	FT208-390P	FT208-390PG	FT208-390PGS	FT208-390PGS0	FT208-390PGST	FT208-390PGST0	FT208-390PGT	FT208-390PP	FT208-390PPG	FT208-390PPGS	FT208-390PPGS0	FT208-390PPGST	FT208-390PPGST0	FT208-390PPGT	FT208-391P	FT208-391PG	FT208-391PGS	FT208-391PGST	FT208-391PGT	FT208-391PP	FT208-391PPG	FT208-391PPGS	FT208-391PPGST	FT208-391PPGT
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
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
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
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
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
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
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
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
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
10103	10	polypropylene pipe plug	4	4	4	4	4	4	4	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
10111 10139	12 13	stainless steel lock washer polyamide strain relief	4 n/a	4 n/a	4 n/a	4	4 n/a	4	4 n/a	4 n/a	4 n/a	4 n/a	4	4 n/a	4	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a	4 n/a
10139 10200A	13	reset switch assy	1/a	1/a	1//a	1	1/a	1	1/a	1/a	1/a	1	1	1/a	1	1/a	1	1/a	1//a	1/a	1/a	1	1/a	1//a	1//a	1//a
10735-002	15		n/a	1	1	1	1	1	1	n/a	1	1	n/a	1	1	1	n/a	1	1	1	1	n/a	1	1	1	1
10735-002	16	ground wire assembly	n/a	1	1	1	1	1	1	n/a	1	1	n/a	1	1	1	n/a	1	1	1	1	n/a	1	1	1	1
10735-002	17	ground wire assembly	n/a	1	1	1	1	1	1	n/a	1	1	n/a	1	1	1	n/a	1	1	1	1	n/a	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
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
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
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
10735-002	22	ground wire assembly	n/a	1	1	1	1	1	1	n/a	1	1	n/a	1	1	1	n/a	1	1	1	1	n/a	1	1	1	1
10372	23		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	n/a	1	1	n/a	n/a	n/a	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
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
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
10376SS 10382SS	27 28	stainless steel screw stainless steel washer	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8	8	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2	8 2
1030235 10432NP (was FT9045)	20	neoprene gasket	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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
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
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
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
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
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
10596PLAC	36 37	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
10597CK 10598AL	37	cork gasket - lid 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
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
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
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
10602BR	42	brass pressure switch	n/a	n/a	1	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	1	1	1	n/a
10603BR	43		n/a		1	1	1	1	n/a		n/a	1	1	1	1		n/a		1	1	n/a		1	1	1	n/a
10612	44	power wire Plug-N-Play OBM plug elbow assy		n/a ₁	n/a	1	n/a ₁	1			n/a		1	n/a	1							n/a			n/a	n/a
10616PLBN	45 46	(Plug-n-Play) aluminium label - ground bolt	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	2	2	2	2	2
10621AL BLACK BUTTON INSERT	40	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	1
10196 10606AC-002	48 49	jumper cross connector acetal plug	1	1			n/a n/a		1	1	1	-		n/a n/a		1	1	1		n/a n/a	1	1		n/a n/a		1



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

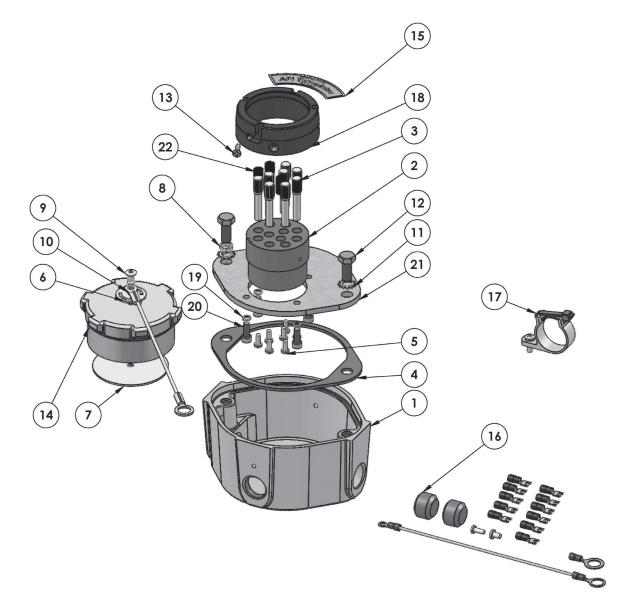


		BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	FT208P	FT208PP	FT208PPC
10103	1	polypropylene pipe plug	6	4	3
10139	2	polyamide strain relief	1	1	2
10196	3	jumper - cross connector	1	1	1
10200A	4	reset switch assembly	1	1	1
10356	5	plastic fuse holder	1	1	1
10358 (was FT9039)	6	brass/glass fuse - 1/2 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.	<b>INCLUDES ITEM #</b>	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 sontact 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

