

# LAND LOADING SYSTEMS

**EMICO  
WHEATON**

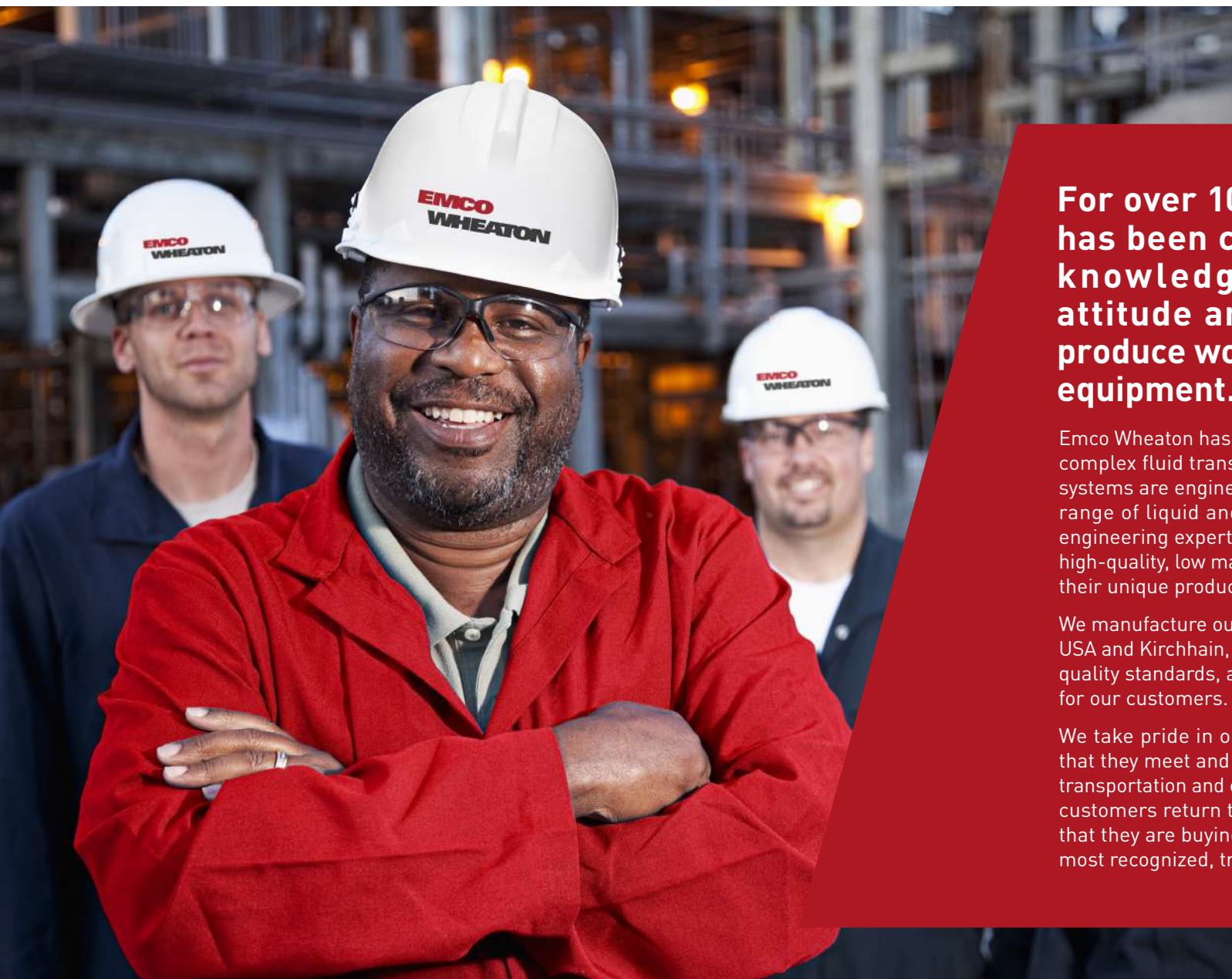
EXPERIENCE THE FUTURE OF SAFE & EFFICIENT  
FLUID TRANSFER SOLUTIONS



Turn to the trusted Market Leader!

# CONTENTS

|                                    |          |                                          |           |
|------------------------------------|----------|------------------------------------------|-----------|
| <b>01   Company Profile</b>        | <b>3</b> | <b>07   Bottom Loading Arms</b>          | <b>20</b> |
| <b>02   Land Loading Arms</b>      | <b>4</b> | E2033 Bottom Transfer Loading Arm        | 21        |
| <b>03   Chemical Loading Arms</b>  | <b>5</b> | E2121 A-Frame Bottom Loading Arm         | 22        |
| <b>04   Petroleum Loading Arms</b> | <b>6</b> | E2313 A-Frame Loaders                    | 23        |
| <b>05   Food Loading Arms</b>      | <b>7</b> | E2304 Bottom Hose Loaders                | 24        |
| <b>06   Top Loading Arms</b>       | <b>8</b> | E2386 Bottom Loading Station             | 26        |
| E2022 Unsupported Boom Loader      | 9        | E2573 Bottom Hose Loading Arm            | 27        |
| E2025 Supported Boom Loader        | 10       | <b>08   Speciality Loading Arms</b>      | <b>29</b> |
| E2110 Fixed Reach Loader           | 11       | Drum/Tote Loading Arm                    | 30        |
| E2112 Variable Reach Loader        | 14       | E2123 Long-Reach Bottom                  | 31        |
| LPG Bullhorn Loader                | 17       | <b>09   LLS Accessories</b>              | <b>32</b> |
| E2632 Parallel Loading Arm         | 18       | Accessories & Repair Kits                | 33        |
|                                    |          | Load Valves                              | 34        |
|                                    |          | Swivel Joints                            | 35        |
|                                    |          | <b>10   Aftermarket &amp; Service</b>    | <b>36</b> |
|                                    |          | <b>11   Dedicated to quality</b>         | <b>37</b> |
|                                    |          | <b>12   Committed to the environment</b> | <b>38</b> |



**For over 100 years, Emco Wheaton has been combining expertise and knowledge, with an innovative attitude and unmatched skills; to produce world leading fluid transfer equipment.**

Emco Wheaton has been the trusted market-leader in supplying complex fluid transfer systems for over a century. Our loading systems are engineered to safely and efficiently transfer a wide range of liquid and gas products. Using our experience and engineering expertise, we provide our customers with reliable, high-quality, low maintenance solutions that are tailored to solve their unique product transfer challenges.

We manufacture our loading arms at our plants in Houston, TX., USA and Kirchhain, Germany using the highest levels of care and quality standards, allowing us to provide class leading products for our customers.

We take pride in our products, and work tirelessly to ensure that they meet and exceed the growing demands of the oil, gas, transportation and chemical industries we serve. That is why our customers return to us, time and again, safe in the knowledge that they are buying the best products, from one of the world's most recognized, trusted, and well respected brands.

# 02 LAND LOADING ARMS

**Emco Wheaton offers a comprehensive range land loading arms, loading systems, and accessories that are engineered to efficiently load and unload a variety of liquid and gas products, from a range of containers and vessels.**

The safety and integrity of our customers operations are our top priority; and our land loading systems are specifically designed to reflect that by providing the ultimate quality, reliability, and flexibility.

Using our experience and expertise to deliver loading solutions that provide our customers with real world benefits. From maximizing safety and profitability, to minimizing maintenance and downtime; our range of products are designed to help our customers get the most out of their operations.

We understand that each customer is unique, and that each operation has a specific set of needs and challenges. That is why we partner with our customers, working closely with them to deliver a solution that is tailored to meet the demands of the specific demands; regardless of the industry or application.

# 03 CHEMICAL LOADING ARMS

**Our specialist chemical loading arms are capable of handling a range of chemicals and biofuels, from virtually any type of container.**

Engineered to ensure zero leakage and minimal product loss, our chemical loading arms deliver real world savings; regardless of the chemical liquid or gas being transferred. Each loading arm is designed to provide maximum safety, durability, and flexibility; allowing our customers to lower their operational costs, without compromising on performance.

Available in a range of materials such as carbon steel, aluminium, and stainless steel, as well as options such as PTFE lining, vapor return lines, and heating systems, our loading arms are ideal for the transfer of:

- Ethanol
- Alcohol
- Sulfuric Acid
- Sodium
- Hydroxide
- Hydrochloric Acid
- Oil
- Butane
- Propane
- Corn Syrup
- Acids
- Base
- Solvents

As well as a range of technical gases such as anhydrous ammonia, molten sulfur, asphalt, sodium hydroxide, hydrochloric, nitric, hydrofluoric, fatty acid, resins, styrene, propylene, aqua ammonia, pygas, tall oil, and chlorine.

# 04 PETROLEUM LOADING ARMS

Emco Wheaton offers a range of top loading arms, bottom loading arms, and couplers that are tailored to meet the rigorous demands of petroleum loading applications.

Manufactured from the highest quality materials, our petroleum loading arms and accessories are designed to maximize safety, increase efficiency, and eliminate product loss; all while reducing maintenance costs and providing the lowest Total Cost of Ownership possible.

Working together, our products help our customers safely and efficiently load and unload a wide variety of petroleum products, including:

- Petrol
- Diesel
- Aviation Fuel
- Heavy Fuel Oil
- Liquefied Petroleum Gas (LPG)
- Petrochemical Feedstock
- Biofuel

# 05 FOOD LOADING ARMS

Emco Wheaton's range of loading arms and accessories for food, beverage, and pharmaceutical product transfer applications are designed to meet the strictest food safety and quality standards and guidelines.

Manufactured from high-quality, food grade materials; each loading arm is engineered to minimize product loss, maximize safety, and eliminate the risk of contamination; helping our customers to meet both their safety and efficiency goals.

