

Animal feed

Feed additives play an essential role in supplementing and enriching the dietary programme for livestock and poultry as well as maximizing the product life. Additives including vitamins, amino acids, preservatives, essential fatty acids, emulsifiers and micro minerals are included in the product mixture.



Process issues

- Consistent delivery
- Varying viscosity
- Accuracy of dosing
- Hygienic process



The delivery of food additives

Food additives are often expensive, with the proportions in the mixture required to be consistent for quality control and to prevent spoilage.

To create a high quality product the pumping process must deliver an accurate flow of additives. Any breakdown of the pump may result in a batch degrading.

The additives are most often introduced to the mixture through dosing with a peristaltic pump. The peristaltic pump has several product features which benefit this process.

The peristaltic principle

The peristaltic pump operates using a positive displacement principle. A rotor/shoe assembly is rotated within the pump casing which causes a double-action: to push and compress a hose or tube causing a seal. This compression displaces the fluid and draws it through the hose. The seal and rotational movement simultaneously draws and pushes the fluid through the flow path.

Benefits of using Verderflex

The working principal allows a consistent amount of fluid to be delivered per revolution. The rotation can be set at a certain frequency to ensure the additive to feed mix is proportionate. This is essential for quality control that there is no excessive

expensive additive dosed, which will raise costs and potentially spoil a batch of mixture.

The Verderflex range features peristaltic options perfect for this type of dosing including

- high pressure/low flow
- programmable presets
- multiple-stream heads
- OEM component pumps

All Verderflex of these models are available with FDA hose and tube types.

Molasses

Molasses and flavourings are added to animal feed to make the mix palatable. Molasses is a viscous, syrupy and slightly oily consistency, often with small particulates.

This fluid type is well suited to the Verdergear internal rotary gear pump. The Verdergear uses a positive displacement principle, where the discharge is directly proportionate to the number of revolutions of the working gear. The gear and crescent mechanism rotate, creating an area of low pressure, drawing the fluid into the pump. The revolution completes, discharging the fluid without a 'pushing' action.

Benefits of using Verdergear

This mechanism is very low-shear with a constant flow-rate, maintaining the correct mixture and the quality of the molasses.



Where the molasses grade may cause compatibility issues, the Verdergear range may be specified with carbon bushes.

Where the sweetener is of a lower viscosity (less than 50cps) such as a caramel flavour mixture, a Verderflex industrial peristaltic pump may be used. This is recommended as the pump provides a constant flow rate, is very low shear and can handle capacity as high as 90m³/h.



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