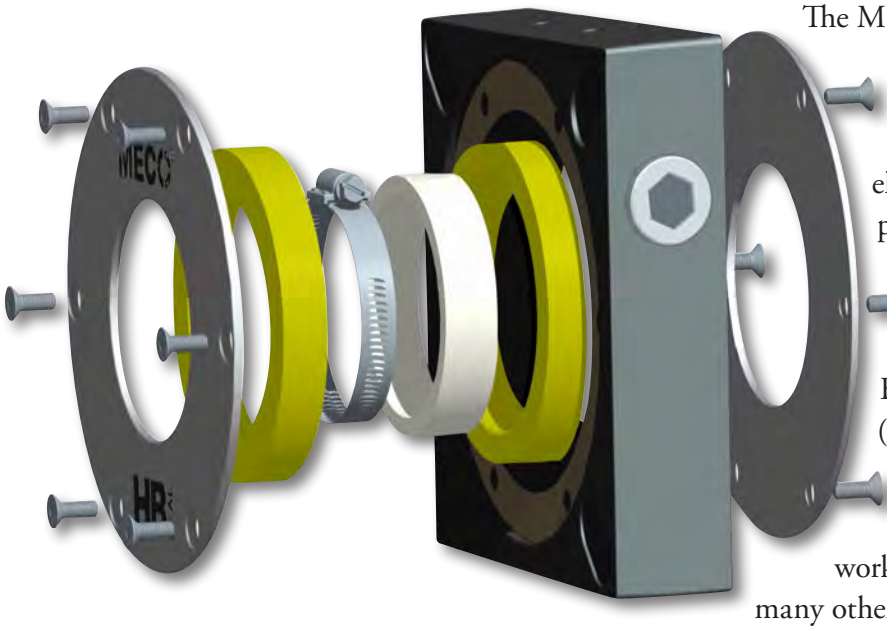
MECO® HC SEALS

ENGINEERED SHAFT SEALS

FOR C.E.M.A STANDARD AND METRIC SCREW CONVEYORS

An Employee Owned Company

What is MECO's HC Seal Model?

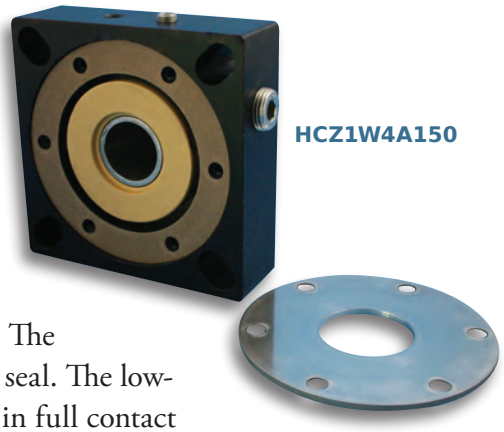


The MECO HC seal model is the best air-free choice in sealing technology for screw conveyors . The HC model is a full-contact, soft-face mechanical shaft seal, using an elastomer drive to rotate bearing-grade, polymeric seal faces against fixed, stainless steel seal faces. The various seal assemblies are sized for equipment following standards of the Conveyor Equipment Manufactures Association (C.E.M.A.) and their metric equivalents.

The HC Seal model provides the superior performance, durability and quality of workmanship that are hallmarks of MECO's many other highly-regarded custom seals. MECO's first-rate customer service is provided for each HC seal sold.

When are HC Seals the Best Option?

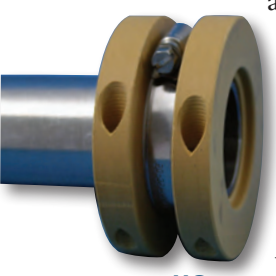
The MECO HC Seal model is ideal for screw conveyors/scrolls, small blenders, bucket elevators, and similar rotating equipment used in bulk process industries. The HC Seal model is used on horizontal, inclined and vertical shafts for unsplit installations.



HCZ1W4A150

How Does the HC Seal Model Work?

