MECO SEALS

HC Seal

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What it is

The MECO HC seal is a modular mechanical shaft seal, designed to fit process equipment following Conveyor Equipment Manufacturers Association (C.E.M.A.) standards, with many customizable material options to meet your application's requirements. The HC seal's air-free design makes it a great choice for applications where compressed air is unavailable or otherwise inconvenient. Adjustments can be quickly and easily performed without disassembling the seal assembly. Unlike standard stuffing box seals, the HC seal is non-abrasive to the machine's shaft and can accommodate up to 1/4" of shaft runout.

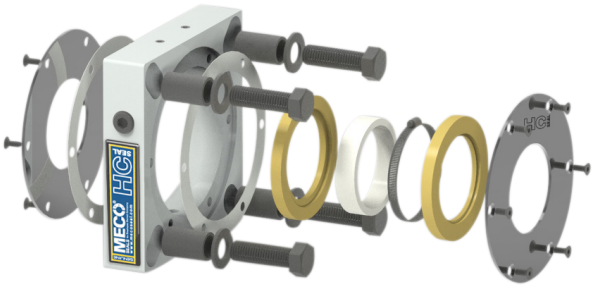
How it works

The HC model's dynamic seal is formed between rotating, polymer seal faces (rotors) and stationary, stainless-steel seal faces (stators). Inside the seal's solid, square housing, the polymer rotors are frictionally locked into rotation with the machine's shaft by an elastomer drive ring. The HC seal's stainless steel adjusting clamp squeezes the elastomer ring against the shaft, causing it to lengthen axially against the rotating seal faces to provide effective seal face loading.

Applications

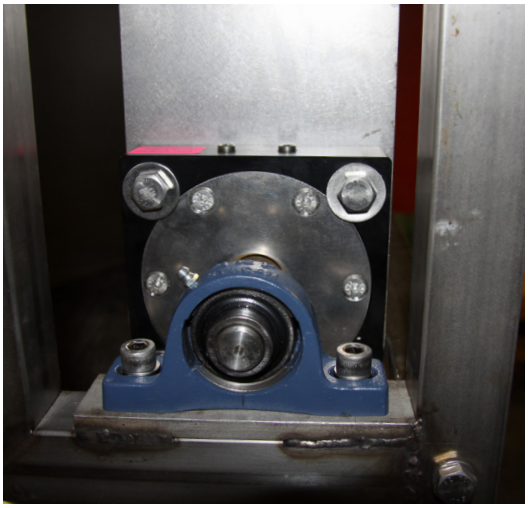
The HC seal is effective where compressed gas cannot be used. It can be an especially effective solution to sealing smaller shafted equipment experiencing shaft run out. The HC seal can be used on horizontal, inclined, and vertical shafts. Several common machines and process material applications are listed below.

HC Seal machine applications	HC Seal process material applications
• Screw conveyors • Small blenders • Bucket elevators • Hoppers • Flange bearing applications	• Powders • Dry abrasive processes • Dry conveying • Dry chemical processes

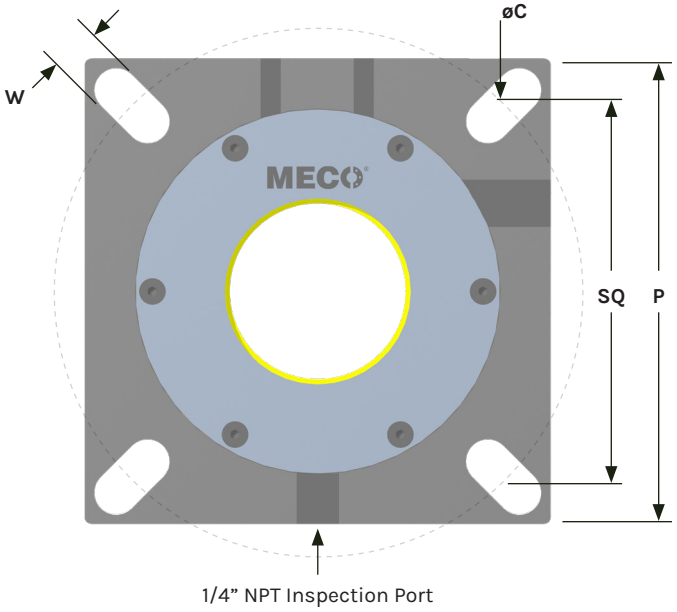


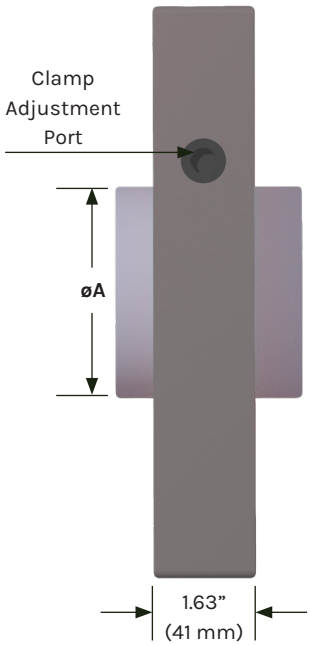
HC Seal features:

