



APPLICATION NOTE

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This application note provides an overview of the successful use of hydraulically flexed multi piston diaphragm pumps for the food grade laquor coating applied to aluminum drink cans.

THE INDUSTRY

A global leader in the design and manufacture of metal packaging technology has operated for over three decades with a continuous commitment to reduce the amount of metal necessary for manufacture, to improve productivity, develop new processes, raise packaging standards, increase functionality and improve operational safety. Metal cans are the most effective packaging solution that has ever been invented to preserve and protect food, beverages and other media. Innovation that includes the use of computer aided design and simulation modeling has resulted in processes to reduce the amount of energy and emissions during the manufacturing process while also reducing the amount of metal, water and other resources needed to manufacture metal containers and ends.

THE APPLICATION

Aluminum may be continuously reused without degradation to its quality, performance or safety. Spraying the internal surfaces of aluminum cans with a food grade laquor coating prevents both corrosion caused by the contents and taste problems associated with the metallurgy. As such, the spraying process requires a reliable and efficient pumping solution. This innovative pumping solution provides for simplicity, efficiency and the electronic control of pumping activities such that pumping and spraying operations are able to meet demanding production line environments that operate continuously 24/7 during the year.

THE PUMP SOLUTION

Hydra Cell D10 Series hydraulically flexed multi-piston diaphragm pumps are long coupled to variable speed AC inverter controlled motors for effective metering during pump and spray operations.

FEATURE	ADVANTAGE	BENEFIT
Positive displacement Pump	<ul style="list-style-type: none"> • Accurate, reliable output 	<ul style="list-style-type: none"> • Consistent, dependable coating thickness
Multiple diaphragm-design	<ul style="list-style-type: none"> • Virtually pulse-less flow 	<ul style="list-style-type: none"> • Smooth, even spraying of the lacquer
Hermetically sealed diaphragms	<ul style="list-style-type: none"> • Zero leakage of the lacquer 	<ul style="list-style-type: none"> • Reduced chemical and environmental hazard in the factory. No wastage
Hydraulically balanced diaphragms	<ul style="list-style-type: none"> • Stress on the diaphragms is significantly reduced 	<ul style="list-style-type: none"> • Reduced down time – longer time between servicing
Inverter controlled AC Motors	<ul style="list-style-type: none"> • Motor speed can be easily adjusted 	<ul style="list-style-type: none"> • Flow rate can be adjusted automatically