The HC Seal replaces standard waste pack housings. It is made with a heavy, metal or FDA nylon housing that cannot be crushed by an over-tightened flange bearing. Two replaceable stainless steel stationary seal faces attach to the seal housing. Inside is a rotating seal face assembly, consisting of replaceable rotors and drive elastomer. The elastomer and rotors interlock, forming an air 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.



HC
ROTORS, ELASTOMER AND CLAMP

Around the driving elastomer is a stainless steel hose clamp to provide seal face loading. The seal is vented to atmosphere at an effective location to monitor seal performance.

MECO ENGINEERED SHAFT SEALS

Manufactured *Since 1984* by: WOODEX® BEARING COMPANY, INC.

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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

For applications where a purge gas is not desired.

What sizes are available?

The HC model seal is stocked in 6 standard inch and 10 metric sizes. These 16 seals can be easily converted for other shaft sizes and all fit within the 6 stocked housing (HSG) sizes. This allows the HC model seals to be sized for shaft diameters 5.07" (129mm) and smaller. See the Stocked HSG# Chart on Page 3 for maximum shaft size for each of the six housings.

What construction is available?

HCZ1W4A119 seal, installed on a 30mm shaft on a sugar mill.

The HC seal's rugged housing options are designed for long life. You may choose from three stock housing materials: FDA Nylon, Anodized Aluminum or 316L SS. Three elastomer materials, Viton, FDA white silicone or EPDM, ensure compatibility with nearly all applications. The standard stators are type 304 stainless steel. The standard rotors are MECO3000, a high-performance, bearing grade, polymer- filled PTFE with FDA approval. No abrasive filler material is added to MECO3000.

MECO3120, a white, FDA approved, ceramic filled, PTFE is available as an option for processes where maximum wear resistance is needed.

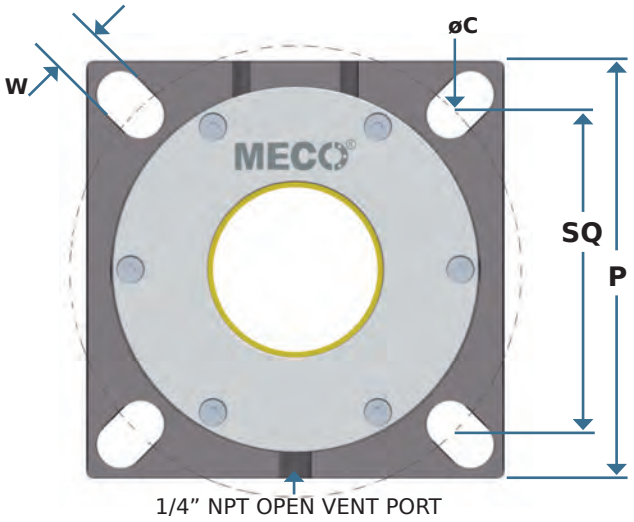
Any of the components may be individually replaced. Unsplit rebuild kits consisting of replacement rotors and drive elastomer are maintained in-stock for immediate shipment. In cases where it is difficult to remove the bearing or drive, convenient, fully-split rebuild kits are available.

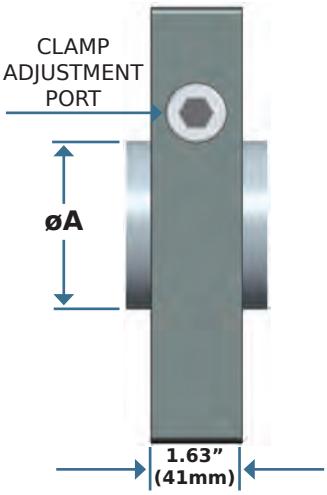
Since Woodex's MECO Seal division manufactures many custom shaft seals, we have the capability to fabricate from any material when required. See Sizing Chart on next page for dimensional information.

HCZ1W4A157 seal installed on a 40mm shaft on an inclined screw conveyor.