Available in a range of sizes from 2" to 6", at temperatures of up to 300°C, and pressures of up to 40 bar; our range of loading arms are the ideal way to safely and efficiently transfer a range of food, beverage, and pharmaceutical liquid and bulk products, including:

- Flours
- Maple Syrup
- Salt
- Starch
- Sugar
- Lactose
- Cacao
- Chocolate Chips
- Wine
- Spirits / Whisky Loading Arms
- Beer

# 06 TOP LOADING ARMS

Emco Top Loading Arm systems are especially designed for top loading of road or rail tankers using the manhole or any kind of fixed connection like couplers.

Because of robust and high quality design of swivel joints and the precise loading arm balancing handling of the loading arm is very convenient. The loading arms offer a long life time under high frequent conditions as well as further numerous benefits:

- Multiple balancing systems
- Various numbers of accessories
- Various numbers of safety equipment
- Arms can be equipped with different heating systems
- PTFE lined version

# TOP LOADING ARMS

## E2022 UNSUPPORTED BOOM LOADER

### 5 year limited maintenance on D2000 World Series swivel joints.

Extended reach makes this arm ideal for applications where a vehicle cannot be accurately spotted. See spotting map.

Standard vertical range of motion for the loading arm is 55° (park position) to -20° (load position). Maximum vertical range of movement up to 95° with spring cylinders. Standard arms feature the D2000 World Series swivel joints for ultra-low maintenance and the easy to adjust spring cylinder balance.

- **Pipe size: 2" (51mm) through 12" (305mm)**
- **Materials: Carbon steel, Carbon, Steel/ Aluminium, Stainless steel**



**Riser connection options.** Loading arms shown in the park position.

|                                   |                                 |                                            |                                          |
|-----------------------------------|---------------------------------|--------------------------------------------|------------------------------------------|
|                                   |                                 |                                            |                                          |
| Riser: Upfeed<br>Base: Upfeed     | Riser: Downfeed<br>Base: Upfeed | Riser: Horizontal / Up<br>Base: Upfeed     | Riser: Horizontal / Down<br>Base: Upfeed |
|                                   |                                 |                                            |                                          |
| Riser: Downfeed<br>Base: Downfeed | Riser: Upfeed<br>Base: Downfeed | Riser: Horizontal / Down<br>Base: Downfeed | Riser: Horizontal / Up<br>Base: Downfeed |

# TOP LOADING ARMS

## E2025 SUPPORTED BOOM LOADER

### 5 year limited maintenance on D2000 World Series swivel joints.

Supported boom loaders are the most versatile of all top loading arms. They provide the greatest mis-spot capability and allow for the greatest reach. See sporting map.

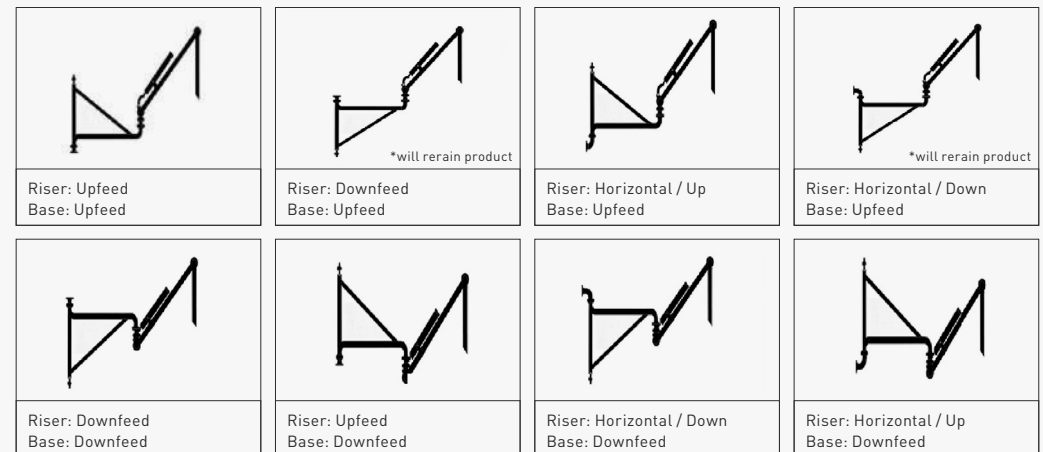
Easy to adjust, super smooth action spring cylinder balance, heavy duty capacity swivel joints and a custom boom support enable these arms to reach even further than the E2022 unsupported boom loader.

Standard arms feature the D2000 World Series swivel joint. A heavy duty, low profile joint with a 5 year limited maintenance. A variety of seal configurations and elastomers ensure long life performance for each specific application.

Standard vertical range of movement for the arm is +55 deg (park position) to -20 deg (loading position). A World Series spring cylinder can provide up to 95 deg of full movement if required.



**Riser connection options.** Loading arms shown in the park position.



# TOP LOADING ARMS

## E2110 FIXED REACH LOADER

The **Fixed Reach Loader** is specifically designed for top loading of single-compartment road or rail tankers where the manhole can be accurately positioned. The arm requires **accurate spotting** of rail car or tank truck. It is perfect for petroleum and chemical applications.



\*applies only to the standard configured pre-Engineered arms



Top quality design and materials allowing effortless operation



D2000 World Series swivel joints **ensuring durability and low maintenance**

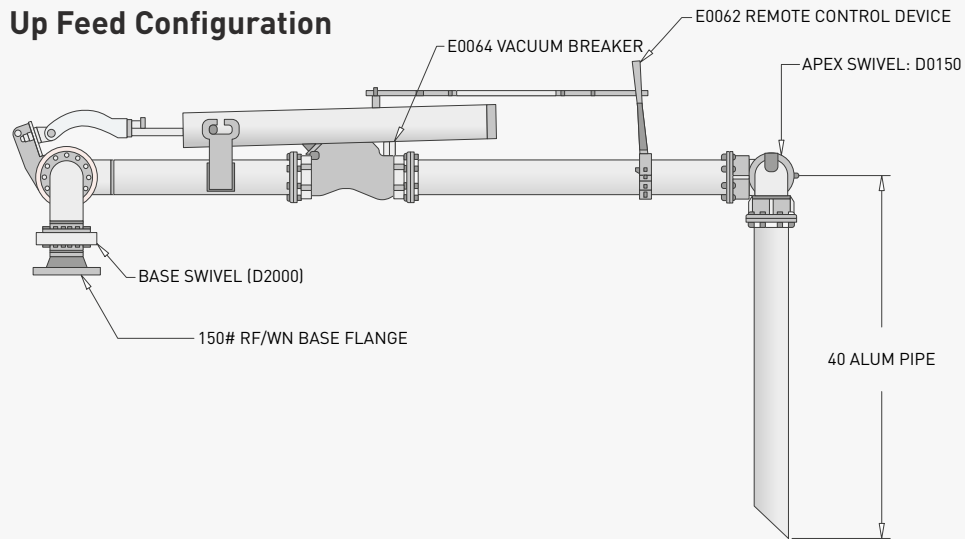


**High precision** of loading arm balancing

# TOP LOADING ARMS

## E2110 FIXED REACH LOADER

### Up Feed Configuration



### ACCESSORIES

- D2000 Swivels
- Cast Alum apex swivels
- Lockdown device
- Aluminum load valves (MWP 150 PSI)
- Ball Valve
- The Position Stop
- Grounding
- Bolt on handle

#### 3" w/ ALUM APEX

| PART NUMBER      |
|------------------|
| E2110-3CBUR120N  |
| E2110-3CVUR120N  |
| E2110-3CBUR120N6 |
| E2110-3CVUR120N6 |
| E2110-3CBUR120V  |
| E2110-3CVUR120V  |
| E2110-3CBUR120V6 |
| E2110-3CVUR120V6 |

#### 3" w/ D2000 APEX

| PART NUMBER       |
|-------------------|
| E2110-3CBUR120ND  |
| E2110-3CVUR120ND  |
| E2110-3CBUR120ND6 |
| E2110-3CVUR120ND6 |
| E2110-3CPUR120ND  |
| E2110-3CGUR120ND  |
| E2110-3CPUR120ND6 |
| E2110-3CGUR120ND6 |

#### 3" w/ D2000 APEX & BALL VALVE

| PART NUMBER       |
|-------------------|
| E2110-3CBUR120VD  |
| E2110-3CVUR120VD  |
| E2110-3CBUR120VD6 |
| E2110-3CVUR120VD6 |
| E2110-3CPUR120VD  |
| E2110-3CGUR120VD  |
| E2110-3CPUR120VD6 |
| E2110-3CGUR120VD6 |

#### 4" w/ ALUM APEX

| PART NUMBER      |
|------------------|
| E2110-4CBUR120N  |
| E2110-4CVUR120N  |
| E2110-4CBUR120N6 |
| E2110-4CVUR120N6 |
| E2110-4CBUR120V  |
| E2110-4CVUR120V  |
| E2110-4CBUR120V6 |
| E2110-4CVUR120V6 |

#### 4" w/ D2000 APEX

| PART NUMBER       |
|-------------------|
| E2110-4CBUR120ND  |
| E2110-4CVUR120ND  |
| E2110-4CBUR120ND6 |
| E2110-4CVUR120ND6 |
| E2110-4CPUR120ND  |
| E2110-4CGUR120ND  |
| E2110-4CPUR120ND6 |
| E2110-4CGUR120ND6 |

#### 4" w/ D2000 APEX & BALL VALVE

| PART NUMBER       |
|-------------------|
| E2110-4CBUR120VD  |
| E2110-4CVUR120VD  |
| E2110-4CBUR120VD6 |
| E2110-4CVUR120VD6 |
| E2110-4CPUR120VD  |
| E2110-4CGUR120VD  |
| E2110-4CPUR120VD6 |
| E2110-4CGUR120VD6 |

