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### **Hose Coupling Safety**

- Use Dixon couplings, retention devices and accessory products only for their intended service.
- All recommendations of the Hose Manufacturer, and the Coupling Manufacturer, must be employed with regards to Size, Temperature, Application, Media, and Pressure when selecting the components for a hose assembly.
- All finished hose assemblies should be tested in accordance with the Rubber Manufacturers Association recommendations.
- All hose assemblies should be thoroughly inspected prior to each use to ensure they are undamaged, and properly coupled.
- Use safety clips on couplings, and King Safety Cables on assemblies where required by the manufacturer, as well as State and Federal regulations. (OSHA regulations may be viewed in full on the OSHA website, www.osha.gov.)
- Under no circumstances should the assembly working pressure or working temperature exceed the working pressure or working temperature of the lowest rated component (coupling, clamp, ferrule, or hose).
- Call Dixon (800.355.1991) for advice on couplings, retention devices, and accessories for your application.

2 Dry Disconnects

#### **Features & Benefits**

Dry disconnect couplings are designed for the quick and spill free connection and disconnection of hoses and pipelines when transferring expensive hazardous product that is costly to clean up, reprocess or dispose of. Dry disconnects 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 when properly used
- safe and reliable due to rugged construction
- product life uncomplicated design and high quality materials ensures long product life
- selectivity To avoid product contamination caused by connecting a coupler to the wrong adapter, selective versions of the adapters are available. Contact the factory for further information.
- produced according to NATO standard STANAG 3756 and ATOFINA SGM 2049.TUY.C.
- compatible with Mann-Tek, Avery Hardoll and Todo-matic® and any other product produced according to NATO standard STANAG 3756
- · Working Pressure aluminum: 300 PSI up to 4" brass/ gunmetal \*: 300 PSI up to 4"

stainless steel: 360 PSI

\* produced to U.S. government bronze specification G

Optional seals:

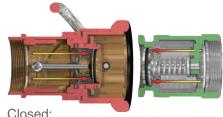
**EPDM** NBR - nitrile Kalrez® Chemraz® Perlast®



Open:

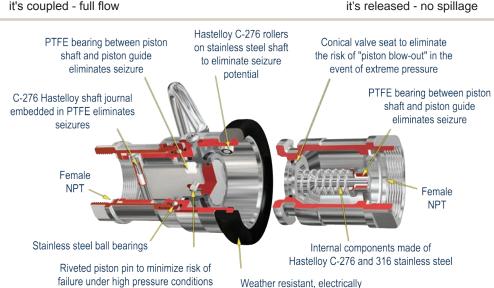
Push and turn

#### **How It Works**



Closed:

 Turn and pull it's released - no spillage



DDC200SS pictured

conductive protective bumper ring



female NPT x coupler - aluminum 3/4" and 1" design



female NPT x coupler - brass 1½" and 2" design



female NPT x coupler - stainless steel 3" design



female NPT x coupler - aluminum 4" design



## **Dry Disconnects**

#### **Coupler - Hose Unit**

- · coupler has built-in swivel
- · stainless steel ball bearings
- shaft journal is stainless steel embedded in PTFE to eliminate seizure
- riveted piston pin to minimize the risk for failure under extreme pressure conditions
- the protective ring is a specially formulated, weather resistant and electrically conductive rubber compound
- stainless steel couplers: rollers are Hastelloy C276 on the stainless steel shaft
- aluminum and brass couplers: rollers are aluminum-bronze on the stainless steel shaft
- for information on repair kits visit us on-line at www.dixonvalve.com

#### dry quick disconnect couplers x female NPT with Viton® seals

Female NPT	Body Size	316 Stainless Steel	Aluminum	Brass / Gunmetal *
3/4"	56 mm	DDC075SS	DDC075AL	DDC075BR
1"	56 mm	DDC100SS	DDC100AL	DDC100BR
1½"	70 mm	DDC150SS	DDC150AL	DDC150BR
2"	70 mm	DDC200SS	DDC200AL	DDC200BR
3"	105 mm	DDC300SS105	DDC300AL105	DDC300GM105
3"	119 mm	DDC300SS	DDC300AL	DDC300GM
4"	164 mm	DDC400SS	DDC400AL	DDC400GM
6"	238 mm	DDC600SS	DDC600AL	

<sup>\*</sup> produced to U.S. government bronze specification G

### **Dust Plugs for Couplers**



composite plug

 Composite (Polyeten PE-HD 300) plugs provide good protection against corrosion and withstands hot and cold environments.

Size	Body Size	Polyeten PE-HD 300
3/4" and 1"	56 mm	DDDP075
1½" and 2"	70 mm	DDDP150
3"	105 mm	DDDP300105
3"	119 mm	DDDP300
4"	164 mm	DDDP400
6"	238 mm	DDDP600 <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> 6" dust plug is aluminum

## Dry Disconnects Tank Unit

- · adapter is usually installed on the tank or manifold
- · conical valve seat reduces the risk for "piston blow out"
- PTFE bearings between the piston shaft and the piston guide eliminate the risk for seizure
- · for information on repair kits visit us on-line at www.dixonvalve.com

#### dry quick disconnect adapters x female NPT with Viton® seals

Female NPT	Body Size	316 Stainless Steel	Aluminum	Brass / Gunmetal *
3/4"	56 mm	DDA075SS	DDA075AL	DDA075BR
1"	56 mm	DDA100SS	DDA100AL	DDA100BR
1½"	70 mm	DDA150SS	DDA150AL	DDA150BR
2"	70 mm	DDA200SS	DDA200AL	DDA200BR
3"	105 mm	DDA300SS105	DDA300AL105	DDA300GM105
3"	119 mm	DDA300SS	DDA300AL	DDA300GM
4"	164 mm	DDA400SS	DDA400AL	DDA400GM
6"	238 mm	DDA600SS	DDA600AL	

<sup>\*</sup> produced to U.S. government bronze specification G

#### dry quick disconnect adapters x 150# ASA flange with Viton® seals

150# ASA	Body Size	316 Stainless Steel	Aluminum	Brass / Gunmetal *
3/4"	56 mm	DDA075SSFL		
1"	56 mm	DDA100SSFL	DDA100ALFL	DDA100BRFL
1½"	70 mm	DDA150SSFL	DDA150ALFL	DDA150BRFL
2"	70 mm	DDA200SSFL	DDA200ALFL	DDA200BRFL
3"	105 mm	DDA300SS105FL	DDA300AL105FL	DDA300GM105FL
3"	119 mm	DDA300SSFL	DDA300ALFL	DDA300GMFL
4"	164 mm	DDA400SSFL	DDA400ALFL	DDA400GMFL
6"	238 mm	DDA600SSFL	DDA600ALFL	

<sup>\*</sup> produced to U.S. government bronze specification G

#### dry quick disconnect adapters x TTMA flange with Viton® seals

TTMA	Body Size	Aluminum
3"	105 mm	DDA300AL105TTMA
3"	119 mm	DDA300AL119TTMA
4"	164 mm	DDA400AL164TTMA

#### Construction:

- aluminum adapter aluminum 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
  - \* produced to U.S. government bronze specification G



adapter x female NPT - DDA100BR



adapter x 150# ASA flange - DDA200SSFL



adapter x TTMA flange - DDA300AL119TTMA

### **Dust Caps for Adapters**

 Composite (Polyeten PE-HD 300) caps provide good protection against corrosion and withstands hot and cold environments.

