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Hose Coupling Safety

Dixon's couplings and retention devices are designed to work safely for their intended use. The selection of the proper hose, coupling and retention device, and the proper application of the coupling to the hose are of utmost importance.

Users must consider the size, temperature, application, media, pressure and hose and coupling manufacturer's recommendations when selecting the proper hose assembly components. Dixon recommends that all hose assemblies be tested in accordance with the Association for Rubber Products Manufacturer's (ARPM) recommendations and be inspected regularly (before each use) to ensure that they are not damaged or have become loose. Visit ARPMINC.com for more information.

Where safety devices are integral to the coupling, they must be working and utilized. The use of supplementary safety devices such as safety clips or safety cables are recommended.

If any problem is detected, couplings must be removed from service immediately.

Dixon is available to consult, train and recommend the proper selection and application of all fittings we sell. We strongly recommend that distributors and end users make use of Dixon's Testing and Recommendation Services. Call 877.963.4966 or click dixonvalve.com to learn more.

Dixon® MannTek

Applications

- Used by producers of ink, adhesives, fatty acids, pharmaceuticals, liquid soaps, petroleum, chemicals, agricultural and a wide variety of common caustic and specialty acids
- Designed for the quick and spill free connection and disconnection of hoses and pipelines

Features

- 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
- Environmental friendly - accidental spillage eliminated when proper 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, selective versions of the couplers and adapters are available. Contact Dixon for further information.
- Produced according to NATO standard STANAG 3756 and ATOFINA SGM 2049.TUY.C.
- Seal kits are available
- Interchanges with Avery Hardoll and Todo-matic®



Materials

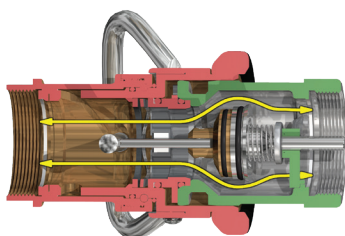
- Standard seal supplied: FKM
- Optional seals:
 - EPDM
 - NBR - nitrile
 - Kalrez®
 - Chemraz®

Specifications

- Working pressure at ambient temperature 70°F (21°C):
 - aluminum: **230 PSI**, up to 4"
 - brass/ gunmetal ¹: **230 PSI**, up to 4"
 - stainless steel: **360 PSI**

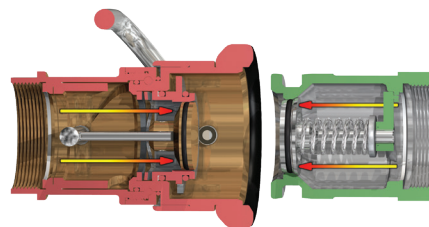
¹ Produced to US government bronze specification G

How It Works



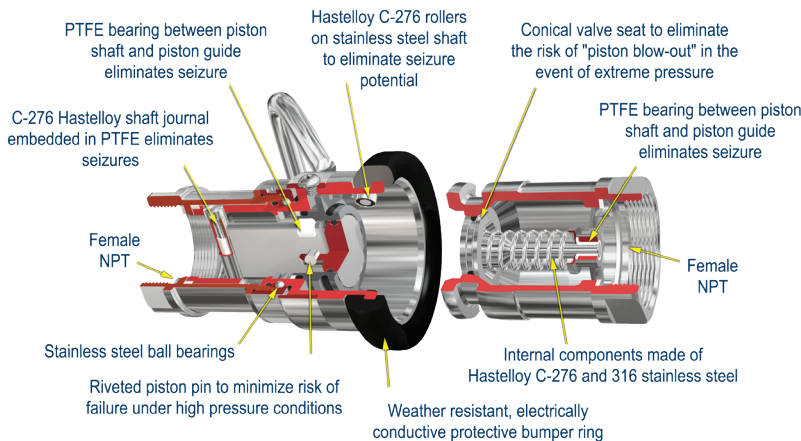
Open

- Push and turn
it's coupled - full flow



Closed

- Turn and pull
it's released - no spillage



DDC200SS pictured

Dixon® MannTek Dry Disconnect Couplers – Hose Unit

Features

- Coupler has built-in swivel
- Stainless steel shaft journal 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
- Composite (Polyeten PE-HD 300) plugs provide good protection against corrosion and withstand hot and cold environments

Materials

- Stainless steel ball bearings
- Stainless steel couplers: rollers are Hastelloy C276 on the stainless steel shaft
- All wetted parts are stainless steel
- Aluminum and brass couplers: rollers are aluminum-bronze on the stainless steel shaft

Coupler x Female NPT



Female NPT	Body Size	316 Stainless Steel Part #	Aluminum Part #	Brass/Gunmetal ¹ Part #
3/4"	56 mm	DDC075SS	DDC075AL	DDC075BR
1"	56 mm	DDC100SS	DDC100AL	DDC100BR
1-1/2"	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	---

¹ Produced to US government bronze specification G

Coupler x 150# ASA Flange



150# Flange	Body Size	316 Stainless Steel Part #
2"	70 mm	DDC200SSFL
3"	119 mm	DDC300SSFL
4"	164 mm	DDC400SSFL
6"	238 mm	DDC600SSFL
8"	272 mm	DDC800SSFL

NOTE: For flange dimensions, diagrams and additional information please reference dixonvalve.com.

Coupler x TTMA Flange



TTMA Flange	Body Size	Aluminum Part #
4"	164 mm	DDC400AL164TTMA

NOTE: For flange dimensions, diagrams and additional information please reference dixonvalve.com.

Dust Plugs



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

¹ Aluminum

Dixon® MannTek Dry Disconnect Adapters – Tank Unit

Application

- Usually installed on the tank or manifold

Features

- Conical valve seat reduces the risk for piston blow out
- PTFE bearing between piston shaft and guide eliminates risk of seizure
- Composite (Polyeten PE-HD 300) cap to provide good protection in harsh environments
- FKM (FPM) gaskets standard on polyeten caps

Materials

- Aluminum adapter: aluminum poppet, stainless steel internal parts
- Stainless steel adapter: stainless steel poppet, stainless steel internal parts
- Brass/gunmetal¹ adapter: brass poppet, brass and stainless steel internal parts

Adapter x Female NPT

Female NPT	Body Size	316 Stainless Steel Part #	Aluminum Part #	Brass/Gunmetal ¹ Part #
3/4"	56 mm	DDA075SS	DDA075AL	DDA075BR
1"	56 mm	DDA100SS	DDA100AL	DDA100BR
1-1/2"	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	---



Adapter x 150# ASA Flange

150# Flange	Body Size	316 Stainless Steel Part #	Aluminum Part #	Brass/Gunmetal ¹ Part #
3/4"	56 mm	DDA075SSFL	---	---
1"	56 mm	DDA100SSFL	DDA100ALFL	DDA100BRFL
1-1/2"	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	---
8"	272 mm	DDA800SSFL	---	---



¹ Produced to US government bronze specification G

NOTE: For flange dimensions, diagrams and additional information please reference dixonvalve.com.

Adapter x TTMA Flange

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

NOTE: For flange dimensions, diagrams and additional information please reference dixonvalve.com.