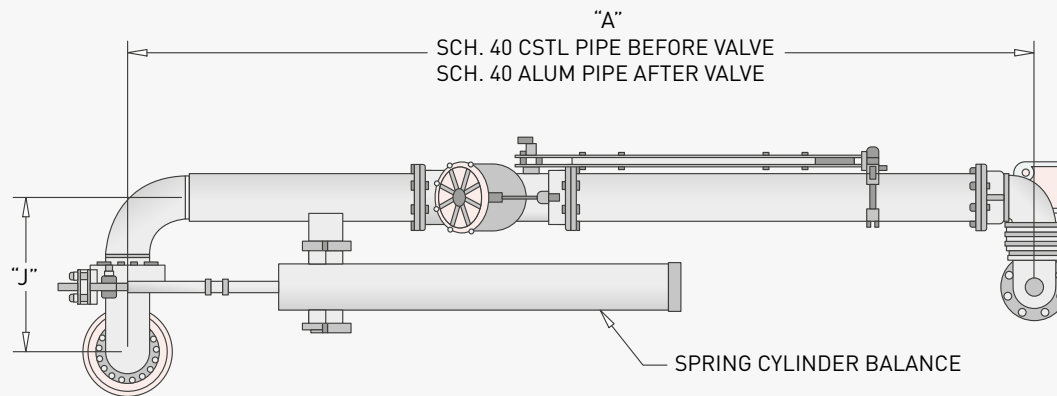
Configure your part number as shown:

| E2110 - 4 C P U R 096 V D 6 A |          |                               |                                                                              |                              |                                 |                             |                                                                                                |             |                                             |                                                        |
|-------------------------------|----------|-------------------------------|------------------------------------------------------------------------------|------------------------------|---------------------------------|-----------------------------|------------------------------------------------------------------------------------------------|-------------|---------------------------------------------|--------------------------------------------------------|
| MODEL                         | DIAMETER | PRIMARY CONSTRUCTION MATERIAL | SEAL MATERIAL                                                                | INLET FEED                   | ORIENTATION                     | PRIMARY DIMENSION           | VALVE                                                                                          | APEX SWIVEL | EXTENDED DROP                               | BOLD ON ADDERS                                         |
| E2110                         | 3" 4"    | C = Carbon Steel              | V = Viton<br>B = Buna<br>P = PTFE<br>G = GFLT<br>(Apex swivel must be D2000) | U = Up Feed<br>D = Down Feed | L = Left Hand<br>R = Right Hand | 96"<br>108"<br>120"<br>132" | N = None<br>V w/ E0471 load valve & remote option or Ball valve<br>(Apex swivel must be D2000) | D2000       | 6 = 60"<br>(otherwise 48" will be provided) | A = Choose from accessories list.<br>Priced Separately |

# TOP LOADING ARMS

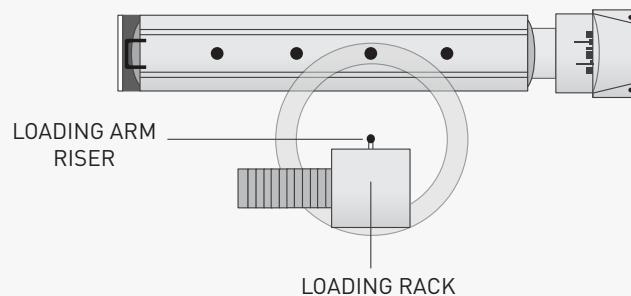
## E2110 FIXED REACH LOADER

### Left Hand Orientation



### DESIGN

- Seals: Viton, Buna/Nitrile, PTFE, GFLT.
- Balancing Method: Spring Cylinder
- Design Pressure:
  - Based on flanges and accessories.
  - Typical 150 psi with load valve, 285 psi without load valve
- Design Temperature:
  - Based on piping/flanges/seals/accessories
  - Typical Range: 5°F to 150°F
  - Broader temperature ranges available



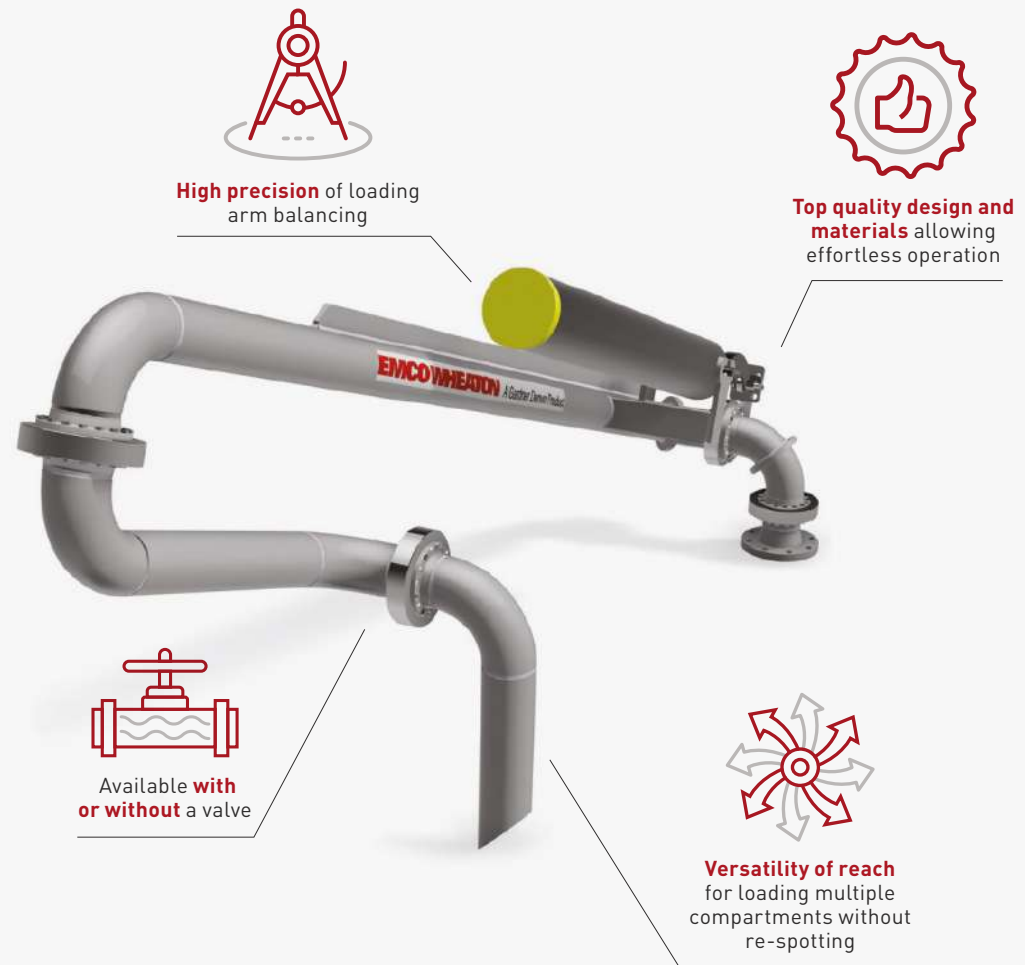
|     | D     | J     | L                                        |
|-----|-------|-------|------------------------------------------|
| 3"* | 11.4" | 13.1" | 8.3" (D0150 apex);<br>13.1" (D2000 apex) |
| 4"* | 13.1" | 16.1" | 9.3" (D0150 apex);<br>16.1" (D2000 apex) |

3" + 4": 8' to 11'

# TOP LOADING ARMS

## E2112 VARIABLE REACH LOADER

Also known as a Pantograph and Scissor arm, this **Variable Reach Top Loader** is dedicated for petroleum, chemical, and mineral oil applications. It's a specialized solution for top loading of road or rail tankers where the manhole cannot be accurately positioned. We recommend our Variable Reach Loader for **medium-range** applications of less than 11 ft.



\*applies only to the standard configured pre-Engineered arms

# TOP LOADING ARMS

## E2112 VARIABLE REACH LOADER

### ACCESSORIES

- D2000 Swivels
- Cast aluminum apex swivels
- Lockdown Device
- Aluminum Load Valve, MWP 150 PSI
- Vacuum Breaker
- Ball valve
- Grounding
- Position Stops
- Bolt on handle

### DESIGN

- Seals: Viton, Buna/Nitrile, GFLT, PTFE & Equivalents
- Balancing Method: Spring Cylinder
- Design Pressure:
  - Based on flanges and accessories
  - Typical 150 psi with load valve, 285 psi without load valve
- Design Temperature:
  - Based on piping/flanges/seals/accessories
  - Typical Range: 5°F to 150°F
  - Broader temperature ranges available

Configure your part number as shown:

| MODEL | DIAMETER | PRIMARY CONSTRUCTION MATERIAL | SEAL MATERIAL                                                                               | INLET FEED                   | ORIENTATION                     | PRIMARY DIMENSION      | VALVE                                                                                                         | APEX SWIVEL | EXTENDED DROP                                              | BOLD ON ADDERS                                         |
|-------|----------|-------------------------------|---------------------------------------------------------------------------------------------|------------------------------|---------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------|--------------------------------------------------------|
| E2112 | 3"<br>4" | C = Carbon Steel              | V = Viton<br>B = Buna<br>P = PTFE<br>G = GFLT<br><small>[Apex swivel must be D2000]</small> | U = Up Feed<br>D = Down Feed | L = Left Hand<br>R = Right Hand | 85" Truck<br>108" Rail | N = None<br>V w/ E0471 load valve & remote option or Ball valve<br><small>[Apex swivel must be D2000]</small> | D2000       | 6 = 60"<br><small>(otherwise 48" will be provided)</small> | A = Choose from accessories list.<br>Priced Separately |

### 3" w/ ALUM APEX

| PART NUMBER     |
|-----------------|
| E2112-3CBUR84N  |
| E2112-3CVUR84N  |
| E2112-3CBUR84N6 |
| E2112-3CVUR84N6 |
| E2112-3CBUR84V  |
| E2112-3CVUR84V  |
| E2112-3CBUR84V6 |
| E2112-3CVUR84V6 |

### 3" w/ D2000 APEX

| PART NUMBER      |
|------------------|
| E2112-3CBUR84ND  |
| E2112-3CVUR84ND  |
| E2112-3CBUR84ND6 |
| E2112-3CVUR84ND6 |
| E2112-3CPUR84ND  |
| E2112-3CGUR84ND  |
| E2112-3CPUR84ND6 |
| E2112-3CGUR84ND6 |

