



Table of Contents

**Loading Arm Introduction** .....3

**Bottom Loading Arms**..... 4-8

Counterweight Loading Arm .....4-5

A-Frame Loading Arm with Rigid Drop Pipe..... 6

A-Frame Loading Arm with Drop Hose..... 7

Horizontal Hose Loader..... 8

**Top Loading Arms** .....9-13

Fixed Reach Loading Arm..... 9

Telescoping Loading Arm ..... 10

Scissor Style Loading Arm ..... 11

Unsupported Boom Loading Arm ..... 12

Supported Boom Loading Arm..... 13

**Loading Arm Ordering Guide**.....14-15

**Swivels Joints** .....16-19

Split Flange Swivels ..... 16

O-ring and V-ring Swivels ..... 17

Base Swivels with Counterbalance..... 18

Loading Arm Swivels ..... 19

**Accessories** .....20-29

Loading Arm Legs, Swivel Handles, Diffusers, and T-Deflectors .....20

Locking Accessories, Supports, Counterbalances, and Clamps.....21

Top Loading Valves, Remote Handle Kits, and TTMA Flange Adapters .....22

TTMA Flange Gaskets, Wet-R-Dri™ Valves, and Sight Flow Indicators .....23

Safety Breakaways.....24

TTMA Flange Extensions and Reducers.....25

5500-Series API Couplers.....26

Overfill Protection - Rack Monitor .....27


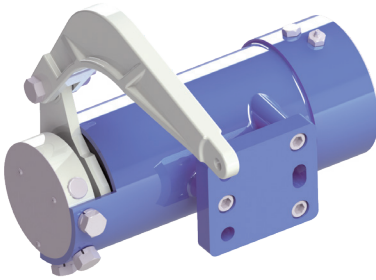
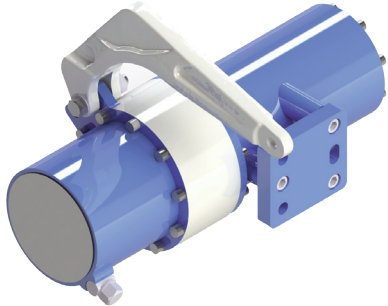
API Compatible Systems .....28

Vapor Recovery Plates and Splash Guards .....29

## Loading Arm Introduction

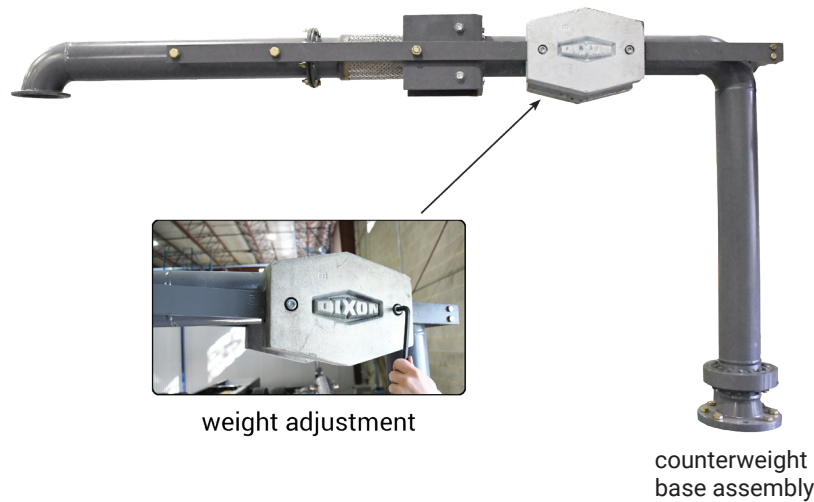
A loading arm is a dynamic system allowing for the transfer of media such as liquids, liquified gas, or dry bulk from one storage vessel to another. Consisting of a combination of swivel joints, pipe and/or hose legs, a counterbalance, and various end connections, loading arms can be configured for both top loading and bottom loading applications. Dixon® loading arms are ideal for a wide range of applications, transferring product to and from tank trucks or rail cars as well as to drums and totes.

### Dixon's Counterbalance Options

	Counterweight	ESB1 Torsion Spring Counterbalance	ESB2 Torsion Spring Counterbalance
			
<b>Description</b>	<ul style="list-style-type: none"> <li>• A classic and reliable means of supporting the weight of a loading arm</li> <li>• Utilizes a lever-and-fulcrum system with heavy metal weights that counteract the weight of the loading arm</li> <li>• Stores fully extended in the horizontal position</li> </ul>	<ul style="list-style-type: none"> <li>• A helical torsion spring inside a metal housing mounted on a loading arm base swivel</li> <li>• When a load pushes the spring downward, the spring exerts an upward balancing force to support the loading arm</li> <li>• Can be stored in various positions based on arm configuration and space requirements</li> </ul>	<ul style="list-style-type: none"> <li>• A heavy-duty helical torsion spring inside a metal housing mounted on a loading arm base swivel</li> <li>• Designed to support larger, heavier loading arms</li> <li>• Utilizes the same balancing method and offers the same storage benefits as the ESB1</li> </ul>
<b>Adjustment</b>	<ul style="list-style-type: none"> <li>• Uses 2 or 4 weights depending on the reach and weight of the loading arm</li> <li>• The balancing force can be precisely adjusted for various reach and load applications by sliding the weights in and out along a rail</li> </ul>	<ul style="list-style-type: none"> <li>• The balancing force can be precisely adjusted for various load applications by tightening or loosening the adjustment bolt</li> <li>• Multiple spring rates are available to accommodate various reach and load applications</li> </ul>	
<b>Benefits and Applications</b>	<ul style="list-style-type: none"> <li>• Counterweights are ideal for tight spaces, locations loading multiple products, or where arm crossover may be necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Spring balances allow for a variety of arm configurations, as well as a wide range of applications including bulk chemicals, food &amp; beverage, and petroleum</li> </ul>	



## Counterweight Loading Arms



### Applications

- Bottom loading bulk liquids and other loading products
- Suitable for fuel loading racks and other loading products requiring multiple arms to crossover

### Size

- 4" nominal pipe size

### Features

- No springs
- Split flange base swivel
- 2 or 4 adjustable counterweights
- Easy adjustment, operation, and maintenance

### Materials

- Carbon steel schedule 40 pipe construction
- 321 stainless steel flex joint with 304 stainless steel braid
- FKM or nitrile rubber seals

### Specifications

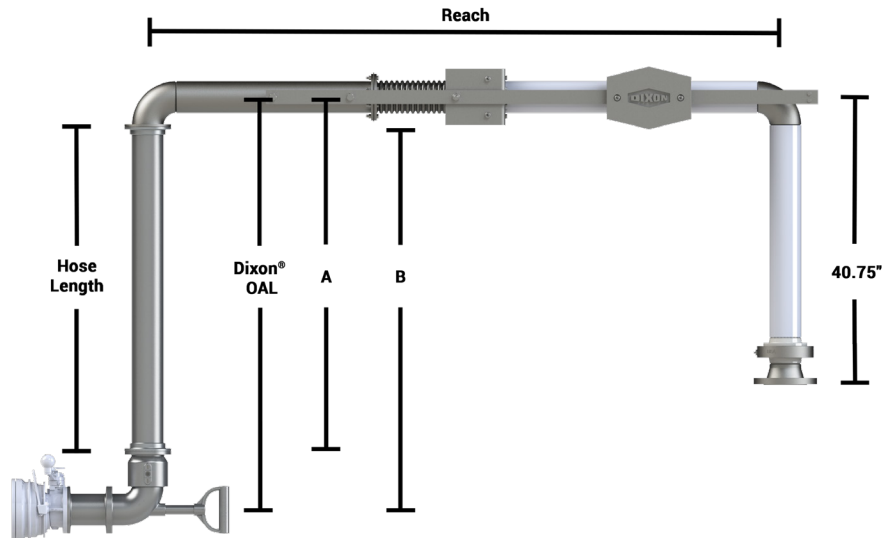
- Composite or stainless steel braided drop hose
- Style 30 loading swivel
- D-handle or ball handle on loading swivel
- TTMA extension or color coded TTMA extension
- Safety breakaway
- Sight glass
- Wet-R-Dri™ valve
- 5500-series API coupler

Counterweights	Reach Dimension	Part #	
		Nitrile Rubber Seals	FKM Seals
2	78"	CW2-LA4-078-0	CW2-LA4-078-1
2	90"	CW2-LA4-090-0	CW2-LA4-090-1
2	102"	CW2-LA4-102-0	CW2-LA4-102-1
2	114"	CW2-LA4-114-0	CW2-LA4-114-1
4	78"	CW4-LA4-078-0	CW4-LA4-078-1
4	90"	CW4-LA4-090-0	CW4-LA4-090-1
4	102"	CW4-LA4-102-0	CW4-LA4-102-1

NOTE: The counterweight base assemblies shown above do not contain the drop leg or the bottom unit. 114" reach is only available with 2 weights.