Adapter Weather Protector with Clamp

Size	Black Neoprene Part #
2"	PCDVCHSS36



Dust Caps

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



¹ 6" dust cap is aluminum

Dixon® MannTek Dry Aviation Couplers - Hose Unit

Application

- Designed for use in aviation refueling systems

Features

- Composite (Polyeten PE-HD 300) plug provides good protection in harsh environments
- Accepts international standard 2-1/2" 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
- Riveted piston pin minimizes risk of failure under extreme pressure conditions
- Protective ring is a specially formulated, weather resistant and electrically conductive rubber compound



Materials

- Body: high strength aluminum
- Coupling ring: gunmetal (*produced to U.S. government bronze specification G*)
- Bayonet flange and inner parts: stainless steel, aluminum
- All wetted parts are aluminum and stainless steel
- Stainless steel ball bearings
- Stainless steel shaft journal embedded in PTFE eliminates seizure
- PTFE bearings between the driving plate and piston guide eliminate the risk of seizure

Specification

- Working pressure: **150 PSI** at ambient temperature **70°F (21°C)**



Coupler x Female NPT

Female NPT	Body Size	Aluminum Part #
2-1/2"	ISO 45	DAC250AL
3"	ISO 45	DAC300AL

Coupler x Female BSP

Female BSP	Body Size	Aluminum Part #
2-1/2"	ISO 45	DAC250ALBSP
3"	ISO 45	DAC300ALBSP



Dust Plug for Couplers

Size	Body Size	Polyeten PE-HD300 Part #
2-1/2"	ISO 45	DADP250

Dixon® MannTek Dry Aviation Adapters - Tank Unit

Application

- Designed for use in aviation refueling systems

Features

- Composite (Polyeten PE-HD 300) cap provides good protection in harsh environments
- Accepts international standard 2-1/2" point bayonet hose end refueling nozzles according to: ISO45/MS24484/STANAG 3105/British Aerospace Spec. 2C14, 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



Materials

- Body: high strength aluminum
- Coupling ring: gunmetal
- Bayonet flange and inner parts: stainless steel, aluminum
- All wetted parts: aluminum and stainless steel

Specification

- Working pressure: 150 PSI at ambient temperature 70°F (21°C)

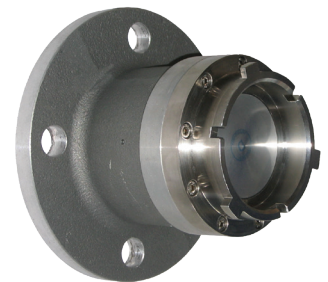
Adapter x Female NPT

Size	Body Size	Aluminum Part #
2-1/2"	ISO 45	DAA250AL
3"	ISO 45	DAA300AL



Adapter x 150# ASA Flange

150# Flange	Body Size	Aluminum Part #
2-1/2"	ISO 45	DAA250ALFL
3"	ISO 45	DAA300ALFL



NOTE: For flange dimensions, diagrams and additional information please reference dixonvalve.com.

Dust Cap for Adapters

Size	Body Size	Polyeten PE-HD 300 Part #
2-1/2"	ISO 45	DADC250



Dixon® MannTek Dry Gas Couplings

Coupler – Hose Unit

Applications

- Primary application is in the handling of LPG - Propane and Butane
- Designed for loading and discharge of bobtails or intermediate bulk delivery trucks to and from rail cars

Features

- Reliable, easy to maintain
- Minimizes the risk of cold burns, spillage, product loss and health risks and keeps the environment free of hazardous vapors and liquids
- Compatible with existing dry disconnect couplings
- Composite (Polyeten PE-HD 300) plug provides good protection in harsh environments
- For pressure relief options contact Dixon

Materials

- Stainless steel and brass/gunmetal (produced to US government bronze specification G)
- FKM (FPM) seals

Specifications

- Working pressure: **360 PSI** at ambient temperature **70°F (21°C)**
- Can be coupled to a tank unit with pressures up to **225 PSI** at ambient temperature **70°F (21°C)**, if pressure is higher, equip couplings with pressure relief valves.



female NPT x coupler
2DGC300SS

Coupler x Female NPT With FKM (FPM) Seals

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

Dust Plugs for Couplers

Feature

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



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

Dixon® MannTek Dry Gas Couplings

Adapter – Tank Unit

Applications

- Primary application is in the handling of LPG - Propane and Butane
- Designed for loading and discharge of bobtails or intermediate bulk delivery trucks to and from rail cars

Features

- Reliable, easy to maintain
- Minimizes the risk of cold burns, spillage, product loss and health risks and keeps the environment free of hazardous vapors and liquids
- Compatible with existing dry disconnect couplings
- Composite (Polyeten PE-HD 300) plug provides good protection in harsh environments
- For pressure relief options contact Dixon

Materials

- Stainless steel and brass/gunmetal (*produced to US government bronze specification G*)
- FKM (FPM) seals

Specifications

- Working pressure: **360 PSI** at ambient temperature **70°F (21°C)**
- Can be coupled to a tank unit with pressures up to **225 PSI** at ambient temperature **70°F (21°C)**, if pressure is higher, equip couplings with pressure relief valves.

Adapter x Female NPT With FKM (FPM) Seals

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



adapter x female NPT - DGA200SS



adapter x female ACME - DGA200SS325

Adapter x Female ACME Thread With FKM (FPM) Seals

Female ACME	Body Size	Stainless Steel Part #
1-3/4"	56 mm	DGA100SS175
3-1/4"	71 mm	DGA200SS325



adapter x 150# ASA flange - DGA200SSFL

Adapter x 150# ASA Flange With FKM (FPM) Seals

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

Dust Caps

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



rubber cap

Dixon® MannTek Dry Disconnects for Steam Service

Application

- Designed to fit hoses carrying steam used in chemical (heating), pharmaceutical (disinfection and sterilization) and at loading bays

Features

- Unintentional separation is eliminated preventing accidents and avoiding unintended down time
- Performance unaffected by surface rust
- Lockable versions are available on 1-1/2" and 2", contact Dixon
- Couplers supplied with double handles

Materials

- Coupling housing and all inner parts: stainless steel
- EPDM 291 seal

Specification

- 150 PSI at 350°F (177°C)



Coupler x Female NPT

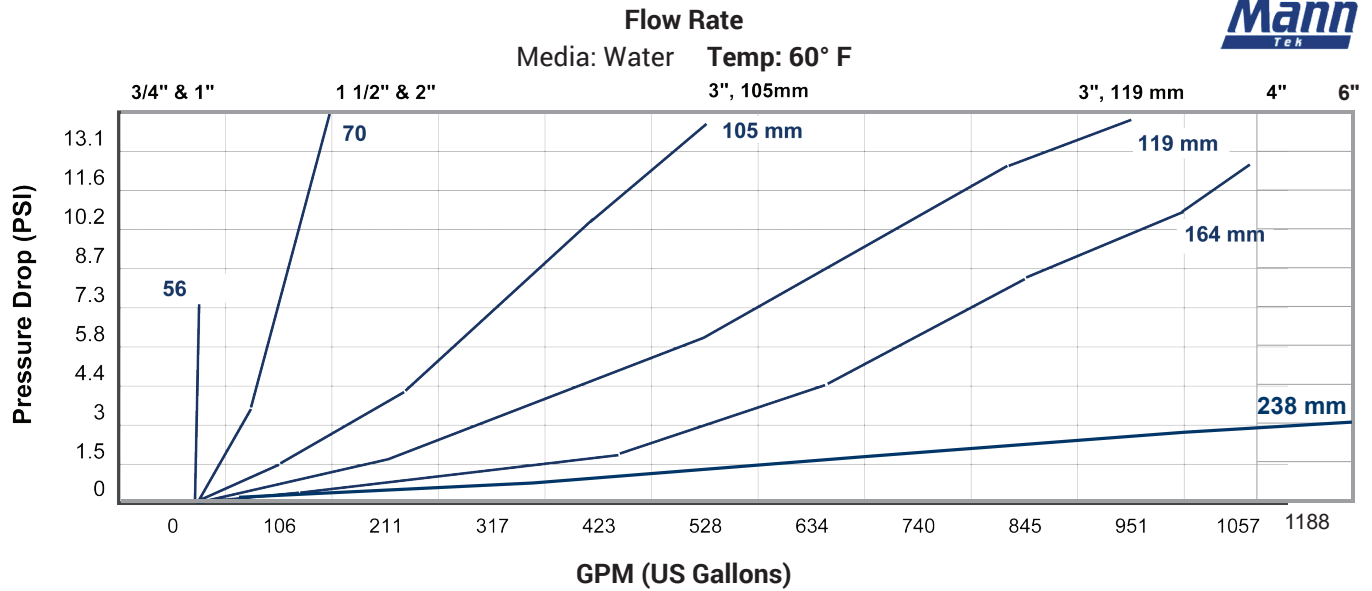
Female NPT	Body Size	316 Stainless Steel Part #
3/4"	56 mm	DDSC075SS
1"	56 mm	DDSC100SS
1-1/2"	70 mm	DDSC150SS
2"	70 mm	DDSC200SS



Adapter x Female NPT

Female NPT	Body Size	316 Stainless Steel Part #
3/4"	56 mm	DDSA075SS
1"	56 mm	DDSA100SS
1-1/2"	70 mm	DDSA150SS
2"	70 mm	DDSA200SS

Dixon® MannTek Dry Disconnect Couplings



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
2-1/2" – 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.