### 3" w/ D2000 APEX & BALL VALVE

| PART NUMBER      |
|------------------|
| E2112-3CBUR84VD  |
| E2112-3CVUR84VD  |
| E2112-3CBUR84VD6 |
| E2112-3CVUR84VD6 |
| E2112-3CPUR84VD  |
| E2112-3CGUR84VD  |
| E2112-3CPUR84VD6 |
| E2112-3CGUR84VD6 |

### 4" w/ ALUM APEX

| PART NUMBER     |
|-----------------|
| E2112-4CBUR84N  |
| E2112-4CVUR84N  |
| E2112-4CBUR84N6 |
| E2112-4CVUR84N6 |
| E2112-4CBUR84V  |
| E2112-4CVUR84V  |
| E2112-4CBUR84V6 |
| E2112-4CVUR84V6 |

### 4" w/ D2000 APEX

| PART NUMBER      |
|------------------|
| E2112-4CBUR84ND  |
| E2112-4CVUR84ND  |
| E2112-4CBUR84ND6 |
| E2112-4CVUR84ND6 |
| E2112-4CPUR84ND  |
| E2112-4CGUR84ND  |
| E2112-4CPUR84ND6 |
| E2112-4CGUR84ND6 |

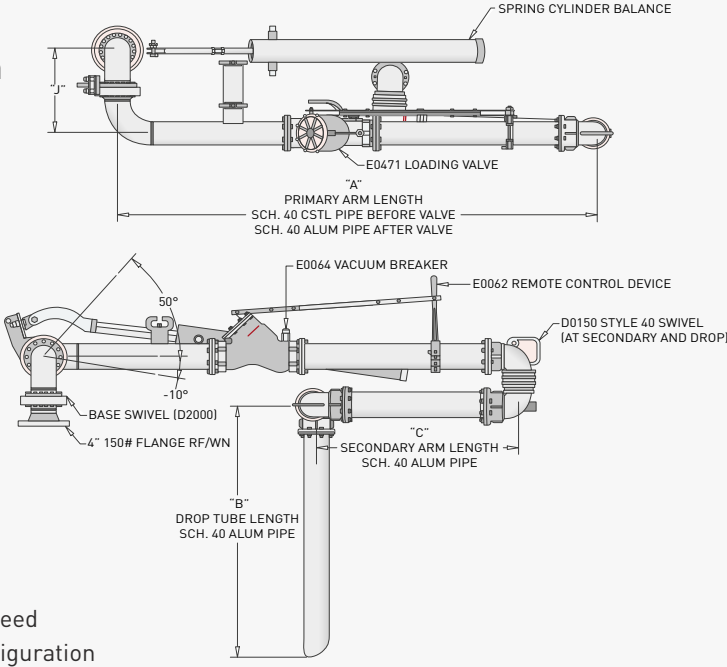
### 4" w/ D2000 APEX & BALL VALVE

| PART NUMBER      |
|------------------|
| E2112-4CBUR84VD  |
| E2112-4CVUR84VD  |
| E2112-4CBUR84VD6 |
| E2112-4CVUR84VD6 |
| E2112-4CPUR84VD  |
| E2112-4CGUR84VD  |
| E2112-4CPUR84VD6 |
| E2112-4CGUR84VD6 |

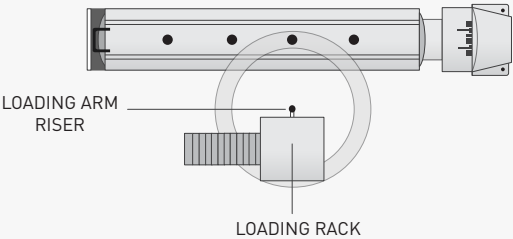
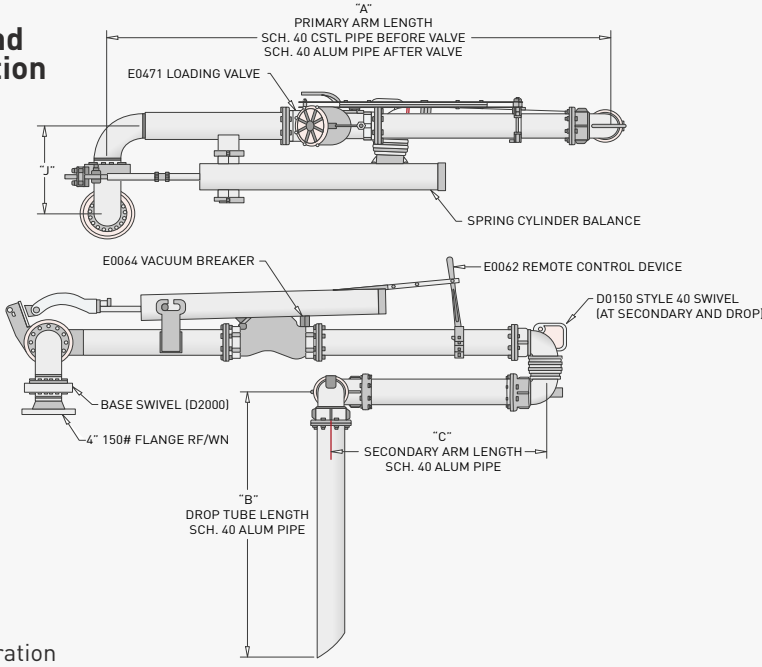
# TOP LOADING ARMS

## E2112 VARIABLE REACH LOADER

Right Hand Orientation



Left Hand Orientation



|     | D     | J     | L                                        |
|-----|-------|-------|------------------------------------------|
| 3"* | 11.4" | 13.1" | 8.3" (D0150 apex);<br>13.1" (D2000 apex) |
| 4"* | 13.1" | 16.1" | 9.3" (D0150 apex);<br>16.1" (D2000 apex) |

3" + 4" arms with 84" primary: 7' to 8.5'  
3" + 4" arms with 108" primary: 9' to 10.5'

## LPG BULLHORN LOADING ARM FOR LOADING / UNLOADING

**The Emco Wheaton LPG transfer system** offers a successful and economic solution of loading/unloading LPG into Rail cars. In contrast to hoses, this transfer system provides safety from explosion, driveway obstructions and condensate losses at site – all of which improve operator safety and profit margins. Common hazards associated with loading and unloading LPG railcars such as operator cold burns, collapsing railcars and product loss are reduced to virtually zero.

Specifically designed for the loading/ unloading of railcars, quick and safe connection to the vessel by couplers and comfortable smooth handling improve loading time.

Traditionally 3 loading arms were required to make three separate connections to the rail car. **The Emco Wheaton LPG transfer system** design incorporates 2 LPG loading connections and 1 Vapor return hose line having the ability to reach each connection point at once with ease. All 3 lines are carried within 1 loading arm.

- **Pipe sizes:** 2" 51mm through 12" 304mm
- **Materials of liquid path:** Carbon steel, Carbon steel/Aluminum, 316L Stainless steel



## E2632 PARALLEL LOADING ARM

**Emco Wheaton's E2632** connects two boom loaders that work together in parallel to form a new loader type: the parallel arm. Operating as a single arm, the parallel arm provides high manoeuvrability, and is equipped with product and vapor recovery lines that are free of pockets.

The E2632 is ideal for loading hydrocarbons (e.g. gasoline, as well as other toxic and/or aggressive media). By loading with a vapor return hose, operators are able to improve terminal profitability and minimize environmental impact, recovering vaporized product directly through the loading arm. Loading with a sealed manhole, operators can further maximize the level of protection offered to both operators and the environment, while also meeting legal requirements and regulations (e.g. EUNorm, German TA-Luft).



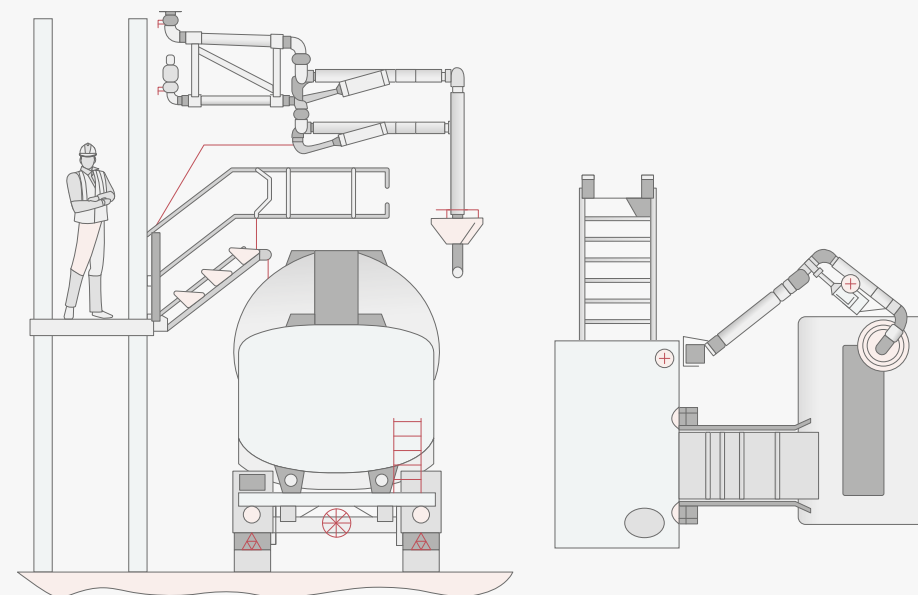
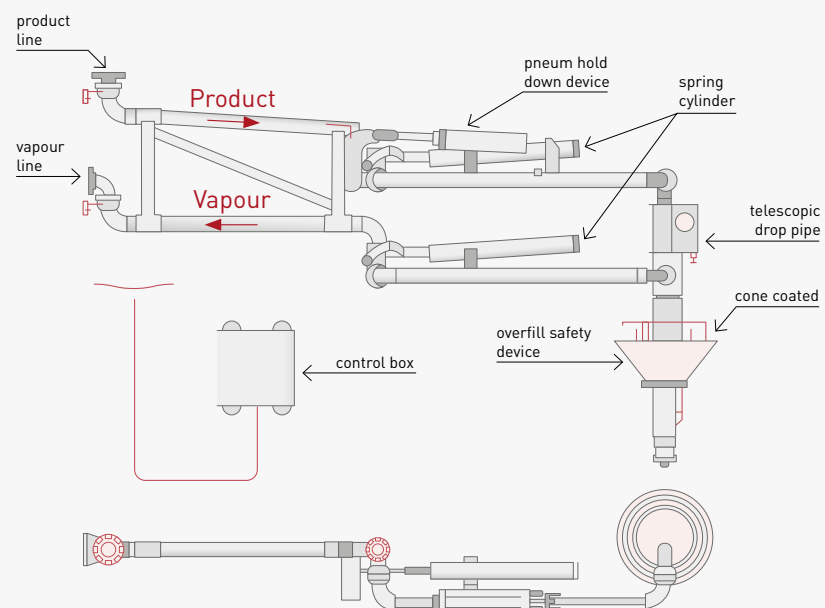
### FEATURES & BENEFITS

