MECO® EP TYPE 2 SEALS

ENGINEERED SHAFT SEALS

Fully Split

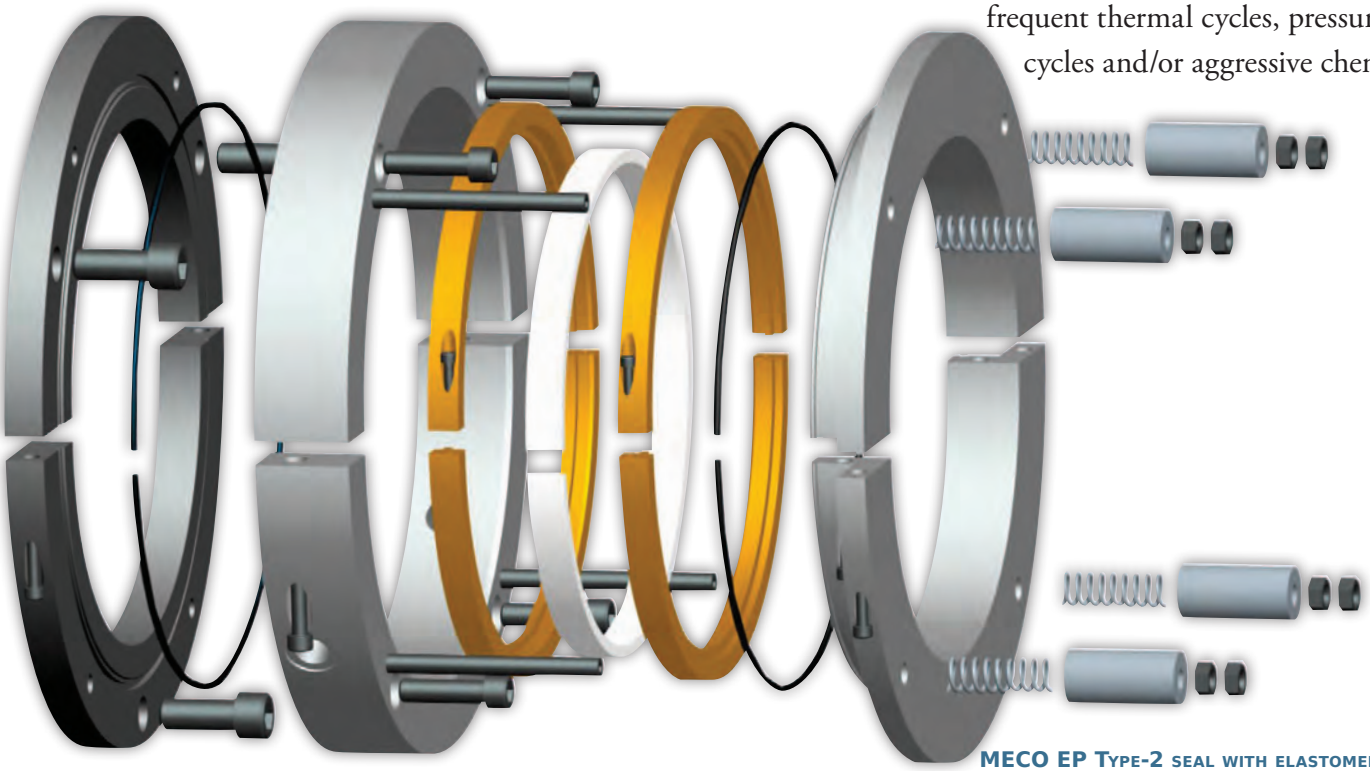
An Employee Owned Company

What is MECO's EP Type-2 Seal?

The MECO EP Type-2 model is the best choice for many sealing applications with low to medium-high shaft speeds, on small to large shaft diameters. The configuration is a double mechanical seal using an elastomer drive to rotate bearing-grade, synthetic seal faces against fixed, hardened stainless steel seal faces. The EP Type-2 uses full-contact, soft-face mechanical shaft sealing technology, sized for OEM and existing in-house process equipment. The EP Type-2 model provides the superior performance, durability and quality of workmanship that are hallmarks of MECO's many other highly-regarded seals. MECO's first-rate customer service is provided for each EP Type-2 seal sold.

