Counterweighted Hose (CWH) Bottom Loading Arm

StandardLine Loading Arms by OPW Engineered Systems raise the bar in quality and performance for the industry. Get OPW’s best-in-class loading systems in pre-engineered sizes, materials and feed orientations with fast delivery.

The Grandfather of our Terminal Product line, the CWH is ideal for longer reach applications or loading bays that require up to seven arms. Its simple, yet robust, design has provided decades of reliable service. Also a good choice when replacing existing Counterweighted or Shot-Bucket Loaders.

Features and Benefits:

- 8000 Series Split Flange Inlet Swivel
  - Higher Load Capabilities
  - Easier Maintenance
- 3000 Series Swivel Joints
  - Simple, Proven Design
  - Carbon Steel/Aluminum Construction
  - Low-Temperature Fluorocarbon Seals
  - Wide Compatibility
- Adjustable Counterweight Balancing
  - Safe, Easy Adjustment
- Braided Stainless Steel or Rackmaster Composite Hoses
- Available with Lynx Bottom Loading Coupler
  - 3-Year Warranty

ALL STANDARDLINE ARMS FEATURE

- Fast Delivery
- Menu of Options to customize your arm
- Freight is included across continental U.S. & Canada
- Exclusive 3-Year Warranty included
Counterweighted Hose (CWH) Loader Dimensions*

StandardLine Terminal Configuration**

* Required to accommodate StandardLine Offering. Other options are available upon request.

** Provides 90" reach. 78" and 114" lengths also available. Other lengths available upon request.
Build Your Standard CWH Arm

1. Fill in the corresponding code for your selections.
2. Add accessories by filling in the appropriate corresponding number for each option.

Example

| CWH | CA | 90 | UP | 0402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Arm Style: (CWH) Short-Style Hose Type
Material Options: (CA) Carbon Steel/Aluminum
Dimension Options:
(78) 78" Overall Reach
(90) 90" Overall Reach
(114) 114" Overall Reach
Orientation*: (UP) Upfeed
Size and Seal Type:
(0402) 4" with fluorocarbon

* Downfeed configuration available upon request.

1 Drop Spool
0 - Drop Spool by Others
1 - 18" Drop Spool, Alum, Sch 40
4" x 18" OAL TTMA Ends (710 ATT - 0418)
2 - 4" x 36" (710 ATT-0436)
3 - 4" x 54" (710-ATT-0454)

2 Drop Hose
0 - Drop Hose by Others
1 - 4" x 80" Rackmaster Composite, TTMA Ends (L19081)
2 - 4" x 80" Braided Stainless Steel, TTMA Ends (L19080)

3 Coupler Swivel
0 - Coupler Swivel By Others
1 - 4" Style 30 (90°) Swivel Joint w/ handle, Alum/Fluorocarbon (3635FTH-0402)

4 Isolation Valve
0 - Isolation Valve by Others
1 - 4" Full Flow (LBV 450VGL)

5 Spacer Spool
0 - Spacer Spool by Others
1 - 4" x 8" OAL, TTMA FLG (VSS4)

6 Site Glass
0 - Site Glass by Others
1 - 4" Acrylic (BF4-SG-25)

7 API Coupler
0 - API Coupler by Others
1 - 1004D3-0402
2 - Lynx Coupler (852VG)

8 Assembly, Testing & Boxing (ATB)
0 - No ATB
1 - ATB Included
2 - ATB, Export

STANDARDLINE
**Technical Features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>Carbon Steel/Aluminum</td>
</tr>
<tr>
<td>Seals</td>
<td>Low-Temp Fluorocarbon</td>
</tr>
<tr>
<td>Working Pressure</td>
<td>80 PSI (5.5 Bar)</td>
</tr>
<tr>
<td>Test Pressure</td>
<td>120 PSI (8.2 Bar)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-20°F to 140°F (-29°C to 60°C)</td>
</tr>
<tr>
<td>Up/Down Angular Movement</td>
<td>+20° to -20° (from horizontal)</td>
</tr>
<tr>
<td>Typical Horizontal Spacing</td>
<td>18&quot; (457 mm)</td>
</tr>
<tr>
<td>Typical Vertical Spacing</td>
<td>18&quot; (457 mm)</td>
</tr>
<tr>
<td>Typical Reach (radius)</td>
<td>78&quot;, 90&quot;, 114&quot; (1,981 mm, 2,286 mm, 2,896 mm)</td>
</tr>
<tr>
<td>Nominal Diameter</td>
<td>4&quot;</td>
</tr>
<tr>
<td>Typical Flow Rates</td>
<td>300-600 GPM (2000-3500 LPM)</td>
</tr>
<tr>
<td>Weight</td>
<td>~275 lbs*</td>
</tr>
</tbody>
</table>

