

# Loading Arms

Petroleum • Chemical • Food • Asphalt • LPG • Ammonia

**From Water & Food Products To Your Most Aggressive Chemicals & Acid Handling, We Offer Arms That Allow You To Easily Handle It!**

## Uses

- Loading And Unloading Product

## Features

- Easy maintenance - no ball bearings to remove.
- Swivels can be replaced without cutting or welding the arm.
- Bearing module not in liquid path means greater chemical resistance.
- Uses standard size O rings.
- Strong swivel/spring capacity allows longer arm reach.
- Unparalleled range of motion (over 95° working range) means we reach more openings.
- Spring can be adjusted in any position.



## Torsion Spring-Balancing

The Carbis Loading Arm Spring-Balance permits any one of a full range of spring balance adjustments with a simple turn of the wrench. This is the ultimate user-friendly solution to spring adjustment. With this technology, you no longer have to have the loading arm in the vertical position to make adjustments.

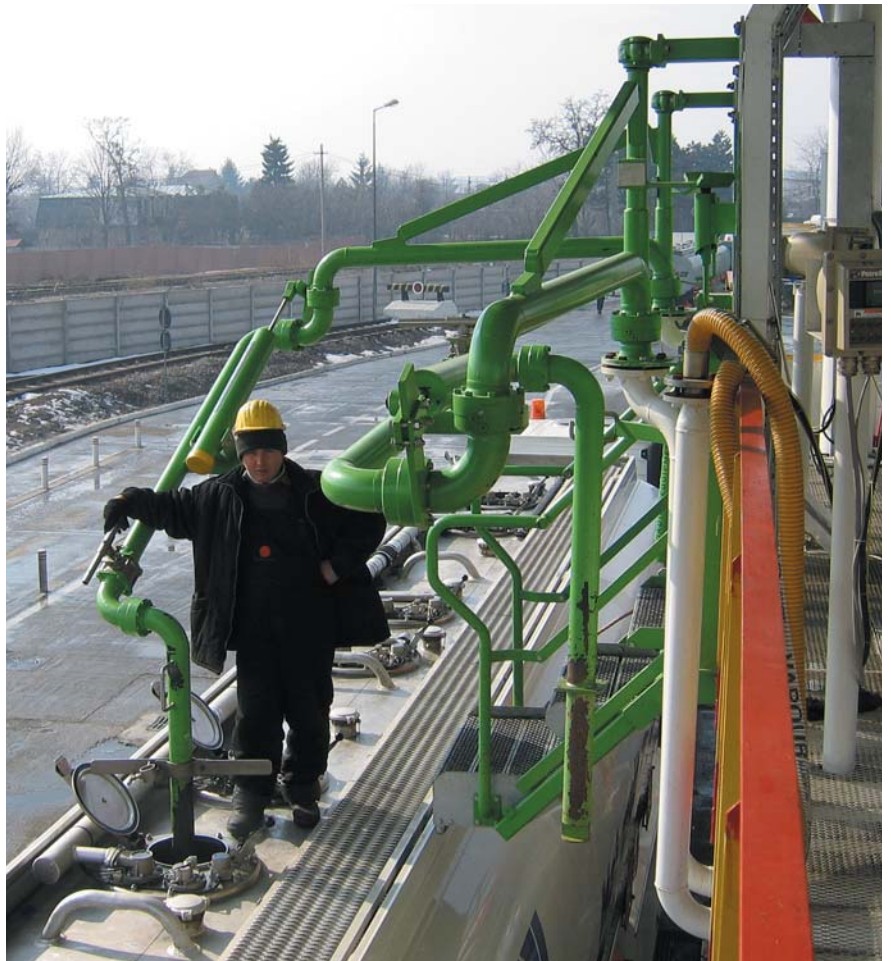
## Spring Cylinder Balancing



The Carbis arm encloses a compression spring in a spring cylinder. With this design, the arm will not fall catastrophically in the event of spring failure.



## Carbis Offers Loading Arms and Couplers by Emco Wheaton • OPW • Kanon • Oilco



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## Vapor Recovery

## Powered Loading Arms



### Features

### Features

- Arms can be engineered with complete vapor return systems for top or bottom loading depending upon the application.
- Arms can be steam jacketed or steam traced.
- High-level detection and arm position sensors available.
- Heavy-duty lock down assemblies are available on all of our top loaders, if required.

- Allows for easy, efficient arm operation.
- Available with pneumatic or hydraulic drive systems.
- Can be powered vertically, laterally, or both vertically and laterally.
- Available as a turnkey package (incorporating both arms and drives) or drive system to be retrofitted to current arms. (Retrofitting may require arm modification.)



