



University - Case Study



Case Study Information

Customer	University
Location	UK

Equipment Supplied:

2 x Peristaltic Pumps (Boyser AMP Range)

Application	Transfer of Saline Solution
Fluid	Saline Solution
Flow	100 l/h
Discharge	< 2 bar
Temperature	20°C
Viscosity	< 1.004 cPs
Suction Connection	3/8" BSP
Discharge Connection	3/8" BSP
Design Pressure	8 bar
Hose	Natural Rubber
Connections	Polypropylene
Pump Casing	Aluminium + Polyester Powder Coating
Drive Type	Gear Reducer
Power Installed	0.25 kW
Electrical Motor-Speed	1.450 rpm
Output Speed	46 rpm
Voltage	220v (Single Phase)
Frequency	50 Hz
Protection	IP-55

Enquiry:

- ✓ Castle Pumps were contacted by a University with a requirement for a pump to transfer a concentrated saline solution to a header tank that was situated 12 metres above the pump. The flow rate performance required was very low at only 100 l/hr, which limited the amount of pumps suitable.

Solution:

- ✓ The required flow rate of 100 l/hr indicated to us that a peristaltic pump would be most suitable for this application. The slow operating speed and smooth non-pulsating pumping action of the peristaltic pump allows very low flow rates to be achieved. We selected a peristaltic pump coupled to a 0.25Kw motor complete with gear reducer; the gear reducer allows the pump to operate at a speed of only 46 RPM.

Peristaltic pumps only have a few wearing parts meaning that spare part requirements are very low. The only component that comes into contact with the fluid is the hose, which permits the selection of lower cost casing materials that are not compatible with salt solutions.