#### dust caps for adapters

Size	Body Size	Polyeten PE-HD 300	Rubber
3/4" and 1"	56 mm	DDDC075	
1½" and 2"	70 mm	DDDC150	DGDC200
3"	105 mm	DDDC300105	DGDC300
3"	119 mm	DDDC300	
4"	164 mm	DDDC400	
6"	238 mm	DDDC600 1	

<sup>&</sup>lt;sup>1</sup> 6" dust cap is aluminum





Dry Disconnects

## **Dry Aviation Couplings**

#### **Hose Unit**

Dry aviation couplings are designed for use in aviation refueling systems. Manufactured to accept the international standard 2½" point bayonet, hose end refueling nozzles according to: ISO45 / MS24484 / STANAG 3105 / British Aerospace Spec. 2C14. *They are not configured for under-wing refueling.* 

#### Technical Information:

- · body: high strength aluminum
- · coupling ring: gunmetal
- bayonet flange and inner parts: stainless steel aluminum
- all wetted parts are aluminum and stainless steel
- 150 PSI working pressure

- · stainless steel ball bearings
- gunmetal (produced to U.S. government bronze specification G) coupling ring minimizes the risk of seizure
- bayonet flange and inner parts: stainless steel, stainless steel shaft journal embedded in PTFE eliminates seizure
  - PTFE bearings between the driving plate and the piston guide eliminate the risk of seizure
  - riveted piston pin minimizes the risk of failure under extreme pressure conditions
  - the protective ring is a specially formulated, weather resistant and electrically conductive rubber compound



female NPT x coupler - DAC250AL

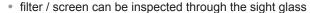
#### aviation couplers x female NPT with Viton® seals

Female NPT	Body Size	Aluminum
21/2"	ISO 45	DAC250AL
3"	ISO 45	DAC300AL

#### aviation couplers x female BSP with Viton® seals

Female BSP	Body Size	Aluminum
2½"	ISO 45	DAC250ALBSP
3"	ISO 45	DAC300ALBSP

### **Sight Flow Indicators**





screen is 100 mesh



Female Thread	Male Thread	Aluminum
2½" NPT	2½" BSP	ASFI25T25B
3" NPT	3" BSP	ASFI30T30B
2½" NPT	2½" NPT	ASFI25T25T
3" NPT	3" NPT	ASFI30T30T



sight flow indicator - ASFI25T25B

### **Dust Plug for Couplers**

 Composite (Polyeten PE-HD 300) plug provides good protection against corrosion and withstands hot and cold environments.



composite plug

#### composite dust plug for couplers

Size	Body Size	Polyeten PE-HD 300
2½"	ISO 45	DADP250

# Dry Aviation Couplings Adapter - Tank Unit

Dry aviation couplings are designed for use in aviation refueling systems. Manufactured to accept the international standard 2½" point bayonet, hose end refueling nozzles according to: ISO45 / MS24484 / STANAG 3105 / British Aerospace Spec. 2C14. *They are not configured for under-wing refueling.* 

- · gunmetal coupling ring minimizes the risk of seizure
- PTFE bearings between the piston shaft and the piston guide eliminate the risk of seizure
- conical valve seat eliminates the risk of "piston blow out" when extreme pressure is used

#### Technical Information:

- · body: high strength aluminum
- bayonet flange and inner parts: stainless steel, aluminum
- all wetted parts are aluminum and stainless steel
- · coupling ring: gunmetal
- **150 PSI** working pressure at ambient temperature (70°F)

#### aviation adapters x female NPT with Viton® seals

Female NPT	Body Size	Aluminum
21/2"	ISO 45	DAA250AL
3"	ISO 45	DAA300AL



adapter x female NPT - DAA250AL

#### aviation adapters x 150# ASA flange with Viton® seals

Female BSP	Body Size	Aluminum
2½"	ISO 45	DAA250ALFL
3"	ISO 45	DAA300ALFL



adapter x 150# ASA flange - DAA250ALFL

### **Dust Cap for Adapter**

 Composite (Polyeten PE-HD 300) cap provides good protection against corrosion and withstands hot and cold environments.

#### composite dust caps for adapters

Size	Body Size	Polyeten PE-HD 300
2½"	ISO 45	DADC250



composite cap

Dry Disconnects - Dry Aviation

### Dry Gas Couplings

#### **Hose Unit**

Dry gas couplings are designed for safe loading and discharge of bulk delivery trucks and rail cars. They are quick and easy to connect and can be connected to a tank unit with pressures up to **225 PSI**. If the pressure is higher you can equip the couplings with a pressure relief valve. The easy to connect pressure relief valve dissipates trapped fluid pressure into the hose coupler without spillage. The primary application of dry gas couplings is in the handling of LPG - Propane and Butane.

#### Technical Information:

- stainless steel and brass / gunmetal (produced to U.S. government bronze specification G)
- Viton® seals
- female NPT and ASA flanges
- 360 PSI working pressure at ambient temperature (70°F)
- safe handling of LPG
- easy to use and saves time
- reliable and easy to maintain
- can be coupled against higher pressure
- minimizes the risk of cold burns
- · minimizes spillage and product loss
- · minimizes health risks
- keeps the environment free of hazardous vapors and liquids



#### dry gas couplers x female NPT with Viton® seals

Female NPT	Body Size	Stainless Steel	
1"	56 mm	DGC100SS	
2"	71 mm	DGC200SS	
3"	119 mm	DGC300SS	

#### **Dust Plugs for Couplers**

 Composite (Polyeten PE-HD 300) plugs provide good protection against corrosion and withstand hot and cold environments



#### composite dust plugs for couplers

Size	Body Size Polyeten PE-HD 300		
1"	56 mm	DGDP100	
2"	71 mm	DGDP200	
3"	119 mm	DGDP300	

## Dry Gas Couplings Tank Unit

Dry gas couplings are designed for safe loading and discharge of bulk delivery trucks and rail cars. They are quick and easy to connect and can be connected to a tank unit with pressures up to **225 PSI**. If the pressure is higher you can equip the couplings with a pressure relief valve. The easy to connect pressure relief valve dissipates trapped fluid pressure into the hose coupler without spillage. The primary application of dry gas couplings is in the handling of LPG - Propane and Butane.