### Counterweight Reference Sheet



Shown with available options including: composite hose, ball handle, Wet-R-Dri valve, color coded TTMA extension, sight flow indicator, and 5500-series API coupler

Hose Length	Dixon OAL	A	B	Reach / Part #			
				78"	90"	102"	114"
76"	89"	80"	84"	WV4078EV076M1ED <sup>1</sup>	WV4090EV076M1ED <sup>1</sup>	WV20A2EV076M1ED <sup>2</sup>	WV20B4EV076M1ED <sup>2</sup>
80"	93"	84"	88"	WV4078EV080M1ED <sup>1</sup>	WV4090EV080M1ED <sup>1</sup>	WV20A2EV080M1ED <sup>2</sup>	WV20B4EV080M1ED <sup>2</sup>
92"	105"	96"	100"	-	WV4090EV092M1ED <sup>1</sup>	WV20A2EV092M1ED <sup>2</sup>	WV20B4EV092M1ED <sup>2</sup>
96"	109"	100"	104"	-	WV4090EV096M1ED <sup>1</sup>	WV20A2EV096M1ED <sup>2</sup>	WV20B4EV096M1ED <sup>2</sup>
108"	121"	112"	116"	-	WV4090EV0A8M1ED <sup>1</sup>	WV40A2EV0A8M1ED <sup>1</sup>	WV20B4EV0A8M1ED <sup>2</sup>
112"	125"	116"	120"	-	WV4090EV0B2M1ED <sup>1</sup>	WV40A2EV0B2M1ED <sup>1</sup>	WV20B4EV0B2M1ED <sup>2</sup>
124"	137"	128"	132"	-	WV4090EV0C4M1ED <sup>1</sup>	WV40A2EV0C4M1ED <sup>1</sup>	WV20B4EV0C4M1ED <sup>2</sup>
128"	141"	132"	136"	-	WV4090EV0C8M1ED <sup>1</sup>	WV40A2EV0C8M1ED <sup>1</sup>	WV20B4EV0C8M1ED <sup>2</sup>

<sup>1</sup> 4 weights

<sup>2</sup> 2 weights

NOTE: Part numbers listed above include FKM seals, stainless steel braided metal hose, Style 30 with D-handle, TTMA extension, and 5500-series API coupler. Other hose lengths are available upon request.

**A-Frame Loading Arm with Rigid Drop Pipe**



**Sizes**

- 3" and 4"

**Features**

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Style 50 loading swivel
- Available accessories include safety breakaway, Wet-R-Dri™ valve, ball handle (see pages 20-29)

**Materials**

- Pipe leg materials offered: aluminum, carbon steel, and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, and food-grade nitrile

**Specifications**

- Standard configurations below include carbon steel base swivels, ESB1 torsion spring counterbalance, TTMA extension, 5500-series API, and D-handle
- Other options available upon request

Size	Description	Part #
3"	60" x 60" aluminum legs, V-ring base swivel, FKM seals, API	AV3A46JAK48H6ED
	60" x 60" aluminum legs, split flange base swivel, FKM seals, API	AV3G46JAK48H6ED
4"	60" x 60" aluminum legs, V-ring base swivel, FKM seals, API	BV4A44JAU46H6ED
	60" x 60" aluminum legs, split flange base swivel, FKM seals, API	BV4G44JAU46H6ED*
	60" x 72" aluminum legs, V-ring base swivel, FKM seals, API	BV4A44JAU58H6ED
	60" x 72" aluminum legs, split flange base swivel, FKM seals, API	BV4G44JAU58H6ED

\*Shown in image above

## A-Frame Loading Arm with Drop Hose



### Sizes

- 3" and 4"

### Features

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Style 30 loading swivel; style 50 available upon request
- Available accessories include safety breakaway, Wet-R-Dri™ valve, ball handle (see pages 20-29)

### Materials

- Pipe leg materials offered: aluminum, carbon steel, and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, and food-grade nitrile
- Drop hose available in composite and stainless steel metal

### Specifications

- Standard configurations below include carbon steel base swivels, ESB1 torsion spring counterbalance, TTMA extension, 5500-series API, and D-handle
- Other options available upon request

Size	Description	Part #
3"	60" aluminum leg A x 72" metal drop hose, V-ring base swivel, FKM seals, API	AV3A46JAK59M1ED
	60" aluminum leg A x 72" metal drop hose, split flange base swivel, FKM seals, API	AV3A46JAK59M1ED
	60" aluminum leg A x 72" composite drop hose, V-ring base swivel, FKM seals, API	AV3G46JAK59C1ED
	60" aluminum leg A x 72" composite drop hose, split flange base swivel, FKM seals, API	AV3G46JAK59C1ED
4"	60" aluminum leg A x 60" metal drop hose, V-ring base swivel, FKM seals, API	BV4A44JAU46M1ED
	60" aluminum leg A x 60" metal drop hose, split flange base swivel, FKM seals, API	BV4G44JAU46M1ED
	60" aluminum leg A x 60" composite drop hose, V-ring base swivel, FKM seals, API	BV4A44JAU46C1ED
	60" aluminum leg A x 60" composite drop hose, split flange base swivel, FKM seals, API	BV4G44JAU46C1ED
	60" aluminum leg A x 72" metal drop hose, V-ring base swivel, FKM seals, API	BV4A44JAU58M1ED
	60" aluminum leg A x 72" metal drop hose, split flange base swivel, FKM seals, API	BV4G44JAU58M1ED*
	60" aluminum leg A x 72" composite drop hose, V-ring base swivel, FKM seals, API	BV4A44JAU58C1ED
	60" aluminum leg A x 72" composite drop hose, split flange base swivel, FKM seals, API	BV4G44JAU58C1ED

\*Shown in image above



Horizontal Hose Loader



Sizes

- 3" and 4"

Features

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Style 30 loading swivel; style 50 available upon request
- Available accessories include safety breakaway, Wet-R-Dri™ valve, ball handle (see pages 20-29)

Materials

- Pipe leg materials offered: aluminum, carbon steel, and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, and food-grade nitrile
- Drop hose available in composite hose and stainless steel metal hose

Specifications

- Standard configurations below include carbon steel base swivels, ESB1 torsion spring counterbalance, TTMA extension, 5500-series API, and D-handle
- Other options available upon request

Size	Description	Part #
3"	52" aluminum leg A x 72" metal drop hose, V-ring base swivel, FKM seals, API	AV3A43MV061M1ED
	52" aluminum leg A x 72" metal drop hose, split flange base swivel, FKM seals, API	AV3G43MV061M1ED
	52" aluminum leg A x 72" composite drop hose, V-ring base swivel, FKM seals, API	AV3A43MV061C1ED
	52" aluminum leg A x 72" composite drop hose, split flange base swivel, FKM seals, API	AV3G43MV061C1ED
4"	52" aluminum leg A x 72" metal drop hose, V-ring base swivel, FKM seals, API	BV4A42MV059M1ED
	52" aluminum leg A x 72" metal drop hose, split flange base swivel, FKM seals, API	BV4G42MV059M1ED*
	52" aluminum leg A x 72" composite drop hose, V-ring base swivel, FKM seals, API	BV4A42MV059C1ED
	52" aluminum leg A x 72" composite drop hose, split flange base swivel, FKM seals, API	BV4G42MV059C1ED

\*Shown in image above

## Fixed Reach Loading Arm



### Sizes

- 2", 3", 4", and 6"

### Features

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Available accessories include tee deflector, diffuser, top loading valve with or without remote handle kit, various handles, locking mechanism (see pages 20-29)

### Materials

- Pipe leg materials offered: aluminum, carbon steel, and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, and food-grade nitrile

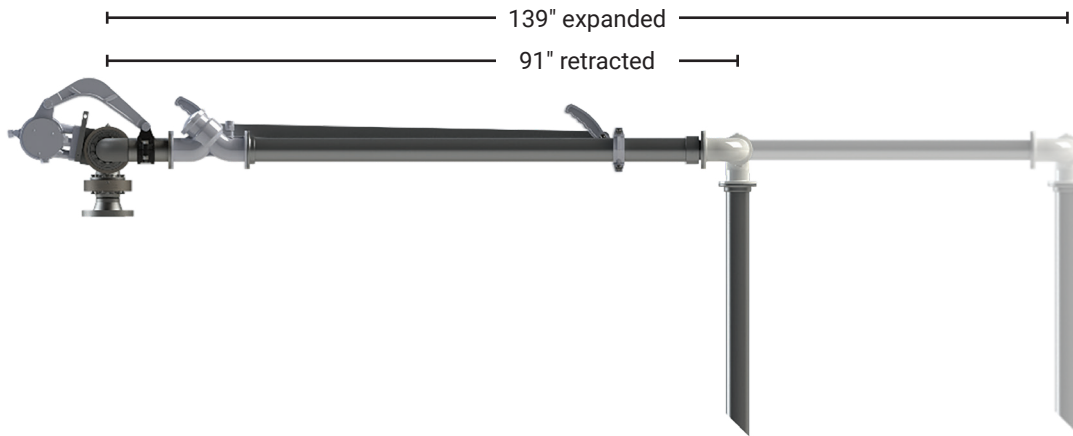
### Specifications

- Standard configurations below include ESB1 torsion spring counterbalance
- Other options available upon request

Size	Description	Part #
2"	60" x 48" 316 stainless steel legs, 316 stainless steel split flange base swivel, 45° cut, PTFE seals	AP2D48QUA45QC00
3"	120" x 48" carbon steel legs, carbon steel split flange base and apex swivels LA handle, bucket hook, 45° cut, FKM seals	CV3GA8AFK45ACJ0
4"	120" x 48" aluminum legs, carbon steel split flange base swivel, top loading valve, LA handle, bucket hook, 45° cut, FKM seals	CV4G90JAU42HCJY*

\*Shown in image above

Telescoping Loading Arm



Sizes

- 3" and 4"

Features

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring or carbon steel split flange
- Available accessories include tee deflector, top loading valve with or without remote handle kit, various handles (see pages 20-29)


Materials

- Pipe leg materials offered: aluminum
- Available swivel seals include: nitrile rubber and FKM

Specifications

- Standard configurations below include carbon steel split flange base swivel, ESB1 torsion spring counterbalance, 45° cut end connection
- Other options available upon request

Size	Description	Part #
3"	telescoping x 42" overall length, FKM seals and top loading valve	AV3GB49AK37HC0Y
	telescoping x 42" overall length, FKM seals, top loading valve and remote handle	BV3GB49AK37HC0N
	telescoping x 48" overall length, FKM seals and top loading valve	BV3GB49AK43HC0Y
	telescoping x 48" overall length, FKM seals, top loading valve and remote handle	BV3GB49AK43HC0N*

NOTE: Telescoping loading arms are for open discharge only. 