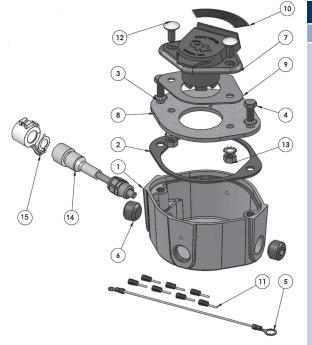


# Plug-n-Play Stand Alone Sockets FT300P & FT301P

		BILL OF MATER	IALS					
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

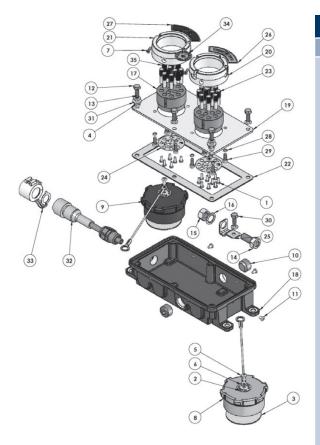


		BILL OF MATERIALS		
PART NO.	ITEM #	DESCRIPTION	FT208P	FT208PPC
10031 (was FT9007)	1	aluminium housing	1	n/a
10038 (was FT9032)	2	neoprene gasket	1	1
10092	3	stainless steel lock washer	4	4
10093	4	stainless steel screw	2	2
10095	5	wire, assembly, socket	1	1
10103	6	polypropylene pipe plug	2	2
10119 (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						



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



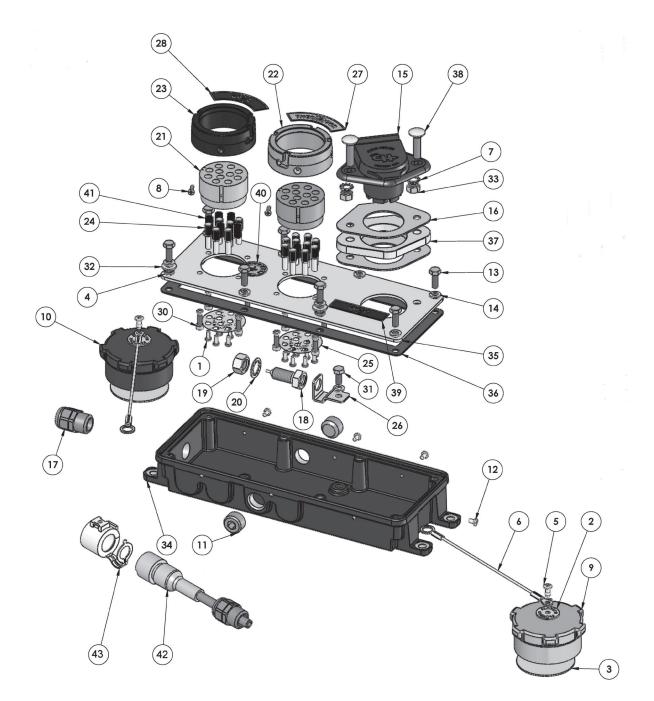
		BILL OF MATERIALS
PART NO.	ITEM #	DESCRIPTION
10086	1	stainless steel screw
use kit FT320 or FT321	2	aluminium name plate - socket washer
use kit FT320 or FT321	3	aluminium washer 2.500 x .0625
10089	4	stainless steel spacer
use kit FT320 or FT321	5	aluminium rivet .1875
use kit FT320 or FT321	6	stainless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

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 attachement screws and washers (4 each)							