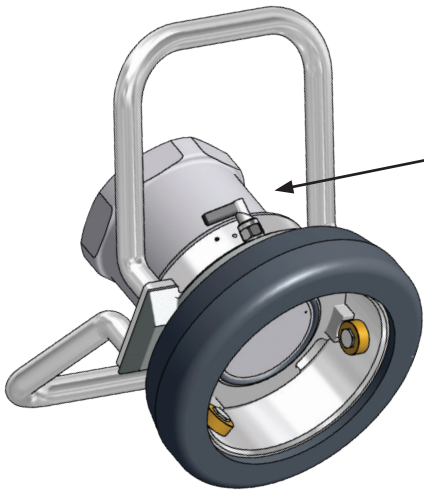


Dixon® MannTek Dry Disconnect Couplings

Options for Hose and Tank Units

Locking Devices

Locking Devices eliminate the unintentional disconnection when subjected to vibration from transfer pumps



4" Hose unit with locking device



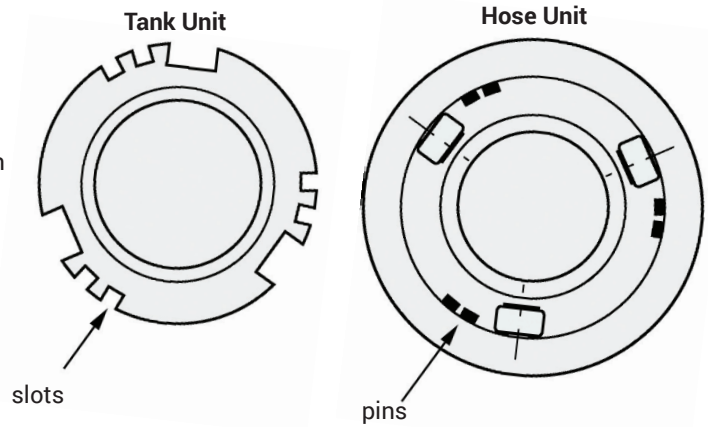
2" Hose unit with locking device

Selectivity Options

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

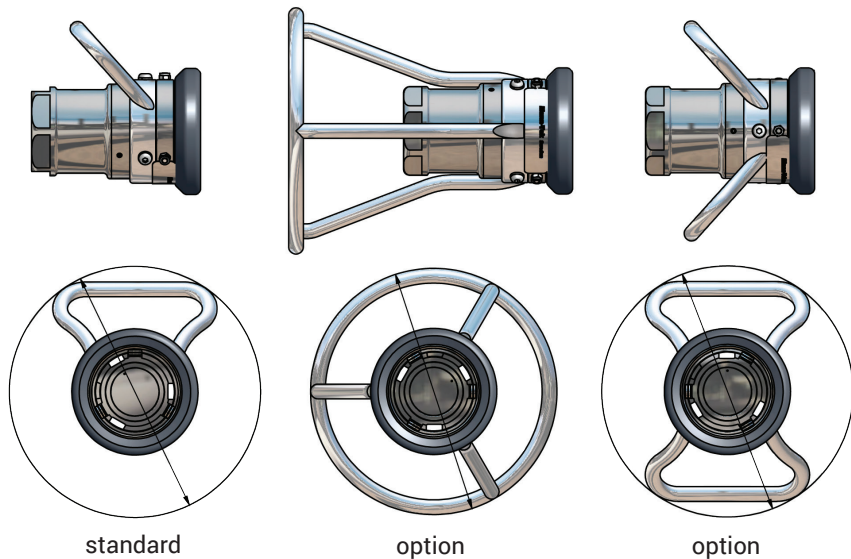
The Tank units are furnished with slots and the Hose unit with pins that interlock upon connection.

A 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.



Bayloc® Dry Disconnects

Coupler x Female NPT

Features

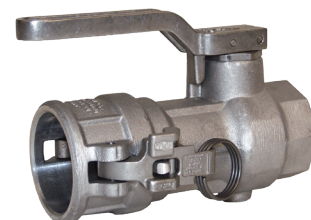
- Automatic closing poppet assembly
- Must be used with a DBA style adapter for coupler to operate, sold separately 
- Fully interchangeable with Kamvalok (OPW trademark) fittings
- Aluminum fittings have stainless internals equivalent to 304 stainless
- Stainless handle allows exposure to corrosive chemicals or wash down service
- Heavy duty handle attachment prevents bending of crank assembly
- One piece stainless crank and link provide long service life

- EZ Boss-Lock cam arms, standard on all 1-1/2" and 2" fittings, provide high security from accidental opening due to vibration or snagging
- Large paddle type locking cam arms, standard on 3" fittings, allow for an easy grip
- Optional coupler lock for handle to prevent unintentional opening

Specifications

- Maximum operating pressure at 70°F (21°C):
 - 1-1/2" - 210 PSI
 - 2" - 150 PSI
 - 3" - 120 PSI

Female NPT	Coupler Size	Seal Material	Maximum PSI at 70°F (21°C)	Aluminum Part #	Stainless Steel ¹ Part #
1-1/2"	2"	nitrile rubber	210	DBC61-150	DBC71-150
2"	2-1/2"		150	DBC61-200	DBC71-200
3"	4"		120	DBC61-300	DBC71-300
1-1/2"	2"	FKM	210	DBC62-150	DBC72-150
2"	2-1/2"		150	DBC62-200	DBC72-200
3"	4"		120	DBC62-300	DBC72-300
1-1/2"	2"	PTFE encapsulated silicone & FFKM	210	DBC63-150	DBC73-150
2"	2-1/2"		150	DBC63-200	DBC73-200
3"	4"		120	DBC63-300	DBC73-300
1-1/2"	2"	EPDM	210	DBC64-150	DBC74-150
2"	2-1/2"		150	DBC64-200	DBC74-200
3"	4"		120	DBC64-300	DBC74-300
1-1/2"	2"	FFPM and PTFE ²	210	---	DBC76-150
2"	2-1/2"		150	DBC66-200	DBC76-200
3"	4"		120	DBC66-300	DBC76-300
1-1/2"	2"	PTFE encapsulated FKM and FFKM	210	---	DBC77-150
2"	2-1/2"		150	---	DBC77-200
3"	4"		120	---	DBC77-300
3"	4"	FKM-B	120	DBC69-300	DBC79-300



Coupler x 1-1/2" or 2" Female NPT



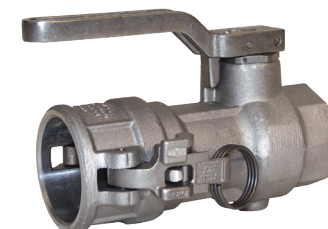
Coupler x 3" Female NPT

Greaseless Coupler x Female NPT

Female NPT	Coupler Size	Seal Material	Stainless Steel ¹ Part #
1-1/2"	2"	PTFE encapsulated FKM and FFKM	DBC77-150-GL
2"	2-1/2"		DBC77-200-GL

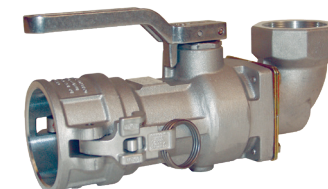
¹ Stainless steel corrosion resistance is equivalent to 304 stainless steel

² FFPM 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

Female NPT	Coupler Size	Seal Material	Aluminum Part #
2"	2-1/2"	nitrile rubber	DBS61-200
2"	2-1/2"	FKM	DBS62-200
2"	2-1/2"	PTFE encapsulated silicone and FFPM	DBS63-200



Coupler Locking Kits

Description	Aluminum Part #
for use with 1-1/2" and 2" dry disconnect couplers	DBCL-200
for use with 3" dry disconnect couplers	DBCL-300

NOTE: Reference page 179 for dust plugs for couplers.