MECO® Driven.
SEALS

HC SEAL SIZING CHART





Stocked HSG#

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

C.E.M.A. 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

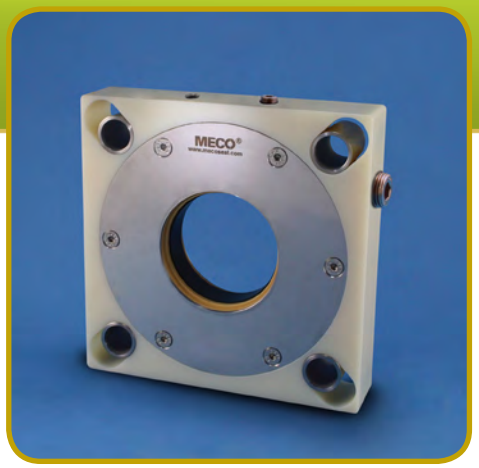
PART NUMBER DECODER

HC Z 5 W 4 A 354

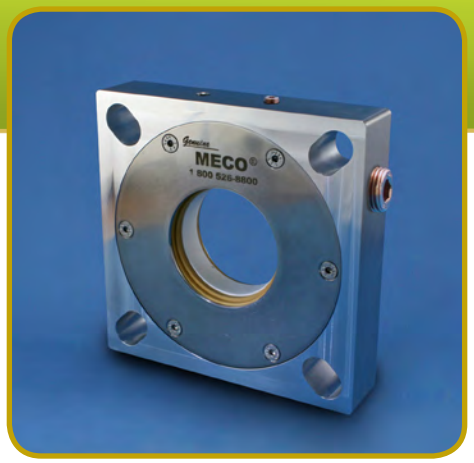
- **Shaft Diameter** - Integer & 1st 2 decimals, in Inches
- **Rotor Material** - A = MECO3000 FDA PTFE (recommended) F = UHMW B = 3120
- **Stator Material** - 4 = Type 304 Stainless; 6 = Type 316L Stainless
- **Elastomer** - Choose 1: W = FDA White Silicone; V = Viton E = EPDM
- **Housing (HSG)#**: 1, 2, 3, 4, 5 or 6
- **Housing Material** - Choose 1: Z = Anodized Aluminum; S = 316L Stainless; P = FDA Nylon
- **Model** - HC with Hose Clamp

MECO HC

HCZ - Anodized Aluminum



HCP - FDA Nylon



HCS - 316L Stainless Steel

Rotor Material	***Process Conditions***	***HCZ - Anodized Alum. Housing***	***HCP - FDA Nylon Housing***	***HCS - 316L Stainless Housing***
MECO3000 (recommended)	TEMPERATURE	-60 to 500°F (-50 to 260°C)	-35 to 200°F (-37 to 94°C)	-60 to 500°F (-50 to 260°C)
	PRESSURE	Vacuum to 10 psig (70 kPa)	Vacuum to 10 psig (70 kPa)	Vacuum to 10 psig (70 kPa)
	SPEED	to 150 RPM	to 100 RPM	to 150 RPM
UHMW	TEMPERATURE	-178 to 135°F (-117 to 57°C)	-35 to 135°F (-37 to 57°C)	-178 to 135°F (-117 to 57°C)
	PRESSURE	Vacuum to 5 psig (35 kPa)	Vacuum to 5 psig (35 kPa)	Vacuum to 5 psig (35 kPa)
	SPEED	to 50 RPM	to 50 RPM	to 50 RPM
Results may vary with operating conditions and shaft Ø - please call for discussion.				

Mechanical Capabilities:	1/64” Axial Motion	***Silicone elastomer*** -178 to 500°F (-117 to 260° C)
	1/4” T.I.R. Runout	***Viton elastomer*** -75 to 450°F (-59 to 232° C)
	1/2” Thermal Growth	***EPDM elastomer*** -70 to 325°F (-56 o 163°C)
Results may vary with operating conditions and shaft Ø - please call for discussion.		

MECO® SEALS

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

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

EP Model
- Reactor Vessels
- Dryers
- Extruders

AH Model
- Blenders
- Screw Conveyors
- Tight Spaces

MP Model
- Air locks
- Rotary Feeders

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

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

Distributed by:

All MECO Seals

Made in USA