

Case Study: Ready To Drink Cocktails

LIVERANI

ENQUIRY

We were approached by a manufacturer of ready to drink cocktails looking for pumps for the transfer of various fluids used within the recipes, as well as the finished product. The initial enquiry was just for two pumps, which they wanted to trial to see if it was worth upgrading all of their existing alcohol transfer pumps on site used for handling their drink products.

After 6 months of excellent service, they returned with an enquiry for another 7 of the same pumps plus another pump for transferring 55% proof alcohol, and two for handling cleaning solutions as part of their canning machines' Clean in Place system.

KEY CHALLENGES

1. Shear sensitivity of the alcohol products.
2. The flammable nature of the 55% proof alcohol.
3. Food grade approvals required.



EQUIPMENT SUPPLIED

7 x Liverani EP Midex Flexible Impeller Pumps

Fluid	Cocktail mixture
Impeller	Neoprene Food Grade
Fittings	1 1/2" Triclover

1 x Liverani INV Midex Flexible Impeller Pump

Fluid	55% proof alcohol
Impeller	Neoprene Food Grade
Fittings	1 1/2" Triclover
Mounting	Trolley
Drive	Inverter with dry run protection
Motor	ATEX rated

2 x Liverani Liquid Ring Pump

Fluid	Cleaning chemicals
Fittings	3/4" BSP

SOLUTION

When it comes to alcohol transfer, flexible impeller pumps are our go to pump design. Firstly, they are a common cost-effective solution for food transfer applications where the fluid is relatively easy to handle. We specified the pumps with a food grade Neoprene impeller, compatible with the alcohol products and Tri-clover connections that meet ISO 2852 standards for hygienic couplings.

Secondly when it comes to the handling of drink products, it is often important that the pump applies low shear during the transfer process, which the flexible impeller design does. This is because the agitation of the product can lead to frothing and the impact on taste.

For the pump required to pump the 55% proof alcohol there were some additional requirements. The first point we recognised was that we needed to supply it with an ATEX motor due to the flammable nature of the fluid. In addition we provided dry run protection to prevent any overheating to further the limit of sparks in the environment.

The customer also told us that this pump would be transported around the manufacturing plant to pump from various containers. Based upon this, we suggested it to be trolley mounted for increased portability, and supplied with an inverter to allow it to be run at different speeds when transferring different quantities from different tanks.

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