

SMRX Ni-Cd battery

The high power backup battery for railway applications

Saft's SMRX nickel-based battery range assures starting and continuity of onboard auxiliary backup applications and delivers outstanding performance, especially in arctic and desert temperature extremes.

Saft's SMRX nickel cadmium battery delivers the short duration, high peak discharge currents essential for instant engine starting, emergency braking, tilting, and for raising pantographs. SMRX LT enables a smaller battery size to support the required load profile in low temperatures, while SMRX HT offers superior charge efficiency in higher temperatures, providing increased capacity for the ideal battery solution.

The SMRX design is fully compatible with Saft's range of standardized railway battery systems while its robust and reliable Ni-Cd technology ensures a long and predictable service life.



Applications

All types of trains

- Urban transport: metros, tramways, tram-trains, airport shuttles
- Regional transport: EMU, DMU (Electric and Diesel Multiple Units)
- Intercity transport: high-speed trains, electric and diesel locomotives, passenger coaches

All types of function

- Engine starting
- Emergency braking
- Fail-safe train start-up: pantograph lift-up, computing, electronics

Benefits

- Optimized performance for extreme temperatures
- Reduced installation footprint and lower weight (30% reduced volume and weight compared with a standard Ni-Cd battery)
- Reduced LCC (Life Cycle Cost) and improved LCA (Life Cycle Assessment)
- Customizable for specific needs
- Easy integration of standard cell design into customer battery systems
- Reliable power for engine starting, even at extremely low temperatures
- Flexible single-cell design keeps down overall costs

Temperature

Operating temperature (SMRX)	From -30°C to +50°C
Operating temperature (SMRX LT)	From -50°C to +40°C
Operating temperature (SMRX HT)	From -20°C to +65°C
Resistance to extreme temperatures	From -50°C to +70°C

Maintenance

Low maintenance thanks to long time between topping-up operation (for LT & HT consult Saft)	6 years or more (less than 35°C average, with charging temperature compensation)
Optimized reconditioning operation (for LT & HT consult Saft)	Once in the battery lifetime
Optional water filling vents allow for quick and accurate topping-up to minimize maintenance costs	Less than 10 minutes for active topping-up operation

Light and compact design

Gain in container and battery compartment size vs conventionally sized batteries	60% depending upon requested mission profile
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Wide capacity range

Capacity range to optimize sizing to specific performances request	From 70 to 260 Ah
Available crates for easy integration & handling	For 2 to 8 cells

* The data provided are nominal values and actual results may vary depending upon application conditions.

Features

- Saft's Sintered/PBE Ni-Cd technology ensures reliable and predictable service life (20 years)*, without risk of sudden death
- Low maintenance:
 - topping-up interval up to 6 years or more
 - only one reconditioning operation in the battery service life
- Robust construction, large electrolyte reserves and advanced plate design
- Delivers short duration high current discharges of up to 1 minute and up to 5 times its capacity for instantaneous diesel engine starting
- Lighter than conventionally sized batteries, providing equivalent performance in containers and battery compartments that are at least 60% smaller
- Optional water filling vents allow for quick and accurate topping-up to minimize maintenance costs
- Each battery option can be integrated into a customized tray, individually designed to meet specific application requirements



