

## API BOTTOM LOADING COUPLER

### The Safer, Cleaner, Faster Way To Load Your Transports

The 1005E3/1004D3 is the latest generation in API bottom-loading couplers from OPW. A proven performer at major oil terminals around the world, the 1005E3 incorporates several new features that make it the most user-friendly coupler on the market.

#### Safer

##### 5-Cam Design

Ensures easy alignment; tight connection to adaptor and resists side forces during loading

##### Fully Interlocked

Dual interlocks ensure that the 1005E3 cannot be opened unless it is properly connected to an API adaptor

#### Cleaner

##### Superior Sealing

Simple and reliable smart-seal design consisting of dual high-performance O-rings

##### High-Performance Seals

Special Fluorocarbon seal compound provides compatibility across most products including gasoline, diesel, biodiesel and ethanol\*

#### Faster

##### Maintenance

- All *pins* and *small threads* have been eliminated to provide quick, easy access to all critical components
- Nose seal can be replaced easily without having to remove coupler from rack
- No special tools required
- Can be completely rebuilt in minutes

##### Operation

New stainless steel "ergo" handle design provides easy, smooth operation

\*other seals available upon request



Patent pending  
1005E3 (small handles for European market)



1004D3 (large handles)

## API BOTTOM LOADING COUPLER

### Design Parameters

|  |                     |                        |                |
|--|---------------------|------------------------|----------------|
| <b>Design Pressure</b>                 |                     | 8.6 bar(g)             | 125 psi(g)     |
| <b>Max Allowable Working Pressure*</b> |                     | 5 bar(g)               | 75 psi(g)      |
| <b>Max Flow Rate</b>                   |                     | 135 M <sup>3</sup> /hr | 600GPM         |
| <b>Temperature Range</b>               | Fluorocarbon        | -29°C to 204°C         | -20°F to 400°F |
|  | Buna                | -29°C to 121°C         | -20°F to 250°F |
|  | EPT                 | -46°C to 107°C         | -50°F to 225°F |
|  | Kalrez <sup>®</sup> | -18°C to 260°C         | 0°F to 500 °F  |
| <b>Weight</b>                          |                     | 9.5 Kg                 | 21 lbs         |
| <b>Pressure Drop (@ Max Flow Rate)</b> |                     | 0.24 bar(g)            | 2-5 psi(g)     |

\* Unit tested to 21 bar (300 psi) in closed position to withstand excessive thermal expansion pressures.  
Reference API standard RP-1004 for additional information.



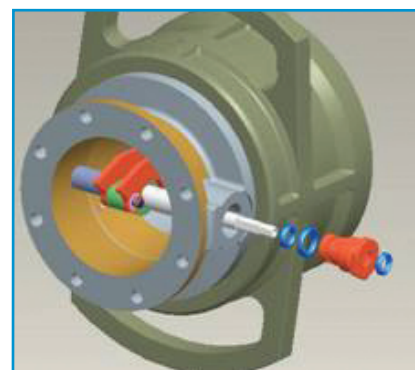
#### 1004DRN DRAIN ADAPTOR

- Allows operator to easily, safely drain loading arm
- Fits any API Bottom Loading Coupler



#### 1005PA PARKING ADAPTOR

- Use to neatly store & secure loading arms while not in use
- Can be provided with standpost and/or proximity switch



- Easy Disassembly
- Easy Seal Replacement

### Seal Replacement Kit

The 1004D3SRK Seal Replacement Kit includes every required part to replace all seals in the 1005E3/1004D3 API Bottom Loading Coupler.

| Seal Material             | Part number    |
|---------------------------|----------------|
| <b>Buna</b>               | 1004D3SRK-0401 |
| <b>Fluorocarbon</b>       | 1004D3SRK-0402 |
| <b>EPT</b>                | 1004D3SRK-0404 |
| <b>Kalrez<sup>®</sup></b> | 1004D3SRK-0409 |



### Materials

|            |                 |
|------------|-----------------|
| Body       | Aluminium       |
| Sleeve     | Aluminium       |
| Poppet     | Aluminium       |
| Shaft      | Stainless Steel |
| Cam Arms   | Stainless Steel |
| Interlocks | Stainless Steel |
| Drive Link | Stainless Steel |
| Handle     | Stainless Steel |
| Cylinder   | Aluminium       |

### Selection Guide

**1 0 0 5 E 3** -

**1005E3:** Small Handles  
**1004D3:** Large Handles

**0 4**

**Size 04:**  
**4"**

**0 2**

**Seal Material**  
01 Buna  
02 Fluorocarbo  
04 EPT  
09 Kalrez<sup>®</sup>