

## What it is

The MECO HB 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 HB seal's air purge not only fortifies the HB's sealing performance but is also an effective diagnostic tool. Unlike standard stuffing box seals, the HB seal is non-abrasive to the machine's shaft and can accommodate up to 1/4" of shaft runout.

## How it works

The HB 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 sliding seal face is 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

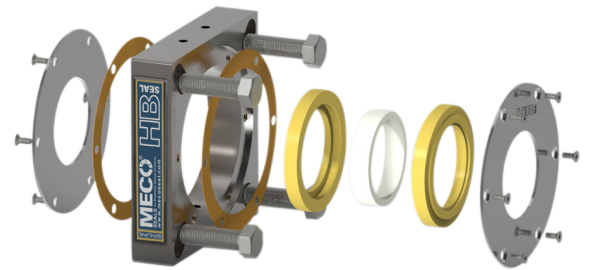
The HB seal is highly versatile, with the ability to seal a wide range of products and processes. It can be an especially effective solution to sealing smaller shafted equipment experiencing shaft runout. The HB seal can be used on horizontal, inclined, and vertical shafts. Several common machines and process material applications are listed below.

### HB Seal machine applications

- Screw conveyors
- Small blenders
- Bucket elevators
- Hoppers
- Flange bearing applications

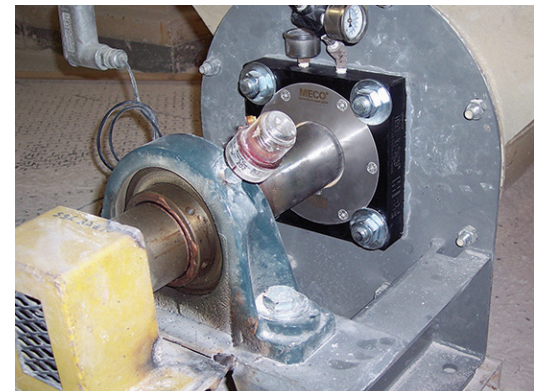
### HB Seal process material applications

- Powders
- Dewatering
- Dry abrasive processing
- Dry conveying
- Dry chemical processes

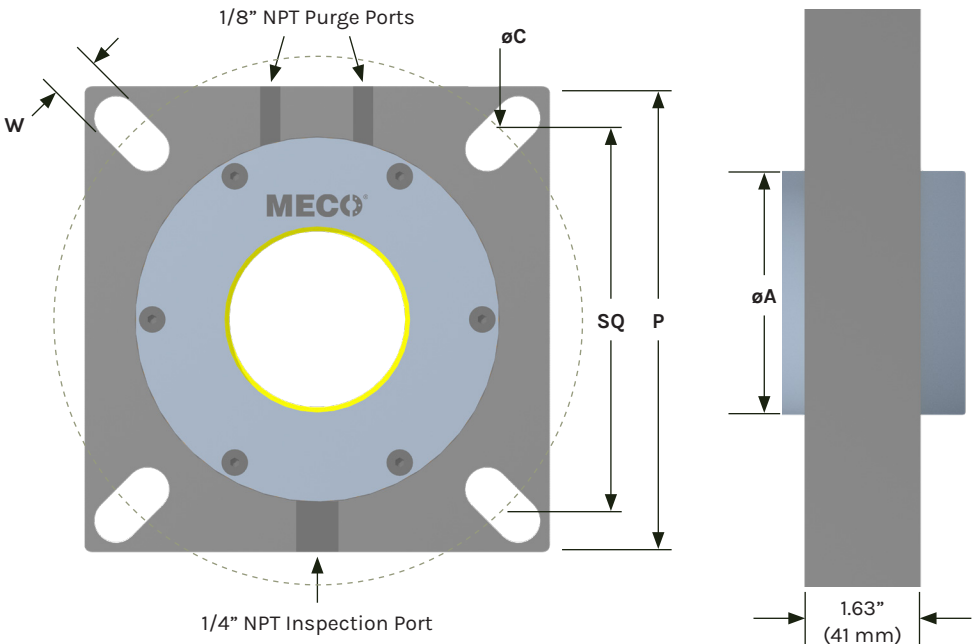


## HB Seal features:

- ✓ Air-purged
- ✓ Economical
- ✓ Fully split repair kits
- ✓ Shaft runout capability