- Liquid sulphur
- Petroleum applications
- Chemical applications
- Long life
- Low maintenance
- Easy handling
- Material: carbon steel/alu, low temperature steel, stainless steel, PTFE-lined
- Temperature range from -50 °C to +50 °C (-53 °F to +122°F)
- Comprehensive range of safety accessories
- EMCO-high performance swivel joints

# TOP LOADING ARMS

## E2632 PARALLEL LOADING ARM

**The E2632** is the best technical solution for loading processes with vapor return. The arm's vapor line prevents condensate from forming by eliminating sloop; while the design of the arm allows heating of both product and the vapor line. Equipped with swivel joints, the E2632 provides safe and easy handling as an added advantage over using hoses.



### MATERIALS AND TECHNICAL DATA

| SIZES                              | MATERIALS                                                                                | SEALS                                       | TEMPERATURE RANGE                            | DESIGN                                              | ACCESSORIES                                    |
|------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------|-----------------------------------------------------|------------------------------------------------|
| Product DN 50 - Vapor DN 50        | Carbon steel /<br>aluminum<br>Low temperature<br>steel<br>Stainless steel<br>PTFE- lined | NBR<br>EPDM<br>PTFE<br>Special<br>materials | 50° C to<br>+50° C<br>(-58° F to<br>+122° F) | Piggable<br>Acc. WHG<br>Acc. VbF<br>(International) | Cover plate<br>Cone<br>Telescopic<br>drop pipe |
| Product DN 80 - Vapor DN 50        |                                                                                          |                                             |                                              |                                                     |                                                |
| Product DN 100 - Vapor DN 80 / 50  |                                                                                          |                                             |                                              |                                                     |                                                |
| Product DN 150 - Vapor DN 100 / 80 |                                                                                          |                                             |                                              |                                                     |                                                |



**EMCO WHEATON** carbon steel swivel joint with hardened ball race way for a long life time! For more details see our data sheet **D2000 Swivel Joint**.

# 07 BOTTOM LOADING ARMS

**Bottom loading offers benefits which cannot be achieved with top loading designs. As it takes place on the ground, it is inherently safer for the operator.**

It also allows for simultaneous loading of several tank compartments, increasing speed and efficiency of loading. Bottom loading is easily adaptable to vapor recovery systems.

Emco Wheaton's selection of bottom loading arms conforms to API RP1004 standard. Designed for safe and reliable loading of tank trucks, rail cars, or any other vessel with sealed connections.

# BOTTOM LOADING ARMS

## E2033 BOTTOM TRANSFER LOADING ARM

**Bottom transfer loaders provide extended reach that makes them ideal for applications where a vehicle cannot be accurately spotted.**

Easy to adjust, super smooth action spring cylinder balance, and heavy duty capacity swivel joints enable these arms to reach further without the need for additional support.

Standard arms feature the D2000 World Series swivel joint. A heavy duty, low profile joint with 5-year limited maintenance. A variety of seal configurations and elastomers ensure long life performance for each specific application.

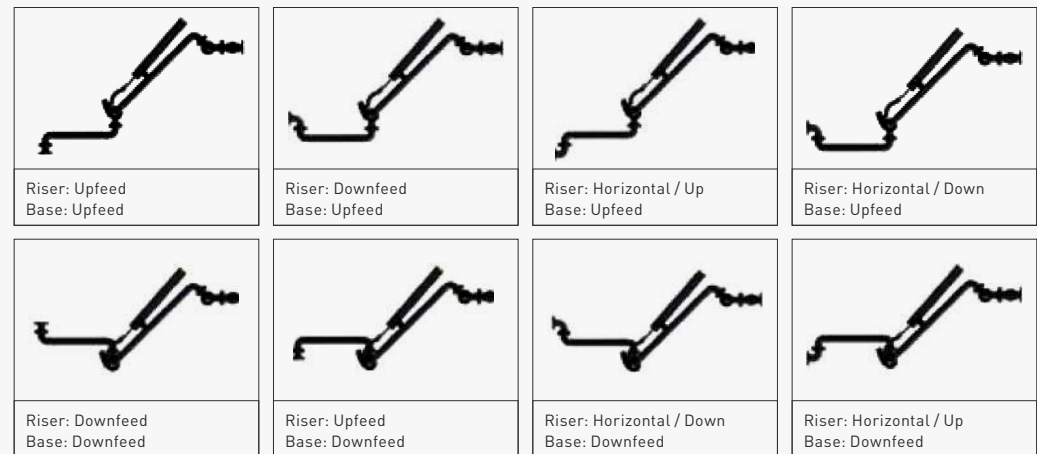
Spring cylinder balance has up to 95 deg of vertical movement for easy to handle alignment and out of the way parking. Not recommended for multiple arm crossover. See E2573 and E2304.

- **Pipe sizes: 2" 51mm through 12" 304mm**
- **Materials of liquid path: Carbon steel, Carbon steel/Aluminum, 316L Stainless steel**



Shown design with emergency release system

**Riser connection options.** Loading arms shown in the park position.



# BOTTOM LOADING ARMS

## E2121 A-FRAME BOTTOM LOADING ARM

**5 year limited maintenance design on D2000 World Series swivel joints. Recommended for servicing both sides of the platform for adjacent arm crossover.**

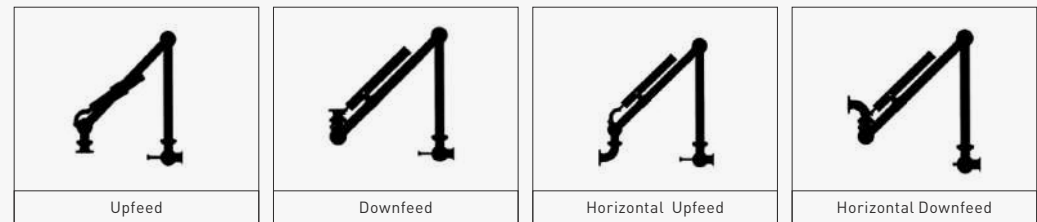
Secondary arm is available as a rigid pipe or hose. Standard vertical range of motion for the loading arm is 80° (park position) to 45° (load position). Standard arms feature the D2000 World Series swivel joints for ultra low maintenance and the easy to adjust spring cylinder balance.



### FEATURES & BENEFITS

- Pipe Size: 50.8mm (2") through 101.6mm (4")
- Materials: Carbon steel, Stainless steel, Low temp
- Rated for pressures up to 580 psi (40 bar)
- Designed for high pressure liquids and gases: LPG, Anhydrous Ammonia, NGL, Propylene
- Long reach capability
- Drop can be hard pipe or high pressure hose
- 'Bull horn' style connection available
- Stores in near vertical position
- For truck and rail loading and unloading

**Riser connection options.** Loading arms shown in the park position.



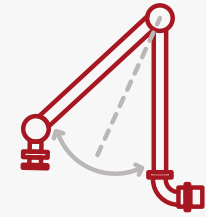
# BOTTOM LOADING ARMS

## E2313 A-FRAME LOADERS

**The A-Frame Bottom Loader** can service both sides of the platform and be used for adjacent arm crossover. The secondary arm is available as a rigid pipe or hose. We recommend this frame loader for tank truck bottom loading, particularly in a **short range**. You can use it for gasoline or diesel products.