QTY

## 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 attachement screws and washers (4 each)

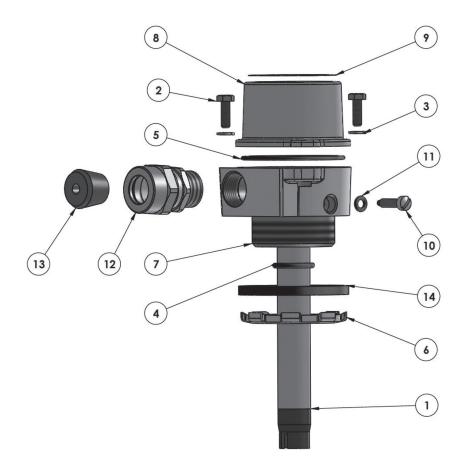


# Plug-n-Play Stand Alone Sockets FT394P & FT395P Series

		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

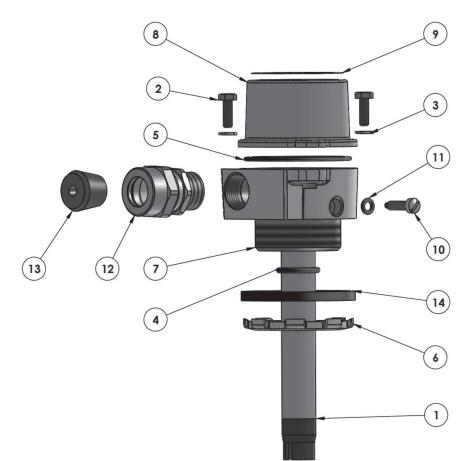


BILL OF MATERIALS								
PART NO.	ITEM #	DESCRIPTION	QTY					
10110	2	stainless steel screw	2					
10111	3	stainless steel lock washer - 1/4"	2					
10125 (was FT9027)	4	FKM O-ring	1					
10126 (was FT9049)	5	Buna O-ring	1					
10128 (was FT9012)	6	steel locknut	1					
10183-P&P	7	aluminium sensor housing	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



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

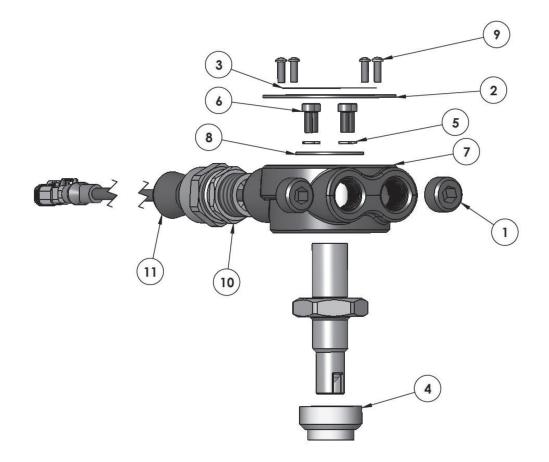


BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
See repair kits	1	Plug-n-Play probe	1
10110	2	stainless steel screw	2
10111	3	stainless steel lock washer - 1/4"	2
10125 (was FT9027)	4	FKM O-ring	1
10126 (was FT9049)	5	Buna O-ring	1
10128 (was FT9012)	6	steel locknut	1
10183-P&P	7	aluminium sensor 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



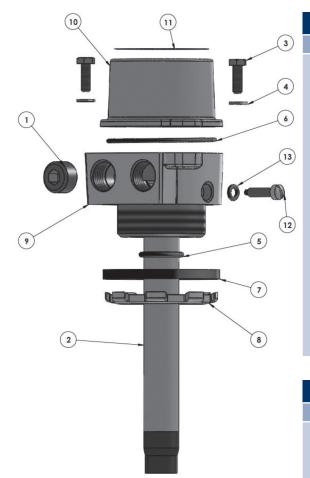
BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
10103	1	polypropylene pipe plug	2
10134	2	aluminium retain sensor lid	1
10343	3	mylar label - retain sensor	1
10347 (was FT9050)	4	aluminium threaded collar	1
10375SS	5	stainless steel lock washer	4
10376SS	6	stainless steel screw	4
10471NY-P&P	7	nylon 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.