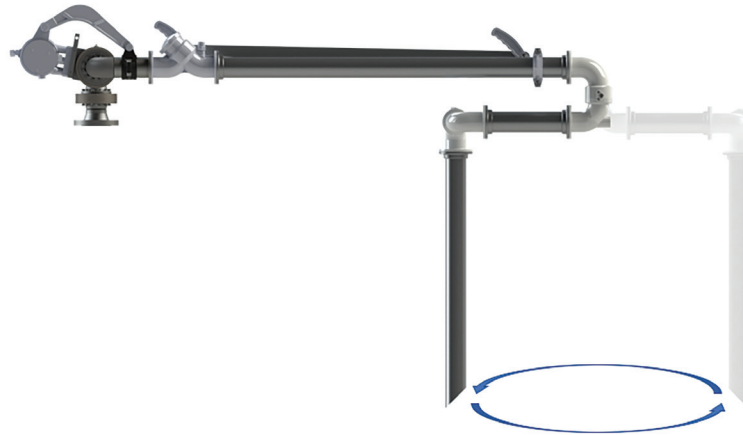
Telescoping Arm Replacement Parts

Size	Description	Part #
3"	3" aluminum telescoping leg, 66" retracted and 114" extended	3SAL0-TFXTF-114
	3" nitrile rubber telescoping leg seal replacement kit	3RKT

\*Shown in image above



### Scissor Style Loading Arm



**Sizes**

- 2", 3", and 4"

**Features**

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Available accessories include tee deflector, diffuser, top loading valve with or without remote handle kit, various handles, locking mechanism (see pages 20-29)

**Materials**

- Pipe leg materials offered: aluminum, carbon steel, 316 stainless steel
- Available swivel seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, or food-grade nitrile

**Specifications**

- Standard configurations below include carbon steel split flange base swivel, aluminum legs, top load valve, remote handle kit, and FKM seals
- Other options available upon request

Size	Description	Part #
3"	84" x 48" drop leg with 24" scissor leg, 45° cut end, top loading valve, remote handle kit	AVBG59JAK43HC0N
	108" x 48" drop leg with 36" scissor leg, 45° cut end, top loading valve, remote handle kit	BVCG83JAK43HC0N
4"	84" x 48" drop leg with 24" scissor leg, 45° cut end, top loading valve, remote handle kit	CVFG55JAU42HC0N*
	108" x 48" drop leg with 36" scissor leg, 45° cut, heavy CB, top loading valve, remote handle kit	PVGG79JAU42HC0N

\*Shown in image above

**Unsupported Boom Loading Arm**



**Sizes**

- 2", 3", 4", and 6"

**Features**

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Available accessories include tee deflector, diffuser, top loading valve with or without remote handle kit, various handles, and locking mechanism (see pages 20-29)

**Materials**

- Pipe and arm swivel materials offered: aluminum, carbon steel, and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, or food-grade nitrile

**Specifications**

- Standard configurations below include carbon steel split flange base swivel and ESB1 torsion spring
- Other options available upon request

Size	Description	Part #
3"	aluminum 78" x 48" drop leg w/ 45° cut, 48" carbon steel boom leg, FKM seals	HVDU64JAK43HC00
	carbon steel 90" x 60" drop leg w/ 45° cut, 60" carbon steel boom leg, FKM seals	JVEU78AFK57AC00
4"	aluminum 78" x 48" drop leg w/ 45° cut, 48" carbon steel boom leg, FKM seals	HVHU62JAU43HC00*
	carbon steel 90" x 60" drop leg w/ 45° cut, 60" carbon steel boom leg, FKM seals	KVJU75AFU56AC00
6"	carbon steel 78" x 48" drop leg w/ 45° cut, 48" carbon steel boom leg, FKM seals, ESB2 counterbalance	Q02660AC642AC00

\*Shown in image above

### Supported Boom Loading Arm



**Sizes**

- 2", 3", 4", and 6"

**Features**

- Torsion spring counterbalance offered in left or right hand
- Base swivels offered: carbon steel V-ring, carbon steel split flange, or 316 stainless steel split flange
- Available accessories include tee deflector, diffuser, top loading valve with or without remote handle kit, various handles, and locking mechanism (see pages 20-29)
- Includes triangulated bracing with pillow block bearing to support longer, heavier arms

**Materials**

- Pipe and arm swivel materials offered: aluminum, carbon steel, and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, or food-grade nitrile

**Specifications**

- Standard configurations below include split flange base swivel and ESB1 torsion spring counterbalance
- Other options available upon request

Size	Description	Part #
2"	stainless steel base swivel, stainless steel 60" x 48" drop leg w/ 45° cut, 49" boom leg, PTFE seals	H02148QUA45QC00
3"	carbon steel base swivel, aluminum 78" x 48" drop leg w/ 45° cut, carbon steel 69" boom leg, FKM seals	H02564JAK43HC00
4"	carbon steel base swivel, aluminum 78" x 48" drop leg w/ 45° cut, carbon steel 69" boom leg, FKM seals	H01362JAU42HC00*


\*Shown in image above

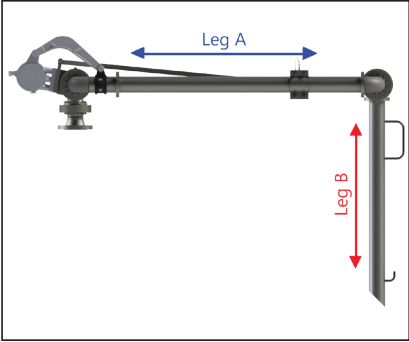


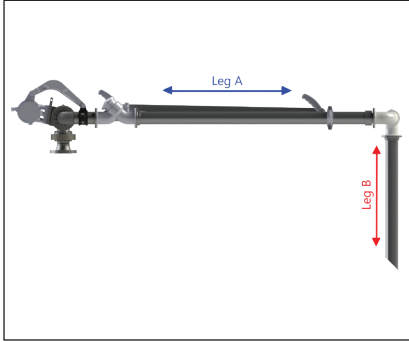
## Section 1: Customer Information

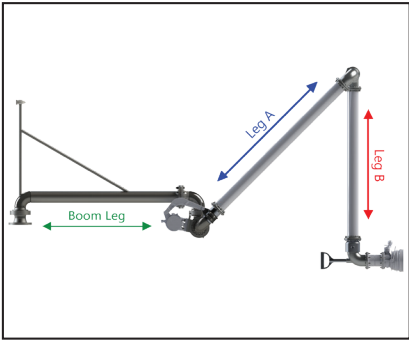
Distributor name:	_____	Phone:	_____
Contact person:	_____	Email:	_____
Distributor city, state:	_____	Customer code:	_____
End user name:	_____	Phone:	_____
Contact person:	_____	Email:	_____

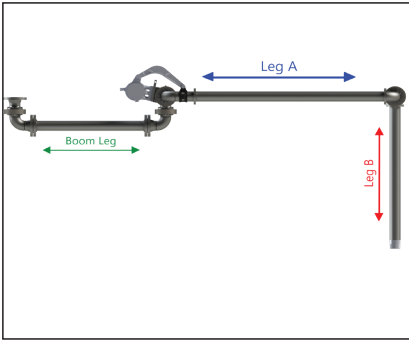
## Section 2: Configuration(s)

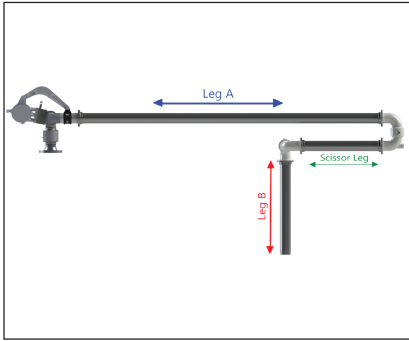
a.  A-frame 

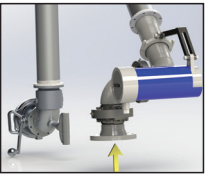
Fixed Reach (top load) 

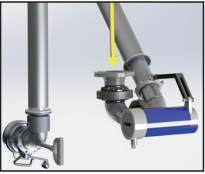
Telescoping\* (\*Leg A only available in one standard length) 

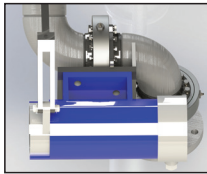
Supported boom 

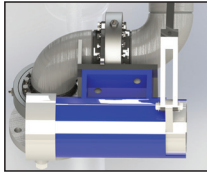
Unsupported boom 

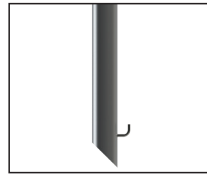
Scissor 

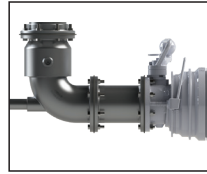
b.  Upfeed 

Downfeed 

c.  Left-hand 

Right-hand 

d.  Top load 

Bottom load 

e.  Other style/configurations:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Custom options are available. Contact Dixon Specialty Products at 888.226.4673 or [load-arms@dixonvalve.com](mailto:load-arms@dixonvalve.com).

