

Case Study:

Viscous Tomato Paste - Food Grade Pump



EQUIPMENT SUPPLIED

Flux F570 Viscopower Food Grade Barrel Pump

Fluid	Sundried tomato paste
Max Pressure	15 bar
Pump Body	Stainless Steel 316
Motor	230v/50Hz
Immersion Length	1000m
Hose	Food grade PVC hose with 2" Triclamp hose tail
Approval	FDA

SOLUTION

The viscosity of the fluid being pumped is always an initial consideration for pump specification, which can sometimes be difficult when the customer doesn't know exactly what viscosity it is. We knew however from looking at a picture of the fluid that it was thick and therefore a viscous fluid pump would definitely be required.

One of the services we offer when it comes to container emptying pumps, is pump testing, where we will trial the pump handling the fluid in question to confirm that it can move it as expected. Due to the viscous, dry and abrasive nature of the sundried tomato paste and its solid content, we requested a sample keg to be sent to our factory for us to perform the test with one of our Viscopower progressive cavity drum pump models. These models can handle high viscosity fluids up to 80,000cPs and solids up to 8mm in diameter.

To meet its requirement as a food grade barrel pump, the FDA Viscopower is designed with minimal dead space, a closed mechanical seal and electropolished surfaces for hidden voids or inaccessible parts. It can also be disassembled in just 30 seconds for quick cleaning with minimum effort.

After seeing how well the Viscopower high viscosity drum pump worked with the tomato paste, the customer placed the order for the pump to be supplied complete with food grade PVC hose and hygienic Triclamp fittings.



ENQUIRY

A manufacturer and supplier of bulk food pastes and marinades to the catering industry contacted Castle Pumps Ltd with a food processing pump enquiry for their production facility. They were looking to pump sundried tomato paste from their processing machine, where the sundried tomatoes get chopped into the blend, into 15kg buckets that are then supplied as the final product.

The challenge of this particular food transfer pump requirement is the product itself that is being handled. As well as being very viscous, it contains various degrees of solids including abrasive tomato seeds and stringy tomato skin, which for many pumps result in clogging or component wear.

KEY CHALLENGES

1. High viscosity of paste.
2. Abrasive tomato and seed solids.
3. Food grade hygienic solution.



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