Dixon® Bayloc® Dry Disconnects

Adapter x Female NPT

Applications

- Compatible with most cam and groove style dry disconnects
- Helps prevent spillage from normal or accidental disconnects
- For use in transfer of hazardous fluids

Features

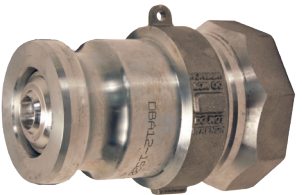
- Two-piece adapter design for easy rebuilding of adapters
- Fully interchangeable with Kamvalok (OPW trademark) style fittings
- For pressure ratings at other temperatures, contact Dixon®
- Contact Dixon® at 800.355.1991 for chemical compatibility, size, material selection and special configurations
- Spring loaded sealing device snaps closed should valve become disconnected with the poppet open



Adapter x 1-1/2" and 2" Female NPT



Adapter x 3" Female NPT

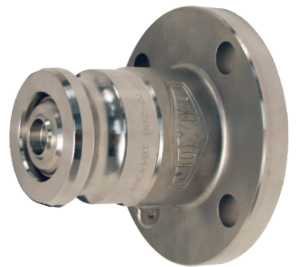


Female NPT	Adapter Size	Seal Material	Maximum PSI at 70°F (21°C)	Aluminum Part #	Stainless Steel Part #
1-1/2"	2"	nitrile rubber	210	DBA11-150	DBA71-150
2"	2-1/2"		150	DBA11-200	DBA71-200
3"	4"		120	DBA11-300	DBA71-300
1-1/2"	2"	FKM	210	DBA12-150	DBA72-150
2"	2-1/2"		150	DBA12-200	DBA72-200
3"	4"		120	DBA12-300	DBA72-300
1-1/2"	2"	PTFE encapsulated silicone	210	DBA63-150	DBA73-150
2"	2-1/2"		150	DBA63-200	DBA73-200
3"	4"		120	DBA63-300	DBA73-300
1-1/2"	2"	EPDM	210	DBA64-150	DBA74-150
2"	2-1/2"		150	DBA64-200	DBA74-200
3"	4"		120	DBA64-300	DBA74-300
1-1/2"	2"	FFPM	210	DBA66-150	DBA76-150
2"	2-1/2"		150	DBA66-200	DBA76-200
3"	4"		120	DBA66-300	DBA76-300
1-1/2"	2"	PTFE encapsulated	210	---	DBA77-150
2"	2-1/2"		150	---	DBA77-200
3"	4"		120	---	DBA77-300
3"	4"	FKM-B	120	DBA69-300	---

Jump Size Adapter x Female NPT

Female NPT	Adapter Size	Seal Material	Maximum PSI at 70°F (21°C)	Aluminum Part #
2"	2"	nitrile rubber	150	DBA11-1520
2"	2"	FKM	150	DBA12-1520

Adapter x 150# ASA Flange



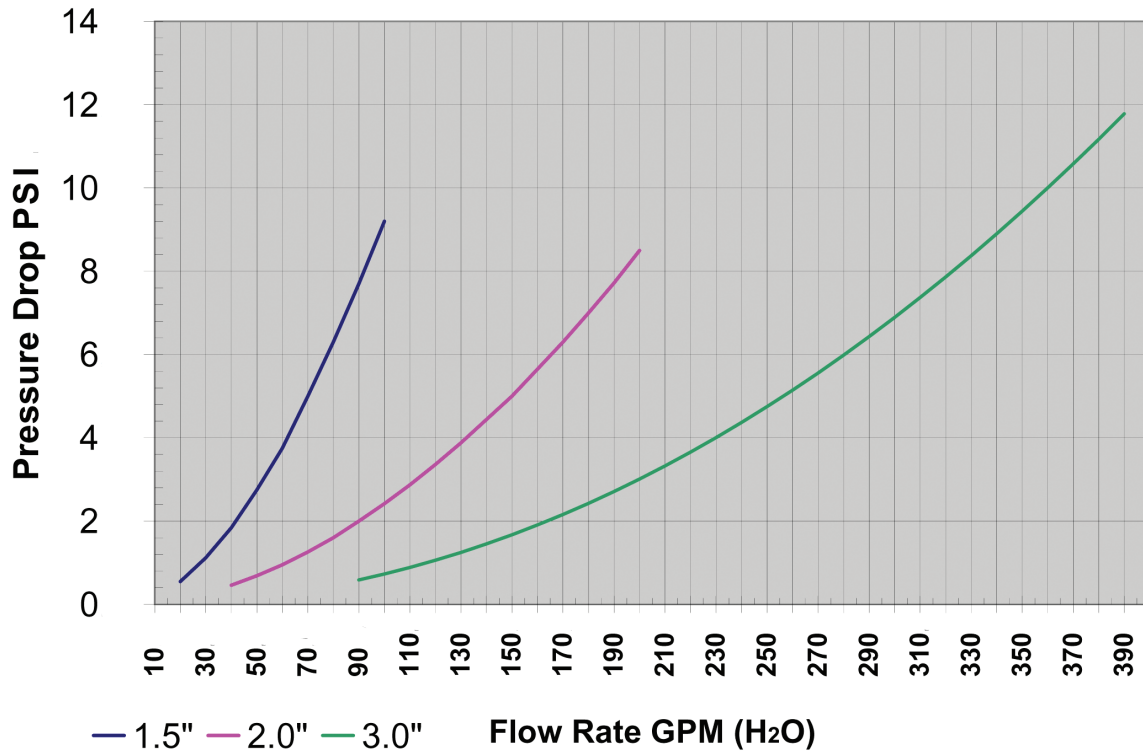
Flange Size	Adapter Size	Seal Material	Maximum PSI at 70°F (21°C)	Stainless Steel Part #
2"	2"	FKM	150	DBAF72-1520
		PTFE encapsulated silicone		DBAF73-1520
		EPDM		DBAF74-1520
		FFPM		DBAF76-1520
2"	2-1/2"	FKM	150	DBAF72-200
		PTFE encapsulated silicone		DBAF73-200
		EPDM		DBAF74-200
		FFPM		DBAF76-200
3"	4"	FKM	150	DBAF72-300
		PTFE encapsulated silicone		DBAF73-300
		EPDM		DBAF74-300
		FFPM		DBAF76-300

NOTE: Reference page 179 for dust caps for adapters.

