



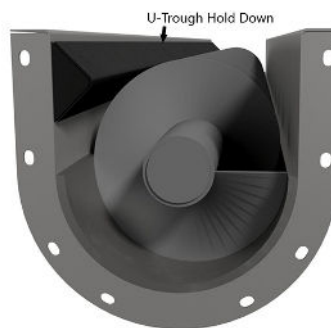
Using Hold Downs with Lined Screw Conveyors

Question

I am designing a screw conveyor for an animal processing plant. The conveyor will handle animal byproducts that include large pieces of stringy material and bones. I plan to have the screw sections ride directly on trough liners. I have seen hold downs used in some conveyors. Do I need hold downs on my conveyor?

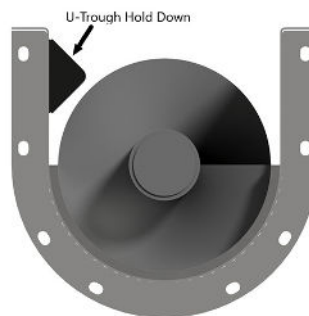
Answer

Hold downs are required when a screw conveyor operates without hanger bearings and rides directly on trough liners. In applications with stringy, fibrous, or irregular bulk materials, hanger bearings can restrict flow and increase maintenance. Hold downs prevent the screw from lifting or moving out of alignment as material gets under the flights during operation.



Hold Downs Prevent Screw from Lifting and Moving Out of Alignment

Hold downs are installed on the side where the screw rotation tends to lift the screw out of the trough liner. For severe applications, hold downs may be required on both sides of the screw. KWS evaluates each application to recommend the correct arrangement.



Location of Hold Down is Important for Successful Operation



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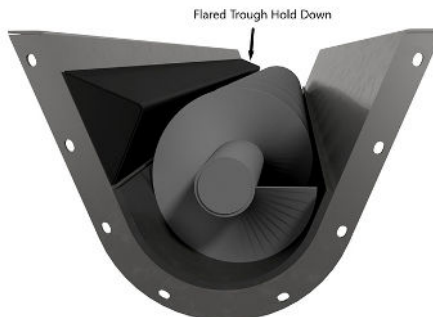
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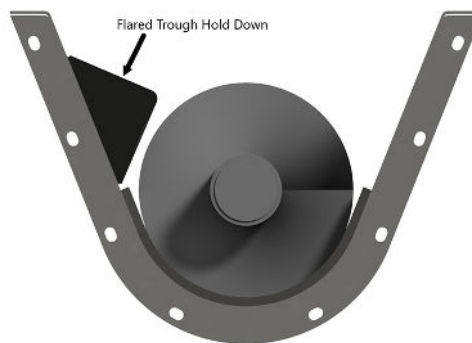
Ask the Experts

Hold downs are typically welded into the trough. Welded hold downs are economical, durable, and effective for most lined screw conveyor applications. KWS also offers bolt-in hold downs as an optional feature. Bolt-in hold downs add cost to the conveyor, but they make maintenance much easier because they can be removed when the screw or liners need to be inspected, repaired, or replaced.



KWS Standard Designs for Hold Downs are Proven
with Many Years of Successful Operation

The size and placement of the hold downs are also very important. KWS has highly developed standards based on many years of field experience. If the hold downs are too large, they can obstruct material flow and create a place for stringy material to catch or build up. If the hold downs are too small, they may not fully prevent the screw from lifting, which can lead to misalignment, excessive wear, and premature failure. Properly designed hold downs keep the screw in position while maintaining open flow through the conveyor.



Hold Downs Must Not Obstruct Bulk Material Flow



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