

Case Study: Vape Liquids Manufacturer



ENQUIRY

Castle Pumps received an enquiry from a manufacturer of vape liquids and flavours who were looking to upscale their production. Part of this involved improving the efficiency of transferring the concentrated flavours from the IBCs where they are stored.

The customer was looking for a number of container emptying solutions for fitting onto the IBCs and dispensing the favours without manually handling the fluid. They wanted to be able to remove these when not in use and store them away, and needed them to be food grade due to the final product being for human consumption.

KEY CHALLENGES

1. Ability to handle the aggressive nature of the concentrated vape liquid flavours.
2. Required easy installation, movement between containers and removal for storage.
3. Food grade and ATEX approvals required.



EQUIPMENT SUPPLIED

Flux F430 Food Grade Drum Pump

Model	Flux F430 Food Grade Drum Pump Ex II 1/2 G Ex h IIB T4 Ga/Gb
Fluid	Concentrated flavourings
Immersion Length	1200mm for IBC
Motor	230v – Single phase, II 2 G Ex db eb IIC T6 Gb
Delivery Hose	8m x 1" FDA approved & swaged fittings
Dispensing Nozzle	FDA approved stainless steel

SOLUTION

When it comes to container emptying, our first port of call is always to consider a Flux barrel pump. Flux are a manufacturer Castle Pumps have partnered with for many years thanks to the quality of their design and vast offering that covers most fluids. All Flux drum pumps benefit from being lightweight and easily fitted to a container and removed just as easily. The good news was that this customer already had Flux pumps on site for another process, which meant they were a natural option as they were already familiar with maintenance and operation!

Given the low viscosity nature of the product, we knew that the Flux F400 impeller style pumps are suitable as they can handle up to 1200cP. We specified the F430 model with mechanical seal to protect the pump's inner tube from the fluid and prevent cross contamination between flavours. In order to last with the aggressive nature of the concentrated flavours, the seals were upgraded to FFKM.

The Flux F430 selected was fully food grade, constructed of stainless steel and supplied with tri-clamp fittings for a hygienic connection. We supplied a full solution for dispensing the vape flavours from their IBCs including motor, pump, screw cap, compression gland, earthing wire and clip, trigger nozzle, hose and swaged fittings.

The customer ordered three of these food grade pumps for use and one to hold on site as a spare to prevent any risk in production downtime when maintenance is required!