**Materials of Construction**

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet Flange</td>
<td>4&quot; 150 ANSI ASTM A105</td>
</tr>
<tr>
<td>Inlet Swivel</td>
<td>Carbon Steel ASTM A105</td>
</tr>
<tr>
<td>Primary Arm Piping</td>
<td>Sch 40 Carbon Steel ASTM A53B</td>
</tr>
<tr>
<td>Drop Hoses</td>
<td>(L19080) Braided Stainless Steel, TTMA Ends (L19081) Rackmaster Composite, TTMA Ends</td>
</tr>
<tr>
<td>Coupler Swivel (p/n 3635FTH-0402)</td>
<td>Aluminum ASTM B26 A356 T6</td>
</tr>
<tr>
<td>Isolation Valve (LBV450VGL)</td>
<td>Cast Aluminum/Fluorocarbon</td>
</tr>
<tr>
<td>Spacer Spool (p/n VSS4)</td>
<td>Cast Aluminum AA601</td>
</tr>
<tr>
<td>API Coupler (p/n: 1004D3, Lynx852VG)</td>
<td>Aluminum/Fluorocarbon</td>
</tr>
</tbody>
</table>

**Additional Information**

- **Weld Procedure**: Per the ASME Boiler & Pressure Vessel Code Section IX
- **Radiograph/X-Ray**: Per OPW Standard, 5% random/factory lot
- **Testing**: All assembled Loading Arms shall be tested to 1.5X the rated design pressure.
- **Surface Treatments**: All Carbon Steel components to be protected with a 2-part paint process. Aluminum components to be unpainted.
- **Lubricant**: OPW 880 High-Performance Synthetic Lubricant
- **Gasketing**: KlingerSil C5400
- **Warranty**: Standard warranty of three years after date of invoice shall apply. LYNX API Coupler warranty to be three years after shipment from factory. 790 Counterbalance warranty to be five years after shipment from factory.
- **Freight**: All shipments are F.O.B Factory Lebanon, OH. Full freight is allowed on surface transportation within continental United States and Canada.
- **Factory Assembly, Testing & Boxing (ATB)**: If this option is selected, Loading Arm would be fully assembled, tested and shipped in protective wooden crate.

**Note**: It may be necessary to ship Loading Arm in sections to accommodate crating, shipping and rigging. Arm will be shipped as fully assembled as possible.

**RECOMMENDED SPARE PARTS LIST**

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
<th>Where Used</th>
<th>Qty/Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>8000RK-0402</td>
<td>8000 Series Swivel Seal Kit, 4&quot; Fluorocarbon</td>
<td>8420F-0402 (Base Swivel)</td>
<td>1</td>
</tr>
<tr>
<td>3000RK-0402</td>
<td>3000 Series Swivel Seal Kit, 4&quot; Fluorocarbon</td>
<td>3635FTH-0402 (Coupler Swivel)</td>
<td>1</td>
</tr>
<tr>
<td>1004D3SRK-0402</td>
<td>Coupler Seal Repair Kit, 4&quot; Fluorocarbon</td>
<td>1004D3-0402 (API Coupler)</td>
<td>1</td>
</tr>
<tr>
<td>API850VGSK</td>
<td>Coupler Seal Repair Kit, 4&quot; Fluorocarbon</td>
<td>Lynx852VG (API Coupler)</td>
<td>1</td>
</tr>
</tbody>
</table>

* Estimated weight for entire Loading Arm (72" Reach). Weight can vary depending on selected options.
** Other seal kits/materials available upon request.