Case study 682

District heating system aided by HP150 pump hire

District heating systems are considered to be a potential source of delivering low-carbon heating for the future. A growing number of UK households, in particular new-build flats, are currently connected to district heat networks to provide homes with heat for hot water and space heating.

Sykes Pumps recently worked with a customer who required a new district heating main to be flushed prior to initiating the system on a nearby housing site. This process is necessary to remove all debris that could potentially cause damage to equipment and avert blockages that might affect the efficiency of the system. District heating mains tend to use larger diameter pipework and varying pipe diameters towards the extremities of the system.

It was therefore necessary to ensure that friction and velocity calculations were carried out considering all the factors. Velocity in the system is important to ensure that it moves and carries debris to the required point. The larger the pipe diameter is, the higher the flow required to provide the necessary velocity.

This particular scheme had pipe diameters up to 10" (250mm) which necessitated a higher flow than is normally required in a flushing operation. Combined with this were a number of branch lines feeding properties with smaller diameters and at long distances from the pump location.

This application demanded a consistently high head to balance the higher flow demand in the larger pipe with the resulting higher friction in the smaller pipe.

For these reasons, our new HP150 Super Silenced was an ideal fit for the project. Providing more than double the flow than a 4" equivalent of this pump, the HP150 also delivers a consistently high head across its operating curve.

Due to nearby occupied housing, the location of the project prompted the need for a silenced unit – which comes as standard with the HP150. The pump has a fully automatic priming and re-priming capability but can also be adapted for use on a positive suction head application such as in a closed loop system.

Performance: Max head: 90 m
Max flow: 100 l/s
Max solid: 20 mm
Weight: 2426 kg with fuel
2314 kg without fuel
Dimensions: 2720 x 1250 x 1790
(L x W x H) mm
Noise level: @ 7m = 65 dBA / 90 Lwa
Fuel tank capacity: 170 litres. Max 24 hours
Pipe connections: Suction: 6" Table D
Bauer couplings option
Discharge: 4" NP16 Flanged
Fuel consumption: Full load @ 2200 rpm:
22 litres/hour
Energy Efficient Fuel Consumption @ 2000 rpm:
duty point: 14 litres/hour