# FT101, FT151 & FT202 Series Overfill Sensor Housings

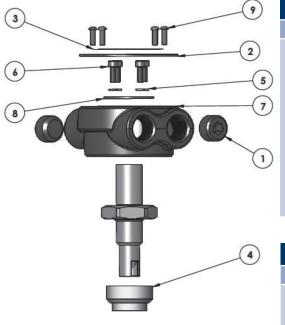


BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
10103	1	polypropylene pipe plug	1
see repair kits	2	probe	1
10110	3	stainless steel screw	2
10111	4	stainless steel lock washer, 1/4"	2
10125 (was FT9027)	5	FKM O-ring	1
10126 (was FT9049)	6	Buna O-ring	1
250-G-BU (was FT9026)	7	Buna-n gasket	1
10128 (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 #	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	



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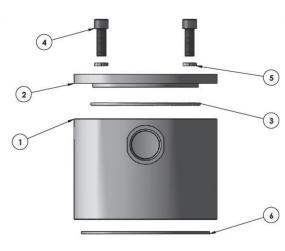


FT152 & FT206 Retain	Sensor Housings
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BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
10103	1	polypropylene pipe plug	2
10134	2	aluminium retain sensor lid	1
10343	3	mylar label - retain sensor	1
10347 (was FT9050)	4	aluminium threaded collar	1
10375SS	5	stainless steel 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

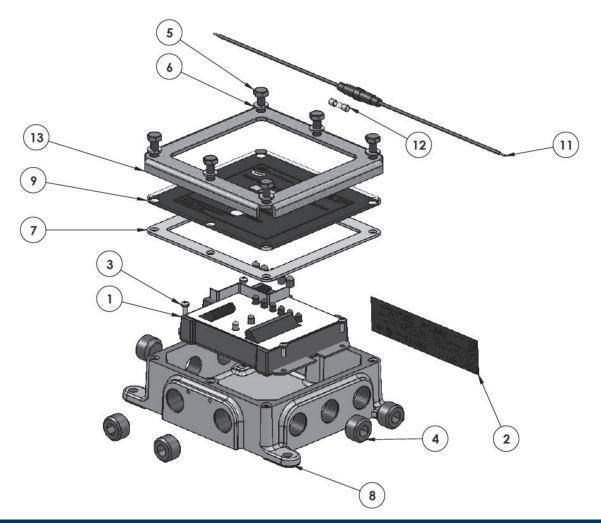


BILL OF MATERIALS			
PART NO.	ITEM #	DESCRIPTION	QTY
10540SS	1	3" stainless steel NPSM housing	1
10541AL	2	aluminium housing lid	1
10542BN	3	Buna-N O-ring	1
10554SS	4	stainless steel screw	4
40099SS	5	stainless steel lock washer	4
40190TF	6	PTFE gasket	1

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"	



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

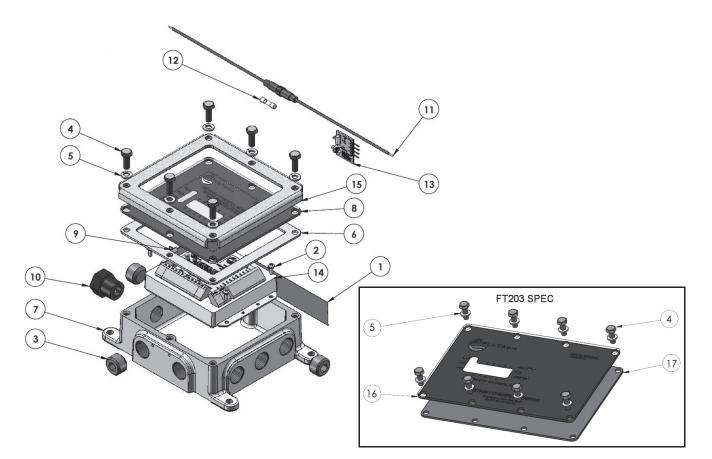


BILL OF MATERIALS				
PART NO.	ITEM #	DESCRIPTION	FT102	FT103
10077	1	5 wire onboard monitor assembly	1	1
10079	2	chrome mylar label	n/a	1
10086	3	stainless steel screw	4	4
10103	4	polypropylene pipe plug	n/a	5
10110	5	stainless steel screw	6	6
10111	6	stainless steel lockwasher - 1/4"	6	6
10131 (was 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