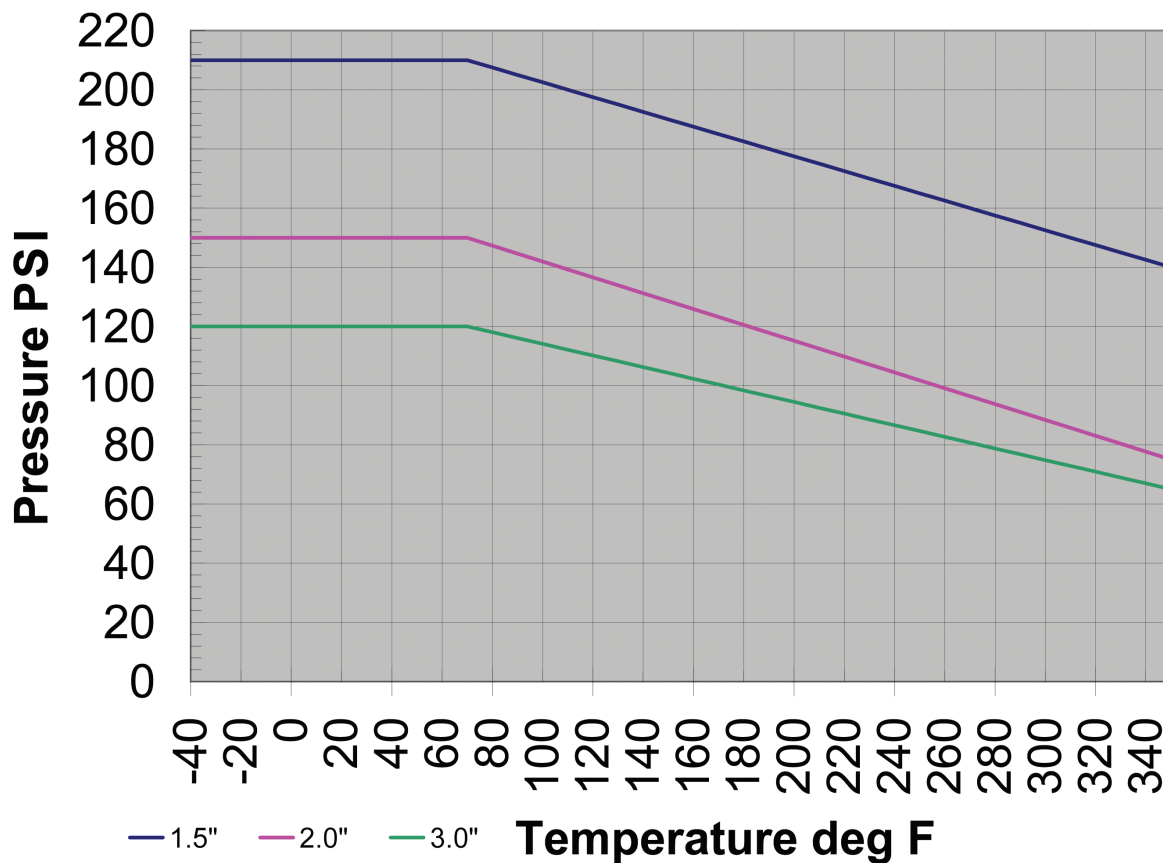
For flange dimensions, diagrams and additional information please reference dixonvalve.com.

Dixon® Bayloc® Dry Disconnect Couplings

Flow Chart



Pressure/Temperature Chart



Bayonet Style Dry Disconnects

Application

- For the spill-less transfer of petroleum products such as fuel oil, lube oil blending and tank truck delivery

Features

- Ensures a spill free connection, fluid cannot flow until couplings are connected together and valve is opened; coupling can then not be disconnected until the valve handle is closed
- Swivels have a standard ZERK fittings
- Replacement parts available, contact Dixon for more information

Specification

- Maximum operating pressure: **85 PSI at 70°F (21°C)**, for pressure ratings at other temperatures contact Dixon®

90° Swivel Coupler x Female NPT



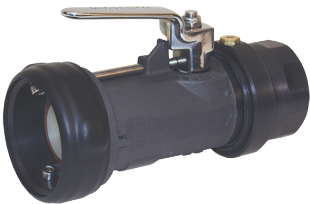
Size	Seal Material	Anodized Hard Coat Aluminum Part #
2"	nitrile rubber	BS61-200
2"	FKM	BS62-200
3"	nitrile rubber	BS61-300
3"	FKM	BS62-300

Straight Coupler x Female NPT



Size	Seal Material	Anodized Hard Coat Aluminum Part #
2"	nitrile rubber	BC61-200
2"	FKM	BC62-200

Straight Swivel Coupler x Female NPT



Size	Seal Material	Anodized Hard Coat Aluminum Part #
2"	nitrile rubber	BSS61-200
2"	FKM	BSS62-200
3"	nitrile rubber	BSS61-300
3"	FKM	BSS62-300

Dust Plugs



Size	Rubber with Stainless Steel Chain Part #
2"	BCP-200
3"	BCP-300

Adapter x Female NPT



Size	Seal Material	Stainless Steel Part #	Brass Part #	Aluminum Part #
2"	nitrile rubber	BA31-200	---	---
2"	FKM	BA32-200	---	---
3"	nitrile rubber	---	BA31-300	BA61-300
3"	FKM	---	BA32-300	BA62-300

Dust Caps



Size	Rubber with Stainless Steel Chain Part #
2"	BAC-200
3"	BAC-300

Dixon® MannTek Industrial Safety Breakaway Couplings – Breaking Bolt Series

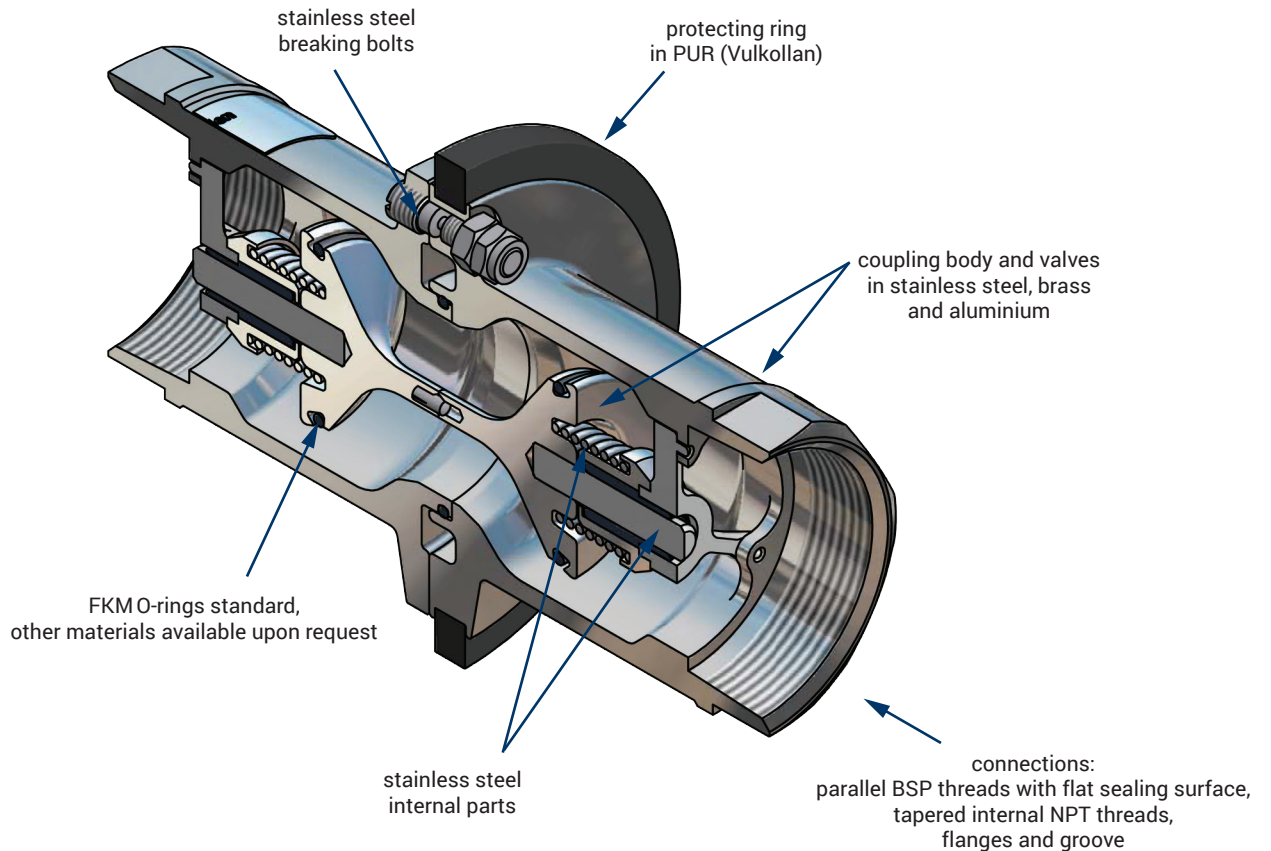
Advantages



Industrial Breakaway 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

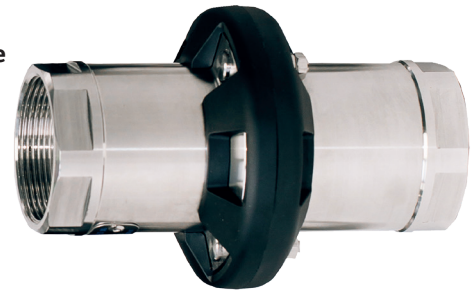


Dixon® MannTek Safety Breakaway Couplings Industrial Version

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

Features

- 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
- FKM is standard seal
- Working pressure: stainless steel **360 PSI** and aluminum **230 PSI** at ambient temperature (**70°F**)
- For information on repair kits visit us online at dixonvalve.com