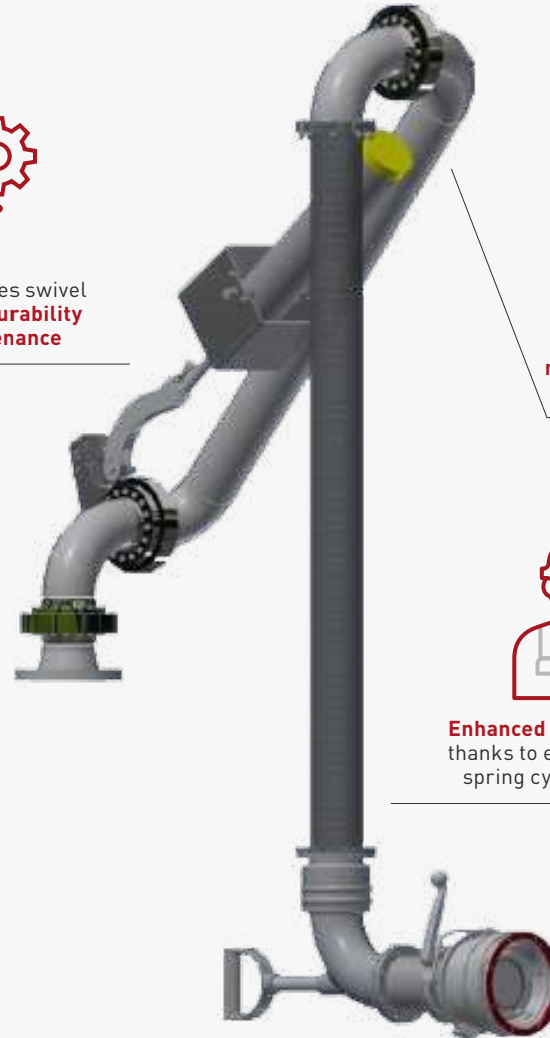
D2000 World Series swivel joints **ensuring durability and low maintenance**



**Parking at high angle made possible** by the ROM, allowing compact storage



**Enhanced operator safety** thanks to easily adjustable spring cylinder balance



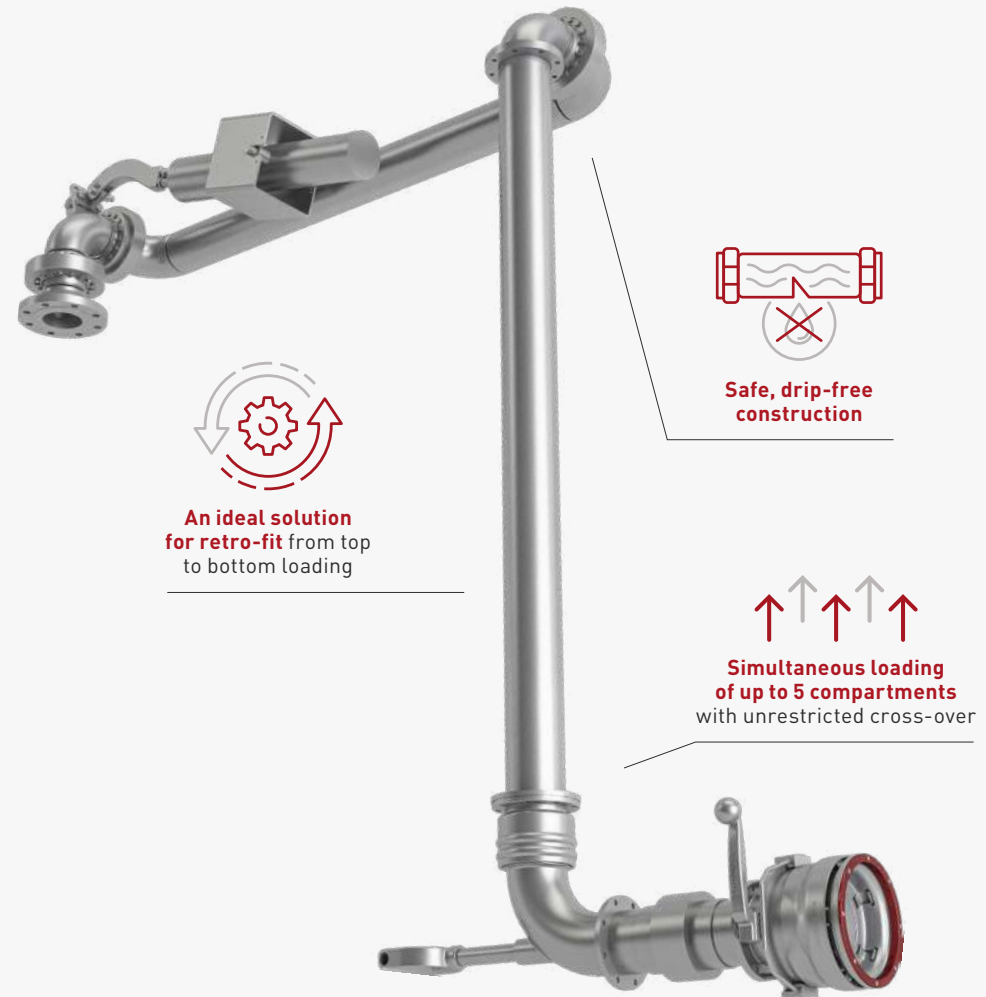
# BOTTOM LOADING ARMS

## E2304 BOTTOM HOSE LOADERS

The E2304 Bottom Hose Loading Arm is designed specifically for bottom filling of multiple-compartment tank trucks.

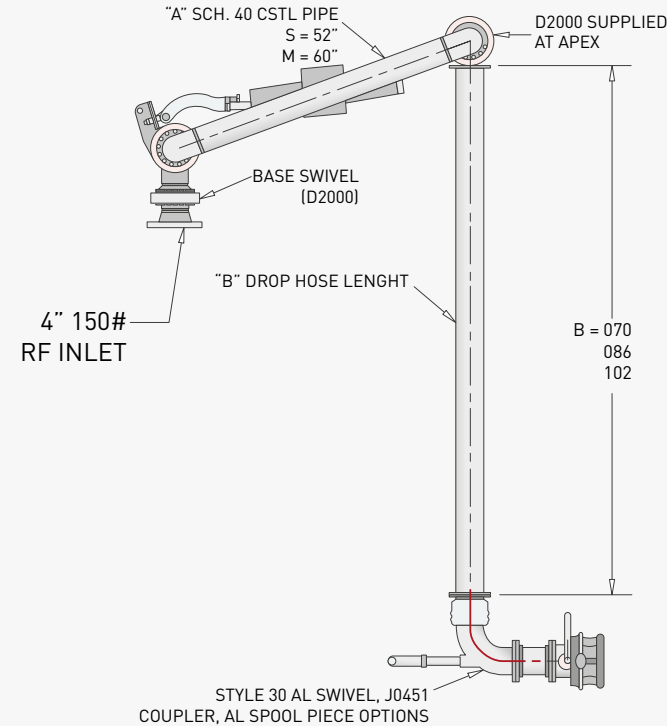
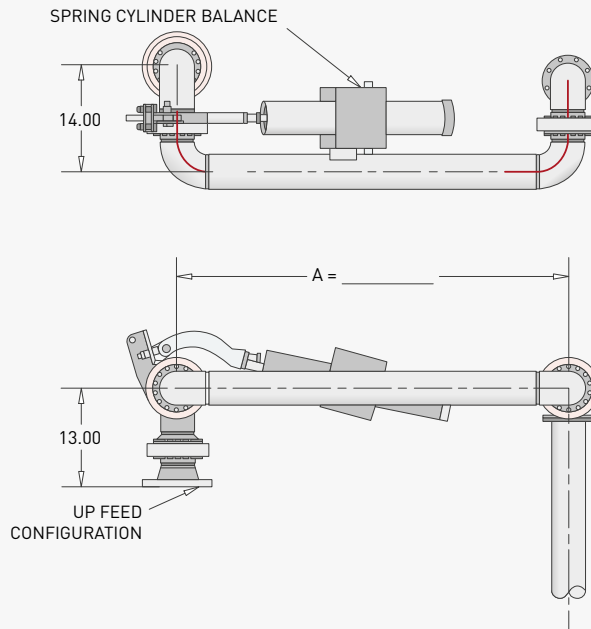


\*applies only to the standard configured pre-Engineered arms



# BOTTOM LOADING ARMS

## E2304 BOTTOM HOSE LOADERS



Configure your part number as shown in the following example:

**E2304**

**4**

**C**

**V**

**U**

**L**

**S**

**070**

**C**

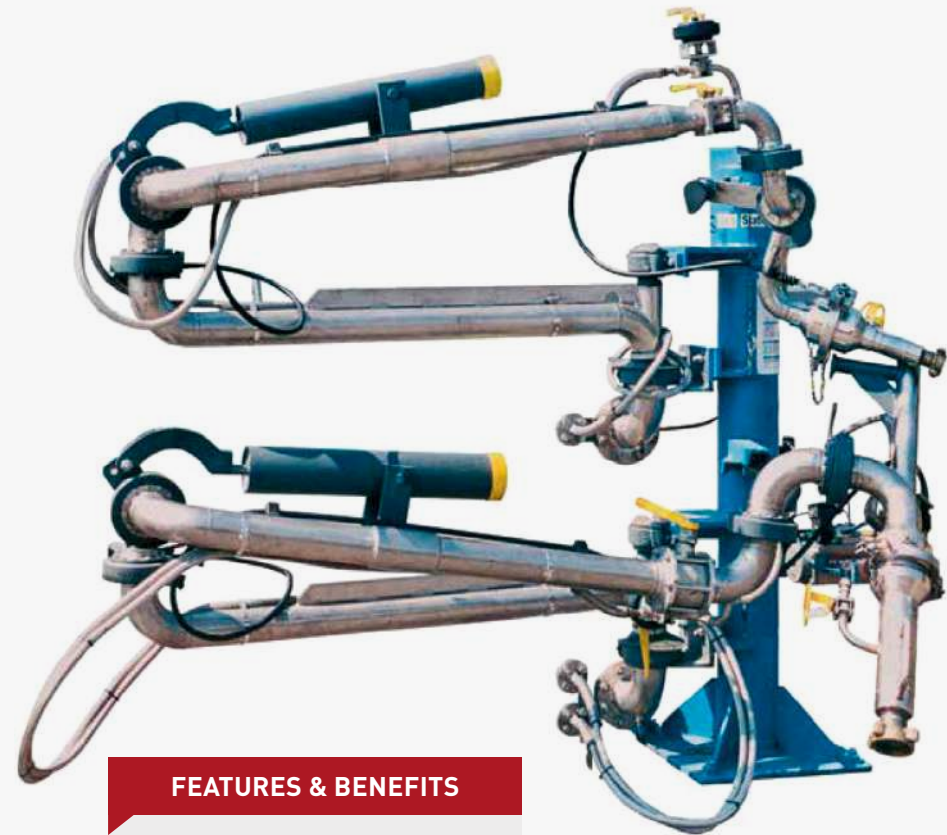
| Model # | Diameter (Inches) | Construction Material   | Seal Material                       | Primary Feed       | Orientation                                   | Primary Length                   | Hose Lengths             | Options                                                                                                                  |
|---------|-------------------|-------------------------|-------------------------------------|--------------------|-----------------------------------------------|----------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| E2304   | 4 = 4-Inch        | <b>C</b> = Carbon Steel | <b>V</b> = Viton<br><b>B</b> = Buna | <b>U</b> = Up Feed | <b>L</b> = Left Hand<br><b>R</b> = Right Hand | <b>S</b> = 52"<br><b>M</b> = 60" | 000<br>070<br>086<br>102 | <b>C</b> = with J0451 coupler, spool piece, style 30 aluminum swivel<br><b>N</b> = no swivel, no coupler, no spool piece |

# BOTTOM LOADING ARMS

## E2386 BOTTOM LOADING STATION

**This type of loading arm is especially designed to load products where vapour return is necessary.**

It is suitable for the bottom loading/ unloading of Road or Rail tankers with flange connection or coupling. The loading arm has a long reach and is suitable for applications where tanker connection flange cannot be accurately positioned. Because of the robust and high quality design of the swivel joints and the precise loading arm balancing handling of the arm is very convenient.



