

CRO

An economical, single coil spring, friction drive seal for use in ANSI chemical pumps with packing box seal chambers. Minimum number of seal components with heavy cross sections simplify installation and resist high levels of corrosion. Double CRO design has no wetted metals and a common spring. The CRO series is available off the shelf in standard configurations for all of the popular chemical pumps offered today.

Features/Benefits

- **Rotating Seal Ring**

Self centers around the shaft. Designed to withstand the harsh physical demands of cyclic operation or continuous duty. Available in a wide range of standard materials.

- **Single Coil Spring**

Robust spring resists clogging and chemical attack.

CRO-P option adds positive rotor drive

through a drive collar and pin arrangement.

- **Shaft Packing**

Completely interchangeable materials without changing other components.

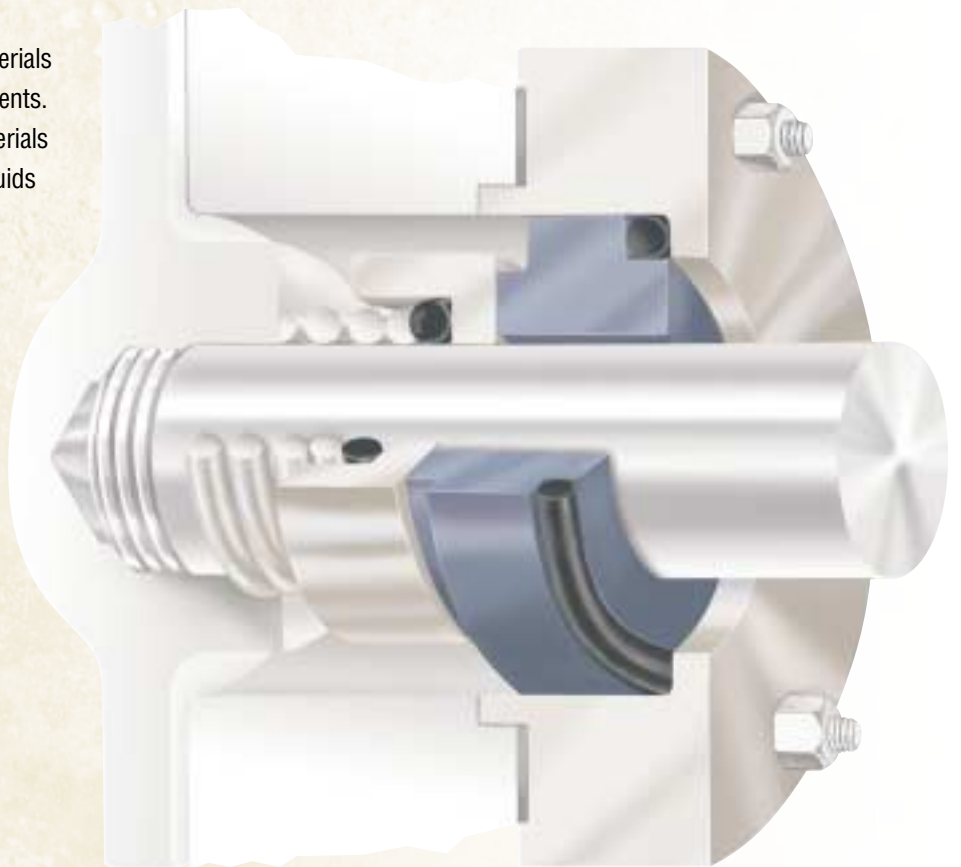
Available in a wide range of materials for compatibility with process fluids and process temperatures.

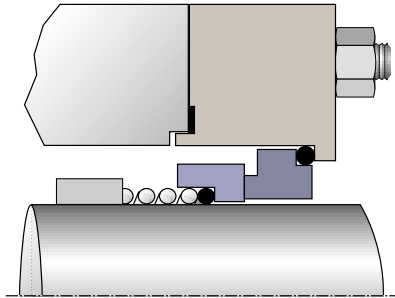
- **Stationary Insert**

Flexibly mounted to prevent distortion.

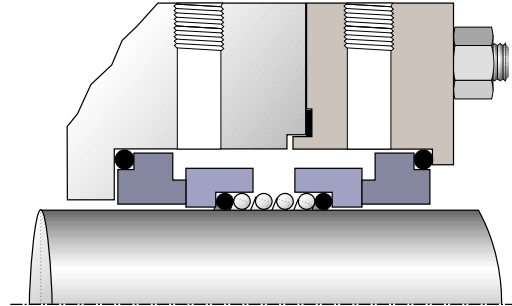
- **Insert Mounting**

Dimensionally interchangeable for versatility in secondary seal materials selections.





CRO



Double CRO

Available Materials of Construction

Coil Spring

- 304, 316, or 20 Stainless Steel
- Alloy C-276 or B-2
- XM-19 or 17-7 PH Stainless Steel
- Titanium
- Alloy 400

Seal Rings or Inserts

- Tungsten Carbide
- Silicon Carbide
- Peramic
- Durchrome
- Bronze
- No. 5 Carbon

Secondary Seals

- Fluoroelastomer
- Buna N
- Ethylene Propylene Rubber (EPR)
- Perfluoroelastomer
- Ethylene Propylene Terpolymer (EPT)
- Neoprene
- PTFE

Operating Parameters

- Pressures: Up to 300 psi (20 bar)
- Temperatures: CRO: -40° F to 120° F (-40° to 49° C)
CRO-P: -40° F to 500° F (-40° to 260° C)
- Shaft Speeds: Up to 4500 fpm (23 m/s)
- Sizes: 0.375" to 3.500" (9.5mm to 89mm)

Note: For sizes and conditions not listed, contact your local Flowserve Representative.

The information and specifications presented in this product brochure are believed to be accurate, but are supplied for information purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, with respect to the product. Although Flowserve Corporation can provide general application guidelines, it cannot provide specific information for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper selection, installation, operation and maintenance of Flowserve products. Because Flowserve Corporation is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice.

Primary Worldwide Flow Solutions Division Locations

Licensees, authorized agents, and affiliated companies located worldwide.

United States	Canada	Netherlands	Argentina	Australia
Kalamazoo, MI Phone 616-381-2650 Fax 616-381-8368	Edmonton, Alberta Phone 780-463-7958 Fax 780-450-1241	Scarborough, Ontario Phone 416-292-2877 Fax 416-292-5190	Roosendaal Phone 31-165-581400 Fax 31-165-552622	Villa Martelli Phone 54-11-4790-6800 Fax 54-11-4709-7072
Singapore	Mexico	Brazil	Japan	Germany
Phone 65-746-4318 Fax 65-747-1963	Tlaxcala Phone 52-2-461-6791 Fax 52-2-461-6847	Sao Paulo Phone 55-11-4066-8600 Fax 55-11-4066-7014	Osaka Phone 81-720-85-5571 Fax 81-720-85-5575	Dortmund Phone 49-231-6964-0 Fax 49-231-6964-248

www.flowserve.com