- · safe handling of LPG
- easy to use and saves time
- reliable and easy to maintain
- can be coupled to a tank unit with pressures up to 225 PSI
- minimizes the risk of cold burns
- minimizes spillage and product loss
- · minimizes health risks
- keeps the environment free of hazardous vapors and liquids

#### Technical Information:

- stainless steel and brass / gunmetal (produced to U.S. government bronze specification G)
- Viton® seals
- female NPT, female ACME thread and ASA flanges
- 360 PSI working pressure

#### dry gas adapters x female NPT with Viton® seals

Female NPT	Body Size	Stainless Steel	
1"	56 mm	DGA100SS	
2"	71 mm	DGA200SS	
3"	119 mm	DGA300SS	



adapter x female NPT - DGA200SS

#### dry gas adapters x female ACME thread with Viton® seals

Female ACME	Body Size Stainless Steel	
1¾"	56 mm	DGA100SS175
31/4"	71 mm	DGA200SS325

## dry gas adapters x 150# ASA flange with Viton $^{\mbox{\tiny 8}}$ seals

150# ASA	Body Size	Stainless Steel	
1"	56 mm	DGA100SSFL	
2"	71 mm	DGA200SSFL	
3"	119 mm	DGA300SSFL	



adapter x 150# ASA flange - DGA200SSFL

#### **Dust Caps**

#### dust caps for adapters

Size	Body Size	Polyeten PE-HD 300	Rubber
1"	56 mm	DGDC100	
2"	71 mm		DGDC200
3"	119 mm		DGDC300



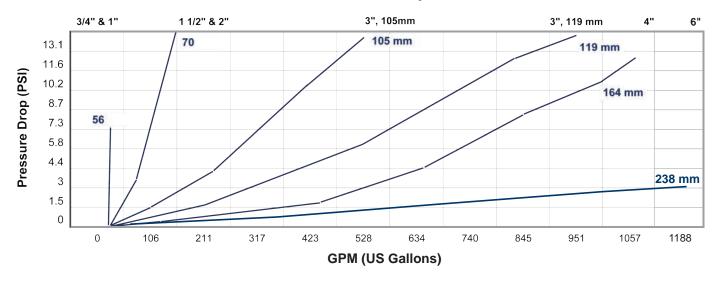
Dry Disconnects - Dry Gas

### **Dry Disconnect Couplings**

#### Flow Rate

*Media:* Water *Temp:* 60° F





### **Spillage on Disconnection**

The test was made by coupling and uncoupling 10 times under pressures between one (1) and ten (10) bars. The result we got is a total spillage over 10 coupling cycles and an average spillage on each coupling cycle. The test was carried out with water under ambient temperature.

Size	Socket diameter	Total spill 10 cycles	Average spill 1 cycle
1" – DN 25	56 mm	1 ml	0,1 ml
2" - DN 50	70 mm	3 ml	0,3 ml
2½" - DN 65	105 mm	8 ml	0,8 ml
3" - DN 80	119 mm	10 ml	1,0 ml
4" - DN 100	164 mm	35 ml	3,5 ml

## **Options for Hose and Tank Units**



#### **Electronic Sensors**

**Electronic Sensors** detect the position of the driving plate inside of the hose unit.

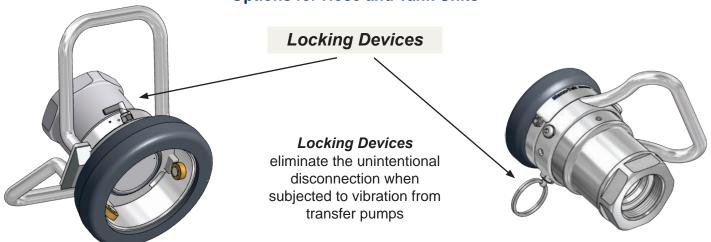
No modification on the tank is required. This makes it possible to identify if the hose unit is connected to a tank unit and if they are in an open position.



10

### Dry Disconnect Couplings

### **Options for Hose and Tank Units**



4" Hose unit with locking device

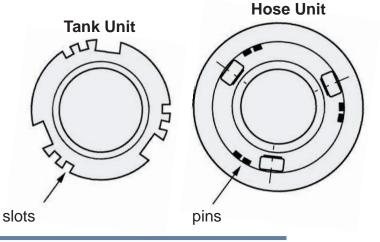
2" Hose unit with locking device

## **Selectivity Options**

**Selectivity** versions of Hose and Tank units are available to prevent the accidental mixing of media.

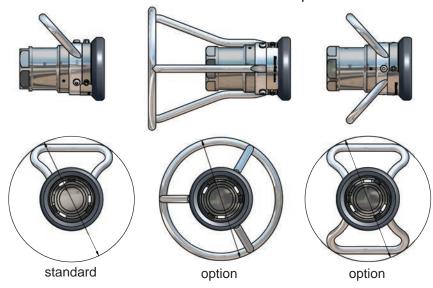
The Tank units are furnished with slots and the Hose unit with pins that interlock upon connection.

The number of selectivity options are possible depending on coupling size.



## **Handle Options**

Optional handles are available for 1"-4" Hose couplers. 2" Hose unit shown.



Dry Disconnects - Dry Gas

## Dry Break Cam & Groove Style Dry Disconnect Couplings

#### 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
- aluminum fittings have stainless steel1 internals
- for pressure ratings at other temperatures, contact the factory
- Dixon EZ Boss-Lock cam arms standard on all fittings, provide high security from accidental opening due to vibration or snagging
- large paddle type cam arms standard on 3" fittings, allow for an easy grip
- for information on repair kits visit us on-line at www.dixonvalve.com

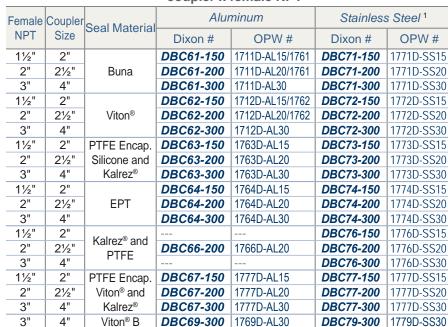
Must be used with a DBA style adapter for coupler to operate.