### FEATURES & BENEFITS

- Petroleum applications
- Chemical applications
- Safe loading from ground level
- Flexible handling
- Long reach

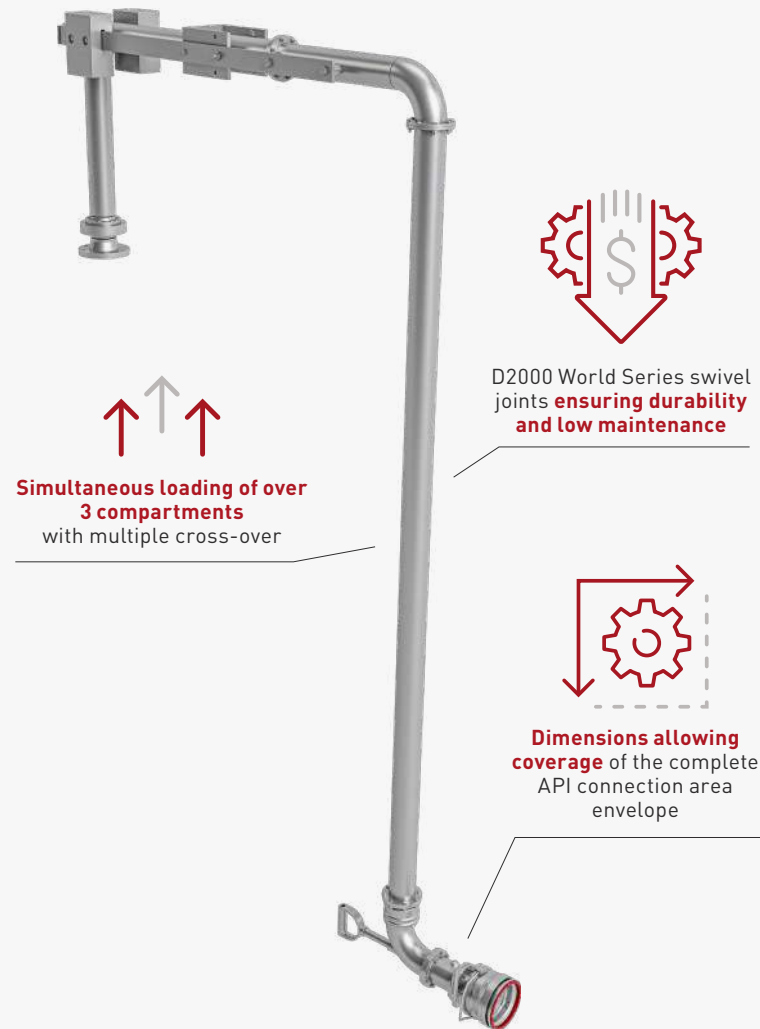
# BOTTOM LOADING ARMS

## E2573 BOTTOM HOSE LOADING ARM WITH COUNTERWEIGHT BALANCE

The Bottom Hose Loading arm with counterweight balance enables efficient bottom loading and unloading of tank trucks. It is recommended for use with gasoline or diesel products. You can order special materials with this design.



\*applies only to the standard configured pre-Engineered arms



# BOTTOM LOADING ARMS

## E2573 BOTTOM HOSE LOADING ARM WITH COUNTERWEIGHT BALANCE

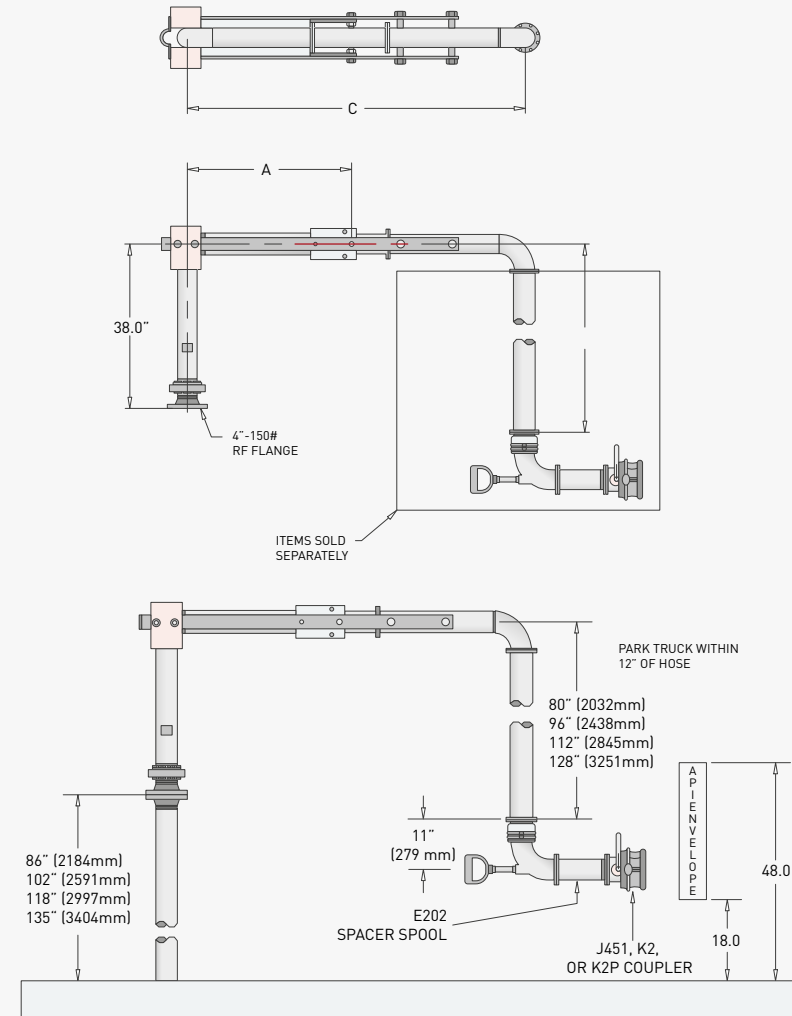
| Part#     | Dimensions |         | Counterweights |
|-----------|------------|---------|----------------|
| E2573-837 | C = 78"    | A = 38" | 2 Weights      |
| E2573-838 | C = 90"    | A = 45" | 2 Weights      |
| E2573-839 | C = 114"   | A = 57" | 2 Weights      |
| E2573-856 | C = 102"   | A = 45" | 2 Weights      |
| E2573-841 | C = 78"    | A = 38" | 4 Weights      |
| E2573-842 | C = 90"    | A = 45" | 4 Weights      |
| E2573-843 | C = 114"   | A = 57" | 4 Weights      |
| E2573-840 | C = 102"   | A = 45" | 4 Weights      |

### NOTES:

If Hose Dim  $\leftarrow$  105" then 2 weights

If Hose Dim  $\rightarrow$  105" then 4 weights

Hose Dim = Center of apex elbow to bottom TTMA flange



# 08 SPECIALITY LOADING ARMS

For specialty applications, such as the loading and unloading of toxic chemicals or dangerous product. This includes loading product that requires heating or insulation.

Specialty loading arms can be fitted with insulation or manufactured with application-specific materials. These specialty loading arms can also be powered for easy and accurate movement.

Our engineers have developed a number of loading arms for specialized service applications. If your application does not quite fit with any of the models listed please contact your distributor who will speak to us about what you require.

# SPECIALITY LOADING ARMS

LAND LOADING SYSTEMS

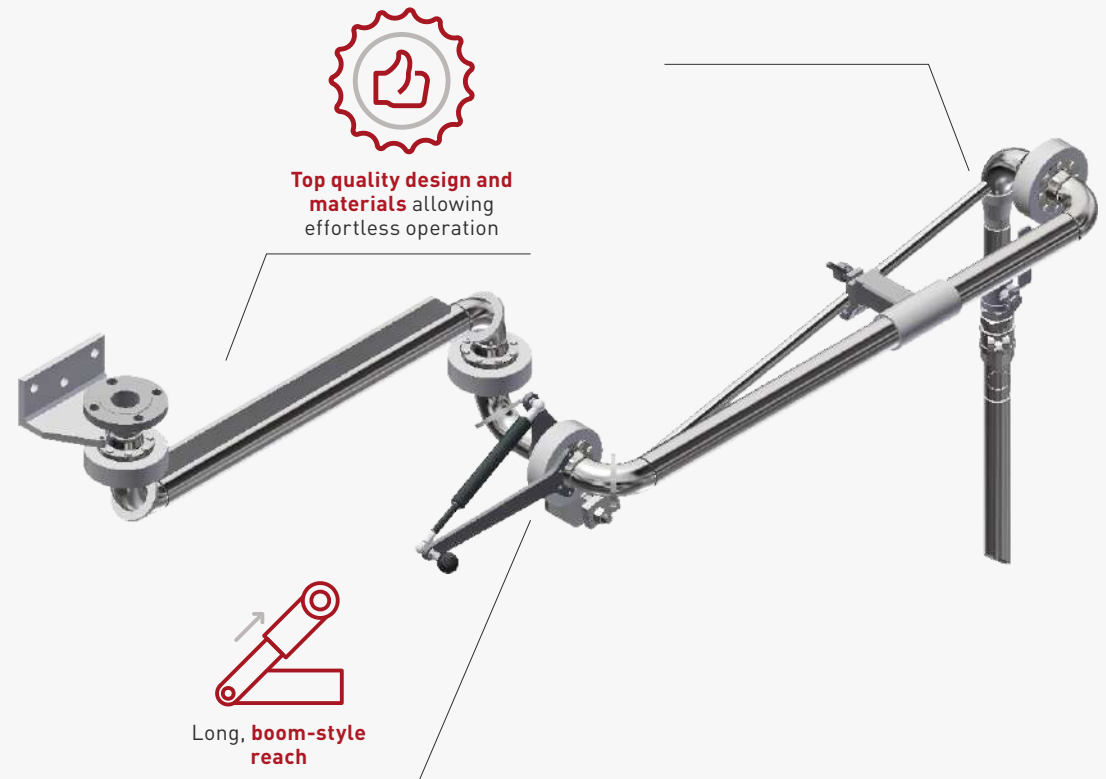
30

## DRUM/TOTE LOADING ARM

Our new drum loading arm is dedicated for loading and unloading of small vessels, such as drums and totes, where spotting of the connection flange may vary. It's a **versatile solution**, suitable for a broad range of industries and applications.



