

AERATED ALOE VERA GEL

Equipment

Waukesha Universal 1
Circumferential Piston Pump



**WAUKESHA
CHERRY-BURRELL™**
An ITT Company

Industry / Application

A personal care manufacturer *uses aerated aloe vera gel in products where encapsulated air contributes to the required texture and visual appearance. During transfer, the gel must be handled gently to preserve the bubble structure and maintain consistent product quality.

The application also requires daily cleaning, making hygienic performance, seal selection and maintenance cost important considerations.

Problem

The customer had been using air-operated diaphragm pumps to transfer the aerated aloe vera gel. However, the high shear created across the suction and discharge valves could damage the encapsulated bubbles within the product.

This resulted in variations in aeration, affecting the consistency and appearance of the gel and potentially influencing downstream filling. Frequent cleaning also made seal cost and maintenance an important operational consideration.

*) Company name is not disclosed due to confidentiality

Solution

The Waukesha Universal 1 Series pump was selected for its gentle product handling characteristics.

Its external circumferential piston rotors scoop and convey the gel through the pump without exposing it to the high-shear valve passages associated with diaphragm pumps. This controlled pumping action helps preserve the encapsulated bubbles and maintain the aerated structure of the product.

For the daily-cleaning requirements of the application, the pump also uses economical single O-ring shaft seals, providing a cost-effective alternative to more complex mechanical seal arrangements.



Result

The Waukesha U1 provides consistent, low-shear transfer of the aerated aloe vera gel while maintaining its bubble structure.

This helps improve product consistency and supports repeatable filling and finished-product appearance. At the same time, the single O-ring shaft seals reduce spare-parts costs and simplify maintenance.

The result is a reliable and economical pumping solution for the gentle transfer of aerated aloe vera gel.



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