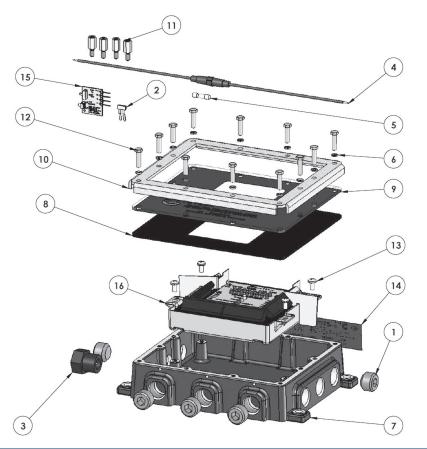


BILL OF MATERIALS					
PART NO.	ITEM #	DESCRIPTION	FT203P	FT203SPEC	FT204P
10078	1	chrome mylar label	n/a	n/a	1
10086	2	stainless steel screw	4	4	4
10103	3	polypropylene pipe plug	n/a	n/a	3
10110	4	stainless steel screw	6	8	6
10111	5	stainless steel lock washer - 1/4"	6	8	6
10131 (was FT9053)	6	neoprene 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 adn bezel for FT203 SPEC	



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

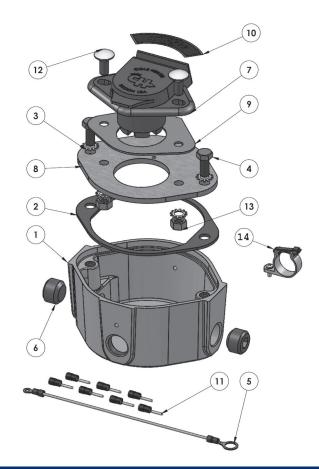


BILL OF MATERIALS				
PART NO.	ITEM #	DESCRIPTION	FT102	FT103
10103	1	polypropylene pipe plug	n/a	5
10196	2	jumper - cross connector	1	1
10200A	3	reset switch assembly	n/a	1
10356	4	plastic fuse holder	1	1
10358 (was FT9039)	5	brass/glass fuse - 1/2 amp	1	5
10375SS	6	stainless steel lock washer	12	12
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

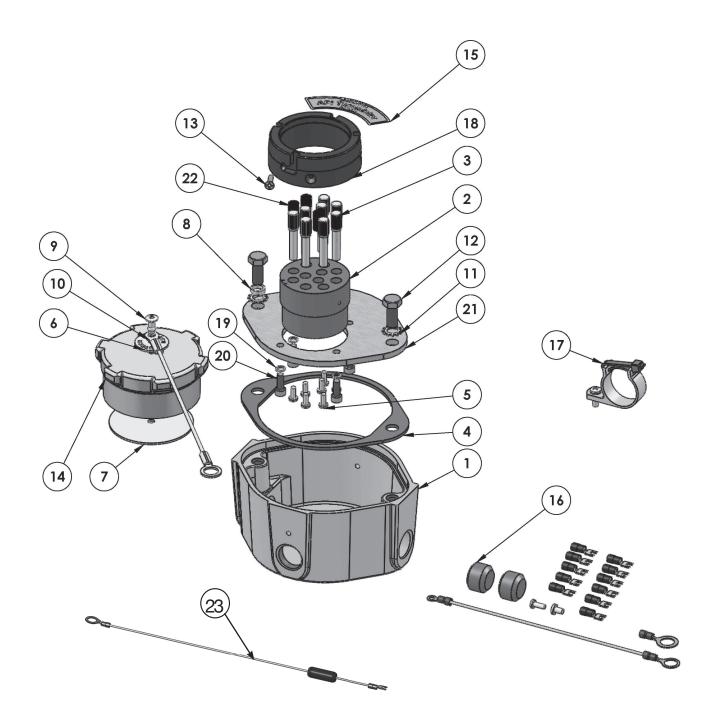


BILL OF MATERIALS										
PART NO.	ITEM #	DESCRIPTION	FT302	FT305	FT306	FT312	FT315	FT316		
10031 (was FT9007)	1	aluminium housing	1	1	1	n/a	n/a	n/a		
10038 (was FT9032)	2	neoprene gasket		1	1	1	1	1		
10092	3	stainless steel lock washer	4	4	4	4	4	4		
10093	4	stainless steel screw	2	2	2	2	2	2		
10095	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.	<b>INCLUDES ITEM #</b>	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							