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# Dry Bulk Loading Arms

## Uses

- Unloading Dry Bulk Products

## Vehicles Used On

- Hopper Cars

## Features

- Two planes of rotation give the arm the ability to reach multiple outlet locations on the rail cars.
- All 3/16" stainless steel construction.
- Long radius elbow to allow maximum product flow rate.



**No More Hoses To Lift,  
Trip Over, or  
Constantly Replace**



Visit

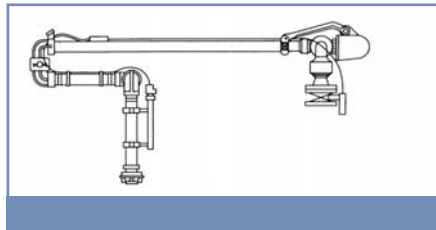
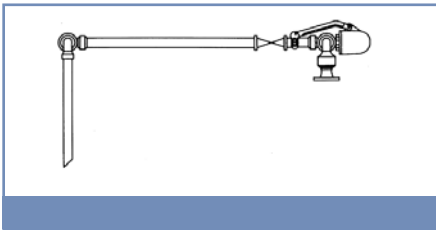
[www.carbiscatalog.com](http://www.carbiscatalog.com)  
to see an operational video



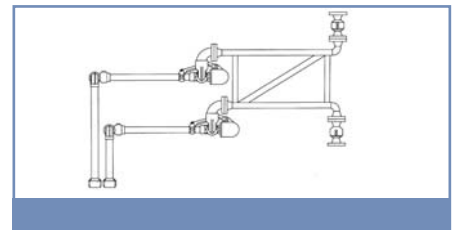
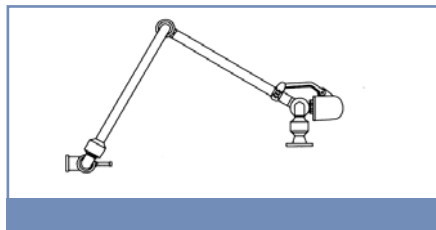
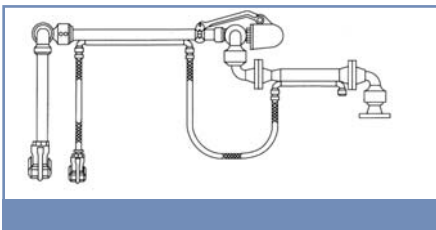
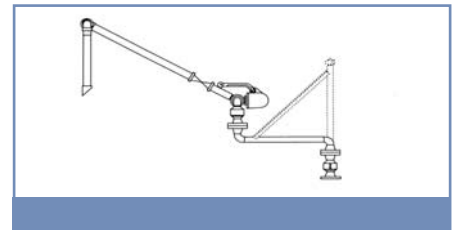
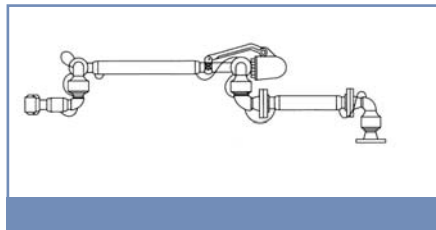
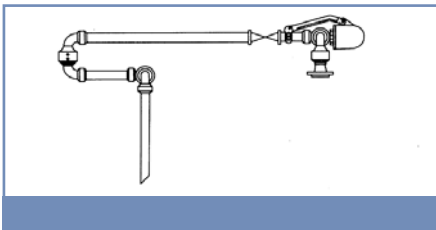
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# Loading Arms

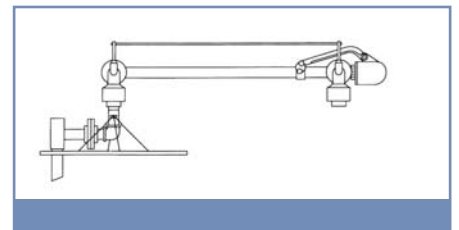
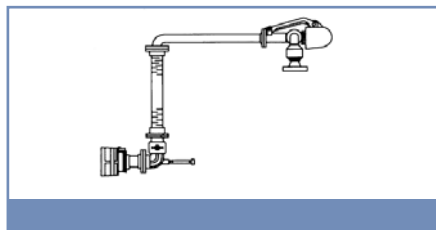
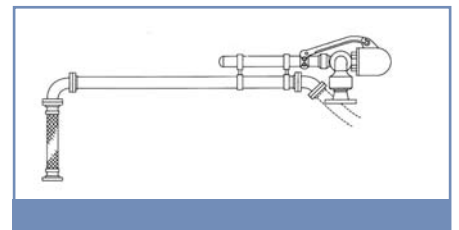
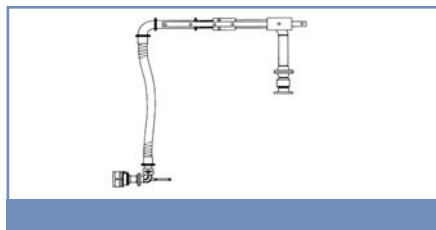
**ONLY CARBIS GUARANTEES LOADING ARMS AND SITE INTEGRATION.  
WE MAKE OUR LOADING ARMS WORK WITH OUR ACCESS EQUIPMENT!**



- Engineered to meet your application.
- Provides optimum safety and efficiency for loading or unloading.
- Up to 1000 psi.
- Sizes up to 6".
- Designs for top and bottom loading applications.
- Available with vapor recovery option.



