

## A New Blend of Classic MECO Technology

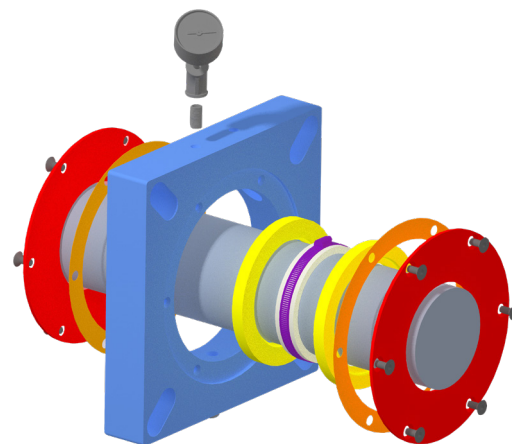
The MECO HA seal is a modular mechanical shaft seal, designed to fit process equipment following Conveyor Equipment Manufacturers Association (C.E.M.A.) standards, with many customizable material options to meet your application's requirements. A combination of MECO's classic HB and HC model seals, the HA seal is an air purged seal that can be quickly and easily adjusted without disassembling the seal assembly. Unlike standard stuffing box seals, the HA seal is non-abrasive to the machine's shaft and can accommodate up to 1/4" of shaft runout.

## How It Works

The HA 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 HA 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. The sliding seal face is also pneumatically loaded by a compressed gas, typically air or an inert gas, which also acts to clear the rotating seal faces of product and debris. In addition, the purge gas helps isolate the process from the atmosphere.

## Applications

MECO's HA seal is highly versatile, with the ability to seal a wide range of products and processes. It is often used for applications with intermediate process temperatures or applications with abrasive product and can be an especially effective solution for sealing smaller shafted equipment experiencing shaft runout. The HA seal can be used on horizontal, inclined, and vertical shafts. Several common machines and process material applications are listed to the right.



## HA Seal Features:

- ✓ Air-Purged
- ✓ Affordable
- ✓ Adjustable w/o Disassembly
- ✓ Shaft Runout Capability

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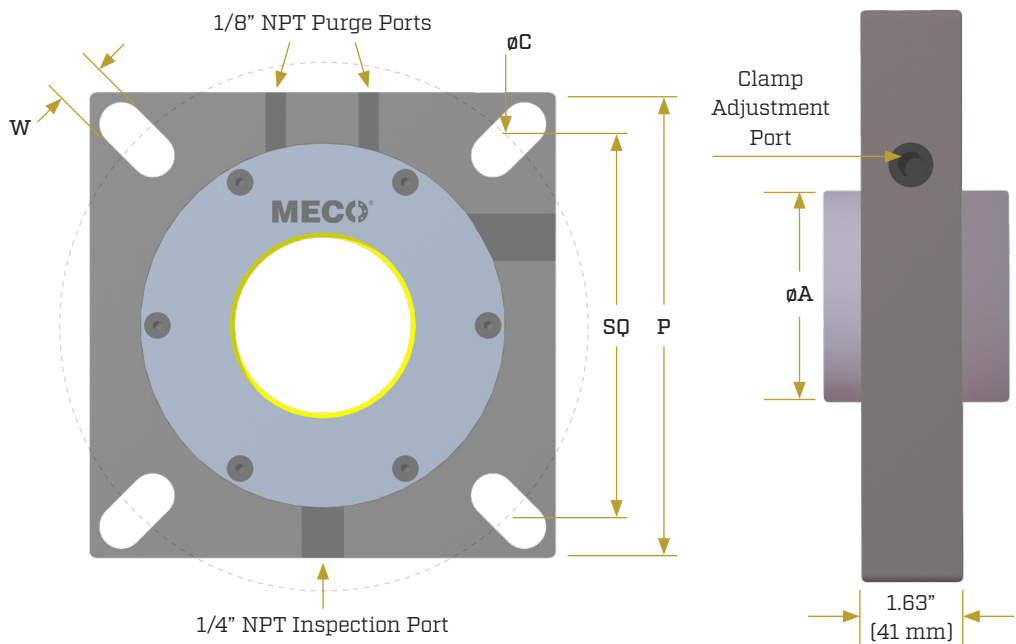
### HA Seal Machine Applications

- Screw Conveyors
- Small Blenders
- Bucket Elevators
- Hoppers
- Holding Tanks
- Flange Bearing Applications

### HA Seal Process Material Applications

- Powders
- Dry Abrasive Processes
- Dry Conveying
- Dry Chemical Processes
- Dewatering