**Section 3: Component Measurements and Materials**

(Measure from centerline of swivel to centerline of swivel. Round to the nearest inch, i.e. 48", 60", etc.)

**Leg A** Length: \_\_\_\_\_ Material:  carbon steel  aluminum  stainless steel

**Leg B** Length: \_\_\_\_\_ Material:  carbon steel  aluminum  stainless steel  
 composite hose  metal hose

**Boom/Scissor**  
 Leg Length: \_\_\_\_\_ Material:  carbon steel  stainless steel  aluminum (scissor only)

**Section 4: Load Arm Information**

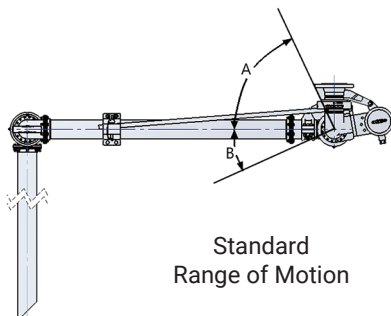
- a. Quantity: \_\_\_\_\_
- b. Pipe size:  2"  3"  4"  other: \_\_\_\_\_"
- c. Base swivel:  split flange style  v-ring style
- d. Riser stand pipe connection:  Class 150 ANSI flange  Class 300 ANSI flange  other: \_\_\_\_\_
- e. Type of media:  asphalt  fuel  other: \_\_\_\_\_
- f. Seals (Dixon can recommend based on media):  Nitrile rubber  PTFE  FKM-A  
 low temperature FKM  EPDM  other: \_\_\_\_\_
- g. Environment conditions: temperature range \_\_\_\_\_ °F to \_\_\_\_\_ °F operating PSI : \_\_\_\_\_
- h. End connections (check all that apply):
 

<input type="checkbox"/> 45° pipe cut	<input type="checkbox"/> cam & groove coupler	<input type="checkbox"/> top loading valve	<input type="checkbox"/> sight glass
<input type="checkbox"/> API coupler w/ flange extension	<input type="checkbox"/> cam & groove adapter	<input type="checkbox"/> top loading valve w/ remote handle kit	<input type="checkbox"/> D-handle
<input type="checkbox"/> tee-deflector	<input type="checkbox"/> dry disconnect	<input type="checkbox"/> butterfly (Wet-R-Dri™) valves	<input type="checkbox"/> ball handle
<input type="checkbox"/> male NPT	<input type="checkbox"/> TTMA flange	<input type="checkbox"/> locking mechanism	<input type="checkbox"/> bucket hook
<input type="checkbox"/> other: _____		<input type="checkbox"/> loading arm handle	<input type="checkbox"/> safety breakaway
		<input type="checkbox"/> other: _____	
- i. Add-ons (check all that apply):

**Section 5: Site Limitations**

Providing the following information will help ensure that the loading arm performs as expected when in service.

**A: 65 degrees**  
**B: 24 degrees**



- a. Ceiling or roof height from riser pipe connection distance: \_\_\_\_\_
- b. Additional items being added by the customer (vapor hoses, drip buckets, hold-down chains, etc.) and estimated weight (pounds): \_\_\_\_\_

**Sketches/Notes:**

---



---



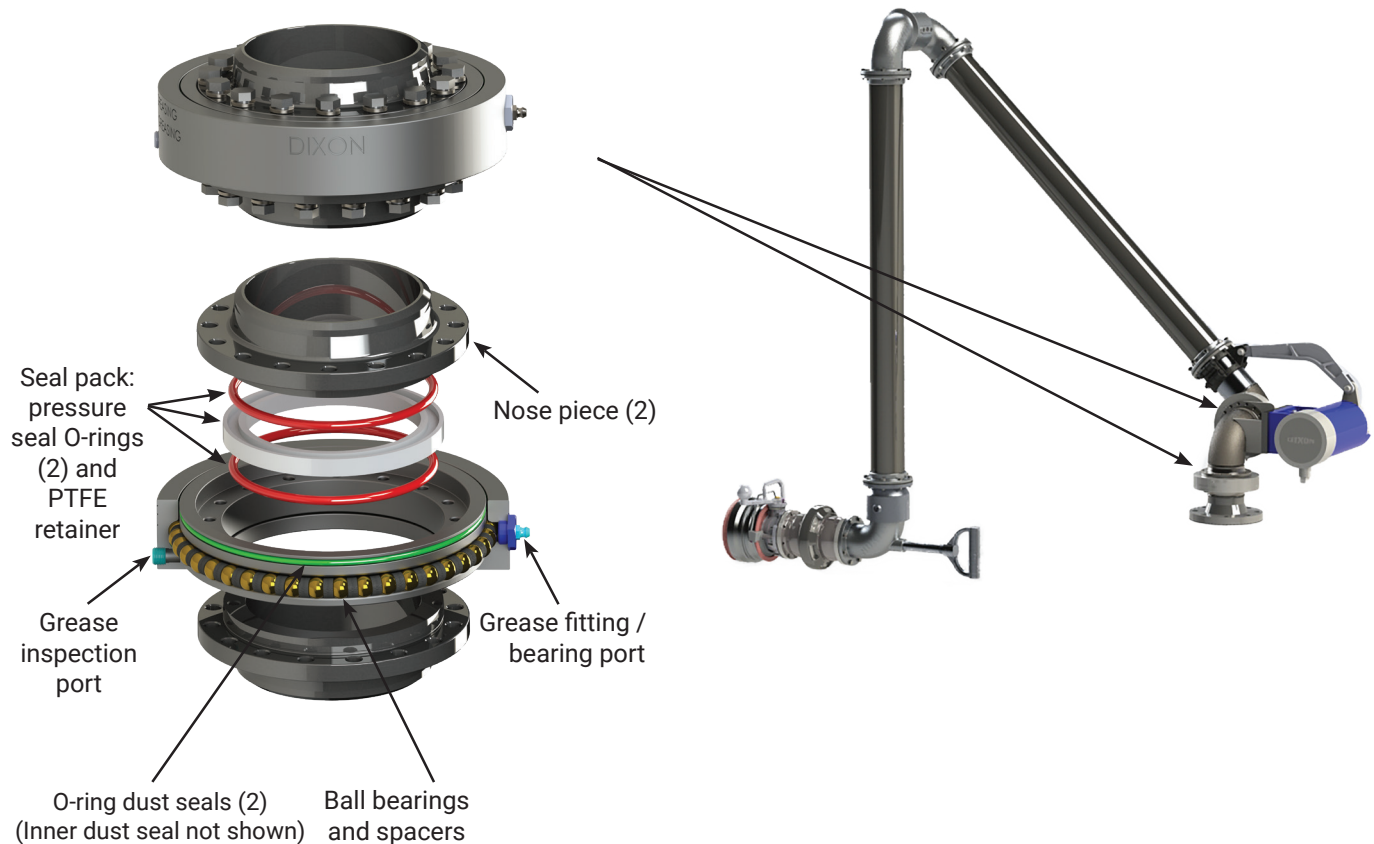
---



---

Custom options are available. Contact Dixon Specialty Products at 888.226.4673 or load-arms@dixonvalve.com.

### Split Flange Swivels



#### Applications

- For use in industries from petroleum, blending plants, petrochemical, refining, mining, distilling, paint plants, farm irrigation and fertilizing, wastewater treatment, food and beverage process equipment, marine, and many more

#### Sizes

- 2", 3", and 4"

#### Features

- Bearing pack design allows easy seal change without removing the ball bearings
- Simple maintenance: remove one nose piece, replace seal pack, and reinstall with little downtime
- In-stream seal separates the wetted area from the ball bearings, allowing for longer bearing pack life compared to conventional swivels
- Wide-set bearing race for higher moment loads
- Compact design for low-profile applications
- Full penetration weld

#### Materials

- Bearing pack: through hardened forged high-carbon alloy
- Material contact surfaces: stainless steel, carbon steel, or aluminum nose pieces
- Seals: FKM-A, PTFE, and more upon request

#### Specifications

- Pressure rating: up to **600 PSI**
- Standard temperature range with Baylast seals is **-30°F to 212°F (-34°C to 100°C)**; contact factory for other temperature requirements

#### Available options

- Swivel end configurations: 150 lbs. and 300 lbs. flanges, FNPT, MNPT, butt weld, TTMA, and others upon request



### O-Ring Swivel Joints

**Applications**

- Commonly used in aluminum loading/unloading arm applications

**Sizes**

- 1" - 4"