**Carbis Offers Loading  
Arms and Couplers by  
Emco Wheaton • OPW  
Kanon • Oilco**

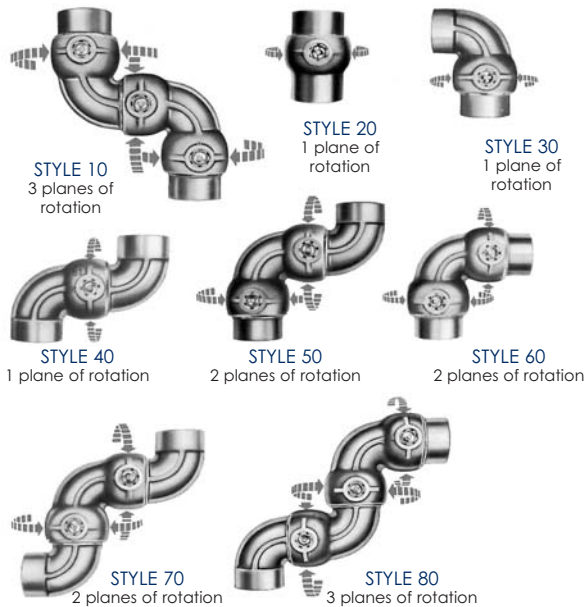


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# Swivel Joints & Sight Flow Indicators

## Swivel Joints



## Features

- Provides unlimited flexibility to any process application.
- Up to 1000 PSI pressure rating.
- Available with flanged, threaded, or butt-weld connections.
- Materials: Carbon Steel, 316 Stainless Steel, Ductile Iron, Bronze, Aluminum.
- Sizes: 3/4" - 24".

**Carbis Offers Both  
OPW & EMCO WHEATON  
Swivel Joints and  
Sight Flow Indicators**

## Sight Flow Indicators



## Features

- VISI-FLO's innovative radial sealing design is so good, it's guaranteed not to leak!
- Full ANSI Service Ratings - up to 400 PSI.
- Independently bolted glass retainers eliminate the need for tie-rods or retaining rings and the need for routine torquing maintenance.
- Flanged VISI-FLOs feature end-to-end dimensions that match Jacoby-Tarbox, Penberthy, and other manufacturers' units.
- Rated For Full-Vacuum Service.
- Standard Sizes - Flanged Units: 3/4" - 12" and Threaded Units: 1/4" - 2".
- Standard Alloys: Carbon Steel, 316 Stainless Steel, Ductile Iron, and Brass.

# Swivel Joints

## Features

- **Tight Seals**
  - O-Rings provide a tight seal without hindering swivel action.
- **True Ball Bearing Race Alignment**
  - Body and tail sections are locked together by a double row of ball bearings.
  - Double raceway design assures proper alignment and prevents binding caused by temperature changes and heavy radial loads.
- **Protected Bearing Chamber**
  - Protective inner O-ring seal prevents product from entering bearing chamber.
  - Outer seal keeps rain, dirt, and other contaminants out.
- **Long-Life Bearings**
  - Ball bearings are hardened, precision-ground steel.
- **Easy Lubrication**
  - All OPW swivels are pre-lubricated at the factory.
  - A grease fitting between races that accepts a standard grease gun is available for swivels that require field lubrication.
  - Non-lubricating swivels are available on special order.
- **No Field Adjustment Necessary**
  - Balls are held in place by factory-installed plugs that **never need to be adjusted to maintain bearing performance.**

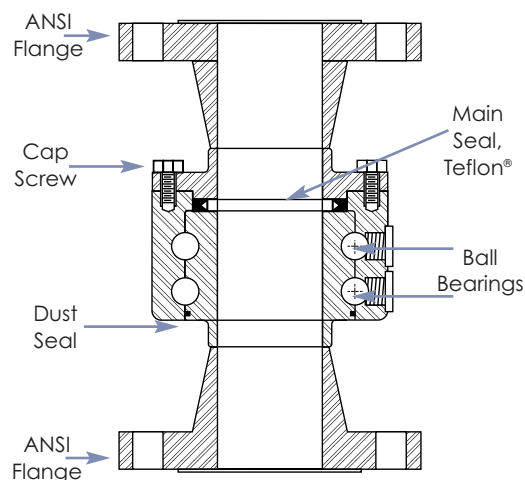


## Split Flange Swivels

- OPW 5400 Series carbon steel and 5900 Series stainless steel split flange swivels were developed specifically for ease of maintenance and heavy load-bearing applications. These heavy-duty swivels are available in 2", 3", and 4" sizes with ANSI flanged or welding ends. A stainless steel spring energized Teflon main seal is standard in both the 4140 steel and 316L stainless steel units.