When are EP Type-2 Seals the Best Option?

The MECO EP Type-2 seal is ideal for single- or twin-shafted extruder-compounders, plow blenders, paddle blenders, conveyors and similar rotating equipment used in the plastics, chemical, metals, pharmaceutical, food and other process industries. The EP Type-2 seal model is typically used on horizontal or inclined shafts configured for a fully-split installation. They are frequently used on polymer extruders containing particulates and vapors. They are well-suited for hard-to-access equipment and machinery with set speeds and feed rates. The seal is appropriate for vacuum service, low pressures and steady-state applications that experience infrequent thermal expansion or pressure changes. In contrast, the MECO Model EP Type-3 seal is better matched for the challenges of applications with frequent thermal cycles, pressure cycles and/or aggressive chemicals.



MECO EP Type-2 seal with elastomer drive.

Manufactured *Since 1984* by: Woodex® Bearing Company, Inc.

MECO ENGINEERED SHAFT SEALS

216 Bay Point Road, Georgetown ME 04548 USA

Phone +1 207 371 2210 • Toll-free in North America 1 800 526 8800 • Fax +1 207 371 2169

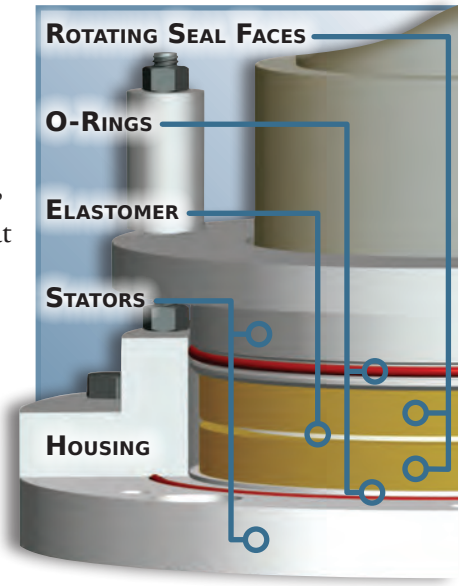
www.mecoseal.com • Email sales@mecoseal.com

The MECO EP Type-2: a reliable solution for shafts with runout and hard to access sealing points.

How does the EP Type-2 Seal model work?

The MECO EP Type-2 seal model features a precision-machined, split seal housing similar to a stuffing box and gland follower. The elastomer drive has two rotating seal faces and a drive elastomer. The elastomer and rotors interlock, forming an airtight and watertight seal. The low-friction rotating seal faces are at right angles to the shaft and in full contact with the stationary seal faces. These rotating parts are fitted around the shaft before the seal housing is installed.

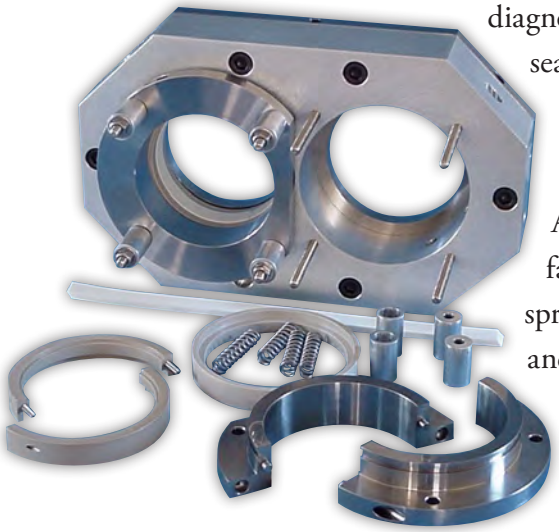
The nose or pilot of the gland follower provides the outboard (secondary) stationary seal face. A plate attached to the bottom of the stuffing box provides the inboard (primary) stationary seal face. These are precision machined stationary seal faces (stators) with hardened, lapped and polished seal surfaces. The seal cavity is charged with low-pressure air or an inert gas, which acts as a barrier fluid to provide pneumatic seal face loading.



