DRY-RUNNING SECONDARY CONTAINMENT SEAL

Designed for Safe Fluid Containment & Environmental Emissions Control

In certain processes dangerous and volatile fluids require additional precautions to protect personnel, ensure safe operation, and prevent downtime. The Flex-A-Seal Fluid Containment (FC) Seal has been specifically designed as an economical option for applications where the highest level of safety and environmental control is necessary. The FC Seal allows monitoring of any primary seal leakage and functions as a secondary containment seal in the event of primary seal failure.

The FC Seal is a contacting, dry-running seal which can be added to most of Flex-A-Seal’s single cartridge options, including:

- Style 63 or 66 High Temperature Cartridge Seal
- Style 58 Heavy Duty API Stationary Multi-Spring Cartridge Seal
- Style 53A API Rotating Welded Metal Bellows Cartridge Seal
- Style SMS Stationary Multi-Spring Cartridge Seal
- Style RB Rotating Welded Metal Bellows Cartridge Seal

Utilizing the FC secondary seal design in conjunction with API Plan 72 or 76 eliminates the cost and maintenance of installing a dual seal with an API Plan 52 buffer system.

The FC Seal is available in low or high temperature designs, making it a cost-effective choice to meet emission regulations and safeguard personnel and equipment.

**Materials of Construction:**

**Faces:** Special Dry-Running Carbon, Silicon Carbide

**Elastomers:** Viton®, Ethylene Propylene, Aflas®, Buna, Neoprene, Perfluorelastomers

**Metallurgy:** 316 Stainless Steel, 17-4 Stainless Steel
Additional options include Hastelloy®, Super Duplex Stainless Steel, Titanium

**Bellows:** Hastelloy®C-276, Heat-treated Inconel 718, Heat-treated AM350. Double-ply bellows designs are also available.

**Operating Parameters:**

**Speed:** 10000 FPM (50 m/sec)

**Temperature:**
- Low Temp Design: up to 400°F (204°C)
- High Temp Design: up to 800°F (425°C)

**Pressure:**
- *Primary Seal (product):* as specified by selected single seal design
- Secondary Seal (dry-running): up to 10 psi (0.7 bar)

* Maximum temperature/speed/pressure/runout indicates operating extremes independently and does not imply the seal will function at these extremes at the same time.
**Features and Benefits:**

*As shown with a Style 58FC cartridge seal*

1. Welded metal bellows technology maintains a uniform light load on dry running seal faces for long seal life
2. Stationary design enables optimum face tracking
3. Static O-ring position eliminates friction during operation and potential failures caused by O-ring hang up
4. Seal faces are heat shrunk retained for higher strength and torque transfer – no pin drive
   - Most commonly used with API Plans 72 and 76

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**API Plan 76**

*As shown with a Style 58FC cartridge seal*

- **INTENT:** Safely diverts non-condensing primary seal leakage to a flare or vapor recovery system. Alarm warns when primary seal is about to fail.
- **BENEFITS:** Lower initial and maintenance costs than dual unpressurized seals using an API Plan 52. Barrier Fluids, tanks, and auxiliary equipment are eliminated.
- **CONVENTION:** Dual seals with a dry contacting containment seal where leakage from primary seal won’t condense.