

Hydrovane chosen as sole supplier of 600 compressors with its unique solution for New Bus for London (NBfL)

Wrightbus Limited, manufacturer of the New Bus for London (NBfL) has selected Hydrovane compressors to power the pneumatic systems on-board all 600 of the hybrid-powered vehicles – soon to become a familiar site in the United Kingdom’s capital.

Benefits-at-a-glance

- Lightweight and compact design – saving fuel and maximising passenger space
- Extremely quiet and vibration free operation – providing a noise-free passenger environment
- Fully integrated module – saving up to 50% of the weight of conventional designs
- Water-cooled design requires no ventilation – enabling easy installation where space is at a premium
- Variable speed inverter drive technology – Integrating with customer system



Application Details

Hydrovane has custom-designed the compressor package at its facility in Redditch to provide very lightweight and quiet performance, in a compact unit capable of being integrated easily in to the new bus design.

The NBfL uses the latest, green diesel-electric hybrid technology, with a turbodiesel generator providing power to the bus’s batteries, which in turn power the Hydrovane compressor on board.

Customer
Wrightbus Limited

Location
Ballymena,
Northern Ireland

Application
Braking, door operation
and ‘kneel down’ systems
for the new generation of
London buses

Products
Circa 600, bespoke-
designed, standalone
Hydrovane compressors

Customer Benefit
Energy-saving, lightweight and
compact design, quiet and vibration
free, reliable source of air



Compressor running is matched to meet the changing demand for air. Inverter drive technology controls the speed of the compressor to provide the amount of air required by the vehicle systems at all times.

Each bus has three separate doors alongside all of the other air systems, so air demand is considerable, but the compressor unit easily provides all of the pneumatic power demanded. This includes air for the brakes, door mechanisms and the ability for the bus access-platform to lower to kerb level; a legal requirement to enable easy passenger accessibility.

Excess weight, in particular, is of prime concern as it can adversely affect fuel consumption, so Hydrovane designed the new compressor to be very lightweight, with an integrated dryer and AC electric motor with inverter technology, saving 50% of the weight of a conventional DC unit. Additionally, the AC electric motor requires no maintenance compared to a DC equivalent, and is available at a lower initial capital outlay.

Space saving

Wrightbus has developed the vehicle to accommodate the maximum number of passengers, using clever space-saving techniques wherever possible. This means that available ancillary equipment room is at a premium and required Hydrovane to design a highly compact solution that could be installed underneath the front stairwell.

An integrated, air on demand twin-tower dryer provides clean, dry air, which, coupled with the compact motor and drive, has provided Wrightbus with an easily integrated, single module.

In addition, the Hydrovane compressor is water-cooled; a further space-saving feature as it requires no ventilation or bulky air/oil heat exchangers making it easy to install in very tight spaces without affecting performance.

Varying air demand

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