SBC200AL - aluminum

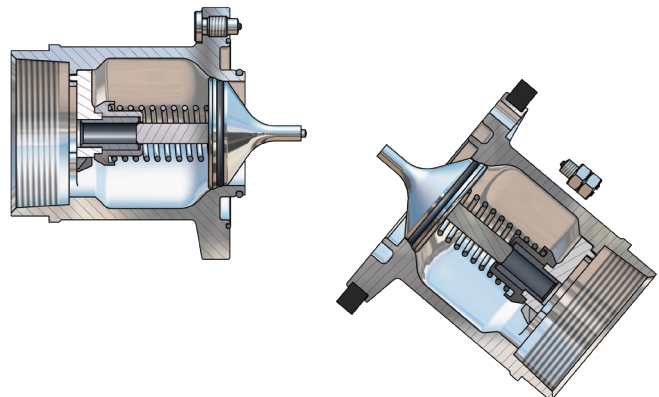
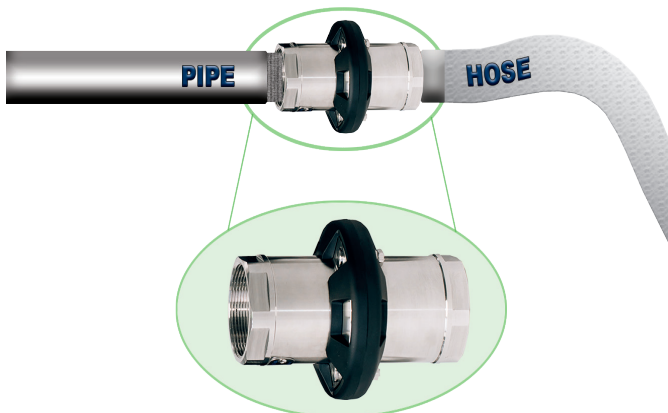
Industrial Breaking Bolt Series

Size	DN	Flow Rate GPM	Width	Length	Weight lbs.		316 Stainless Steel Part #	Aluminum Part #
					SS	AL		
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 ¹	SBC200ALMNPT ¹
3"	80	650	6.8"	11.3"	18.7	7.0	SBC300SSMNPT ¹	SBC300ALMNPT ¹
4"	100	800	8.3"	12.9"	36.8	13.0	SBC400SSMNPT ¹	SBC400ALMNPT ¹
5"	125	1100	10.6"	13.8"	66.1	26.6	SBC500SSMNPT ¹	SBC500ALMNPT ¹
6"	150	1500	12"	16"	103.0	37.6	SBC600SSMNPT ¹	SBC600ALMNPT ¹
2"	50	200	4.5"	7"	7.5	5.7	SBC200SSFL ²	SBC200ALFL ²
3"	80	650	6.8"	8.5"	25.4	12.1	SBC300SSFL ²	SBC300ALFL ²
4"	100	800	9.3"	9"	43.2	17.2	SBC400SSFL ²	SBC400ALFL ²
5"	125	1100	10.6"	14"	70.4	26.6	SBC500SSFL ²	SBC500ALFL ²
6"	150	1500	12.5"	15.1"	110.0	40.0	SBC600SSFL ²	SBC600ALFL ²
8"	200	3700	13.5"	17.7"	157.0	-	SBC800SSFL ²	SBC800ALFL ²

¹ Male NPT

² 150# flange

Industrial breakaways 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.

Dixon® MannTek Marine Safety Breakaway Couplings – Breaking Bolt Series

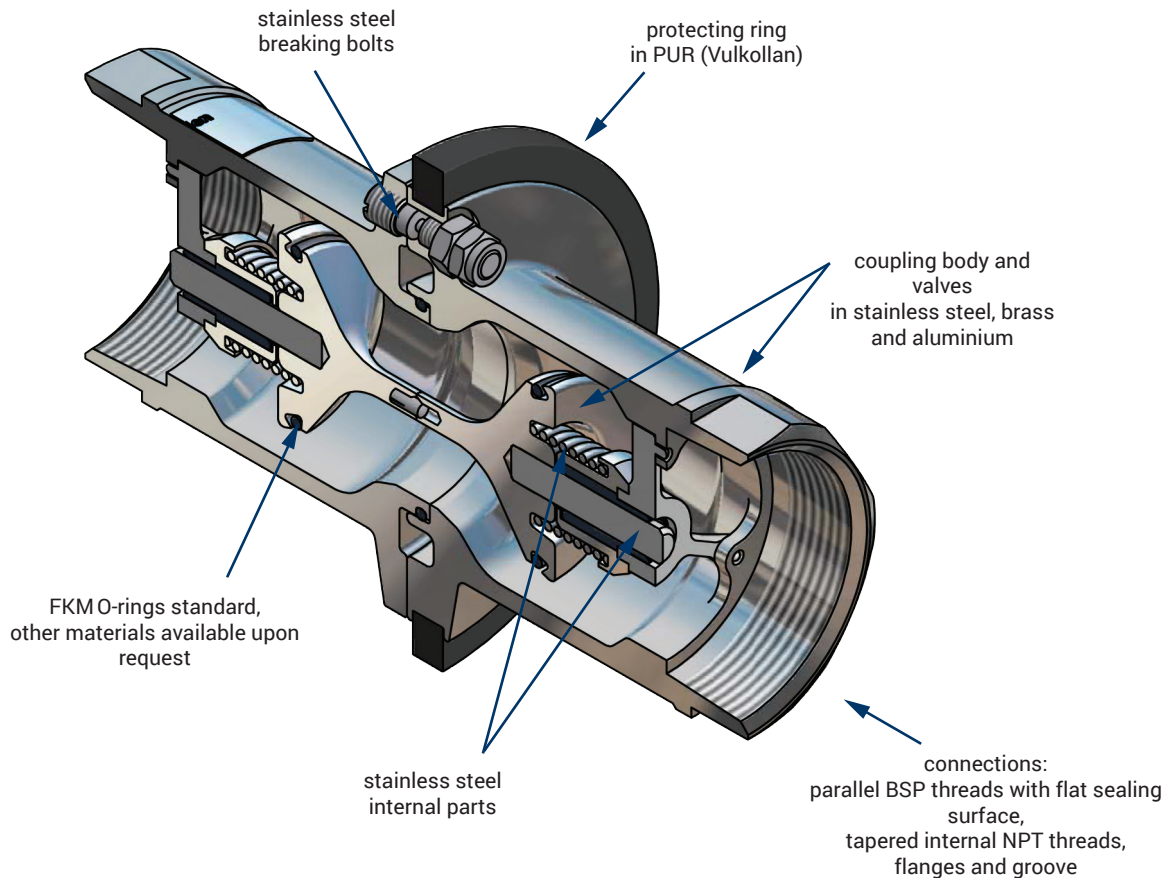
Advantages



Marine version of the safety breakaway 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



Dixon® MannTek Safety Breakaway Couplings

Marine Version

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

Features

- 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 23)
- Release is executed when force causes bolts to break
- Female NPT is standard, optional ASA/DIN flanges or male NPT are available
- FKM 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 dixonvalve.com