## FT30x Series Single J Slot Sockets



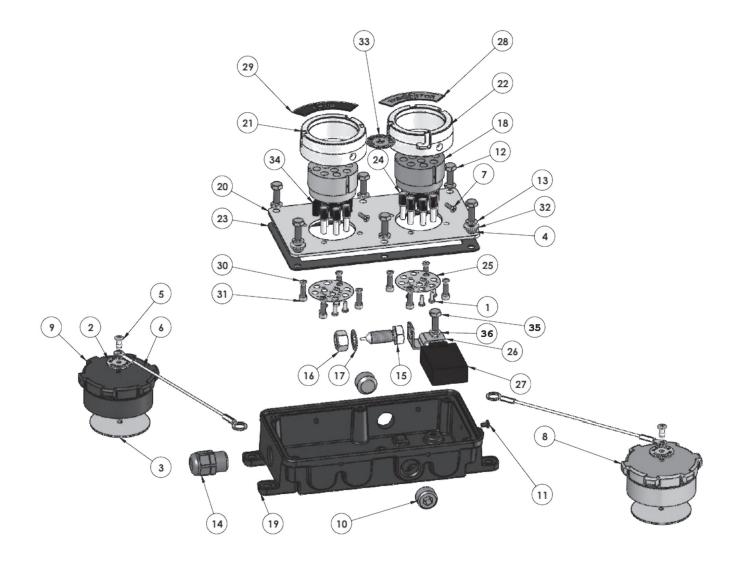


BILL OF MATERIALS																							
PART NO.	ITEM NO.	DESCRIPTION	FT300	FT300SS	FT300GW	FT301	FT301SS	FT303	FT303SS	FT304	FT304SS	FT307	FT307SS	FT310	FT310SS	FT311	FT311SS	FT313	FT313SS	FT314	FT314SS	FT317	FT317SS
10031 (was FT9007)	1	aluminium housing	1	1	1	1	1	1	1	1	1	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
10099	15A	aluminium name plate - FT300	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	n/a
10100	15B	aluminium name plate - FT301	n/a		n/a	1	1	n/a								1	1	n/a	n/a	n/a	n/a	-	
10228	15C	aluminium name plate - FT303		n/a		n/a		1	1		n/a							1	1		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	1	1		
10283	15E	aluminium name plate - FT307	n/a		n/a	n/a		n/a		n/a	n/a	1	1					n/a	n/a	n/a	n/a	1	1
10099-002	15F	aluminium name plate-FT300GW		n/a	1								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
10264 10366HC-001	17 18A	nylon clamp assembly ALH wear ring - 4 J slots	n/a n/a	n/a n/a	n/a n/a	1	1 n/a	n/a 1	n/a n/a	1	1 n/a	n/a 1		n/a n/a		1	1 n/a	n/a 1	n/a n/a	1	1 n/a	n/a 1	n/a n/a
(was FT9042) 10366HC-002	18B	ALH wear ring - 3 J slots	1	n/a	1						n/a			1								n/a	
(was FT9041) 10366SS-001	18C	stainless steel wear ring - 4 J slots		n/a			1	n/a	1	n/a		n/a	1		n/a		1	n/a	1	n/a	1	n/a	
(was FT9043) 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	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(was r 19044) 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
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
10431AL	20	aluminium socket plate	1	4	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1
BLACK BUTTON	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

#### **REPAIR KITS INCLUDES ITEM #** DESCRIPTION PART NO. 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) 2 - 16, 18 - 22 **FT317SS** 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) 3, 5 FT9020 replacement socket pin, screw & crimp lug FT9034 4, 15A,18B, 1921 replacement faceplate 3 J slot, (without contact block and hardware) 3, 5 FT9046 replacement socket contact pins, and screws FT9068 19, 20 replacement contact block attachement screws and washers (4 each)



