

## Mumbai Metro Aqua Line inaugurated for commercial operation with trains and signalling solutions supplied by Alstom

- Alstom India-made driverless Metropolis trains to transport more than 1.6 million passengers per day
- A comprehensive set of solutions comprising fully automated train operation, predictive maintenance of signalling systems, overhead catenary system, automated train maintenance at the depot, and more.

**5 October 2024** – The first phase of Mumbai Metro’s Aqua Line, with Metropolis metro trainsets and signalling solutions supplied by Alstom India will commence commercial service soon, connecting the Bandra Kurla Complex business district to Aarey JVLR. Honourable Prime Minister Shri. Narendra Modi inaugurated this line today by flagging off the inaugural metro trainset from Aarey JVLR station. Running on 33.5 km, Mumbai Metro’s Aqua Line is one of the longest underground continuous metro stretches in India and first underground metro of Mumbai city.

Speaking on the occasion, **Olivier Loison, Managing Director - Alstom India** said, “The Alstom built full stack mobility solutions for the Mumbai Aqua Line is packed with some of the most sophisticated engineering and technology solutions for Mumbai’s first underground metro. With our 100% made-in-India driverless trains, we are demonstrating that innovation and efficiency can go hand-in-hand. Our longstanding partnership with MMRCL has enabled us to deliver a world-class metro experience that promises to significantly ease the daily commute for millions of Mumbaikars.”

Alstom’s engagement with Mumbai Metro Rail Corporation Limited (MMRCL) for the Aqua Line includes manufacturing of 31 lightweight, fully furnished modern metro trains of 8 cars each, which is one of the biggest rolling stock contracts in the urban sector for the company in India. It also includes signalling solutions comprising:

- Driverless operation, facilitated by the latest generation of CBTC communications-based train control technology, Urbalis Forward, which features GOA4, the highest grade of automation,
- Computer-based interlocking
- Automatic train supervision
- Integrated Platform screen doors (PSD),
- Telecommunication systems as well as the Mechanical and Electrical supervisory control and data acquisition system (M&E SCADA).

Bidirectional video communication between onboard passengers and the Operations Control Centre (OCC) during a passenger emergency alarm.

The metro trainset design themed on Dynamic Fluidism takes inspiration from the city’s vibrant energy and its mix of global architectural styles. The metro trains prioritise high interior density layout to maximise space, as well as accessibility and comfort for differently abled passengers, offering dedicated

wheelchair space in every car. Each trainset will be able to accommodate at least 3,000 passengers on a single trip, thereby impacting the lives of over more than 1.6 million commuters.

The Aqua Line Metropolis trainsets are equipped with advanced safety features, including face recognition security CCTV cameras, smoke detectors, emergency intercoms, and fire extinguishers. The trainsets also feature clear signage, three rows of grab rails, grab handles, and support poles, along with designated space for passengers carrying luggage. Large doors allow for quick passenger evacuation during emergencies.

For the first time in India, the metro cars in India have 75% motorisation, enabling quick acceleration and deceleration thereby bringing about greater efficiency in operations. The trainsets are also equipped with regenerative braking system significantly reducing carbon emissions. These trains are also estimated to reduce 35% of overall traffic and air and noise pollution. They are 96% recyclable and 99% recoverable, with no prohibited substances used.

Under the 'Make in India' initiative, the trains have been designed and developed at Alstom's engineering centre in Bangalore, Karnata and are currently being manufactured at its state-of-the-art rolling stock manufacturing unit at Sri City, Andra Pradesh. So far, 24 trainsets have been delivered to MMRCL.

Alstom stands at the forefront of urban mobility with its market-leading Metropolis metros, serving over 80 customers worldwide. As an undisputed leader in communication-based train Control (CBTC) technology, Alstom also supplies more than 35% of all CBTC systems in service globally. Our driverless metro solutions, powered by cutting-edge CBTC technology, address today's mobility challenges, ensuring fluid and connected travel experiences for passengers in an era of increasing transportation demands.

For more information, please visit [Metropolis metros: Keeping your city breathing](#) and [Alstom Signalling](#)

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## About Alstom in India

Alstom is the only multinational sustainable mobility provider in India, to have a comprehensive portfolio of offerings to meet customer specific needs, from cost-efficient mass-market platforms to high-end technological innovations. Synonymous with the country's 'Rail Revolution', Alstom continues to be a strategic partner in supporting India's freight revolution and passenger movement. With 6 industrial sites and 5 major engineering centres, the company not only caters to domestic project needs, but also delivers for many international projects. Supporting the government's modernization initiatives, Alstom has been at the forefront of introducing several breakthrough technologies in India with world class rolling stock, rail equipment & infrastructure, signalling and services. Fully aligned with the country's vision of Make-in-India and Aatmanirbhar Bharat, Alstom remains deeply committed to strengthening its local sourcing and supply chain ecosystem.

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