**Features**

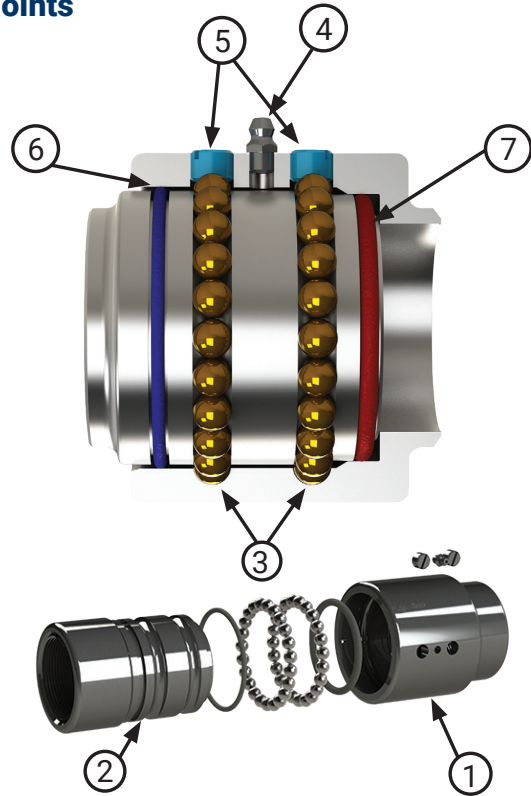
- O-ring pressure seal ensures a leak-proof seal and smooth rotation with lower torque
- Smooth moving seal for high-volume drum and tote loading
- Available working pressure ratings up to 1,000 PSI, based on material and end connections
- Available end connections include: 150 lbs. and 300 lbs. flanges, FNPT, MNPT, butt weld, TTMA, and others upon request
- End connections and materials offered may vary based on size, contact Dixon® for details

**Materials**

- Available materials include carbon steel, 316L stainless steel, aluminum, brass, and malleable iron

**Bill of Materials**

1. Body
2. Sleeve
3. Ball bearings
4. Grease fitting
5. Ball retainer screw
6. O-ring (dust seal)
7. O-ring (pressure seal)



### V-Ring Swivel Joints

**Applications**

- V-ring, also known as chevron packing, is a multiple lip seal known for its reliability and long life
- The three V-ring seals are designed to seal even under misalignment caused by race wear from years of service. This design results in longer time between service periods, increased up-time efficiencies, and lower maintenance costs.

**Sizes**

- 2" - 12"

**Features**

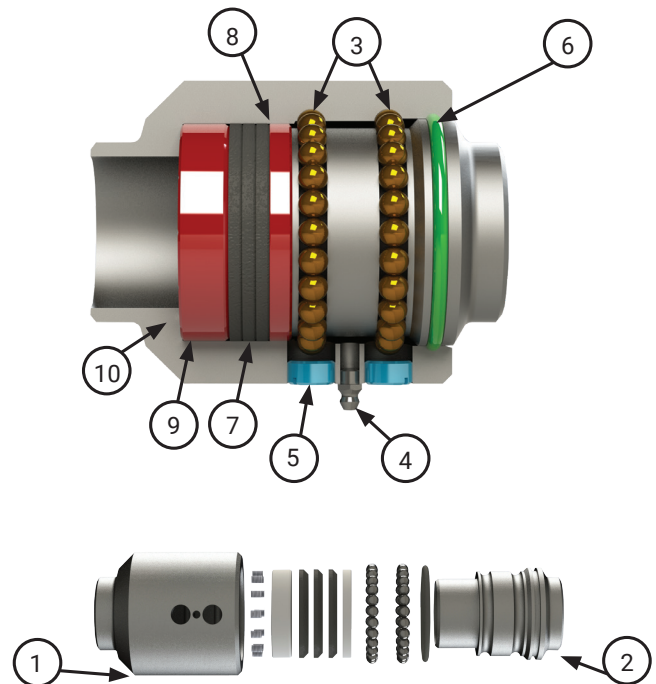
- Spring-loaded triple V-ring sealing system ensures a leak-proof seal at high or low pressure and extends seal life
- Swivels are shipped standard with the following:
  - Nitrile rubber pressure seals and dust seals
  - Carbon steel ball bearings
  - PTFE retainers in V-ring swivels
- Available working pressure ratings up to **1,000 PSI**
- End connections and details offered may vary based on size, contact Dixon® for details

**Materials**

- Available materials include carbon steel, 316L stainless steel, and aluminum

**Bill of Materials**

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



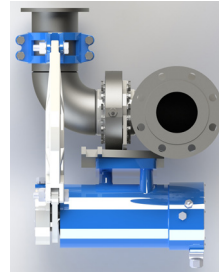
**Base Swivels with Counterbalance**

**Sizes**

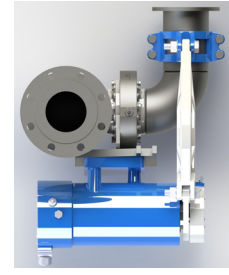
- Carbon steel V-ring: 3", 4", and 6"
- Carbon steel split flange: 2", 3", and 4"
- 316 stainless steel split flange: 2", 3", and 4"

**Features**

- Torsion spring counterbalance offered in right or left hand
- Style 50 or 70 available for base swivels based on configuration and flow of media
- Connecting arm and clamp included



left hand style



right hand style

**Materials**

- Base swivel materials offered: carbon steel and 316 stainless steel
- Available seals include: nitrile rubber, FKM, low temperature FKM, PTFE, EPDM, or food-grade nitrile

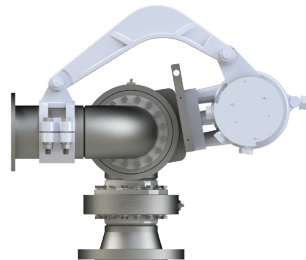
**Specifications**

- Standard configurations below include carbon steel split flange base swivel, ESB1 torsion spring counterbalance, 150# flange inlet, and TTMA flange outlet
- Connection options include: 150# flange, 300# flange, and TTMA flange
- Other options available upon request

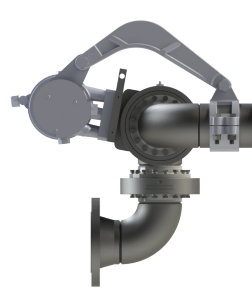
Orientation	Seals	Counterbalance Spring	3" Part #	4" Part #
UFRH	Nitrile rubber	A	AB3G0000000000	AB4G0000000000
		B	BB3G0000000000	BB4G0000000000
		C	CB3G0000000000	CB4G0000000000
	FKM	A	AV3G0000000000	AV4G0000000000
		B	BV3G0000000000	BV4G0000000000
		C	CV3G0000000000	CV4G0000000000
UFLH	Nitrile rubber	E	EB3G0000000000	EB4G0000000000
		F	FB3G0000000000	FB4G0000000000
		G	GB3G0000000000	GB4G0000000000
	FKM	E	EV3G0000000000	EV4G0000000000
		F	FV3G0000000000	FV4G0000000000
		F	FV3G0000000000	FV4G0000000000
		G	GV3G0000000000	GV4G0000000000



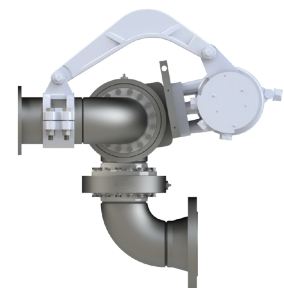
upfeed right-hand (UFRH)



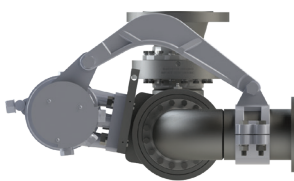
upfeed left-hand (UFLH)



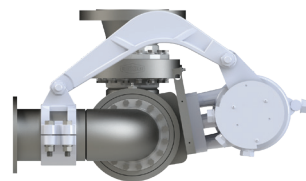
horizontal upfeed right-hand (HUF RH)\*



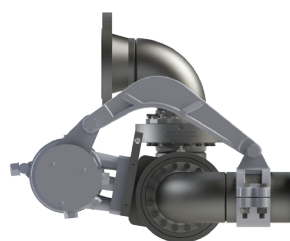
horizontal upfeed left-hand (HUFLH)\*



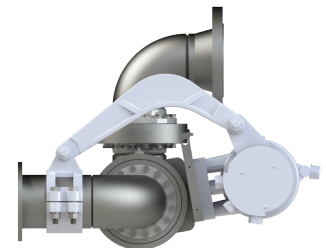
downfeed right-hand (DFRH)\*



downfeed left-hand (DFLH)\*



horizontal downfeed right-hand (HDFRH)\*



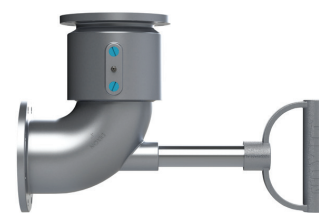
horizontal downfeed left-hand (HDFLH)\*

\*Not listed in chart above, contact Dixon® for details

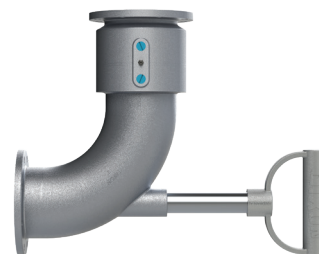
## Loading Arm Swivels

**Features**

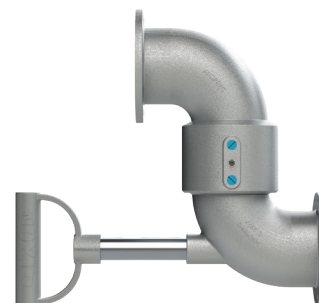
- TTMA-flanged aluminum loading arm swivel
- Optional D-handle or ball handle is used to guide the connection of the API load coupler to the adapter on the tank truck
- Optional long radius elbow improves the flow into the API load coupler and provides spacing between the load arm and the tank truck
- Can be used with flange extensions and other TTMA flanged accessories
- Available seals include: nitrile rubber, FKM, low temperature FKM, EPDM, or food-grade nitrile