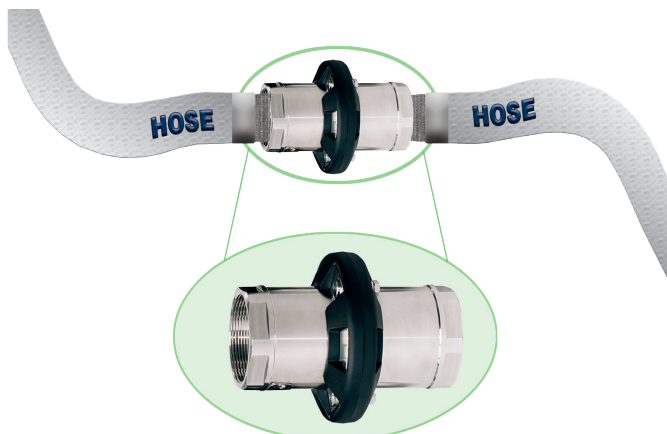
MSBC300SS - stainless steel

Marine Breaking Bolt Series

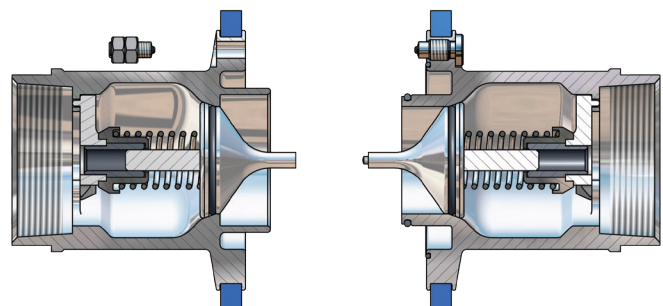
Size	DN	Flow Rate GPM	Width	Length	Weight lbs.	316 Stainless Steel Part #
2"	50	200	4.5"	7.0"	5.7	MSBC200SS
3"	80	650	6.8"	11.0"	21.8	MSBC300SS
4"	100	800	8.3"	12.0"	34.1	MSBC400SS
5"	125	1100	10.6"	14.0"	70.4	MSBC500SS
6"	150	1500	12.0"	16.0"	103.0	MSBC600SS
2"	50	200	n/a	n/a	5.7	MSBC200SSMNPT ¹
3"	80	650	6.9"	11.8"	18.7	MSBC300SSMNPT ¹
4"	100	800	8.3"	13.6"	36.8	MSBC400SSMNPT ¹
5"	125	1100	n/a	n/a	70.4	MSBC500SSMNPT ¹
2"	50	200	5.9"	5.4"	12.1	MSBC200SSFL ²
3"	80	650	7.5"	9.0"	27.3	MSBC300SSFL ²
4"	100	800	9.0"	9.9"	46.7	MSBC400SSFL ²
5"	125	1100	n/a	n/a	n/a	MSBC500SSFL ²
6"	150	1500	12.5	15.1	110	MSBC600SSFL ²
8"	200	3700	13.5"	17.7"	157	MSBC800SSFL ²

¹ Male NPT

² 150# flange



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



Dixon[®] MannTek Safety Breakaway Couplings – Breaking Bolt Series

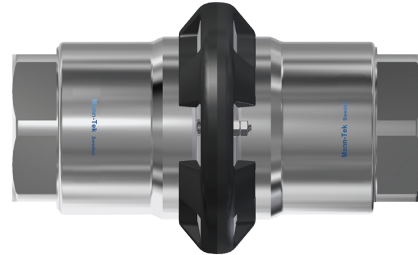
Examples of Connection Combinations

Features

- 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



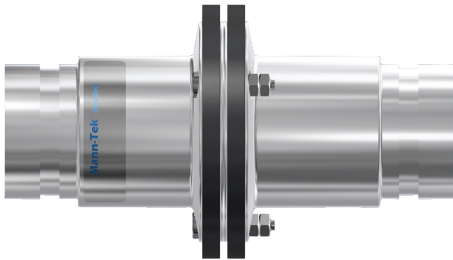
NPT female thread/NPT female thread



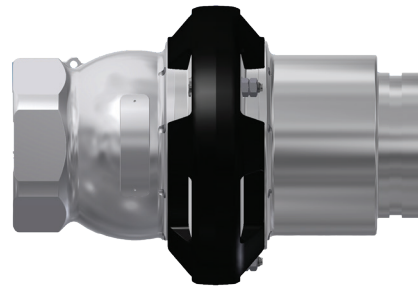
male thread/male thread



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



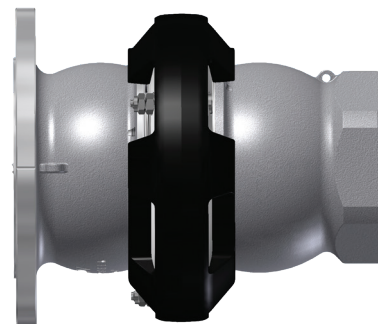
groove/groove



NPT female thread/groove



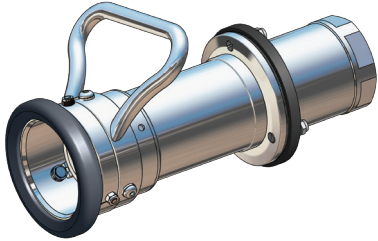
flange/flange



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

Dixon® MannTek Safety Breakaway 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.



dry disconnect hose unit with breakaway integrated

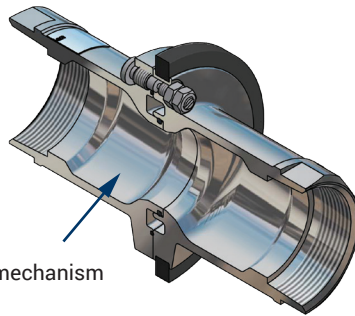


hose swivel with breakaway integrated

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 Dixon® for more information.



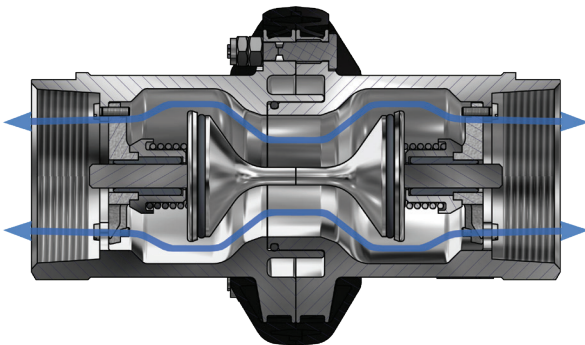
no internal mechanism

Dixon MannTek Safety Breakaway Couplings – Breaking Bolt Series

How It Works

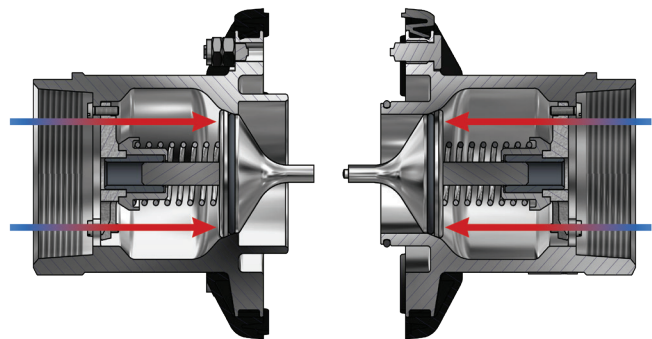
The SBCouplings, safety breakaway couplings, have three external break bolts. In the case of axial tension all of the bolts take up the force corresponding to the break force on the hose with a safety margin.

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



BEFORE emergency disconnect

The safety breakaway 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.