- Air-free
- Economical
- Adjustable w/o disassembly
- Shaft runout capability



HC Seal sizing chart





Stocked Housing #

Each MECO HC Seal housing can accommodate optional shafts up to these limits:

HSG #	Max. Shaft ø
1	1.77"/45mm
2	2.24"/57mm
3	2.63"/67mm
4	3.62"/92mm
5	4.07"/103mm
6	5.07"/129mm

CEMA Standard Sizes (Inches)

CEMA Part #	øA Shaft	P	HSG #	SQ Min	SQ Max	W	øC Min	øC Max
HCZ1W4A150	**1.50**	5.38	**1**	4.00	4.38	5/8	5.65	6.19
HCZ2W4A200	**2.00**	6.50	**2**	4.38	5.38	3/4	6.19	7.60
HCZ3W4A244	**2.44**	7.38	**3**	5.13	6.25	3/4	7.25	8.84
HCZ4W4A300	**3.00**	7.75	**4**	5.75	6.50	7/8	8.12	9.19
HCZ5W4A344	**3.44**	9.25	**5**	6.75	8.00	7/8	9.55	11.31
HCZ6W4A444	**4.44**	10.88	**6**	7.75	8.75	7/8	10.96	12.38

METRIC Standard Sizes (Millimeters)

Metric Part #	øA Shaft	P	HSG #	SQ Min	SQ Max	W	øC Min	øC Max
HCZ1W4A157/177	**40/45**	137	**1**	102	111	16	144	157
HCZ2W4A197/217	**50/55**	165	**2**	111	137	19	157	193
HCZ3W4A236/256	**60/65**	187	**3**	130	159	19	184	225
HCZ4W4A276	**70**	197	**4**	146	165	22	206	233
HCZ4W4A295	**75**	197	**4**	146	165	22	206	233
HCZ4W4A315	**80**	197	**4**	146	165	22	206	233
HCZ5W4A335	**85**	235	**5**	171	203	22	243	287
HCZ5W4A354	**90**	235	**5**	171	203	22	243	287
HCZ6W4A394	**100**	276	**6**	197	222	24	278	314
HCZ6W4A433	**110**	276	**6**	197	222	24	278	314

Part number decoder

HC Z 5 W 4 A 354

- HC — Model - HC with Hose Clamp
- Z — Housing Material - Choose 1: Z = Anodized Aluminum, S = 316L Stainless, P = FDA Nylon
- 5 — Housing (HSG)# - 1, 2, 3, 4, 5 or 6
- W — Elastomer - Choose 1: W = FDA White Silicone, V = Viton®, E = EPDM
- 4 — Stator Material - 4 = Type 304 Stainless, 6 = Type 316L Stainless
- A — Rotor Material - A = MECO3000 FDA PTFE (recommended), F = UHMW, B = MECO3120
- 354 — Shaft Diameter - Integer & 1st 2 decimals, in Inches

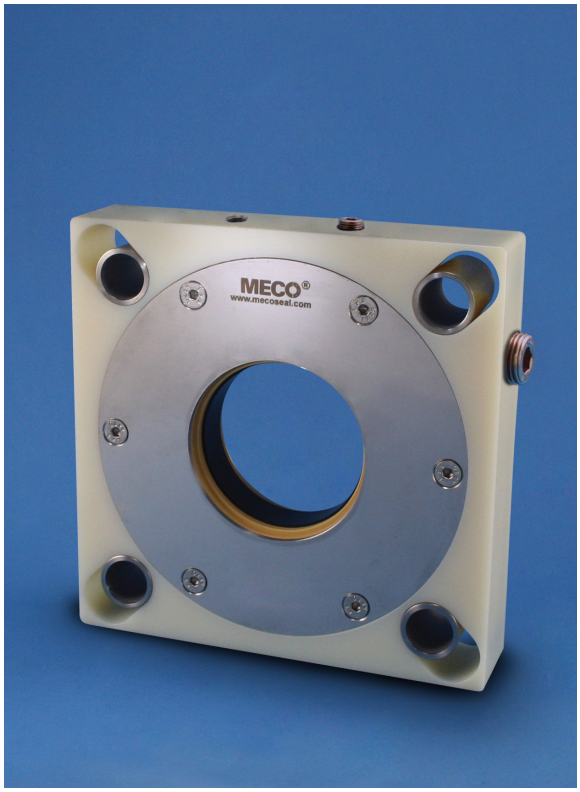
Material options

The HC seal is available in a variety of materials. The standard materials are listed below, but alternate materials may be available upon request. Contact us with your specific application requirements for a custom solution.