\*applies only to the standard configured pre-Engineered arms



# SPECIALITY LOADING ARMS

## E2123 LONG-REACH BOTTOM

**The Long-Reach Bottom Loading Arm** is a long reach bottom loading arm that is ideal for extended reach bottom truck loading spots, particularly where “B-Trains” or double length trailers are being loaded. The Long-Reach Bottom Loading Arm excels at long reach loading with an effective working reach ranging from 6’ to 18’ and a connection height envelope from 24” – 54”. Not recommended where multiple arm cross-over is required.

The arm remains fully balanced with minimal effort required to easily guide the arm through its full range of motion. The arm utilizes Emco Wheaton’s industry leading maintenance free D2000 swivels with multiple seal type options available. Emco Wheaton is the pioneer of this technology and the leading supplier of this configuration for the Canadian Market.



### FEATURES & BENEFITS

- Can be retrofitted with minimal tools
- Draw bar design for failsafe redundancy
- Powder-coated for longer life expectancy
- Easily adjustable turnbuckle fastener design

### DRAW BAR

- Material 17-4 Stainless
- Inside Loop Length 35” +/- .50
- Coating – Powder Coat Red Finis

# 09 LLS ACCESSORIES

Emco Wheaton provides a range of accessories for our road and rail loading arms. Our range of premium accessories are designed to maximize the safety and handling of your loading arms.

They reduce emissions as well as minimizing the risk of drive away incidents, incorrect operation, and accidental discharge. Our combination of products and services will ensure optimum performance in your bulk liquid transfer operations. Whenever you need assistance, our experienced team can recommend the best accessories for your operation, guide you through on-site integration.

Our range of accessories are available in a variety of connection options, and can be used in many loading applications.

## ACCESSORIES & REPAIR KITS

Emco Wheaton provides a range of Aftermarket accessories for our road and rail loading arms. Our range of premium accessories are designed to maximize the safety and handling of your loading arms and can easily be applied to the arm on site without cutting or welding.

We also provide a wide range of repair kits to service your loading arm on site with ease and minimal downtime.

Our combination of products and services will ensure optimum performance in your bulk liquid transfer operations. Whenever you need assistance, our experienced team can recommend the best accessories and kits for your operation and guide you through on-site integration.

### ACCESSORIES

- Load valve remote
- Lockdown device
- Spacer spools
- Vacuum breakers
- Position stops
- Grounding straps
- Sight glass
- Grip handle / bucket hook

### REPLACEMENT PARTS & REPAIR KITS

- D2000 seal kits
- Load valve kits
- Aluminum swivel kits
- D2000 module refurbishment
- Hardware & gasket kits [TTMA. 150#, 300#]
- Legacy swivel kits
- API coupler kits
- D2000 modules
- Flexible handling
- Long reach



Lockdown device



Aluminum swivel repair kits



Grounding straps

D-handle



D2000 seal kits

D2000 modules



Grip handle

## LOAD VALVES

**Emco Wheaton offers aluminum loading valves for top loading gasoline, diesel, and heavy fuel oil applications. Both European and Western valve allow opening under pressure and self closing without water hammer.**

Closure rate is easily adjustable for both models, with no special tooling required, to prevent shock in the line. The valve is operated with a rigid remote control located above or close to the manhole of the vehicle allowing the operator to follow loading while holding the arm down and valve open.

A vacuum breaker can be fitted directly on the body of the valve after the piston to empty product into the vehicle after loading.

### European Fiab Valve



#### FEATURES

- 3" and 4" available
- Cast aluminum body (built to NF A57705)
- Piston offered in cast iron & stainless
- Viton and FEP seals
- TTMA connections
- Design pressure: 10 bar
- Design temperature: -20°C to +110°C
- Flow rates: 100m<sup>3</sup>/h (3") & 160m<sup>3</sup>/h (4")
- Optional "stay open" valves available

### US E0471 Valve



#### FEATURES

- 3" and 4" available
- Cast aluminum body
- Piston offered in stainless
- Viton and Buna seals
- TTMA connections
- Design pressure: 150 PSI
- Design temperature: -20°F to +120°F
- Flow rates: 300 GPM (3") & 600 GPM (4")

## SWIVEL JOINTS



**The use of our multifunctional swivel joint D2000 optimizes nearly all liquid transports.**

### **The D2000 can be used universally**

Whether in the mineral oil, food or chemical industry, the D2000 meets the highest standards. Due to the sandwich design, the bearing module is separated from the product carrying components. Therefore it can be used as a standard swivel joint for nearly all media with temperatures ranging from -45 °C to +250 °C.

- **Complies with TA Luft (German regulation for environmental protection)**
- **Split flanged design**

### **The D2000 has a compact design**

The compact dimensions of the D2000 allows it to be used in "low profile" applications.

### **The D2000 high load capacity & integrity**

Due to the separation of product carrying parts, the material of the bearing module is produced for high load bearing capacity with the ball races being "deep" hardened.

### **The D2000 has many variants**

The D2000 can be used to fulfil customers own specific requirements. The material of the product carrying parts can have many variants and will depend on the media being handled.

### **The D2000 complies with relevant regulations**

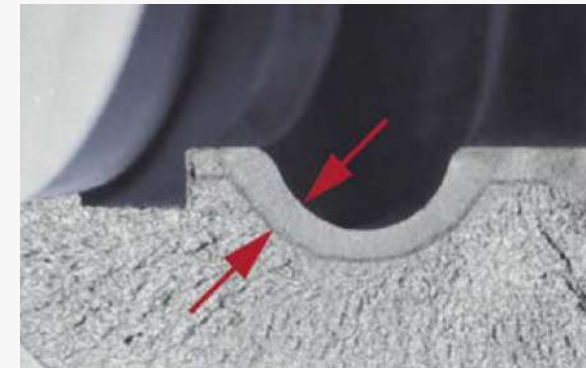
The swivel joint is produced according to the requisite regulations for articulated pipework. It can also be adapted to comply with other specific regulations.

### **The D2000 has a high leak-proof capacity**

The D2000 achieves its sealing characteristics due to its smooth rotation and high bending moment characteristics. It fulfills all requirements of the "TA-Luft" (German regulation for environmental protection).

### **The D2000 is long-lasting**

The deep hardened ball races guarantee a long working life and low wear characteristics.



### **The D2000 is maintenance friendly**

The bearing module and seals can be easily replaced: remove flange, change seal, replace flange - ready for use.

All this without having to disassemble the whole loading arm! This is practical, saving time and substantially reducing life costs.

# 10 SERVICE

**From basic services to total care packages, Emco Wheaton provides a range of service and support products that are designed to proactively help our customers increase their return on investment in terms of longevity, safety, and performance.**

Using a comprehensive global network of manufacturing facilities, sales offices, and trading partners, we are able to think globally and act locally; providing our customers with the service and support they need, whenever and wherever they need it.

Our team of factory trained technicians aim to provide our customers with superior service, ensuring successful installation and long-term operation of the systems and products supplied. Most importantly, we partner with our customers to make sure that they not only receive world class products and expert service, but also complete peace of mind.

# 11 DEDICATED TO QUALITY

**The safety and integrity of our customers operations are our top priority; that is why our range of products are engineered to meet and exceed the highest levels of quality possible.**

Designed to provide our customers with complete peace of mind, our portfolio of loading arms, systems, couplers, and accessories are designed to comply with a range of international standards, including:

#### **Emco Wheaton GmbH, Germany**

- ISO 9001-2015
- Pressure Equipment Directive 2014/68/EU - Modul A2
- Water Resources Law (Wasserhaushaltsgesetz - WHG)
- SCCP Certified
- SIL 2 Certification High Pressure Coupler
- Russian TR CU 010 Certificate for LLS
- Russian TR CU 010 Certificate for MLS

#### **Emco Wheaton USA, Inc.**

- TSSA Certification
- CSA B51-14



# 12 COMMITTED TO THE ENVIRONMENT

**At Emco Wheaton, we consider effective environmental management to be an integral part of our business.**

As an organization, we ensure that all of our activities are carried out in conformance with relevant environmental legislation and other requirements, as well as our comprehensive environmental management system.

Designed to satisfy the requirements of BS EN ISO 14001, Emco Wheaton's environmental management system guides the way we operate; helping us to focus, and continually improve, on our environmental performance.

All of our employees, as well as individuals working on behalf of the organization, are committed to helping us meet our goals of minimizing waste, promoting recycling, reducing energy consumption, reducing harmful emissions and, where possible, working with both our suppliers and customers on practical environmental programmes.

**For more information on Emco Wheaton's environmental policy, please visit our website.**



#### Manufacturing facility

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##### **Emco Wheaton USA, Inc.**

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#### Sales office

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