**ALERT** 

Adapter sold separately. (see next page)

- 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 female NPT





coupler x female NPT - DBC61-300



coupler x 90° swivel female NPT - DSB61-200



dust plug - G200-DP-AL locking kit - DBCL200

## greaseless coupler x female NPT

Female NPT	Coupler Size	Seal Material	Aluminum	Stainless Steel
1½"	2"	PTFE Encap.	DBC67-150-GL	DBC77-150-GL
2"	21/2"	Viton® and	DBC67-200-GL	DBC77-200-GL
3"	4"	Kalrez <sup>®</sup>	DBC67-300-GL	DBC77-300-GL

#### coupler x 90° swivel female NPT

		<u>'</u>			
Female	Coupler	Cool Motorial	Aluminum		
NPT	Size	Seal Material	Dixon #	OPW#	
2"	2½"	Buna	DBS61-200	1711ES-0200	
2"	2½"	Viton®	DBS62-200	1712ES-0200	
2"	2½"	PTFE Encap. Silicone and Kalrez®	DBS63-200		

#### **Locking Kit for Couplers**

prevents unintentional opening of poppet assembly

Description	Aluminum
for use with 1½" and 2" cam and groove couplers	DBCL-200
for use with 3" cam and groove couplers	DBCL-300

#### **Dust Plugs for Couplers**

Size	Aluminum	Stainless Steel
2"	G200-DP-AL	G200-DP-SS
21/2	G250-DP-AL	G250-DP-SS
4"	G400-DP-AL	G400-DP-SS

## Dry Break Cam & Groove Style Dry Disconnect Couplings Adapters

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.

- two-piece design for easy rebuilding of adapters
- fully interchangeable with Kamvalok (OPW trademark) style fittings
- aluminum fittings have aluminum nose piece and brass piston
- for pressure ratings at other temperatures, contact the factory
- for information on repair kits visit us on-line at www.dixonvalve.com

#### adapter x female NPT

Female	Adapter	Seal	Alum	ninum	Stainles	s Steel 1
NPT	Size	Material	Dixon #	OPW#	Dixon #	OPW#
1½"	2"		DBA11-150	1611AN-AL15	DBA71-150	1671AN-SS15
2"	2½"	Buna	DBA11-200	1611AN-AL20	DBA71-200	1671AN-SS20
3"	4"		DBA11-300	1611AN-AL30	DBA71-300	1671AN-SS30
1½"	2"		DBA12-150	1612AN-AL15	DBA72-150	1672AN-SS15
2"	21/2"	Viton®	DBA12-200	1612AN-AL20	DBA72-200	1672AN-SS20
3"	4"		DBA12-300	1612AN-AL30	DBA72-300	1672AN-SS30
1½"	2"	PTFE	DBA63-150	1613AN-AL15	DBA73-150	1673AN-SS15
2"	21/2"	Encap.	DBA63-200	1613AN-AL20	DBA73-200	1673AN-SS20
3"	4"	Silicone	DBA63-300	1613AN-AL30	DBA73-300	1673AN-SS30
1½"	2"		DBA64-150	1614AN-AL15	DBA74-150	1674AN-SS15
2"	21/2"	EPT	DBA64-200	1614AN-AL20	DBA74-200	1674AN-SS20
3"	4"		DBA64-300	1614AN-AL30	DBA74-300	1674AN-SS30
1½"	2"		DBA66-150	1616AN-AL15	DBA76-150	1676AN-SS15
2"	21/2"	Kalrez®	DBA66-200	1616AN-AL20	DBA76-200	1676AN-SS20
3"	4"		DBA66-300	1616AN-AL30	DBA76-300	1676AN-SS30
1½"	2"	PTFE			DBA77-150	1677AN-SS15
2"	21/2"	Encap.			DBA77-200	1677AN-SS20
3"	4"	Viton®			DBA77-300	1677AN-SS30
3"	4"	Viton® B	DBA69-300	1619AN-AL30		

#### jump size adapter x female NPT

Female	Adapter	Seal	Aluminum		
NPT	Size	Material	Dixon #	OPW#	
2"	2"	Buna	DBA11-1520		
2"	2"	Viton®	DBA12-1520		

#### adapter x 150# ASA flange

Flange	Adapter	Seal	Stainless	Steel 1
Size	Size	Material	Dixon #	OPW#
2"	2"		DBAF72-1520	1672ANF-SS15
2"	2½"	Viton®	DBAF72-200	1672ANF-SS20
3"	4"		DBAF72-300	1672ANF-SS30
2"	2"	PTFE	DBAF73-1520	1673ANF-SS15
2"	21/2"	Encap.	DBAF73-200	1673ANF-SS20
3"	4"	Silicone	DBAF73-300	1673ANF-SS30
2"	2"		DBAF74-1520	1674ANF-SS15
2"	2½"	EPT	DBAF74-200	1674ANF-SS20
3"	4"		DBAF74-300	1674ANF-SS30
2"	2"		DBAF76-1520	1676ANF-SS15
2"	21/2"	Kalrez <sup>®</sup>	DBAF76-200	1676ANF-SS20
3"	4"		DBAF76-300	1676ANF-SS30

#### vapor adapter x female NPSM

Female	Adapter	Seal	Stainless	Steel 1
NPSM	Size	Material	Dixon #	OPW#
3"	2"	PTFE	DBAV73-2030	2173AVN