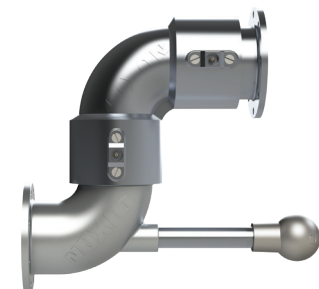
style 30, short radius



style 30, long radius



style 40



style 50

Description	Handle	Seal	3" Part #	4" Part #
style 20	no handle	Nitrile rubber	320TFXTFAL00000	420TFXTFAL00000
		FKM	320TFXTFAL11000	420TFXTFAL11000
style 30 short radius	D-handle	Nitrile rubber	33HTFXTFAL00000	43HTFXTFAL00000
		FKM	33HTFXTFAL11000	43HTFXTFAL11000
	ball handle	Nitrile rubber	33BTFXTFAL00000	43BTFXTFAL00000
		FKM	33BTFXTFAL11000	43BTFXTFAL11000
	no handle	Nitrile rubber	330TFXTFAL00000	430TFXTFAL00000
		FKM	330TFXTFAL11000	430TFXTFAL11000
style 30 long radius	D-handle	Nitrile rubber	---	43HTFTFLAL00000
		FKM	---	43HTFTFLAL11000
	ball handle	Nitrile rubber	---	43BTFTFLAL00000
		FKM	---	43BTFTFLAL11000
	no handle	Nitrile rubber	---	430TFTFLAL00000
		FKM	---	430TFTFLAL11000
style 40	D-handle	Nitrile rubber	34HTFXTFAL00000	44HTFXTFAL00000
		FKM	34HTFXTFAL11000	44HTFXTFAL11000
	ball handle	Nitrile rubber	34BTFXTFAL00000	44BTFXTFAL00000
		FKM	34BTFXTFAL11000	44BTFXTFAL11000
	no handle	Nitrile rubber	340TFXTFAL00000	440TFXTFAL00000
		FKM	340TFXTFAL11000	440TFXTFAL11000
style 50	D-handle	Nitrile rubber	35HTFXTFAL00000	45HTFXTFAL00000
		FKM	35HTFXTFAL11000	45HTFXTFAL11000
	ball handle	Nitrile rubber	35BTFXTFAL00000	45BTFXTFAL00000
		FKM	35BTFXTFAL11000	45BTFXTFAL11000
	no handle	Nitrile rubber	350TFXTFAL00000	450TFXTFAL00000
		FKM	350TFXTFAL11000	450TFXTFAL11000

## Loading Arm Swivel Replacement Parts

Description	Part #
1" schedule 80 aluminum nipple	ATN100X7
ball-style handle	100BHAN-AL
D-Style heavy-duty shovel handle	100DHAN-AL
Nitrile rubber seal kit	4RK0BU
FKM-A seal kit	4RKOVIVI



## Loading Arm Legs/Spools and Hoses



**Sizes**

- 1-1/2", 2", 3", 4", and 6"

**Features**

- Available connections include: TTMA flange, 150# flange, 300# flange, MNPT, FNPT, and weld end
- Additional options include: ports, jump sizes, handle, and bucket hooks

**Materials**

- Pipe: carbon steel, 316 stainless steel, and aluminum
- Hose: stainless steel metal and composite

## Swivel Handles



100\*HAN-AL



ATN100X7

**Feature**

- Threads into the elbow of a swivel

**Material**

- Aluminum

Description	Part #
ball handle for loading arm swivels	100BHAN-AL
D-handle for loading arm swivels	100DHAN-AL
1" Schedule 80 nipple 7" overall length	ATN100X7

## Top Loading Diffusers and T-Deflectors

**Application**

- Installed on drop leg of a top load loading arm to distribute media evenly to help reduce splash



diffuser

**Features**

- Diffusers distribute media evenly 360°
- T-deflectors distribute media to the sides of the tank, railcar, or tote
- Female NPT threaded

**Materials**

- Aluminum and stainless steel



T-deflector

Size	Description	Part #
2"	aluminum T-deflector	200-TLTD-AL
	stainless steel T-deflector	200-TLTD-SS
3"	aluminum 360° diffuser	TLD-300S
	aluminum T-deflector	300-TLTD-AL
	stainless steel T-deflector	300-TLTD-SS
4"	aluminum 360° diffuser	TLD-400S
	aluminum T-deflector	400-TLTD-AL
	stainless steel T-deflector	400-TLTD-SS

## Split Flange Swivel Locking Kits

### Applications

- Locks the swivel into a horizontal position
- Not to be used vertically

### Feature


- Single or multiple hole design

### Material

- Carbon steel

Description	Part #
locking single hole T-handle kit for split flange swivel joints	LA-SFLOCKTHK-S
locking multiple hole T-handle kit for split flange swivel joints	LA-SFLOCKTHK-M



**Warning:** This item is only intended to restrain the rotation during storage and is limited to a maximum of 12 in-lbs. of torque. 

## Locking Mechanism / Lock Bar Assembly

### Application

- Used in top loading applications to help reduce sudden arm movement caused by pressure changes
- Contact Dixon® for more details

### Material

- Carbon steel



## Loading Arm Support Braces

### Application

- Support the load on the arm for applications with a long reach or high moment load

### Features

- Pillow block bearing support with turnbuckle for easy adjusting
- Clamp included for easy loading arm attachment
- Contact Dixon® for more details

### Material

- Carbon steel



## Counterbalances

### Features

- Includes pivot arm (shown) and spring to help prevent possible pinch point
- Easy-adjust tension bolt, carbon steel housing

Description	Part #
light-duty white torsion spring, right hand	ESB1/A
medium-duty yellow torsion spring, right hand	ESB1/B
heavy-duty red torsion spring, right hand	ESB1/C
light-duty black torsion spring, left hand	ESB1/E
medium-duty grey torsion spring, left hand	ESB1/F
heavy-duty orange torsion spring, left hand	ESB1/G



ESB1/A

## Counterbalance Connecting Arm Clamps

### Feature

- Clamps link counterbalance connecting arm to the primary leg

### Materials

- 2" clamp: stainless steel
- 3" and 4" clamp: iron

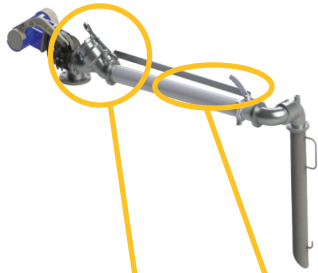
Size	Description	Part #
2"	counterbalance connecting arm clamp for 2" pipe	ESB-CLAMP-2
3"	counterbalance connecting arm clamp for 3" pipe	ESB-CLAMP-3
4"	counterbalance connecting arm clamp for 4" pipe	ESB-CLAMP-4



ESB-CLAMP-3



## Top Loading Valves and Accessories



### Applications

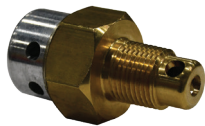
- Manual or remote controlled valve mounts before the loading arm horizontal leg to control flow
- Used in top loading fuels and other low viscosity media

### Features

- Adjustable closure rate
- Manually operated "Deadman" style with spring-loaded handle
- Optional remote-handle available

### Materials

- Valve: aluminum
- Vacuum breaker body: brass
- Vacuum breaker housing: aluminum
- Seals: FKM



Size	Description	Part #
2"	top loading valve with FNPT and vacuum breaker	TLV-200FTVBVIAL
2"	top loading valve with TTMA flanges and vacuum breaker	TLV-200TFVBVIAL
3"	top loading valve with TTMA flanges and vacuum breaker	TLV-300TFVBVIAL
4"	top loading valve with TTMA flanges and vacuum breaker	TLV-400TFVBVIAL
2"	valve remote, handle, and bracket kit with bar	TLRVK-200X58AL
3"	valve remote, handle, and bracket kit with bar	TLRVK-300X58AL
4"	valve remote, handle, and bracket kit with bar	TLRVK-400X58AL
2"	valve remote, handle, and bracket kit	AT1350-2
3"	valve remote, handle, and bracket kit	AT1350-3
4"	valve remote, handle, and bracket kit	AT1350-4
1/2"	vacuum breaker, BSP threads	VB-050-BSP <sup>1</sup>
1/2"	vacuum breaker, NPT threads	VB-050-NPT

<sup>1</sup> Replacement vacuum breaker for top loading valve.

