



# Saft batteries ensure smooth running for Singapore's MRT Metropolis driverless trains

Saft's MRX batteries provide essential back-up power on board Alstom's Metropolis driverless trainsets in Singapore. The compact batteries deliver reliable power for up to 60 minutes for lighting, air conditioning, door operation and communication systems.



Case study

Singapore's Land Transport Authority (LTA) is the government agency responsible for the city-state's road and rail transport. With a fast growing population that is now over 5.4 million, the LTA has made significant investments in the city's transport infrastructure to accommodate passenger numbers of more than 2 million passengers per day. To boost capacity on its Circle and North East lines, the LTA has selected Alstom to supply 42 of its driverless Metropolis trainsets for the city's Mass Rail Transport (MRT) system.

## Metropolis developed for safe, reliable city transportation

Alstom has developed the Metropolis concept to provide growing cities with safe, reliable and comfortable transportation for ever-increasing numbers of passengers while reducing environmental impact. The first deliveries are scheduled for 2015. The MRT uses state-of-the-art technologies that place a key emphasis on reliability and low maintenance to ensure optimized total cost of ownership (TCO). Alstom required backup power batteries to deliver a reliable service over many years with low running costs.



**SAFT**



## Adaptable MRX batteries

Backup power on the Singapore MRT driverless trains will be supplied by Saft's nickel-cadmium (Ni-Cd) MRX batteries. These highly compact block batteries are designed to meet the continuous, everyday onboard backup needs of all types of modern electric trains. Saft is supplying a total of 48 of the MRX230 batteries.

### Key features:

- Up to 60 minutes of backup power
- Compact design
- Performs ideally between - 20°C to + 50°C
- Robust block battery with water filling system
- Available in 18 size steps from 70 to 520 Ah
- Field proven to last more than 15 years

## Efficiency, flexibility and reliability

The MRX offers high-energy storage capacity in a compact form. This frees up valuable passenger space for the MRT. As a vital element of Alstom's Metropolis, the MRX batteries help the trainsets meet the three key objectives of efficiency, flexibility and reliability. Saft is also providing local support for the trainsets constructed in China from its manufacturing plant in Zhuhai, China.

### Key benefits:

- Frees up passenger space
- Saves weight
- Delivers reliable power in a harsh environment
- Low Total Cost of Ownership (TCO)
- Simple to install, commission and maintain
- Local manufacturing and service support from Saft China

## Proven performance

“*Driverless operation of our Metropolis trains places an even greater emphasis on the reliability and safe operation of critical onboard systems. There can be no compromise. That's why we selected Saft MRX batteries as they deliver proven performance and optimized total cost of ownership in a compact, lightweight installation footprint.*”

Lionel Dapvril, Alstom Electrical Sub System Engineer Transverse Activity – Pantograph and Battery



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