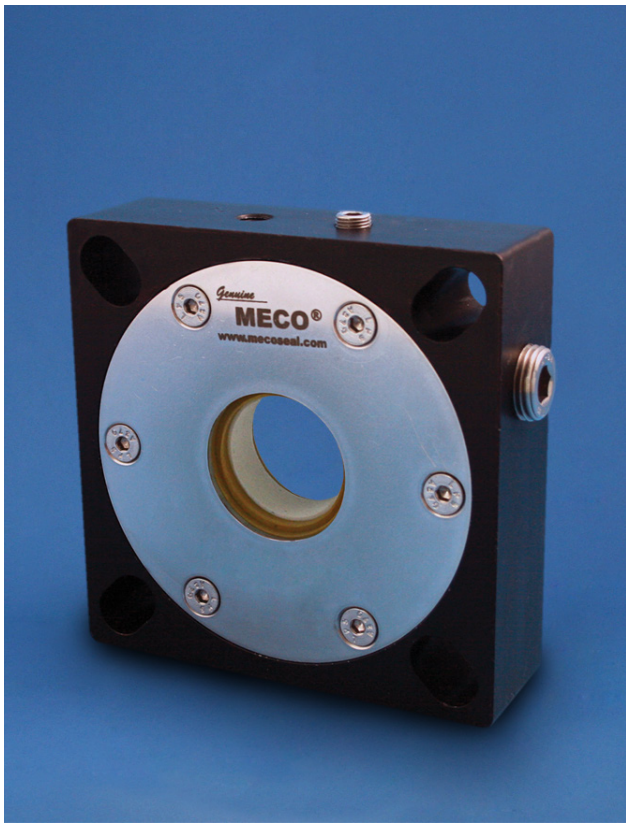
Stator materials	• 304L stainless-steel • 316L stainless-steel
Housing materials	• Anodized 6061 aluminum • 316 stainless steel • FDA nylon
Elastomer materials	• Viton® • Silicone • EPDM
Rotor materials	• MECO 3000 * • MECO 3120 * • UHMW • MECO 3400 **

* FDA Approved Polymers

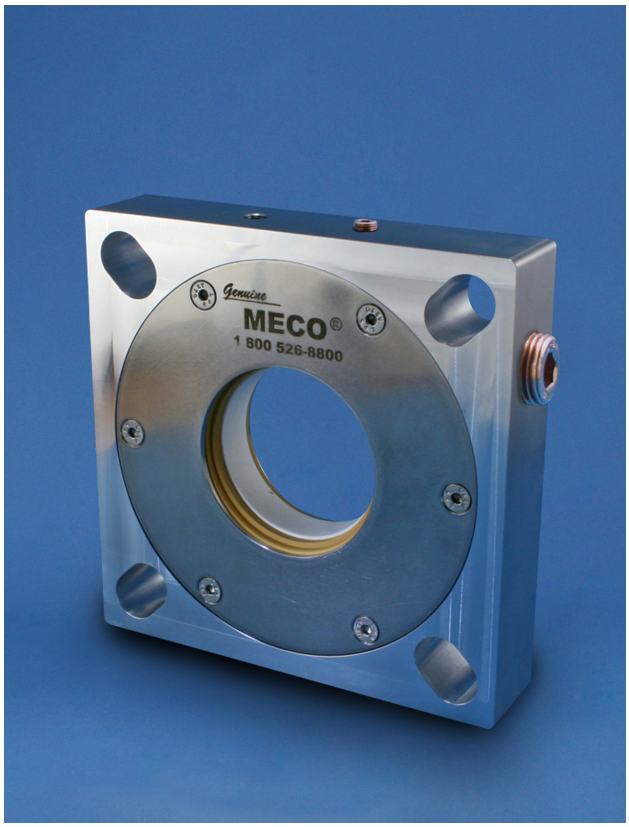
** EU10/2011 Approved Polymers



HCP - FDA NYLON



HCZ - ANODIZED ALUMINUM



HCS - 316 STAINLESS STEEL

Maintenance

Natural wear of the rotating seal faces resulting in decreased seal face pressure can be accounted for by tightening the HC seal's adjusting clamp. The adjusting clamp is easily accessible through an adjustment port in the square seal housing. We offer fully split repair kits to replace soft wear components like the polymer rotors and elastomer drive ring. Unsplit repair kits are available to replace all wear components including the stainless-steel stators.

Operating parameters

Woodex-MECO specializes in custom engineered seals designed for the particulars of each specific application. The mechanical capabilities of the HC seal are dependent on the materials and processes involved in the application. We have a range of other seal models that may be more applicable if the HC seal isn't a good fit for your application.

MADE IN THE USA

To learn more and to find out if the **HC Seal** is the right seal for you, please give us a call, or submit an online application today!

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