

SUPPLIERS' TIPS

What are the signs that indicate I should consider replacing my screener?

Screener performance is critical to maintaining product quality and Hazard Analysis Critical Control Point compliance in many food applications. For screeners that rely on gyratory or vibratory action, when maintenance doesn't restore balance or normal motion, screening efficiency can be compromised. In other cases, when the spacer frames, side sheets, or body that registers the screening media is worn, the screen can leak, resulting in loss of performance or a compromise in the end product's quality or purity.

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There are two aspects to consider concerning screener replacement. The first would be performance and the second would be mechanical. These considerations are linked together in that a performance problem may be the result of a mechanical issue and a mechanical issue may lead to a performance problem.

When considering performance, the screener is intended to separate materials via particle size into one or multiple fractions to yield desired end particle size distributions or end products. If the desired end product or end particle size isn't being achieved, for example fines are present in the coarse particles or coarse particles in the fines, then I'd expect you'd consider replacing the screener.

For mechanical issues, signs would be items such as cracks or damages to the screener resulting in screen holes, fraying, and stretching. An overall visual assessment of the entire screener's condition with respect to construction, tolerances, and other parameters that would compromise the screener's integrity with regard to operational safety and material contamination during screening should be conducted on a routine basis and be part of a maintenance program. The above mechanical issues would warrant you considering a screener replacement.

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I've seen my share of screeners in various degrees of disarray. Determining if there are any salvageable components is based on many factors. Here are some instances where replacement would be your best option.

Heavy base flange rust and deterioration at the floor or on top of the base where the springs are located. The deterioration will compromise the spring mounting surface of the screener and could jeopardize the safety and motion efficiency of the unit if the screener loses a spring.

Deformed, warped, or worn frame flanges. Worn frame flanges can cause material leakage and bypass. Additionally, if frame rotation occurs, worn flanges present a sharp edge and cut hazard to employees.

Fretted or deformed motor mounting surfaces within the motor column. When the motor mounting surface is compromised, the motor is no longer secure in the screener, which could lead to unstable conditions.

Cracked lower vibrating table. Because the entire separation assembly (frames and screens) sits on this component, a cracked lower vibrating table poses serious issues with the performance and safety of a screener.

Process changes. If process capacity requirements or material characteristics have changed and the screen surface is routinely flooded, you need to contact the screener manufacturer for assistance. A larger machine may be required.

When considering a new screener, keep in mind that many time-saving and capacity-increasing features have been added over the years to help increase efficiency, reduce downtime, and often limit the need for multiple machines. Be sure to research the screener that best fits your process.

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