## FT390/FT391 Series EZ-Cept Double Sockets





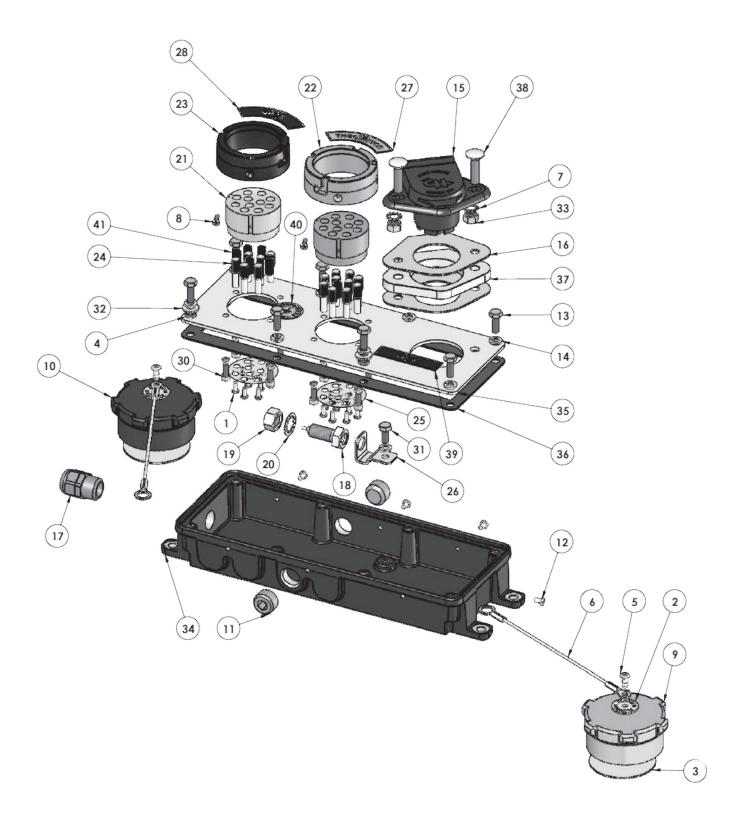
## **Replacement Parts**

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
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
10223	15	stainless steel ground bolt r		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	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 attachement screws and washers (4 each)								



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





150 Telephone: +44 (0)1772 323529

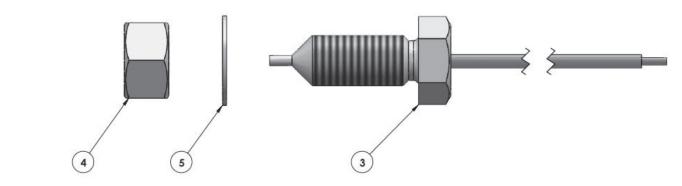
## **Replacement Parts**

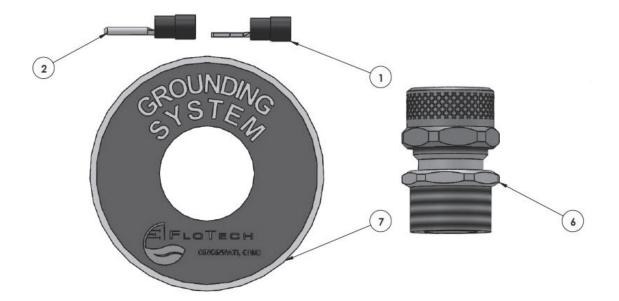
BILL OF MATERIALS											
PART NO.	ITEM NO.	DESCRIPTION	FT393	FT394	FT394G	FT394V-G	FT395	FT395V	FT395G	FT395V-G	
10086	1	stainless steel screw	16	16	16	16	16	16	16	16	
10087	2	aluminium name plate - socket washer	2	2	2	2	2	2	2	2	
use kit FT320 or FT321	3	aluminium washer 2.500 x .0625	2	2	2	2	2	2	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	
10139	17	polyamide strain relief		1	1	1	1	1	1	1	
10223	18	stainless steel ground bolt		n/a	1	1	n/a	n/a	1	1	
10224	19	stainless steel nut - ground bolt 1/2"- 13		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 attachement screws and washers (4 each)								



## FT450 Ground Bolt

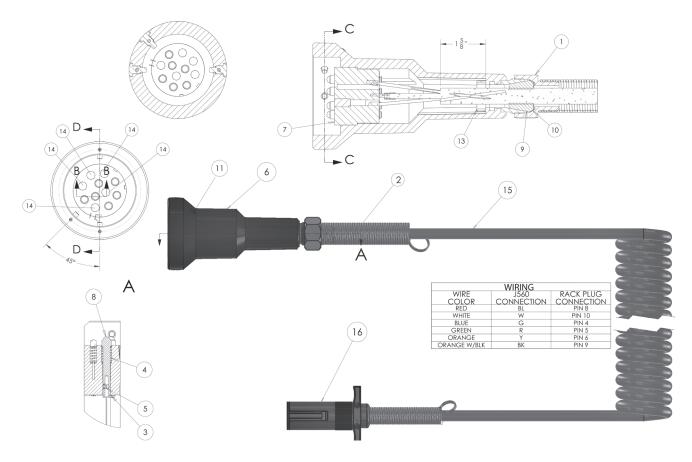




BILL OF MATERIALS								
PART NO.	ITEM #	DESCRIPTION	QTY					
10102	1	locking spade	1					
10123	2	terminal pin	1					
10223	3	stainless steel ground bolt	1					
10224	4	stainless steel nut - ground bolt 1/2"-13	1					
10225	5	stainless steel lock washer internal tooth	1					
10229	6	strain relief 1/2"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



