

Media Release

Voith Turbo

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Alexander Dennis supplies 35 electric double decker buses with VEDS to Hong Kong

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- First nine zero-emission Enviro500EV double decker buses recently delivered to the MTR Corporation
- All buses are driven by the powerful and energy-efficient Voith Electrical Drive System (VEDS)
- VEDS ideal for Hong Kong's challenging topography

HEIDENHEIM, GERMANY. Alexander Dennis Ltd. is not just one of the world's leading bus manufacturers but also a longstanding partner to Heidenheim-based global technology group Voith in Germany. In conjunction with the electrification of the public transport system in Hong Kong, Alexander Dennis recently delivered the first nine zero-emission Enviro500EV double decker buses, all powered by the innovative Voith Electrical Drive System (VEDS), to local public transport operator MTR Corporation. This delivery marks an important milestone in an even larger project for a total 35 ultra-modern electric buses ideally tailored to meet the complex challenges presented by the Hong Kong transport system.

The MTR Corporation plays a key role in Hong Kong's public transport system by providing essential feeder bus services to the Mass Transit Railway (MTR) urban rail system. With its fleet of more than 170 buses, the company carries more than 160,000 passengers a day in the northwest New Territories, a region with a highly complex topography.

Hong Kong is well-known for its steep hills and many elevation differences. This means that all buses operating there need to have powerful drive systems. "To reliably master these topographical requirements, the new electric buses were fitted with the proven heavy-duty version of the VEDS. With a peak output of 410 kW and continuous output of 310 kW, it certainly offers outstanding performance data," explains Robin Gundel, Product Manager E-Mobility.



The very demanding climatic conditions in Hong Kong are also a challenge for the buses, because the combination of high temperatures that regularly exceed 33°C in summer, and a humidity that is often more than 80%, puts extreme stress on the vehicle technology. This is exacerbated by dense urban traffic involving frequent stops and low average speeds.

It is precisely in these situations that the advantages of the VEDS come into play. Because alongside its excellent performance characteristics, it also offers an especially efficient energy management system. Even in the case of high-capacity utilization and an enormous passenger volume that necessitates the use of 3-axle buses with a maximum passenger capacity of 86 people – including a dedicated space for a wheelchair – the VEDS has still not reached the limits of its capacity.

All Enviro500EV double decker buses are 12 m long, and with a total capacity of 472 kWh, they still have sufficient range between charges even in Hong Kong's dense public transport network. In addition, the battery system in the buses has been designed so that it can simply be upgraded if necessary. This enables the MTR Corporation to protect its investment in the long term and benefit from future innovations without having to renew the entire fleet.

Andy Boulton, Managing Director Asia Pacific at Alexander Dennis, therefore stresses the strategic significance of this project: "With support from Voith, our next-generation electric bus has been designed from the ground up for the demands of Hong Kong's world class transport system to deliver sizable passenger capacity alongside operational flexibility. We're honored to be the MTR Corporation's partner for its bus fleet electrification and look forward to continuing to deliver this major contract."

The remaining 26 buses from the overall order will be delivered over the coming months. However, for all participants, the delivery of the first nine ultra-modern electric buses means much more than just an expansion of the Hong Kong bus fleet. It is seen as a major step towards sustainable urban mobility and proves that even in the most complex urban environments, electro-mobility can be successfully implemented.

"The successful partnership between Alexander Dennis, Voith and the MTR Corporation could therefore serve as a model for similar initiatives in other major cities with equally challenging geographic and climatic conditions," says Florian Rehm, Global Key Account Manager.

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Powered by the innovative Voith Electrical Drive System (VEDS): The new zero-emission Enviro500EV double decker buses from Alexander Dennis for the MTR Corporation in Hong Kong.



About the Voith Group

The Voith Group is a global technology company. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, paper, raw materials and transport. Founded in 1867, Voith today has around 22,000 employees, sales of € 5.2 billion and locations in over 60 countries worldwide and thus is one of the larger family-owned companies in Europe.

The Group Division Voith Turbo is part of the Voith Group and a specialist for intelligent drive technology, systems as well as tailor-made services. With its innovative and smart products, Voith offers highest efficiency and reliability. Customers from highly diverse industries such as oil and gas, energy, mining and mechanical engineering, ship technology, rail and commercial vehicles rely on the advanced technologies and digital applications of Voith.

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