Case Study:
Transfer of Soup

NOVA ROTORS

ENQUIRY

Castle Pumps received an enquiry from a Stainless Steel fabricating company, who specialise in the design and manufacturer of equipment for the food processing equipment. A project they were commissioned to work on required a pump to be installed onto the equipment they were manufacturing, which we were happy to help specify.

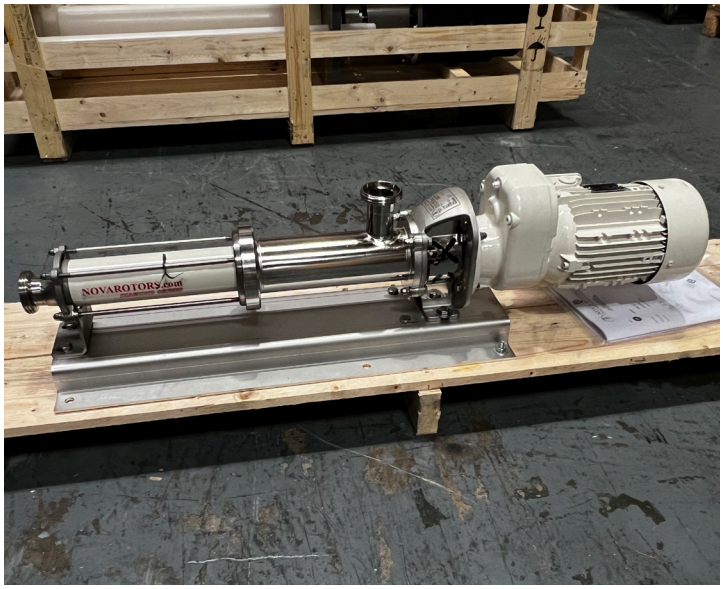
The pump was needed to transfer soup, which could contain both meat and vegetable pieces. Due to the pump being used for handling food products, they of course need this to be a food grade pump and able to be cleaned in place to ensure the soup remains safe for human consumption at all times.

KEY CHALLENGES

1. Able to handle the meat and vegetable chunks in the soup without clogging.

2. Shear sensitive fluid – needed to keep the soup intact without crushing the solids.

3. Food grade approvals required.



CASTLE PUMPS LTD

EQUIPMENT SUPPLIED

Nova Rotors DXC 2L1 Food Grade Progressive Cavity Pump

Flow	6.9m3/h
Pressure	6 bar
Fluid	Soup
Orientation	Horizontal
Voltage	230v
Material	AISI 316 Stainless Steel
Suction/Discharge	1"
Certifications	FDA, 3A and EHEDG
Drive	Close Coupled Gear Motor
Mounted	Stainless Steel Base Plate

SOLUTION

The requirement for a food grade pump was no problem for Castle Pumps, as we regularly supply solutions to the food and drink industry, What we did want to carefully consider was the gentle handling of the meat and vegetable chunks within the soup. Not only did the selected model need to be able to pump these solids without clogging, but also be able to keep them fully intact so that they weren't crushed and turned to slurry within the soup.

Given the above point and the duty requirements at hand, we specified a Nova Rotors DXC food grade progressive cavity pump. The progressive cavity pump design is known for handling viscous, solid laden fluids whilst applying low shear to the fluid as it is passes through. This fully stainless steel model is also of complete sanitary design, free of dead zones, ideal for clean in place and fully compliant with FDA, EHEDG and 3A.

With production of the soup relying on this pump, reliability for this customer's application was paramount. Our longstanding relationship with the Italian manufacturer Nova Rotors meant that we had full confidence in specifying this solution. Their progressive cavity pumps have a patented pin joint designed for 8000 hours before maintenance is required and consumes20% less power than other models thanks to its long pitch rotor.