# HA Seal Sizing Chart

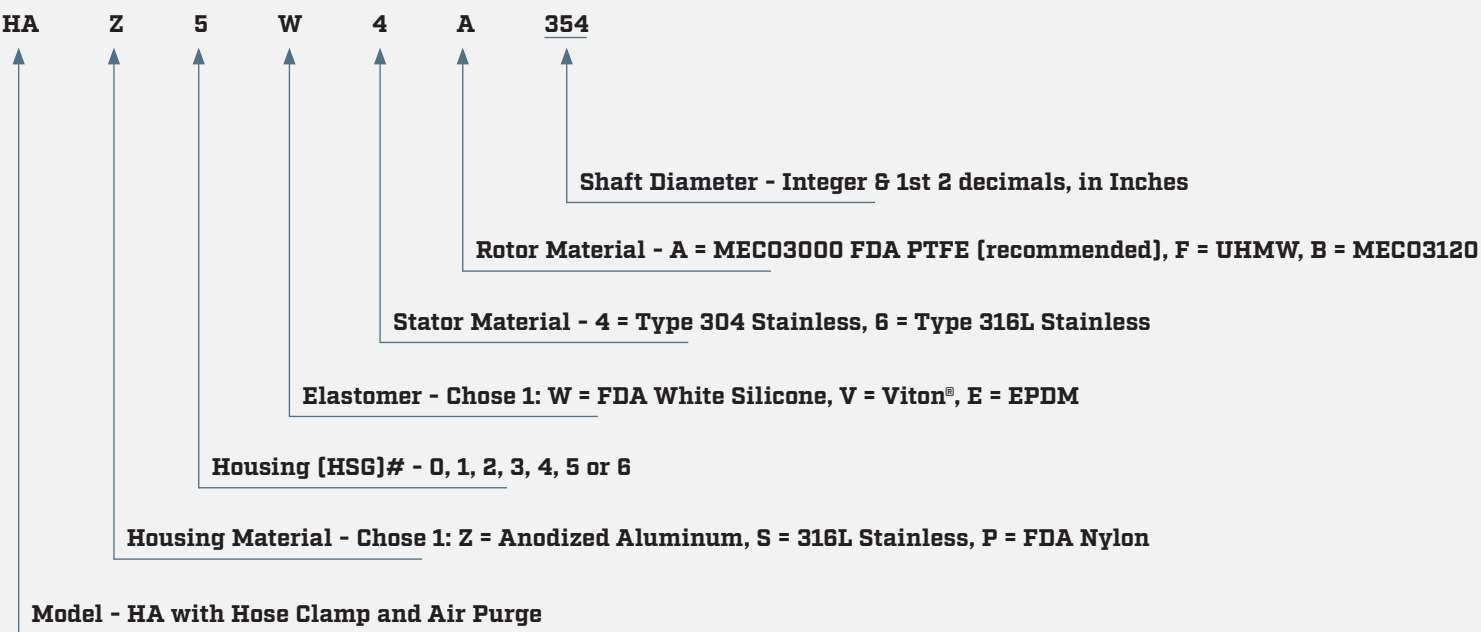


Stocked Housing #	
Each MECO HA Seal housing can accommodate optional shafts up to these limits:	
HSG #	Max. Shaft $\phi$
1	1.77"/45mm
2	2.24"/57mm
3	2.63"/67mm
4	3.62"/92mm
5	4.07"/103mm
6	5.07"/129mm

CEMA Standard Sizes (Inches)								
CEMA Part #	$\phi A$ Shaft	P	HSG #	SQ Min	SQ Max	W	$\phi C$ Min	$\phi C$ Max
HAZ1W4A150	1.50	5.38	1	4.00	4.38	5/8	5.65	6.19
HAZ2W4A200	2.00	6.50	2	4.38	5.38	3/4	6.19	7.60
HAZ3W4A244	2.44	7.38	3	5.13	6.25	3/4	7.25	8.84
HAZ4W4A300	3.00	7.75	4	5.75	6.50	7/8	8.12	9.19
HAZ5W4A344	3.44	9.25	5	6.75	8.00	7/8	9.55	11.31
HAZ6W4A444	4.44	10.88	6	7.75	8.75	7/8	10.96	12.38

METRIC Standard Sizes (Millimeters)								
Metric Part #	$\phi A$ Shaft	P	HSG #	SQ Min	SQ Max	W	$\phi C$ Min	$\phi C$ Max
HAZ1W4A157/177	40/45	137	1	102	111	16	144	157
HAZ2W4A197/217	50/55	165	2	111	137	19	157	193
HAZ3W4A236/256	60/56	187	3	130	159	19	184	225
HAZ4W4A276	70	197	4	146	165	22	206	233
HAZ4W4A295	75	197	4	146	165	22	206	233
HAZ4W4A315	80	197	4	146	165	22	206	233
HAZ5W4A335	85	235	5	171	203	22	243	287
HAZ5W4A354	90	235	5	171	203	22	243	287
HAZ6W4A394	100	276	6	197	222	24	278	314
HAZ6W4A433	110	276	6	197	222	24	278	314

