

# Case Study: Diesel Generator Feed



## EQUIPMENT SUPPLIED

### 4 x YMDY1 Modular Gear Pump

Fluid	40lpm
Flow	9.2 bar
Fluid	Diesel
Orientation	Horizontal
Voltage	400v, Three Phase
Material	Cast Iron
Suction/Discharge	1"
Certifications	ATEX
Drive	Long Coupled Motor
Mounted	Base Plate

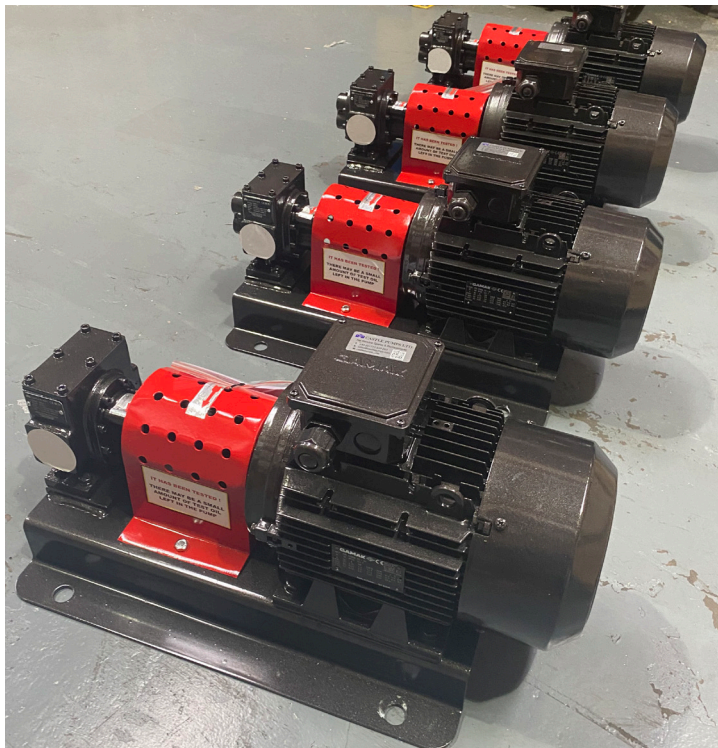
## ENQUIRY

Castle Pumps received an enquiry from a client who specialise in the design, fabrication and installation of fuel systems and their pipework. They were working on a project for which they were fabricating two duplex pump sets that would be feeding rooftop generators from a bulk diesel tank.

Duplex pump systems can be for duty assist, where two pumps contribute to the total output, or duty standby, where one pump acts as a back up in the event of a failure with the first. This particular application was the latter to limit any risk of the generator being unable to be fed.

## KEY CHALLENGES

1. Reliability due to use for emergency power.
2. ATEX approval for high pressure fuel pumping.



## SOLUTION

Due to be engineering based, the customer was clear on their flow and pressure requirements, which is always a great start when we need specify a pump model. This led us down the route of an ATEX approved YMD external gear pump.

Gear pumps are a proven technology, along with screw pumps, when it comes to the handling of clean fuels such as diesel. We typically are led by the rule of thumb that for marine fuel applications, we opt for a screw pump, whereas for industrial fuel transfer pump applications gear pumps can be a more cost effective solution.

With reliability a huge factor, we specified these pumps long coupled, meaning the pump head and motor are on their own shafts and that separate bearings share the strain of operation. As they were being used for a duplex pump system, we supplied these gear pumps mounted on a base plate to provide a stable installation, minimized vibrations and limited misalignment.