stainless steel corrosion resistance is comparable to 304 stainless steel



adapter x female NPT - DBA71-200



adapter x female NPT - DBA11-300



adapter x flange - DBAF71-200



vapor adapter x female NPSM - DBAV73-2030

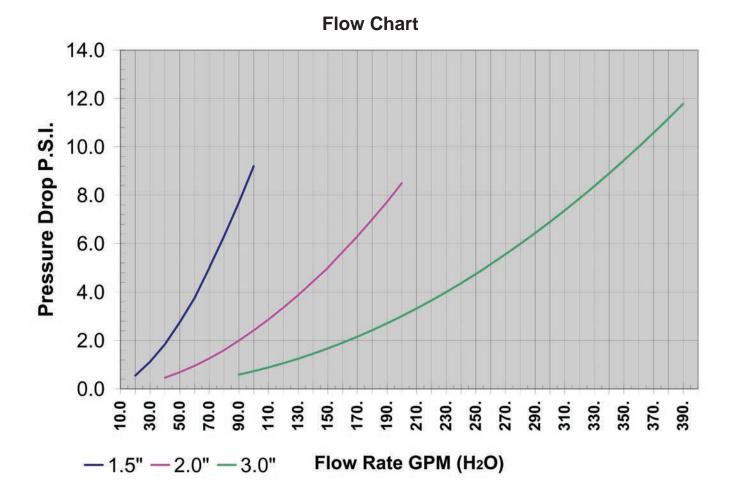


**Dust Caps** for Adapters

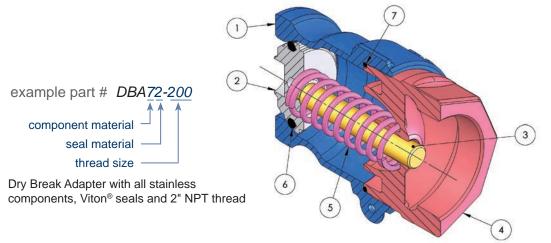


Size	Aluminum	Stainless Steel
2"	G200-DC-AL	G200-DC-SS
2½"	G250-DC-AL	G250-DC-SS
4"	G400-DC-AL	G400-DC-SS

## Dry Break Cam & Groove Style Dry Disconnect Couplings



## Dry Break Adapters DBA Series with Female NPT



	Item	Description
S	1	adapter end
Components	2	poppet
por	3	stem
mo:	4	pipe end
0	5	spring
Seals	6	poppet O-ring
Se	7	body O-ring

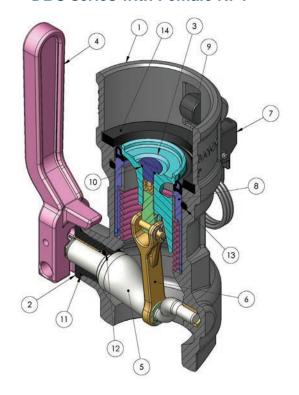
All metallic parts not listed are stainless steel. All non-metallic parts not listed are PTFE.

## Dry Break Cam & Groove Style Dry Disconnect Couplings

## Dry Break Couplers DBC series with Female NPT



Dry Break Coupler with all stainless components, Viton® seals and 2" NPT thread



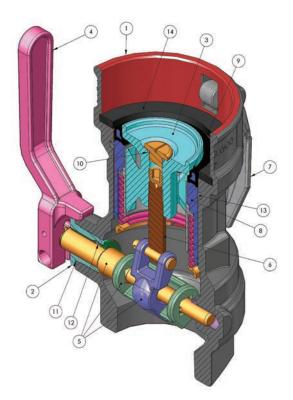
	Item	Description		
	1	body		
	2	stuffing box		
nts	3	poppet		
Components	4	handle		
mb	5	crank		
Co	6	link		
	7	cam arm		
	8	cylinder		
	9	nose seal		
	10	screw O-ring		
Seals	11	stuffing box seal		
Se	12	crank seal		
	13	cylinder seal		
	14	gasket		
A II	All			

All metallic parts not listed are stainless steel. All non-metallic parts not listed are PTFE.

## Dry Break Couplers DBC series with Female NPT



Dry Break Coupler with all stainless components, Viton® seals and 3" NPT thread



	Item	Description
	1	body
	2	stuffing box
nts	3	poppet
Components	4	handle
mp	5	crank
Co	6	link
	7	cam arm
	8	cylinder
	9	nose seal
	10	screw O-ring
Seals	11	stuffing box seal
Se	12	crank seal
	13	cylinder seal
	14	gasket

All metallic parts not listed are stainless steel. All non-metallic parts not listed are PTFE.

## Bayonet Style Dry Disconnect Couplings Couplers



coupler x straight female NPT - BC62-200

Bayco brand BA and BS series bayonet dry disconnect fittings are designed for use in the fuel and lube oil service industry. These fittings are compatible with Emco Wheaton™ Dry Break™, commonly found in these services. The maximum pressure rating for fittings is **85 PSI** at 70°F, for pressure ratings at other temperatures contact Dixon..

• for information on repair kits visit us on-line at www.dixonvalve.com



coupler x straight swivel female NPT - BSS62-300

#### bayonet style coupler x straight female NPT

Size	Seal Material	Anodized Aluminum		
		Dixon #	Emco Wheaton™ #	
2"	Buna	BC61-200	J72C-ABN0-B	
2"	Viton®	BC62-200	J72C-AVN0-B	



coupler x 90° swivel female NPT - BS62-200

#### bayonet style coupler x straight swivel female NPT

		<u> </u>		
Size	Seal Material	Anodized Aluminum		
		Dixon #	Emco Wheaton™ #	
2"	Buna	BSS61-200	J72C-ABN1-B	
2"	Viton®	BSS62-200	J72C-AVN1-B	
3"	Buna	BSS61-300	J73C-ABN1-B	
3"	Viton®	BSS62-300	J73C-AVN1-B	



coupler x 90° swivel female NPT - BS62-300

#### bayonet style coupler x 90° swivel female NPT

Size	Seal Material	Anodized Aluminum		
		Dixon #	Emco Wheaton™ #	
2"	Buna	BS61-200	J72C-ABN2-B	
2"	Viton®	BS62-200	J72C-AVN2-B	
3"	Buna	BS61-300	J73C-ABN2-B	
3"	Viton®	BS62-300	J73C-AVN2-B	



dust plug BCP-200

#### **Dust Plugs for Couplers**

Size	Part #
2"	BCP-200
3"	BCP-300

Rubber dust plugs come with stainless steel chains.

## Bayonet Style Dry Disconnect Couplings Adapters

Bayco brand BA and BS series bayonet dry disconnect fittings are designed for use in the fuel and lube oil service industry. These fittings are compatible with Emco Wheaton™ Dry Break™, commonly found in these services. The maximum pressure rating for fittings is **85 PSI** at 70°F, for pressure ratings at other temperatures contact Dixon..

