

Pie Manufacture

Lower decibel levels | Reduced cycle times | Low Maintenance

The challenge

MasoSine pump technology from the Watson-Marlow Pumps Group is solving a number of problems associated with Air Operated Diaphragm Pumps (AODs) at leading food manufacturers.

The benefits to the customer include:

- Lower decibel levels
- Impressive suction lift capacity for high density fillings and mixtures
- Reduced cycle times
- Cuts in energy consumption
- Easy to clean and maintain





The story of success

Pukka Pies Ltd replaced pneumatically operated air pumps with MasoSine SPS 2.5 pumps to transfer meat fillings at its headquarters in Syston, Leicestershire, from where it produces over 60 million pies every year.

"The different fillings must not be broken up by the pumping operation," explains company's maintenance manager, Simon Kemp "We need to retain sizeable pieces of meat to maintain the necessary quality levels our customers expect. The large pumping chambers within the MasoSine SPS pumps preserve and maintain product integrity, even for fragile product such as pre-cooked meat or chicken."

Watson-Marlow...Innovation in Full Flow

The solution

Watson-Marlow's series of MasoSine SPS pumps offer a highly reliable alternative to AODs. These economic pumps are ideally suited to high pressure, hygienic operations in sectors such as food manufacture.

Their exclusive sinusoidal rotor overcomes the limitations of conventional rotary lobe pumps to produce powerful suction with low shear, low pulsation and gentle handling, all of which contributes significantly to lower noise output.

SPS series pumps offer capacity up to 91.2 m³/hr and pressures up to 15 bar thanks to their heavy duty construction. They can safely pump high viscosity products, while their innovative yet simple design allows economical in-line maintenance. With a single shaft and rotor, there is no need for the complex timing gears and multiple seals associated with conventional rotary lobe pumps.



Customer success

Pukka Pies Ltd replaced pneumatically operated air pumps with MasoSine SPS 2.5 pumps to transfer meat fillings at its headquarters in Syston, Leicestershire, from where it produces over 60 million pies every year. Originally using a noisy pneumatic air pump to transfer pre-cooked meat from a 200 litre capacity mixing bowl to a depositor feed hopper ready to fill the pies, the meat mixture – which is rich, thick and full of meat chunks and must not be damaged – was problematic for the pumps on site.

The company installed a number of SPS pumps on site, including several pumps operating with a flooded suction and three which utilise the suction lift capacity of the sine pump. They report no reliability or maintenance issues. "The large pumping chambers within the MasoSine SPS pumps preserve and maintain product integrity, even for fragile product such as pre-cooked meat or chicken," says maintenance manager, Simon Kemp. "There's no doubt that the MasoSine pumps have become a key part of our process," concludes Mr Kemp. "With health and safety of our workforce paramount, the noise reduction along with clinical hygiene, process efficiency and reduced energy consumption, has made the entire project a real success."