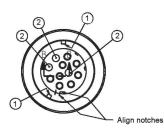
## **Rack Cords-FT620P**

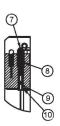


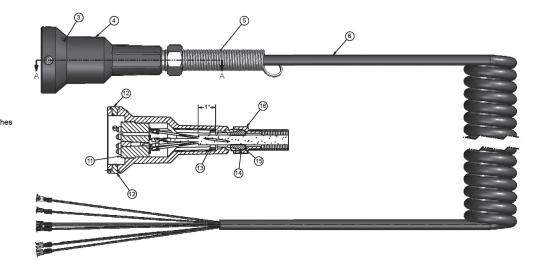
BILL OF MATERIALS									
PART NO.	ITEM #	DESCRIPTION	QTY	MATERIAL					
10249	1	strain relief nut	1	aluminium					
10250	2	spring	1	SST					
10252	3	retaining ring	6	steel					
10253	4	spring	6	SST					
10260	5	set screw	6	SST					
10523NY-003	6	body	1	nylon					
10524PL-001	7	contact block-long	1	plastic					
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	-					



## **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		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' coilded (US)	1	n/a	n/a	n/a	n/a	n/a	
10259-C	6B	thermistor cable assembly 30' coilded (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' coilded (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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### **Limited Warranty**

Dixon Group Europe Ltd (herein called "Dixon") warrants the products described herein, and manufactured by Dixon to be free from defects in material and workmanship for a period of one (1) year from date of shipment by Dixon under normal use and service. It's sole obligation under this warranty being limited to repairing or replacing, as hereinafter provided, at its option any product found to Dixon's satisfaction to be defective upon examination by it, provided that such product shall be returned for inspection to Dixon's factory within three (3) months after discovery of the defect. The repair or replacement of defective products will be made without charge for parts or labour. This warranty shall not apply to: (a) parts or products not manufactured by Dixon, the warranty of such items being limited to the actual warranty extended to Dixon by its supplier; (b) any product that has been subject to abuse, negligence, accident, or misapplication; (c) any product altered or repaired by others than Dixon; and (d) to normal maintenance services and the replacement of service items (such as washers, gaskets and lubricants) made in connection with such services. To the extent permitted by United Kingdom law, this limited warranty shall extend only to the buyer and any other person reasonably expected to use or consume the goods who is injured in person by any breach of the warranty. No action may be brought against Dixon for an alleged breach of warranty unless such action is instituted within one (1) year from the date the cause of action accrues. This limited warranty shall be construed and enforced to the fullest extent allowable by applicable United Kingdom law.

#### OTHER THAN THE OBLIGATION OF DIXON SET FORTH HEREIN, DIXON DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY OTHER OBLIGATION OR LIABILITY. THE FOREGOING CONSTITUTES DIXON'S SOLE OBLIGATION WITH RESPECT TO DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL, RESULTING FROM THE USE OR PERFORMANCE OF THE PRODUCT.

Some products and sizes may be discontinued when stock is depleted, or may require a minimum quantity for ordering.

Dixon Group Europe Ltd is committed to a policy of continuous development, and as such, the above detailed specification and may be subject to change without notice. Dixon Group Europe Ltd reserves the right to change and modify designs and specification without notice.

#### Pricing

Dixon will always try to maintain pricing, however, with the fluctuation of material cost we may be forced to change prices. Please be aware pricing is subject to change without notice.

### Freight/Postage & Carriage Charges

Postage & carriage charges are at the customer's expense and will be charged at current appropriate rates.

#### Returns

Dixon will allow its customers to return any product for any reason within 30 days of shipment, provided it is received in a saleable condition. The customer must call to receive a CCR number prior to returning goods to Dixon and shipping will be at the customer's expense, unless it is determined Dixon created the reason for the return.

A re-stocking charge of 25% applies to all returns.

### **Limits of Liability**

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