• for information on repair kits visit us on-line at www.dixonvalve.com

#### bayonet style adapter x female NPT

Size	Seal Material	Stainless Steel		
Size		Dixon #	Emco Wheaton™ #	
2"	Buna	BA31-200	J72A-BBN0-B / J72A-ABN0-B	
2"	Viton®	BA32-200	J72A-BVN0-B / J72A-AVN0-B	

adapter x female NPT - BA32-200



adapter x female NPT - BA31-300

#### bayonet style adapter x female NPT

Size	Seal Material	Bras	S
		Dixon #	Emco Wheaton™ #
3"	Buna	BA31-300	J73A-BBN0-B
3"	Viton®	BA32-300	J73A-BVN0-B

#### bayonet style adapter x female NPT

Size	Seal Material	Aluminum		
		Dixon #	Emco Wheaton™ #	
3"	Buna	BA61-300	J73A-ABN0-B	
3"	Viton®	BA62-300	J73A-AVN0-B	



adapter x female NPT - BA62-300

### **Dust Caps for Adapters**

Size	Body Size	Polyeten PE-HD 300
2"	70mm	DDDC150
3"	105mm	DDDC300105

Size	Body Size	Rubber
2"	71mm	BAC-200
3"	119mm	BAC-300

Rubber dust plugs come with stainless steel chains.



composite dust cap DDDC300



rubber dust cap BAC-300

Dry Disconnects - Bayonet 17

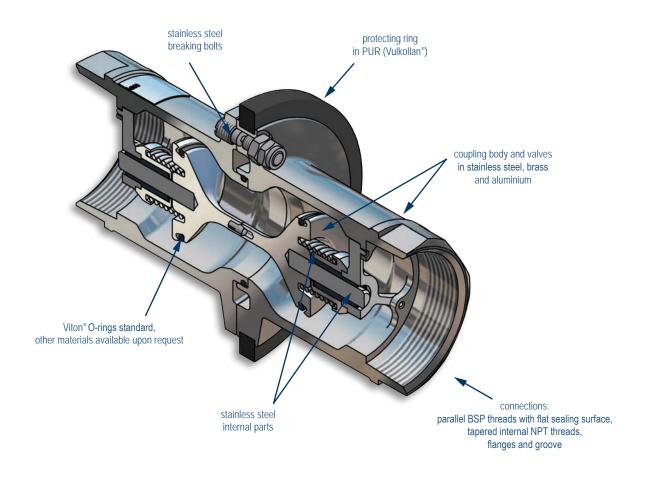
## Industrial Safety Break-Away Couplings - Breaking Bolt Series Advantages



Industrial break-away coupling can be utilized for most industrial product transfer installations.

The industrial SBCouplings are specifically designed to be able to activate with a tensile force being applied at an angle to the plane of the coupling housing, up to 90 degrees.

#### **Key Features**



### Safety Break-Away Couplings

#### **Industrial Version**

The breaking bolt industrial breakaway coupling is designed to minimize spillage and damage associated with drive away and pull away incidents.

- designed to be installed between a fixed point (pipe, pump, manifold) and a hose
- coupling automatically senses an excessive load, closes the valves and disconnects (see page 24)
- simple dependable mechanism
- · high flow rate / low pressure drop
- · female NPT is standard, optional ASA/ DIN flanges or male NPT are available
- Viton® is standard seal
- Working pressure: sainless steel 360 PSI and aluminum 230 PSI at ambient temperature (70°F)
- for information on repair kits visit us on-line at www.dixonvalve.com



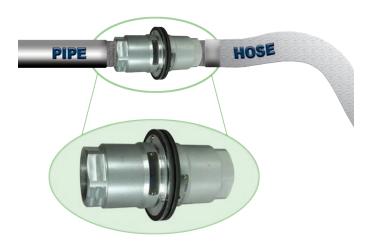
SBC200AL - aluminum

#### industrial breaking bolt series

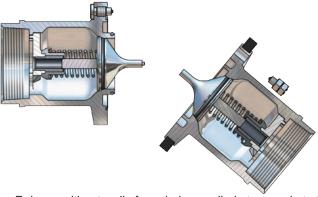
		Flow			Weig	ht lbs.		
Size	DN	Rate GPM	Width	Length	SS	AL	316 Stainless Steel	Aluminum
2"	50	200	4.5"	7"	6.8	2.4	SBC200SS	SBC200AL
3"	80	650	6.8"	11"	19.6	7.3	SBC300SS	SBC300AL
4"	100	800	8.3"	12"	35.9	12.8	SBC400SS	SBC400AL
5"	125	1100	10.6"	14"	69.4	26.6	SBC500SS	SBC500AL
6"	150	1500	12"	16"	103.0	37.6	SBC600SS	SBC600AL
2"	50	200	4.5"	7"	6.2	2.2	SBC200SSMNPT *	SBC200ALMNPT *
3"	80	650	6.8"	11.3"	18.7	7.0	SBC300SSMNPT *	SBC300ALMNPT *
4"	100	800	8.3"	12.9"	36.8	13.0	SBC400SSMNPT *	SBC400ALMNPT *
5"	125	1100	10.6"	13.8"	66.1	26.6	SBC500SSMNPT *	SBC500ALMNPT *
6"	150	1500	12"	16"	103.0	37.6	SBC600SSMNPT *	SBC600ALMNPT *
2"	50	200	4.5"	7"	5.7	7.5	SBC200SSFL	SBC200ALFL
3"	80	650	6.8"	8.5"	25.4	12.1	SBC300SSFL	SBC300ALFL
4"	100	800	9.3"	9"	43.2	17.2	SBC400SSFL	SBC400ALFL
5"	125	1100	10.6"	14"	70.4	26.6	SSBC500SSFL	SSBC500ALFL
6"	150	1500	12.5	15.1	110.0	40.0	SBC600SSFL **	SBC600ALFL **
8"	200	3700	13.5"	17.7"	157.0		SBC800SSFL **	SBC800ALFL **

<sup>\*</sup> male NPT

<sup>\*\* 150#</sup> ASA flange



Industrial break-aways are typically installed on a loading arm or manifold and hose assemblies, where at least one side of the coupling is attached to a rigid or fixed point.



Release with a tensile force being applied at an angle to the plane of the coupling housing, up to 90 degrees.

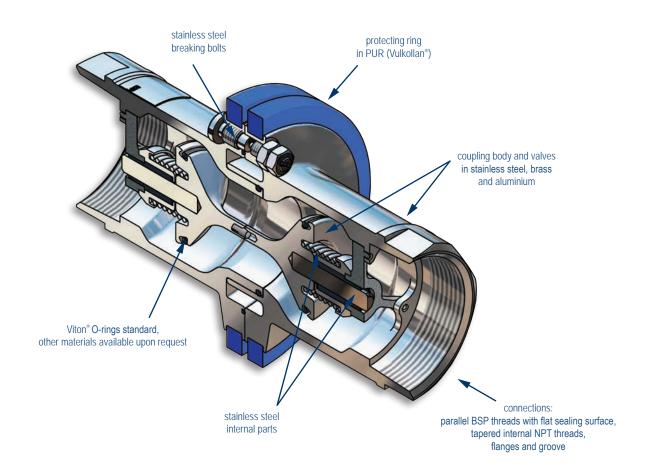
## Marine Safety Break-Away Couplings - Breaking Bolt Series Advantages



Marine version of the safety break-away couplings are designed specifically to be installed within a hose string, where the coupling would have a length of hose attached to both sides.