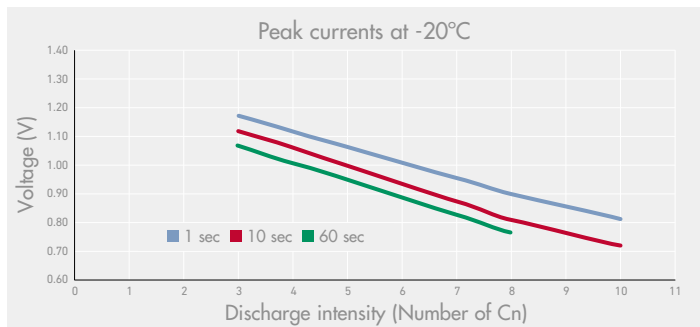
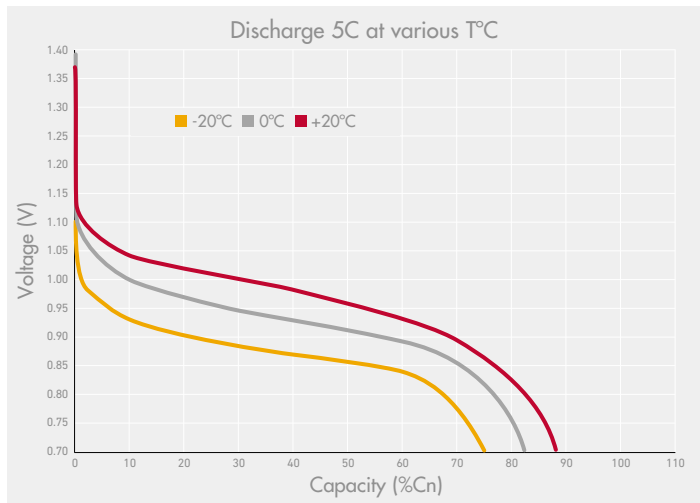
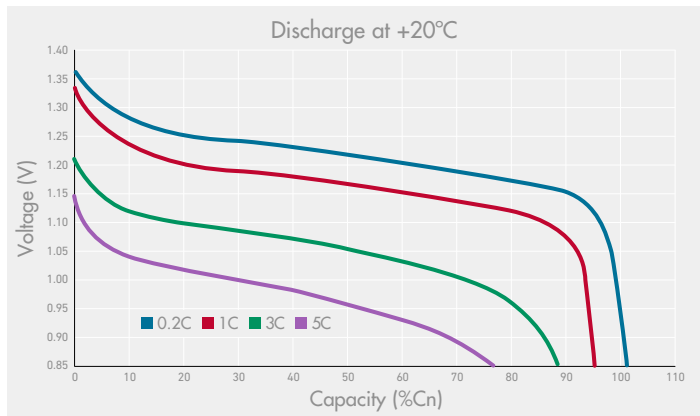
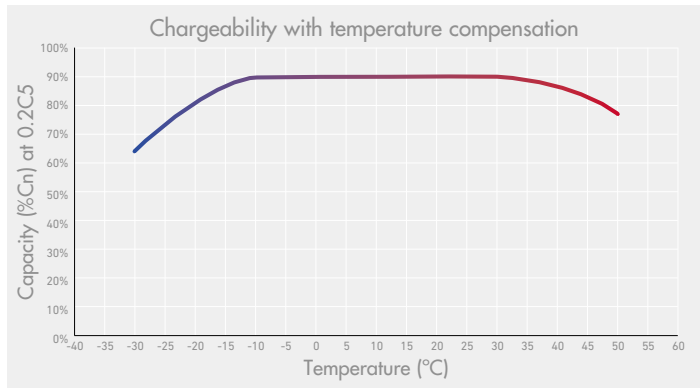
Full conformity with quality, safety and environmental standards

- Electrical: exceeds the medium "H" type requirements of IEC 60 623, also significantly exceeds UIC 854 requirements
- Integration: EN 50547 railway auxiliary onboard battery
- Fire & smoke: NFF 16101-16102, DIN 5510-2, UNI IEC 11170-3, UL 94-V0, NFPA 130 for ASTM E 162 and E 662
- Shocks & vibrations: IEC 61 373
- Quality: ISO 9001, IRIS, Saft world class continuous improvement program
- Environment: fully recyclable, ISO 14001, RoHS, REACH
- Others: DIN 40771, BS 6260



Saft

Transportation, Telecom & Grid
 26 quai Charles Pasqua
 92300 Levallois-Perret – France
 Tel. : +33 1 58 63 16 00
 Fax : +33 1 58 63 16 18
www.saftbatteries.com



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