

Ask the Experts

Disadvantages of Screw Conveyors

Question

What is the main disadvantage of a screw conveyor?

Answer

While screw conveyors are a very economical and efficient method of conveying bulk materials, there are a few disadvantages when compared to other types of mechanical conveyors. Screw conveyors are very efficient at conveying bulk materials horizontally and on inclines up to 30-degrees from horizontal. As the incline exceeds 30-degrees, screw conveyors lose conveying efficiency and horse-power requirements increase. Design changes are required to convey bulk materials on inclines steeper than 30-degrees.

Another potential disadvantage of a screw conveyor is the overall length a bulk material can be transferred. Most screw conveyors can convey bulk materials up to 150-feet before experiencing horsepower and torque issues. Horsepower requirements are a function of capacity, bulk density, and conveyor length. More horsepower is required as the length of the conveyor increases.

Types of Screw Conveyors



Typical Layout Utilizing Horizontal and Inclined Screw Conveyors



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