

SRM+ Ni-Cd battery

The optimized high-energy railway backup battery

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

Saft's SRM+ high performance Sintered/PBE nickel-cadmium battery ensures reliable energy backup over a service life of more than 15 years and is fully recyclable.

The single cell design offers a high level of flexibility in battery system configuration and the package has the same installation footprint as an equivalent block battery solution.

SRM+ is purpose-designed to operate cost-efficiently and provides outstanding chargeability across a wide temperature range.

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 locomotives, passenger coaches

All types of function

- Passenger safety: onboard signaling, security lighting, door control and communication networks
- Passenger comfort: ventilation, air-conditioning, lighting, Wi-Fi
- Fail-safe train start-up: pantograph lift-up, computing, electronics

Benefits

- Total reliability for high energy backup applications requiring "M" type performance, even in the toughest conditions
- Purpose designed for cost-effective solutions
- Optimized use of battery space
- Low LCC (Life Cycle Cost)
- Battery design offers complete flexibility
- Standardized or customized options available



Temperature

Operating temperature	From -30°C to +50°C
Resistance to extreme temperatures	From -50°C to +70°C

Maintenance

Low maintenance thanks to long time between topping-up operation	2 years or more depending upon operation characteristics
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
--	--

Wide capacity range

Capacity range to optimize sizing to specific performances request	From 40 to 360 Ah
Available crates for easy integration & handling	For 2 to 8 cells

Features

- Saft's Sintered/PBE Ni-Cd technology ensures reliable and predictable service life (over 15 years), without risk of sudden death
- Compact single cell design offers a 25% reduction in weight and installation footprint compared with SRM
- Advanced electrolyte ensures excellent charge/discharge performance
- Wide operating temperature range from -30°C to +50°C and resistance to extreme temperatures from -50°C to +70°C
- Proven resistance to shocks and vibrations
- Outstanding chargeability over an extended temperature range
- Fast recharge (90% capacity achieved in 5 hours) for rapid return to service
- Lower water consumption for optimized maintenance intervals
- Flexibility in capacity, container type and maintenance systems
 - 17 capacity steps ranging from 40 Ah to 360 Ah
 - Containers available in various plastics (FRpp, P, F2)
 - Optional centralized water filling system
- Compatible with Saft's range of standardized battery systems or can be integrated into a customized tray, individually designed, engineered and tested to meet specific application requirements



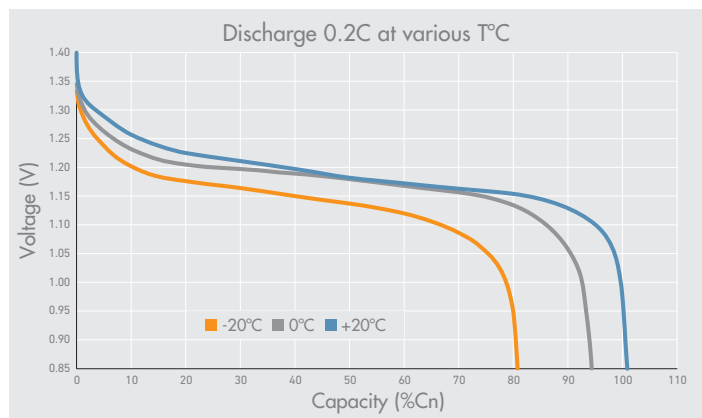
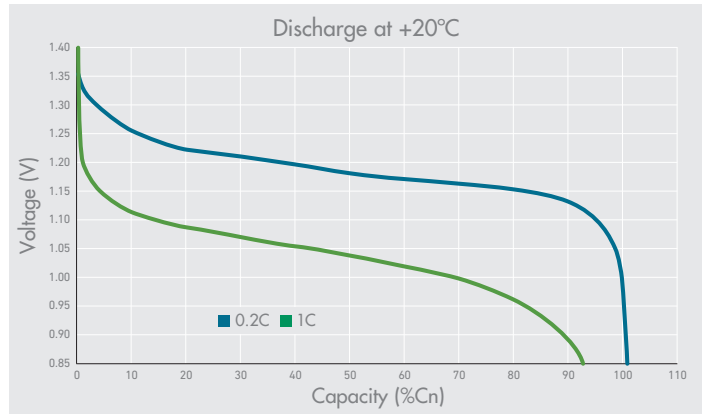
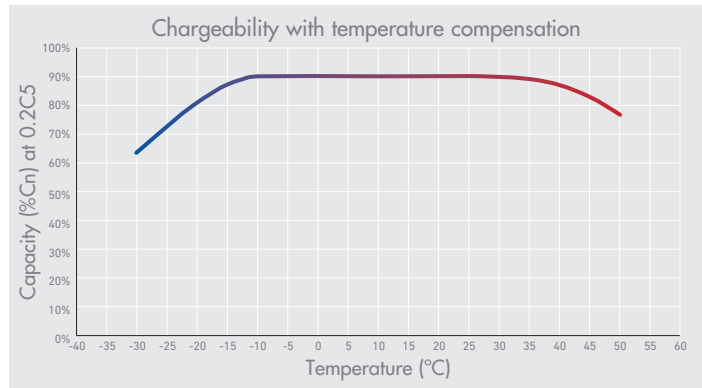
Full conformity with quality, safety and environmental standards

- Electrical: exceeds the medium "M" type requirements of IEC 60 623
- 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, ISO/TS 22163 (IRIS), Saft world class continuous improvement program
- Environment: fully recyclable, ISO 14001, RoHS, REACH



Saft

ESS & Mobility
 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



Doc No.: 22000-0719-2

Edition: July 2019

Data in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.

Société par Actions Simplifiée au capital de 31 944 000 €

RCS Nanterre 383 703 873

Photo credits: Saft

Published by the ESS & Mobility Communications Department

Produced in the UK by Arthur Associates Limited