MECO EP Type-2 with one housing half removed for visibility

How is the EP Type-2 Seal model maintained?

The MECO EP Type-2 seal model is pneumatically loaded to provide seal face pressure, while also functioning as a diagnostic tool. A pressure gauge is attached to the seal housing to monitor seal cavity pressure. External springs attached to the back of the gland follower hold the outboard seal face in check and provide seal face alignment.



Split MECO EP T2 duplex extruder seal

As the sacrificial rotor seal face material wears, the springs gradually expand and the seal cavity pressure gradually decreases. After a significant pressure decrease or when an opportunity presents itself, the springs should be re-set. The pressure will then reset itself.

Split MECO EP Type-2 seal on a 8.7"/220mm shaft

MECO® SEALS Driven.

MECO EP Type-2

What construction is available?

EXAMPLE: 1

MECO EP Type-2 installed on a continuous mixer with 1.75”/44.5mm shafts

The MECO EP Type-2 seal’s rugged components are designed for long life. The standard assembly uses hardened stainless steel stators. A replaceable hardened stator is available for very large shafts or highly abrasive process materials. The housing is available in various 300-series stainless steels, aluminum, or other corrosion-resistant alloys.

Split EP Type-2 seal for a 18.11”/460mm shaft

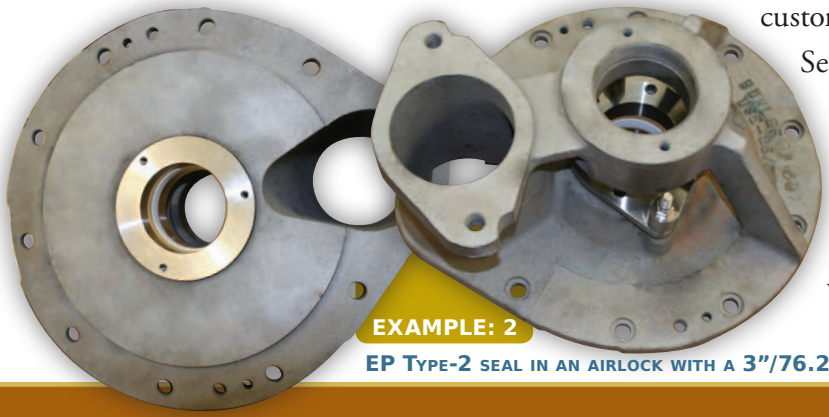
Two common rotor seal face options are MECO 3000, a high-performance, bearing-grade, polymer-filled PTFE with FDA approval, or MECO 4001, a glass-filled bearing-grade PEEK. The common elastomer is white silicone; Viton®, EPDM and nitrile are available as alternatives. The elastomers have an FDA compliant option.

Seal housing with removable stator

Because Woodex’s MECO Seal division manufactures many custom shaft seals, we can fabricate from any material required.

What sizes are available?