This coupling incorporates the same internal mechanism as our Industrial couplings, but has additional external features that provide increased resistance to torsional and bending moment forces which may be applied to the coupling, preventing premature activation in the unpredictable marine environment.

#### **Key Features**



## Safety Break-Away Couplings Marine Version

The breaking bolt marine version break-away coupling is designed to minimize spillage and damage associated with pull-away incidents.

- designed to be installed within a hose string where the coupling will have a length of hose attached to both sides
- typical applications include: ship-to-offshore platform and ship-to-ship product transfer operations
- coupling automatically senses an excessive load, closes the valves and disconnects (see page 24)
- release is executed when force causes bolts to break
- female NPT is standard, optional ASA / DIN flanges or male NPT are available
- Viton® is standard seal
- working pressure of stainless steel is **360 PSI** at ambient temperature (70°F)
- for information on repair kits visit us on-line at www.dixonvalve.com



MSBC300SS - stainless steel

#### marine breaking bolt series

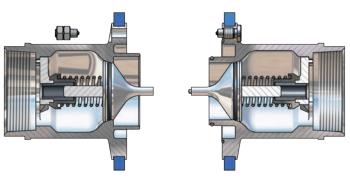
Size	DN	Flow Rate GPM	Width	Length	Weight lbs.	316 Stainless Steel
2"	50	200	4.5"	7.0"	5.7	MSBC200SS
3"	80	650	6.8"	11.0"	21.8	MSBC300SS
4"	100	800	8.3"	12.0"	34.1	MSBC400SS
5"	125	1100	10.6"	14.0"	70.4	MSBC500SS
6"	150	1500	12.0"	16.0"	103.0	MSBC600SS
2"	50	200	n/a	n/a	5.7	MSBC200SSMNPT *
3"	80	650	6.9"	11.8"	18.7	MSBC300SSMNPT *
4"	100	800	8.3"	13.6"	36.8	MSBC400SSMNPT *
5"	125	1100	n/a	n/a	70.4	MSBC500SSMNPT *
2"	50	200	5.9"	5.4"	12.1	MSBC200SSFL **
3"	80	650	7.5"	9.0"	27.3	MSBC300SSFL **
4"	100	800	9.0"	9.9"	46.7	MSBC400SSFL **
5"	125	1100	n/a	n/a	n/a	MSBC500SSFL **
6"	150	1500	12.5	15.1	110	MSBC600SSFL **
8"	200	3700	13.5"	17.7"	157	MSBC800SSFL **

<sup>\*</sup> male NPT

<sup>\*\* 150#</sup> ASA flange



Marine safety break-aways are designed to only release by inline pull and used between two strings of hose.



## Safety Break-Away Couplings - Breaking Bolt Series

## **Examples of Connection Combinations**

- BSP female thread / BSP female thread
- male thread / male thread
- groove / groove
- flange / flange

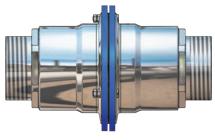
- NPT female thread / NPT female thread
- NPT female thread / NPT male thread (also available with BSP)
- NPT female thread / groove
- flange / thread (BSP / NPT female/male or groove)



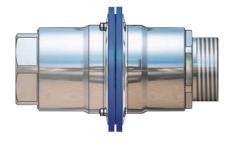
BSP female thread x BSP female thread



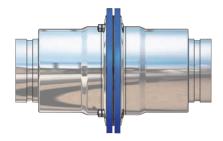
NPT female thread / NPT female thread



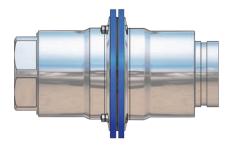
male thread / male thread



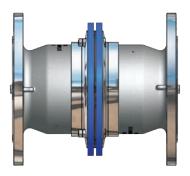
NPT female thread / NPT male thread (also available with BSP)



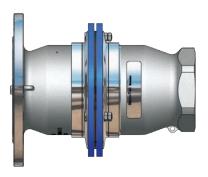
groove / groove



NPT female thread / groove



flange / flange



flange / thread (BSP / NPT female / male or groove)

### Safety Break-Away Coupling - Options

Where there is a risk of excessive force on the hose due to unexpected movement between the loading and unloading station, combining the dry disconnect coupling or swivel with a safety break away coupling may be a solution.





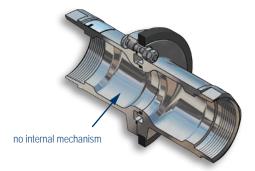


hose swivel with break-away integrated

#### **Non-Closure Design**

The non-closure design is an economical alternative which allows the coupling to break away due to pull-away/drive-away incidents thus protecting piping systems and equipment. This design allows spillage of product in these instances due to the lack of valving in the coupling.

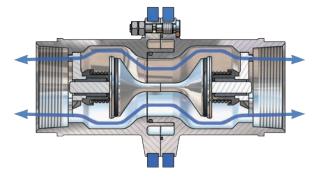
Useful in applications where non-hazardous product is being conveyed and where there are no environmental concerns. Available in both Industrial and Marine versions. Consult the factory for more information.



## Safety Break-Away Couplings - Breaking Bolt Series How It Works

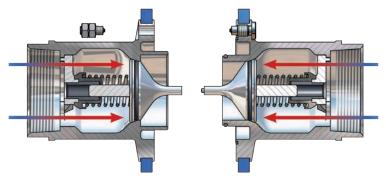
The SBCouplings, safety break-away couplings, have three external break bolts. In the case of axial tension all of the bolts take up the force corresponding to the break force on the hose with a safety margin.

Non-axial forces concentrate the tension forces more strongly on one bolt, so that the safety break-away coupling reacts in a natural way to the reduction of the hose break forces.



#### **BEFORE** emergency disconnect

The safety break-away valve consists of two halves, each with a valve that has a o-ring seal.



#### **AFTER emergency disconnect**

When the SBCouplings separate, it allows the valves to close. The two valves close rapidly, minimizing exposure to personnel and the environment.

