

Building a fruitful pump partnership for waste disposal



An automated waste handling solution from Seepex is enabling Natures Way Foods to hygienically, safely and cost-effectively dispose of its waste at its coleslaw and potato salad processing facility.

Over the past five years, Seepex has supported Natures Way on its journey to becoming one of the UK's leading manufacturers of fresh convenient food. Since initially supplying just a single progressive cavity (PC) pump, Seepex has gone on to provide the fresh food processor with a further four pumps, as well as a bespoke grinding, chopping and pumping solution and most recently an enclosed waste handling solution.

"When we began developing our new Drayton manufacturing unit, to handle the coleslaw and potato salad arm of our business, we needed a reliable partner to engineer a bespoke automated waste handling system, capable of processing both organic and non-organic waste streams," Andy Mays, Engineering Manager for Natures Way Foods, told International Food & Meat Topics.

"Seepex's solution has delivered on its promises to reduce costs, reduce labour, keep our manufacturing area clean, tidy and compliant, and keep our operatives safe."

A fresh start

Seepex's partnership with Natures Way Foods began back in 2014. The preparation of fresh, convenient food, including ready-to-eat fruit and salad products for retailers such as Tesco, Sainsbury's and Morrisons, generated waste that had to be removed from high care production areas in an automated, enclosed hygienic system.

The existing equipment was causing 'bridging' (where product does not pass into the pumping elements), resulting in downtime and reduced production. In addition, some of the waste material was particularly challenging for traditional pumps: mangoes, peaches, nectarines and grapes all have hard internal stones or woody

waste which cannot be pumped easily.

"Over a period of two years, we supplied Natures Way with a series of open hopper PC pumps with auger feed screws from our T range," explains Andy Gentle, Technical Lead Engineer for Seepex UK. "In addition, we supplied BTM pumps with integrated cutting knives, bridge breakers and extended hoppers, to chop and pump all the waste produced from fruits without stones. To handle mango stones, grape vines and other tough waste, we developed a sophisticated system incorporating an auger feed screw, a vertical cutting device and an open hopper pump."

Pumpable plastic

Thanks to the success of these solutions, Natures Way returned to Seepex in 2017, when they were developing their dedicated coleslaw and potato salad facility. The challenge posed this time was for an hygienic waste removal system that could handle not only different food wastes, but also the plastic pots in which they were contained.

Seepex first conducted a trial to prove that its grinders could efficiently break down the plastic pots into a pumpable format. Its engineers then built two waste removal systems: one for packaged food waste, which is sent for anaerobic digestion; and one for the

remaining organic waste, which is sent for composting.

Any reject products are tipped into tote bins, fitted with level sensors. Once they reach a certain level, the tipper is activated to drop the waste into a bespoke open hopper PC pump system, comprising an auger, a grinder and a pump. Once broken down, the waste is pumped vertically into the factory's ceiling space before being dewatered and compacted, to reduce the volume that is then transported off-site for disposal.

Meeting a tough brief

The system was completed in the summer of 2018 and Natures Way Foods are pleased with the system's performance.

"The sealed waste removal solution does what it was designed to do," says Andy Mays. "It enables us to pump waste across a total distance of almost 100m, ensuring our factory stays clean, tidy and free from contamination – if waste product were to get onto the factory floor, it is an immediate health and safety risk to our operatives, who are in danger of slipping on it. There is a technical compliance risk too, with the potential of new product becoming

Not only does the Seepex system remove food waste, it also handles plastic containers.

contaminated with the old; so this enclosed system is helping on a number of levels. It has also brought us cost savings. By removing a manual element from our processes and automating it, we are saving on labour. And dewatering and compacting the waste reduces the volume taken off-site, lowering our transport and disposal costs."

Customer commitment

For Seepex's Andy Gentle, the success of this partnership underlines the importance of listening to customers and understanding their needs.

"It takes time to build trust; over the years that we have been working with Natures Way, we have taken pride in not only creating the right solutions, but also solving any problems that arise. Installing a system is just the first step; we support our customers throughout our products' lifetime and pride ourselves on our level of commitment. We are in it for the long haul."

This is echoed by Natures Way Foods' Andy Mays, who concludes: "With close collaboration between ourselves and Seepex, we have a system that delivers on our project remit. They listened carefully in the initial stages of this latest project and made sure we achieved our goal of waste removal with minimal labour input. They have been responsive whenever any issues have arisen, and have gone back to find a solution. I look forward to working with them again." ■

The enclosed hygienic waste removal system keeps the factory clean, safe and tidy.



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