Dixon® MannTek Safety Breakaway 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

Size	Used On Aluminum	kN rating	Pounds Force	Kits	
				Standard Bolt	FKM 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

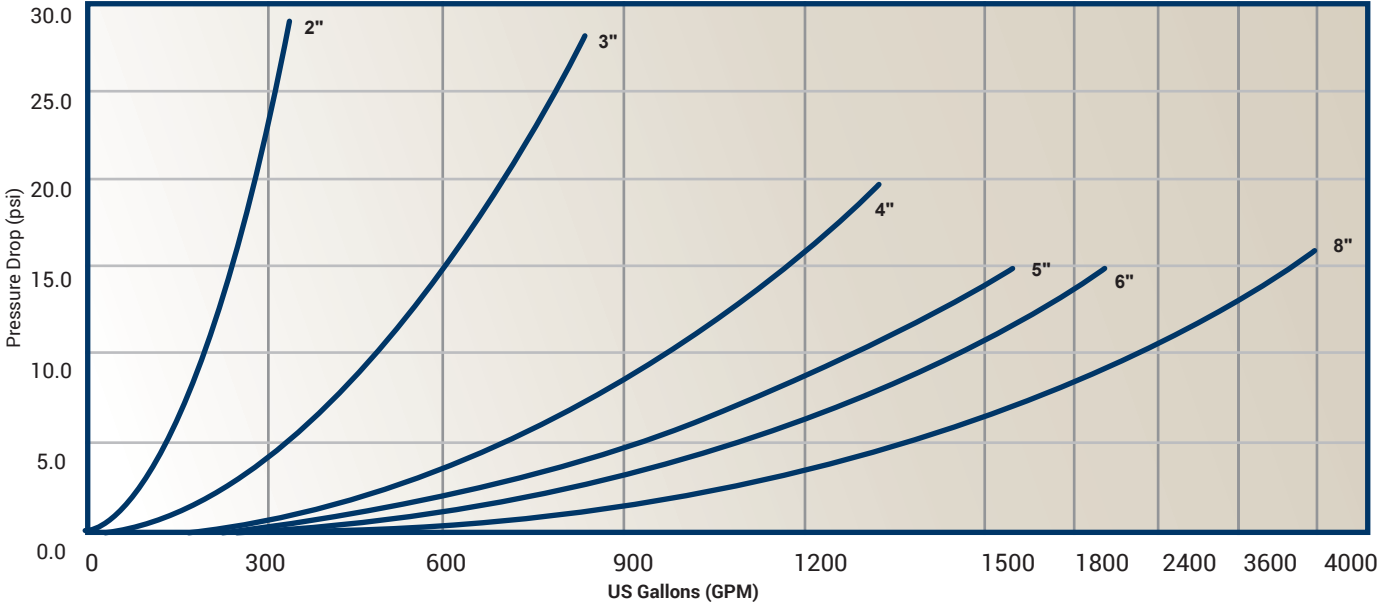
Size	Used On Stainless Steel	kN rating	Pounds Force	Kits	
				Standard Bolt	FKM O-ring
2"	SBC200SS	13 kN	2900	S-N2D-44	O-ND2-01
3"	SBC300SS	33 kN	7500	S-N4D-44	O-ND4-01
4"	SBC400SS	52 kN	11,700	S-N5D-44	O-ND5-01
5"	SBC500SS	81 kN	18,200	S-NVD-44	O-NVD-01
6"	SBC600SS	92 kN	20,700	S-N6D-44	O-N6D-01
6"	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 Stainless Steel	kN rating	Pounds Force	Kits	
				Standard Bolt	FKM 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	81 kN	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 Breakaway Couplings

Flow Diagram (Pressure Drop)



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

Product Application

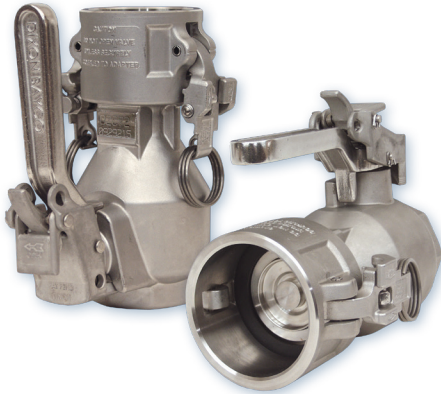
products in use at a facility



API couplings

Safety breakaway couplings

Dixon® Bayloc® Actuator Style Fittings couplers



1 1/2" and 2" - stainless steel

Applications

The D2C style couplers work with the DBA adapters (*page 14*) 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.

Features

- 316 stainless steel body
- 304 stainless steel internal components
- EZ Boss-Lock cam arms
- Stainless steel locking lever included
- Available with nitrile rubber, FKM, FKM-B, EPDM, PTFE encapsulated silicone and PTFE encapsulated FKM seals

actuator style couplers

Size	Seal Material	Stainless Steel Part #
1-1/2"	nitrile rubber	D2C71-150
2"		D2C71-200
1-1/2"	FKM	D2C72-150
2"		D2C72-200
1-1/2"	PTFE encapsulated silicone	D2C73-150
2"		D2C73-200
1-1/2"	EPDM	D2C74-150
2"		D2C74-200
1-1/2"	PTFE encapsulated FKM	D2C77-150
2"		D2C77-200
1-1/2"	FKM-B	D2C79-150
2"		D2C79-200

5500-Series API Couplers



*Normal wear and tear items (including seals) not covered

Application

- Combined with API adapters, these couplers are suitable for railcar and tank truck loading or unloading

Features

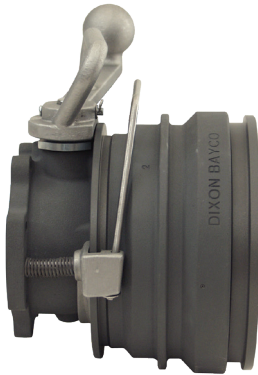
- Locking five-cam design provides easy alignment and tight connection
- Modular design allows various face seal combinations to be compatible with different alternative fuels, performance levels, and applications
- Shaft seals can be changed without removing coupler from the loading arm
- Fully interlocked collar cannot be opened when connected and cannot be disconnected when opened
- Replaceable seal design while coupler is on loading arm
- 4" TTMA inlet mounting flange connection
- Ball-end handle for easy and comfortable operation
- No special tools needed for maintenance
- Reference dixonvalve.com for bill of materials and a complete list of repair kits

Materials

- Body: hard coated anodized 356T6 aluminum
- Shroud: hard coated anodized 356T6 aluminum with stainless steel insert
- Link, shaft, pin, and crank: hardened 17-4PH stainless steel
- Cam: CF8M stainless steel
- Poppet and bearing: Bayloy
- Seals: Baylast™, EPDM, FFKM, FKM-B, FKM-GFLT, and fluorosilicone

Specifications

- Seal operating temperature:
 - Baylast™: -35°F to 212°F (-37°C to 100°C)
 - EPDM: -60°F to 250°F (-50°C to 121°C)
 - FFKM: 0°F to 400°F (-18°C to 204°C)
 - FKM-B: -15°F to 400°F (-26°C to 204°C)
 - FKM-GFLT: -35°F to 400°F (-37°C to 204°C)
 - Fluorosilicone: -50°F to 350°F (-45°C to 176°C)
- Flow rate: 600 GPM at 3 PSI pressure drop, maximum flow rate: 1,000 GPM
- Fully compliant with API RP1004:2003 specifications
- Burst tested: 450 PSI



5500-Series



Replaceable nose seal:
Replace without removal
from the loading arm

Description	Seal Material	Part #	Complete Repair Kit* Part #	Replaceable Nose Seal Part #
4" API coupler	Baylast	5500BL	5500RK2	5500RK8
	EPDM	5500E	5500RK3	5500RK9
	FFKM	5500K	5500RK6	5500RK12
	FKM-B	5500B	5500RK1	5500RK7
	FKM-GFLT	5500G	5500RK5	5500RK11
	Fluorosilicone	5500F	5500RK4	5500RK10

*Complete repair kit contains all the seals, pins, and cotter keys to replace all the seals.

API Coupler Locking Handle Repair Kit



Description	Part #
locking handle kit for 5300BC rack couplers	5354K21

Limited Warranty

DIXON VALVE AND COUPLING COMPANY, LLC (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. Its 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 labor. 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 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 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.

Limits of Liability

This catalog is intended as a product offering. It is not intended to be a user or technical manual. Information in this catalog is subject to change without notice. All users and distributors of products sold through this catalog should contact Dixon with questions of use, compatibilities, coupling procedures, and life of product. Our full-time engineering and test staff are always available to recommend uses and to assist distributors and users with any questions.



Safety



Safety logos, which appear throughout our catalog, are used as a reminder that the user should carefully review for the appropriateness of the product for the media, application, and environment in which it will be used.

NOTE: Because of the health hazards associated with contamination and lead content in drinking water systems, Dixon couplings, unless otherwise specifically approved, are not recommended for potable water service and should not be used in applications where drinking water will contact the wetted surfaces of the coupling.



WARNING: Dixon products may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

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