### Safety Break-Away Couplings - Breaking Bolt Series

Break loads for bolts should be based upon information specific to the application such as weight of unsupported hose or pipe and angle of pull associated with the specific application. Contact Dixon regarding specific applications.

#### ratings and kits for the standard aluminum industrial breaking bolt series

Ciro	Used On	LAN Landing or	Dounds Force	Kits		
Size	Aluminum	kN rating	Pounds Force	Standard Bolt	Viton® O-ring	
2"	SBC200AL	9 kN	2,000	S-N2D-44-9	O-ND2-01	
3"	SBC300AL	15 kN	3,000	S-N4D-44-15	O-ND4-01	
4"	SBC400AL	24 kN	5,400	S-N5D-44-24	O-ND5-01	
5"	SBC500AL	37 kN	8,300	S-NVD-44-37	O-NVD-01	
6"	SBC600AL	54 kN	12,000	S-N6D-44-54	O-N6D-01	
6"	SBC600ALFL	54 kN	12,000	S-N6D-44-54	O-N6D-01	

#### ratings and kits for the standard stainless steel industrial breaking bolt series

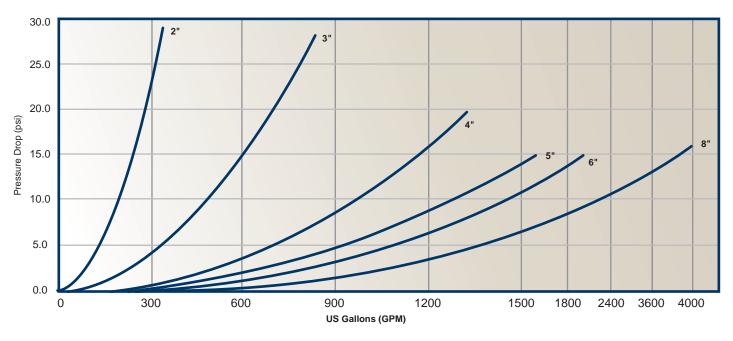
Size	Used On	kN rating	Pounds Force	Kits		
Size	Stainless Steel	kN rating	Pourids Force	Standard Bolt	Viton® O-ring	
2"	SBC200SS	13 kN	2900	S-N2D-44	O-ND2-01	
3"	SBC300SS	33 kN	7500	S-N4D-44	O-ND4-01	
4"	SBC400SS	52 kN	11,700	S-N5D-44	O-ND5-01	
5"	SBC500SS	81 kN	18,200	S-NVD-44	O-NVD-01	
6"	SBC600SS	92 kN	20,700	S-N6D-44	O-N6D-01	
6"	SBC600SSFL	92 kN	20,700	S-N6D-44	O-N6D-01	
8"	SBC800SSFL	165 kN	37,000	S-N8D-44	O-N8D-01	

#### ratings and kits for the standard marine breaking bolt series

Size	Used On	LAN Landing	Davida Farra	Kits		
Size	Stainless Steel	kN rating	Pounds Force	Standard Bolt	Viton® O-ring	
2"	MSBC200SS	13 kN	2900	S-N2M-44	O-ND2-01	
3"	MSBC300SS	33 kN	7500	S-N4M-44	O-ND4-01	
4"	MSBC400SS	52 kN	11,700	S-N5M-44	O-ND5-01	
5"	MSBC500SS	81kN	18,200	S-NVM-44	O-NVM-01	
6"	MSBC600SS	92 kN	20,700	S-N6M-44	O-N6M-01	
6"	MSBC600SSFL	92 kN	20,700	S-N6M-44	O-N6M-01	
8"	MSBC800SSFL	165 kN	37,000	S-N8M-44	O-N8M-01	

## Safety Break-Away Couplings

### Flow Diagram (Pressure Drop)



Test Fluid: n-paraffin Temperature: 70°F Density: 100 oz/gal Viscosity: 1,75 cps

### **Product Application**

products in use at a facility



## Cam and Groove Actuator Style Fittings couplers



11/2" and 2" - stainless steel

The D2C style couplers work with the DBA adapters for applications where automatic closure for the coupler is not desired. This coupler is suited to vapor recovery, suction pump line and applications where it is necessary to easily drain the hose or piping for clean out. It can also be used when product retention in hose or pipe is desired but damage from accidental spill from an open coupler is not a concern.

- 316 stainless steel body
- 304 stainless steel internal components
- · EZ Boss-Lock cam arms
- stainless steel locking lever included
- available with Buna, Viton®, Viton-B®, EPDM, PTFE encapsulated Silicone and PTFE encapsulated Viton® seals
- used with poppeted adapter DBA series (page 13)

#### actuator style couplers

Size	Seal Material	Stainless Steel
1½"	Dung	D2C71-150
2"	Buna	D2C71-200
1½"	Viton®	D2C72-150
2"	VILON	D2C72-200
1½"	PTFE encapsulated	D2C73-150
2"	Silicone	D2C73-200
1½"	EPDM	D2C74-150
2"	EPDIVI	D2C74-200
1½"	DTFF enceptual details Vitage	D2C77-150
2"	PTFE encapsulated Viton®	D2C77-200
1½"	Viton-B®	D2C79-150
2"	Alrou-Ba	D2C79-200

## API Bottom Rack Loading Fittings couplers

Dixon Bayco's 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.

- 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

#### Material Specifications:

- body: hard coated anodized AL 356 T6
- shroud: hard coated anodized AL 356 T6 with stainless steel insert
- link, shaft, pin and crank: hardened 17-4PH stainless steel
- · cam: CF8M stainless steel
- poppet and bearing: ZA-12
- seal options: Buna, Viton-B®, Viton® GFLT

#### Technical Specifications:

- · weight: 20 lbs.
- maximum working pressure: 150 PSI
- peak surge pressure: 350 PSI
- operating temperature:

Viton® seals: -20°F to +400°F Buna seals: -20°F to +250°F

- maximum flow rate: 600 GPM
- pressure drop: 3 to 4 PSI

#### **API** couplers

Seal Material	Bonded Nose Seal #	Replaceable Nose Seal #
Buna	5300	5400
Viton-B®	5300B	5400B
Viton® GFLT	5300G	5400G

## Chemical Compatibility (Buna seals):

- gasoline
- diesel
- 10% ethanol
- B2 biodiesel blends

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

- gasoline
- diesel
- jet fuel
- avgas
- 100% ethanol
- 100% methanol
- 100% biodiesel
- · any blend of the above fluids



bonded nose seal model - 5300