# HB Seal sizing chart

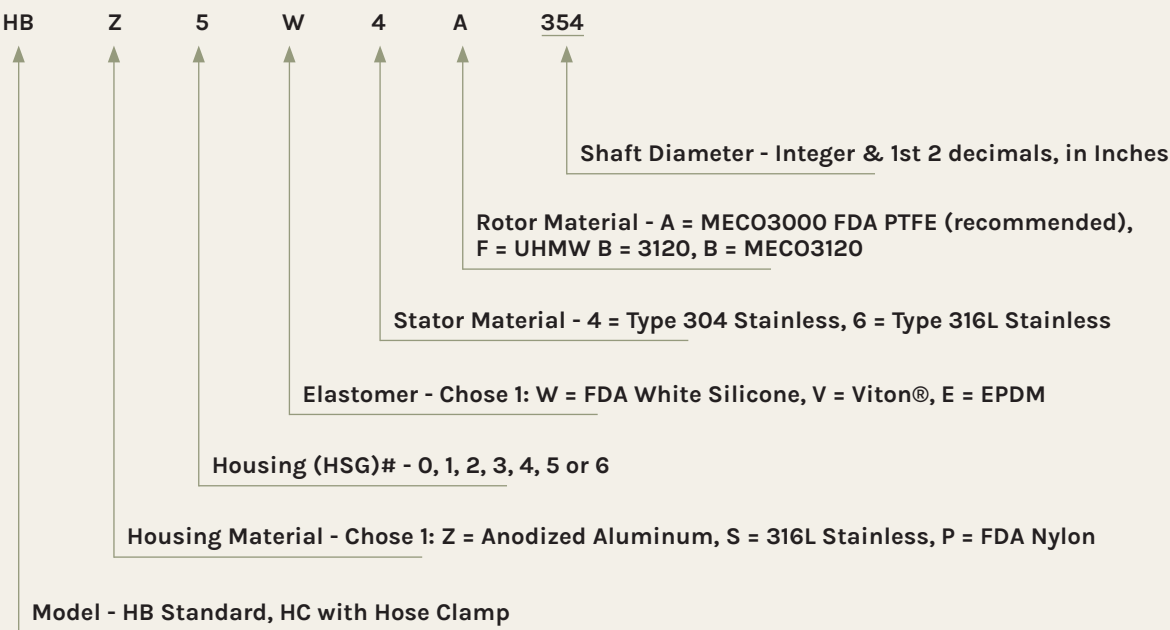


Stocked Housing #	
Each MECO HB Seal housing can accommodate optional shafts up to these limits:	
HSG #	Max. Shaft ø
0	1.25"/32mm
1	1.77"/45mm
2	2.24"/57mm
3	2.63"/67mm
4	3.62"/92mm
5	4.07"/103mm
6	5.07"/129mm

S.A.E. Standard Sizes (Inches)								
CEMA Part #	øA Shaft	P	HSG #	SQ Min	SQ Max	W	øC Min	øC Max
HBZ0W4A100	1.00	4.25	0	2.75	3.50	15/32	3.89	4.95
HBZ1W4A150	1.50	5.38	1	4.00	4.38	5/8	5.65	6.19
HBZ2W4A200	2.00	6.50	2	4.38	5.38	3/4	6.19	7.60
HBZ3W4A244	2.44	7.38	3	5.13	6.25	3/4	7.25	8.84
HBZ4W4A300	3.00	7.75	4	5.75	6.50	7/8	8.12	9.19
HBZ5W4A344	3.44	9.25	5	6.75	8.00	7/8	9.55	11.31
HBZ6W4A444	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
HBZ1W4A157/177	40/45	137	1	102	111	16	144	157
HBZ2W4A197/217	50/55	165	2	111	137	19	157	193
HBZ3W4A236/256	60/65	187	3	130	159	19	184	225
HBZ4W4A276	70	197	4	146	165	22	206	233
HBZ4WA295	75	197	4	146	165	22	206	233
HBZ4W4A315	80	197	4	146	165	22	206	233
HBZ5W4A335	85	235	5	171	203	22	243	287
HBZ5W4A354	90	235	5	171	203	22	243	287
HBZ6W4A394	100	276	6	197	222	24	278	314
HBZ6W4A433	110	276	6	197	222	24	278	314

# Part number decoder



## Material options

The HB seal is available in a variety of materials to meet the requirements of your sealing application. Contact us with your specific application requirements for a custom solution.

<b>Stator materials</b>	<ul style="list-style-type: none"><li>• 304L stainless-steel</li><li>• 316L stainless-steel</li></ul>
<b>Housing materials</b>	<ul style="list-style-type: none"><li>• Anodized 6061 aluminum</li><li>• 316 stainless steel</li><li>• FDA nylon</li></ul>
<b>Elastomer materials</b>	<ul style="list-style-type: none"><li>• Viton®</li><li>• Silicone</li><li>• EPDM</li></ul>
<b>Rotor materials</b>	<ul style="list-style-type: none"><li>• MECO 3000 *</li><li>• MECO 3120 *</li><li>• UHMW</li><li>• MECO 3400 **</li></ul>

\* FDA Approved Polymers

\*\* EC10/2011 Approved Polymers



**HBP - FDA NYLON**



**HBZ - ANODIZED ALUMINUM**



**HBS - 316 STAINLESS STEEL**

## Maintenance

The HB 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.

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 Mecos specializes in custom engineered seals designed for the particulars of each specific application. The mechanical capabilities of the HB 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 HB seal isn't a good fit for your application.



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

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