The split flange design allows the main seal to be easily replaced without removing the ball bearings and dismantling the swivel joint. By simply unbolting and lifting the sealing flange, the main seal is accessible for easy replacement.

Deep ball grooves with wide spacing, along with heavy-duty construction, provide the significantly greater load carrying capacity needed in extended-reach loading arms and other high-load applications. Costly booms and support structures can be eliminated by using OPW split flange swivel joints.



# Swivel Joints

Each D2000 swivel joint bearing module is  
**GUARANTEED NOT TO NEED LUBRICATION FOR AT LEAST FIVE YEARS!**

## Features

- Heavy-duty split flange design.
- Ultra low maintenance.
  - No field greasing for five years.
  - Simply unbolt either of the two flanges to replace the seal.
  - No ball bearings to replace.
- 5 year limited warranty.
- Engineered for hard-to-handle chemical applications.
- Bearing module not in liquid path allows outstanding performance with aggressive chemicals.
- Low profile to reduce overall height and bend radius.
- Deep groove ball bearing technology provides best-in-class load-carrying capacity.
- Materials to suit any application.



## Cryogenic & Toxic Duty Swivel Joints

### Swivel Joint with Leak Detection

- Double sealed for use with cryogenic and toxic materials. Includes nitrogen purge facility and leak detection monitoring. For toxic and extreme hazardous materials, seal monitoring provides an early warning of a leak before the product has a chance to escape to atmosphere. By monitoring a pressure change in the cavity between the dual seals, even a small leak past the main seal will provide an indication of escaping product.



## PTFE Coated Swivel Joints

### Heavy-Duty Special Applications

- The D1131 and D1135 swivel joints for special applications with one or two ball tracks. These swivel joints are internally lined with PTFE and are equipped with a special PTFE seal. Therefore, they are suitable for extremely aggressive products.





# Couplers

## Kamvalok™

If your product is expensive, hazardous, caustic, corrosive, flammable, or toxic, you need a Kamvalok™ dry disconnect coupler and adapter. Its unique poppet action virtually eliminates spillage of any residual liquid contained within the line after disconnection.



- Ideal for transfer points where you cannot have product loss.
- Dry disconnection - No accidental leakage from products remaining in lines or couplings. Residual fluids will remain in the valve.
- Safe - Poppet will automatically close if the Kamvalok™ is accidentally disconnected.
- Lets you transfer volatile organic compounds without product or vapor loss.
- Contains fugitive emissions so employees are kept out of harm's way.
- Easy to use - 360° orientation eliminates need for swivels.

## Drylok™

Drylok™ is your preferred coupler when you need to guard against loss, fugitive emissions, and costly contamination. Its easy-flow interior is ideal for high-viscosity fluids and high-pressure applications. Fewer drips in day to day handling than any other style of coupler.



- Reliable - Fewer potential leak points so seals will last longer and won't deteriorate.
- Prevents accidental spills - Cannot be uncoupled if the valve is open.
- Error proof operation spills - Turning the lever locks the coupler in place and opens valve to product flow. Unlocking closes valve with a secure seal.

# Couplers

## Dry Break Liquid Transfer Couplers

- One quick rotation for connection and dry-disconnection.
- Unique design; coupling can never be disconnected while valves are open.
- Seals replaced on site by your own operators.
- No vulnerable external valves or levers to damage.
- Stainless steel components of 316L (also available in aluminum and brass).
- Sizes: 3/4" - 24".



## LPG Couplers

- The interlocking design eliminates the possibility of incorrect connections or disconnections.
- Available in both stainless steel and brass with a thread or flange connection in 1" and 2" diameter.
- Single rotation; no levers, buttons, or locks.
- Specially designed to safely transfer propane and butane in liquid and vapor phases.



## Dry Break Liquid Transfer Couplers

- High flow rate / low pressure drop.
- Valves in both halves close automatically before the main fluid seal releases to the atmosphere.
- Ultra compact design.
- Encapsulated shear bolts for protection from external damage will release at any angle of pull.
- Easily re-set on site with one person.
- Operates independently of shut-off safety systems.
- Does not require an external power source.