## TTMA-Series Flange Adapters

### Features

- Simply and easily converts threaded components to a standard TTMA flange configuration
- Solid cast lightweight aluminum design is more durable than welded fabrications
- Design improves flow through adapter
- Compact size reduces the overall space needed to install

### TTMA Flange x Female NPT Adapters



TTMA Flange	Female NPT	Overall Length	Aluminum Part #
4"	3"	2-1/2"	TTF4AL-3FT
	4"	2-1/2"	TTF4AL-4FT

### TTMA Slip-on Socket Weld Flange



TTMA Flange	Pipe Size	356T6 Aluminum Part #
3"	3"	TTF300SP
4"	4"	TTF400SP



### TTMA Flange Gaskets

Size	O.D.	I.D.	Thick.	Material	Part #
3"	5-5/8"	3-1/2"	1/8"	Cork / Nitrile rubber	300GTTFCB
	5-15/16"	3-1/4"	5/32"	PTFE envelope with Klinger filler	300GTTFTK
	5-5/8"	3-1/2"	1/8"	Klingsil® C-4300	300GTTFK
	5-29/32"	3-1/2"	3/32"	PTFE with fiber core	40321TF
	5-5/8"	3-5/8"	1/8"	Baylast	300GTTFBL
4"	6-5/8"	4-9/16"	1/8"	Cork / Nitrile rubber	400GTTFCB
	6-15/16"	4-1/4"	5/32"	PTFE envelope with Klinger filler	400GTTFTK
	6-5/8"	4-9/16"	1/8"	Klingsil C-4401	400GTTFK
	6-7/8"	4-9/16"	3/32"	PTFE with fiber core	40322TF
	6-5/8"	4-5/8"	1/8"	Baylast	400GTTFBL



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

### Betts Wet-R-Dri™ Valves

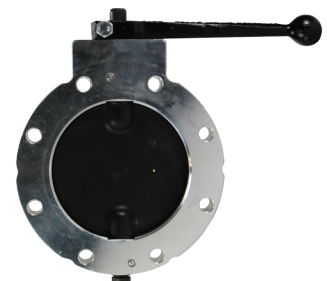
**Applications**

- Designed for handling liquid, gaseous, or dry products

**Features**

- Positive stop in the open and closed position
- Detent spring and ball assist in holding the disc in the open and closed position

Size	Description	Part #
3"	TTMA Wet-R-Dri valve with manually operated detent handle	WD301ALVB
3"	TTMA Wet-R-Dri valve with manually operated metering handle	WD304ALVB
4"	TTMA Wet-R-Dri valve with manually operated detent handle	WD401ALVB
4"	TTMA Wet-R-Dri valve with manually operated metering handle	WD404ALVB



WD401ALVB

### TTMA Flanged Sight Flow Indicators

**Features**

- TT3ASG-ETH and TT4ASG-ETH for use with ethanol
- 5201-SFI for use with gasoline and diesel, up to E100 and B100 biofuels
- Tank truck flange gaskets and dimensional information at dixonvalve.com

**Material**

- Acrylic
- Baylast seals (in 5201-SFI only)

**Specifications**

- Maximum flange bolt torque is 200 in-lbs.
- Due to the proprietary blending of petroleum products, Dixon recommends that the thermoplastic tubing and the gaskets be immersion tested in the product to be handled to ensure compatibility
- Not compatible with crude oil

Size	Nominal Width	Part #
3"	1-3/4"	TT3ASG-ETH
4"	1-3/4"	TT4ASG-ETH
4"	3-1/4"	5201-SFI



TT4ASG-ETH

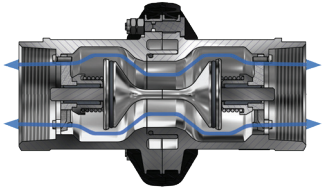


5201-SFI

## Safety Breakaways

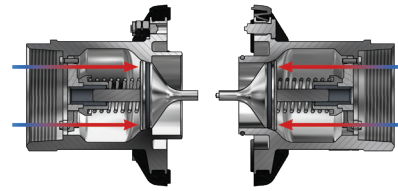
### How it Works

Safety break-away couplings have three external breaking 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 force 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 an O-ring seal.



**AFTER** emergency disconnect

When the safety break-away couplings separate, the valves are able to close. The two valves close rapidly, minimizing exposure to personnel and the environment.

## TTMA Flanged Breakaway Coupling

### Application

- Installs between an API coupler and loading arm

### Features

- Minimizes spillage and damage associated with driveaway and pull-away incidents
- Passive security against situations where a hose or loading arm could be subjected to inadvertent excessive loads
- Coupling automatically disconnects and closes the valves under excessive loads
- High flow rate/low pressure drop
- FKM/FPM is standard seal

### Specification

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



Size	Material	Part #
4"	aluminum	SBC400ALTTMA
4"	aluminum - compact version	SBC400ALTTMACP

## 5900 -Series Safety Breakaway Coupling

### Application

- Designed to protect loading arms and hoses used in petroleum loading applications

### Features

- Designed to shear and separate protecting the loading arm or hose and preventing spillage of liquid product
- Sheared bolts are replaceable allowing the fitting to be reassembled and put back in service
- Poppet design holds open permitting low pressure drop flow through the coupling, should the coupling shear as a result of a drive away, the internal poppets will snap shut preventing spillage and loss of product
- Compact, fits behind any API loading coupler
- PTFE seal option is typically used in fuel applications to resist long term exposure to fuel additives
- Break force varies with line pressure, refer to the Maintenance & Operating Instructions for 5900-Series Breakaway Couplings

### Materials

- Seal material options include nitrile rubber, FKM-GFLT, and PTFE
- Aluminum A356T6

Size	Seal Material	Part #
4"	nitrile rubber	5900ALBN400A
	FKM encapsulated PTFE	5900ALTV400A
	FKM-GFLT	5900ALVG400A



5900ALBN400A

## TTMA Flange Extensions

### Applications

- Used to connect an API coupler to a loading arm
- TTMA flange extension provides additional clearance near swivels, elbows, and valves
- Extension with groove provides a specified parting point to prevent excessive damage to the loading arm

### Features

- Adds a 6" space to allow for clearance between the loading arm and the tank truck
- Color coded extensions are offered for product identification
- Other colors available upon request. Consult Dixon® for more details

### Materials

- Aluminum and powder coated aluminum

Size	Description	Part #
4"	TTMA flange extension	TETF4AL
	TTMA flange extension with groove	TETFG4AL
	TTMA flange extension with 1/2" female NPT port	TETF4ALFP50
	TTMA flange extension with 3/4" female NPT port	TETF4ALFP75
	TTMA flange extension; color-coded white	TETF4AL-W
	TTMA flange extension; color-coded blue	TETF4AL-B
	TTMA flange extension; color-coded green	TETF4AL-G
	TTMA flange extension; color-coded red	TETF4AL-R
	TTMA flange extension; color-coded yellow	TETF4AL-Y
	TTMA flange extension; color-coded orange	TETF4AL-O
	TTMA flange extension; color-coded black	TETF4AL-BLK
	TTMA flange extension; color-coded combination green and yellow	TETF4AL-G/Y
	TTMA flange extension; color-coded combination blue and white	TETF4AL-B/W
	TTMA flange extension; color-coded combination blue and red	TETF4AL-B/R
	TTMA flange extension; color-coded combination white and red	TETF4AL-W/R
	TTMA flange extension; color-coded combination red, white, and blue	TETF4AL-R/W/B



TETF4AL



TETFG4AL



TETF4AL-W



TETF4AL-B



TETF4AL-G



TETF4AL-R



TETF4AL-Y



TETF4AL-G/Y



TETF4AL-R/W/B

## TTMA Flange Extension Reducing Spools

Size	Description	Material	Part #
3" x 4"	TTMA flange extension reducing spool	aluminum	TETF3X4AL
	TTMA flange extension reducing spool	carbon steel	TETF3X4CS
	TTMA flange extension reducing spool	stainless steel	TETF3X4SS



TETF3X4AL

## 5500-Series API Couplers



Normal wear and tear items (including seals) not covered<sup>1</sup>

### Applications

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

### Features

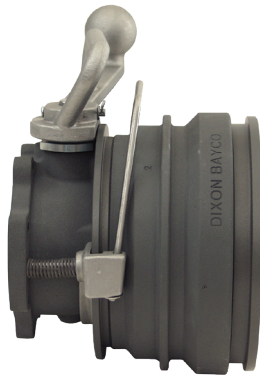
- Locking five-cam design provides easy alignment and tight connection
- Modular design allows various face seal combinations to be compatible with different alternative fuels, performance levels, and applications
- Replaceable nose seal can be changed without removing coupler from loading arm
- Fully interlocked collar prevents fitting from opening when disconnected and from being disconnected while opened
- 4" TTMA inlet mounting flange connection
- Ball-end handle for easy and comfortable operation
- No special tools needed for maintenance

### Materials

- Body: 356 T6 aluminum anodized hard-coat
- Cam: stainless steel
- Poppet: 356T6 aluminum anodized hard-coat
- Seals: FKM-GFLT standard; Baylast, EPDM, Fluoroelastomer, FKM-B, HiFluor<sup>®</sup>
- Link, shaft, pin, crank: hardened 17-4PH stainless steel
- Handle: aluminum, stainless steel

### Specifications

- Seal operating temperature:
  - Baylast: **-35°F to 212°F (-37°C to 100°C)**
  - EPDM: **-20°F to 250°F (-28°C to 121°C)**
  - FKM-B: **-10°F to 400°F (-23°C to 204°C)**
  - FKM-GFLT: **-35°F to 400°F (-34°C to 204°C)**
  - Fluorosilicone: **-50°F to 350°F (-45°C to 176°C)**
  - HiFluor: **-15°F to 400°F (-26°C to 204°C)**
- Flow rate: 600 GPM at **3 PSI** pressure drop; maximum flow rate: 1,000 GPM
- Fully compliant with API RP1004:2003 specifications
- Maximum allowable working pressure: **150 PSI**
- Surge pressure: **350 PSI**