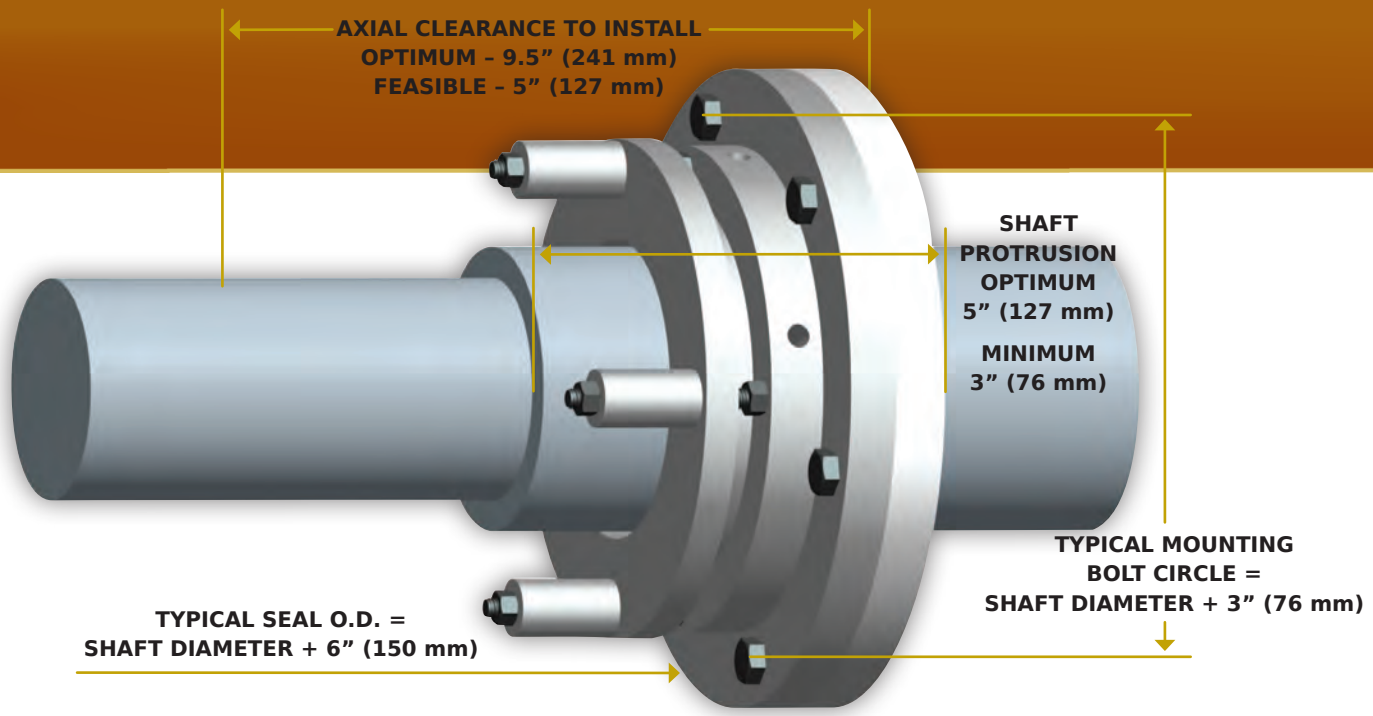
The MECO EP Type-2 seal model is custom-designed and built to order. Typical assemblies are fully split and often are made for twin shafts. Shaft diameters range from 1” (25mm) to 20” (500mm) and include any size in between. Dimensions vary according to the application, but typical dimensions are shown in the illustration on the last page. They are readily designed to fit most OEM mounting arrangements and are designer-friendly, to interface with customized in-house process equipment requirements. Seals can be built either to SAE or metric dimensions. Non-removable stuffing boxes, integral to the equipment, can be modified or machined to fit the seal as shown in examples 1 and 2 on this page.



EXAMPLE: 2

EP Type-2 seal in an airlock with a 3”/76.2mm shaft

EP MODEL TYPICAL DIMENSIONS



Mechanical Capabilities	
Temperature	-60° to 300° F (-50° to 150° C)
Pressure	Vacuum to 20 psig (135 kPa)
Shaft Speed	To 375 RPM
Total Indicator Runout (TIR)	1/4” (6mm) standard - greater runout can be accommodated
Repeated Axial Shaft Motion	1/128” (0.2mm)
Thermal Shaft Growth	Limits set per application
Results may vary with operating conditions - please call for discussion.	

MECO® SEALS

MECO’s design staff or your local distributor can help tailor the EP to your individual needs.

Below are a few examples of other **MECO** seal models.

Split OFS Model
• Top and Side Entry
• Solvents
• Purge Free

AH Model
• Blenders
• Screw Conveyors
• Tight Spaces

MP Model
• Air locks
• Rotary Feeders

HB Model
• Standard Seals for C.E.M.A. and Metric Screw Conveyors

EA Model
• Abrasive Slurries
• Adjustable on-the-Fly
• Large Diameters

Distributed by:

All MECO Seals
Made in USA