

Case study 625

Sykes assist Mersey Gateway scheme

The Mersey Gateway is a new road bridge across the River Mersey and the Manchester Ship Canal in north-west England, which began construction in May 2014. The bridge will be located approximately 1.5 km (0.93 mi) to the east of the existing Silver Jubilee Bridge that connects the towns of Widnes and Runcorn. It will connect the Central Expressway in Runcorn with the Eastern Bypass and Speke Road in Widnes. The draft design is for a cable-stayed bridge with three towers across the river, and a second bridge across the canal. The total length of the crossing will be 1,000 m (3,300 ft).

As part of the piling contract within the Mersey Gateway Link Project, the main contractor had the need to pump and recirculate large quantities of bentonite. To assist this operation Sykes Pumps have supplied a B150 bentonite pump which is positioned in the field adjacent to the drilling rig. Clean bentonite is fed from the plant into the drill casing whilst the auger drilling is taking place. Our unit then pumps back the contaminated bentonite from the casing which will be a mixture of sand, chalk and earth.

Once pumped back to the plant de-silter, approximately 70 metres away and combined with a static head of 10 metres, the bentonite is recirculated and sent back out to the field as a reusable composite.

As leading Pump hire specialists, we have developed this new range of bentonite pumps for use in construction, civil engineering and utilities projects with a priming system isolation valve to enable safe operation on flooded suction or standard automatic priming applications. The pumps have been designed for faster and easier set up on site. The lightweight B150 unit has an oil bath mechanical seal for efficient performance and abrasion resistance, while a three-way valve on the vacuum pump and six flushing points per unit ensure easy cleaning, flushing and draining – saving time on site.



Performance Max head: 38 m, Max flow:
90 l/s, Max solid: 52 mm
Weight 1433 kg with fuel, 1300 kg
without fuel
Dimensions 2420 x 1160 x 1600
Noise level 70 dBA @ 7 m
Fuel tank capacity 160 litres. Max 39
hours with cleaning and flushing facilities
Pipe connections Suction: 6" table D,
Discharge: 6" table D, Bauer couplings
option: 6"
Fuel consumption @ 1500rpm: 4.1
litres/hour



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