

Food producer turns over a new leaf.

A major processor of top quality fresh fruit, vegetables and leafy salads for the major retailers, food service and manufacturing sectors cleans, prepares and packs a wide range of vegetables prior to nationwide distribution.

The operation generates a large amount of unavoidable waste and rejected product which is collected in skips and disposed of on a daily basis.

The starting situation

There were two systems of moving the waste from the factory:

Line one consisted of a wide throat progressive cavity pump which had a slow speed twin shafted grinder fitted over the pump's wide throat. Problems were soon encountered due to the leafy product "bridging" above the cutters of the grinder; this resulted in significant operational problems, which included the pump dry running as well as associated costs as production waste very quickly backed up within the factory.

Line two consisting of a screw compactor and conveyor was also used to remove leaf. The line had a larger capacity but had been identified as a hygiene risk by the company due to difficulties in cleaning it..

The solution

Starting with a blank canvas the seepex project team analysed the waste removal operation and put together a turn-key package for the customer. This package involved design, supply, installation and commissioning of a full waste transfer and dewatering system.



seepex BTM pump with integral stone trap and cutting knives handles waste vegetables, replacing both widethroat pump with grinder and the screw conveyor

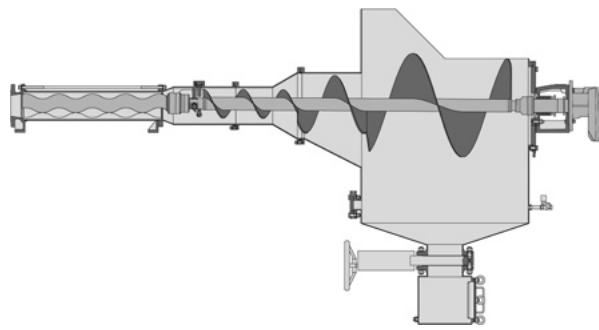
The system comprises two seepex BTM pumps which incorporated an open hopper; auger feed screw and integral cutting knives. In order to protect the knives and the stator from stone damage a specially designed hopper and auger feed screw were proposed. This design allows "heavy material" (stones) to drop through the over sized auger into the integral stone trap within the open hopper whilst allowing leaves and vegetable waste to be carried by the auger screw into the pump.

Both pumps feed a single outlet and the macerated waste leaf is then pumped through a dewatering device designed by seepex before being discharged to the skip. The compacted dewatered leaf is sent to make compost and the liquid from dewatering is discharged to drain.

The benefit

Waste transport costs have been reduced by water removal and the compaction of the dewatered material which is sent for composting. In addition spares costs have been reduced due to stator protection from damage and hygiene has been improved by the system.

The operational problems encountered with the previous system have all been resolved by installation of the seepex turnkey package.



Sectional drawing of seepex BTM pump with integral stone trap and cutting knives

Key Facts

- Chopping and pumping in one unit
- Specially designed hopper with integral stone trap to remove stones and hard materials
- In-line dewatering device
- Improved hygiene

Significant Cost Savings

- Factory production efficiency improved
- Spares usage dramatically reduced
- Waste transportation costs reduced

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