# Part Number Decoder



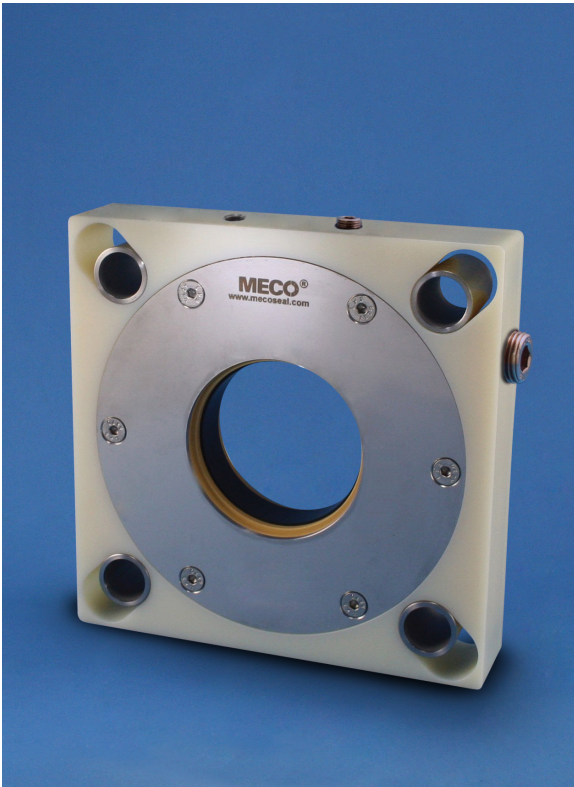
## Material Options

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

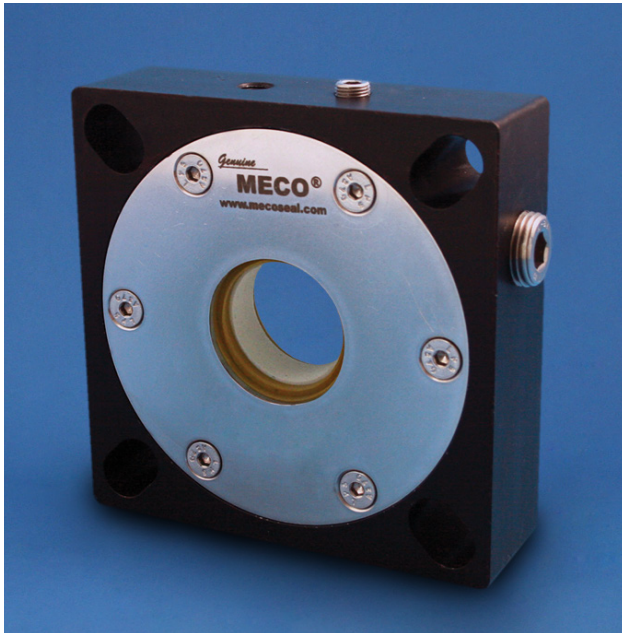
Stator Materials	304L Stainless-Steel 316L Stainless-Steel
Housing Materials	Anodized 6061 Aluminum 316 Stainless Steel FDA Nylon
Elastomer Materials	Viton® Silicone EPDM
Rotor Materials	MECO 3000 * MECO 3120 * UHMW MECO 3400 **

\* FDA Approved Polymers

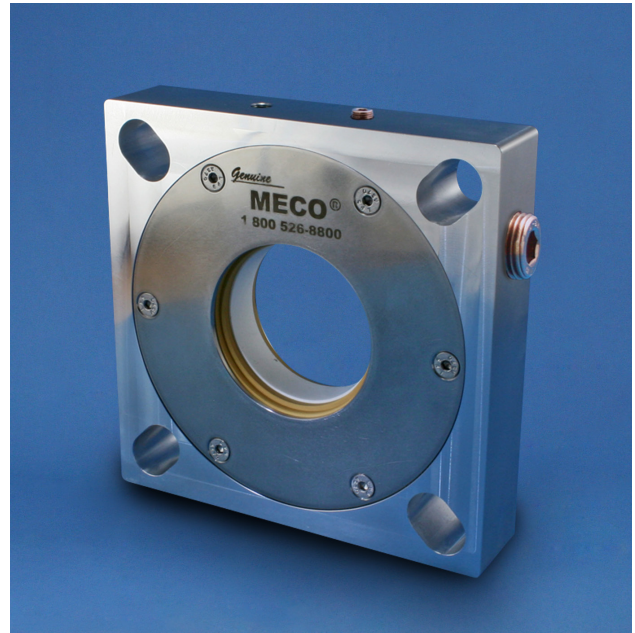
\*\* EC10/2011 Approved Polymers



HAP - FDA Nylon



**HAZ - Anodized Aluminum**



**HAS - 316 Stainless Steel**

## Maintenance

The HA model's sealing performance can be easily monitored by maintenance and production personnel using the seal's pressure gauge system. The pressure gauge system is effective in quickly alerting maintenance and production personnel of a potential seal breach so that repairs or replacements can be made before product leakage occurs.

Natural wear of the rotating seal faces resulting in decreased seal face pressure can be accounted for by tightening the HA seal's adjusting clamp. The adjusting clamp is easily accessible through an adjustment port in the square seal housing. MECO offers 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

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



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

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