

## 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



Patent pending  
1005E3 (small handles for European market)



1004D3 (large handles)

**Assentech**  
**Limited**

The Experts in Tank Storage and Process Safety

[www.assentech.co.uk](http://www.assentech.co.uk)

01726 844707

## 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

### 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>

**Assentech**  
Limited

The Experts in Tank Storage and Process Safety

www.assentech.co.uk

01726 844707