



How Do Plate Seals Differ from Waste Pack Seals?

Question

We are specifying shaft seals for a screw conveyor handling multiple dry bulk materials. Our goal is to minimize bulk material leakage while also protecting the bearings on each end. We have reviewed the KWS website and see references to both waste pack seals and plate seals. How do the two types of seals differ, and which one is better for our application?

Answer

Both plate seals and waste pack seals use a lip seal pressed into a steel housing to seal against the rotating shaft and minimize material leakage. In both designs, the seal assembly mounts directly between the conveyor trough end and a four-bolt flange bearing. Under normal operating conditions—conveying free-flowing, non-abrasive bulk materials at 30 percent or less trough loading—lip seals provide adequate sealing performance. Over time, however, lip seals wear, allowing bulk materials to leak and potentially migrate into the bearing, which can lead to premature bearing failure.



KWS Plate Seals are Cost-Effective for Sealing Most Bulk Materials

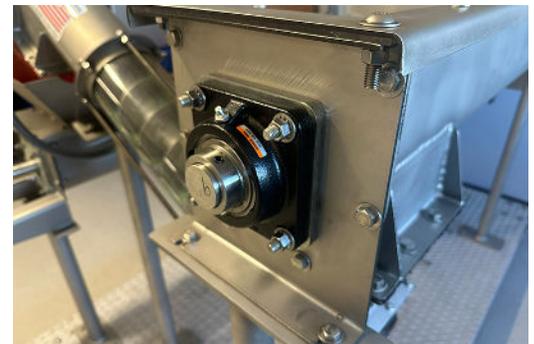


Plate Seal Mounts Between Trough End and Flanged Bearing

Waste pack seals incorporate an additional sealing element by means of a cavity within the housing. This cavity is filled with shredded waste packing material that captures any material that passes through the lip seal. The cavity is open at the bottom, allowing bulk materials to escape rather than being forced into the bearing. Waste packing material is readily available and easily replaced without requiring disassembly.

When handling dusty or abrasive materials, waste pack seals offer superior bearing protection and extend equipment life compared to plate seals.



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Ask the Experts



Plate Seals and Waste Pack Seals Use a Lip Seal Pressed into a Steel Housing



KWS Waste Pack Seals are Reliable and Widely Used for Sealing Difficult Bulk Materials



Waste Pack Seals Utilize a Lip Seal Plus the Addition of a Waste Pack Cavity for Double Sealing Capability



Packing Material is Easily Installed into Waste Pack Cavity



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