5500-Series



Replaceable nose seal:  
Replace without removal from the loading arm



5500RK24

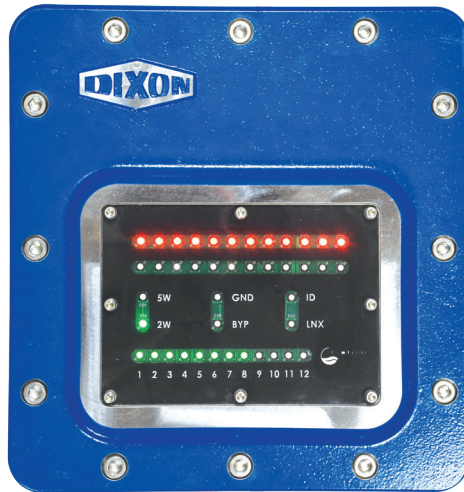
Description	Seal Material	Part #	Complete Repair Kit <sup>1</sup> Part #	Replaceable Nose Seal Part #
4" API coupler	Baylast	5500BL	5500RK2	5500RK8
	EPDM	5500E	5500RK3	5500RK9
	FFKM	5500K	5500RK6	5500RK12
	FKM-B	5500B	5500RK1	5500RK7
	FKM-GFLT	5500G	5500RK5	5500RK11
	Fluorosilicone	5500F	5500RK4	5500RK10
	HiFluor	5500H	5500RK19	5500RK20

<sup>1</sup> Complete repair kit contains all the seals, pins, and cotter keys to replace all the seals.  
NOTE: Stainless steel handles and locking handle kit options are available please contact Dixon for a quote.

### API Coupler Repair Kits

Description	Part #
small parts kit for 5500 series rack coupler	5500RK21
aluminum replacement handle kit with bolt and nut	5500RK22
stainless steel replacement handle kit with bolt and nut	5500RK23
locking handle kit	5500RK24
aluminum short handle replacement kit with bolt and nut	5500RK25
replacement poppet kit with links, pins, and cotter pin	5500RK26
replacement seal cylinder - no seal	5500RK27
replacement FKM-GFLT bearing kit for 5500	5500RK51

## Overfill Protection - Rack Monitor



FT7000

FT7000  
Rack MonitorFT7500  
Junction BoxFT600  
Rack Cord

### Application

- Installed on the gantry to control the loading process of petroleum fuels or other hazardous liquid into cargo tanks

### Features

- Automatically switches between 2-wire or 5-wire type sensors
- Compatible with analog 2-wire thermistor type sensors
- Redundant relay outputs prevent single point failures
- Data management via RS485 port
- Wireless bypass key system
- Ground verification
- Reads trailer identification modules

### Approvals

- Meets API RP1004 and EN13922 standards
- Suitable for Class I, Division 1, Group CD and Class I, Zone 1, Group IIB
- Rated to IP66



## API-Compatible Systems



FT7500



FT7501



FT7502



FT600



FT620



FT600P  
with 13-pin plastic



FT620P  
with J560 aluminum

### Features

- Plug is color-coded (5-wire optic) blue or (2-wire optic/thermistor) green
- Highly visible orange/blue safety jacket to meet trip hazard requirements
- Cord is bonded mechanically and resistant to abrasion and oil
- Cord sets are interchangeable with Scully and Civacon
- All wiring is compatible with standard Scully color codes and wiring number configurations
- The 9-pin conductor is shielded to be compatible with Scully VIP system
- For mating socket, consult Dixon®

### Materials

- Plug body: reinforced nylon
- Button contacts: 316 stainless steel
- All other hardware: stainless steel

### Order Guide

Part #	Rack Monitor Description
FT7000	rack monitor, auto switch between 2-wire / 5-wire sensors, ground verification, and trailer identification modules; API RP 1004 / EN13922
<b>Safe-T Connect Junction Box Description</b>	
FT7600	8-pin, 2J, green API plug, and 30' safety orange coiled cable
FT7600-4	8-pin, 4J, green API plug, and 30' safety orange coiled cable
FT7600C	10-pin, 4J, green API plug, and 30' safety orange coiled cable
FT7600P	8-pin, 2J, green API plug, 30' safety orange coiled cable, and Plug-n-Play connector
FT7600S	8-pin, 2J, green API plug, and 20' safety orange straight cable
FT7620	6-pin, 3J, blue API plug, and 30' blue coiled cable
FT7620P	6-pin, 3J, blue API plug, 30' blue coiled cable, and Plug-n-Play connector
FT7620S	6-pin, 3J, blue API plug, and 20' blue straight cable
FT7630	10-pin, 4J, black plug per EN13922, and 30' blue shielded coiled cable
FT7630D	10-pin, 4J, black plug per EN13922, and 30' blue shielded coiled cable with Dixon Bayco® break-away
<b>Junction Box Description</b>	
FT7500	single cord junction box
FT7501	dual cord junction box
FT7502	junction box with Cole Hersee yellow 13-pin break-away
FT7503	junction box with D-type pigtail break-away
<b>Rack Cord Description</b>	
FT600	8-pin, 2J, API thermistor plug, and 30' safety orange coiled cable
FT600-4	8-pin, 4J, API thermistor plug, and 30' safety orange coiled cable
FT600C	10-pin, 4J, API thermistor plug, and 30' safety orange coiled cable
FT600P	8-pin, 2J, API thermistor plug, and 30' safety orange coiled cable with 13-pin Plug-n-Play
FT600S	8-pin, 2J, API thermistor plug, and 20' safety orange straight cable
FT620	6-pin, 3J, API optic plug, and 30' blue coiled cable
FT620P	6-pin, 3J, API optic plug, 30' blue coiled cable and Plug-n-Play connector
FT620S	6-pin, 3J, API optic plug, and 20' blue straight cable
FT630	10-pin, 4J, black plug per EN13922, and 30' blue shielded coiled cable
FT630D	10-pin, 4J, black plug per EN13922, 30' blue shielded coiled cable, and Dixon Bayco break-away



## Vapor Recovery Couplers

### Features

- "Floating bridge" poppet design allows optimal flow
- Machined hose shank ensures easier insertion into hose and better sealing
- Durable and easy-to-couple
- Big wings ensure contact with air interlock button on tanker, helping prevent drive-offs
- Change poppet seal without removing the coupler from the hose
- Secure to hose with traditional band clamps or built-in crimp collar
- 4" MNPT version allows for either cam and groove or threaded flange option
- 45° angle version relieves stress common to vapor hoses, swivel version also available

### Materials

- Coupler: aluminum
- Seal: nitrile rubber
- Cam arms: stainless steel

Description	Part #
4" coupler x 4" hose shank	VR4040CS-AL
4" coupler x 3" 45° hose shank	VR4030CS-AL45
4" coupler x 4" 45° hose shank	VR4040CS-AL45
4" coupler x 4" 45° hose shank swivel	VR4040CS-ALS45
4" coupler x 4" MNPT connection	VR4040CS-4MNPT
4" coupler x 4" female NPT	VR4040CS-4FNPT
4" coupler x 3" hose shank	VR4030CS-SH
seal repair kit	VR4040CSRK1
cam arm repair kit	VR4040CSRK2



VR4040CS-AL



VR4030CS-AL45 and  
VR4040CS-AL45



VR4040CS-ALS45



VR4040CS-4MNPT  
(TTF4AL-4FT sold separately)

## Vapor Recovery Plates and Splash Guards

### Application

- Vapor recovery plates are used to prevent unwanted emissions and to recover vapors that occur when products are being top loaded
- Splash guards are also used in top-loading applications, to reduce unwanted splash of products such as asphalt or other media while being loaded

### Sizes

- Designed to work with 2", 3", and 4" loading arms

### Features

- Design based on customers' needs and can be highly customized
- Available features include: threaded NPT ports, viewing ports, and handles
- Available connections include: cam & groove fittings, TTMA flanges, NPT threaded connections

### Materials

- Vapor plate available materials include: aluminum and stainless steel
- Vapor plate gasket available materials include: nitrile rubber and FKM
- Splash guard available materials include: aluminum



vapor recovery plate



splash guard



---

## Limited Warranty

DIXON VALVE & 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) 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 brochure is intended as a product offering. It is not intended to be a user or technical manual. Information in this brochure is subject to change without notice. All users and distributors of products sold through this brochure 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.

All Dixon products are shipped in cartons with the following warning:

**"WARNING:** This product contains lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm."

## Trademark

Delrin® and Zytel® are registered trademarks of E.I. duPont Nemours and Company.

Kalrez® is a registered trademark of DuPont Dow Elastomers.

All other trademarks appearing in the Dixon illustrated product list are the property of their respective owners.

## Copyright

Copyright © 2023 by Dixon Valve & Coupling Company, LLC

All rights reserved. This book is copyrighted material. Use, reproduction or copying of it by anyone other than Dixon® is strictly forbidden without its express written consent.

NOTE: Reasonable care has been taken in preparing this catalog. Dixon Valve & Coupling Company, LLC reserves the right to make corrections.

