

Xcelion® 6T-E battery

Rechargeable lithium-ion battery system

Super lithium-iron phosphate 6T format battery for high energy applications

The 24V Xcelion 6T® Energy battery variant provides double the usable capacity of lead-acid batteries in the same footprint.

Saft's Xcelion 6T® is a 24V battery system that offers a drop-in replacement solution for legacy battery technology in military vehicles and other industrial applications.

This ruggedized battery uses Saft's proprietary Super-Phosphate® chemistry which is ideally suited for high performance applications requiring high levels of safety.

Benefits

- Significant weight savings and life cycle costs compared to lead-acid chemistries
- Maintenance free
- Drop-in replacement for current vehicle batteries
- Commercial off-the-shelf solution
- Communicates over J1939 CAN Bus protocol
- Compatible with MIL-STD-1275E power bus

Features

- Built-in self-balancing
- Fast charging under varying conditions*
- Self shut-down in unsafe conditions
- Internal battery management system

Applications

- Military ground vehicle energy
- Silent watch
- Applications requiring a balance of power and energy



Electrical characteristics	Xcelion 6T-E
Nominal capacity	82 Ah
Nominal voltage	25.5 V
Voltage at full state of charge	30.0 VDC
Voltage at zero state of charge	20.0 VDC
Energy	2.1 kWh
Cold cranking amps (CCA)	
at +25 C° for 30 seconds	750 A
at -18 C° for 30 seconds	600 A
at -30 C° for 30 seconds	300 A
Maximum discharge current	
Continuous	200 A
Maximum charge current	
Continuous	120 A
Pulse (20 s)	250 A
Mechanical characteristics	
Weight	20.7 kg
Height	230 mm
Width	256 mm
Length	269 mm
Operating Conditions	
Operating temperature	
Discharge	-40 °C to +60 °C
Charge*	
Storage and transportation temperature**	-46 °C to +71 °C

*For cold temperatures of -32°C and below, the battery can be commanded to self-heat to enable extreme cold temperature discharge. The battery will automatically engage the heaters during cold temperature charging to ensure maximum battery life

** Sustained high temperature storage will reduce life.

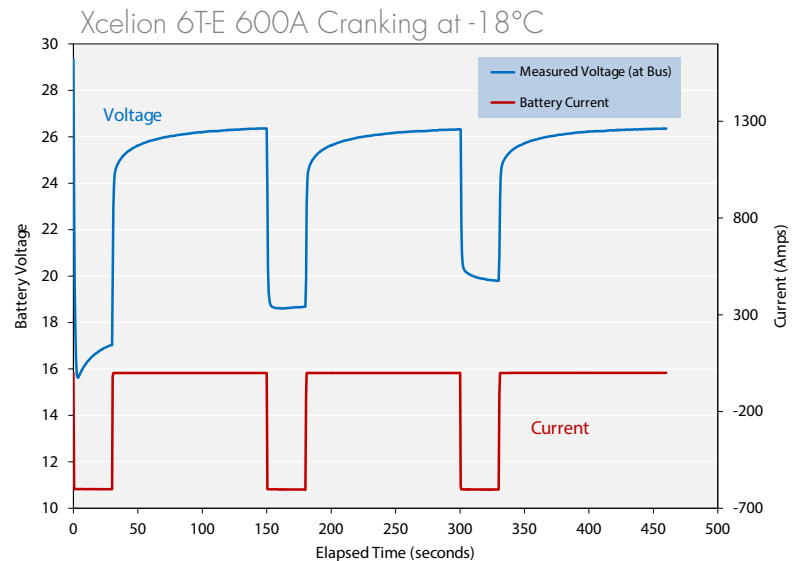
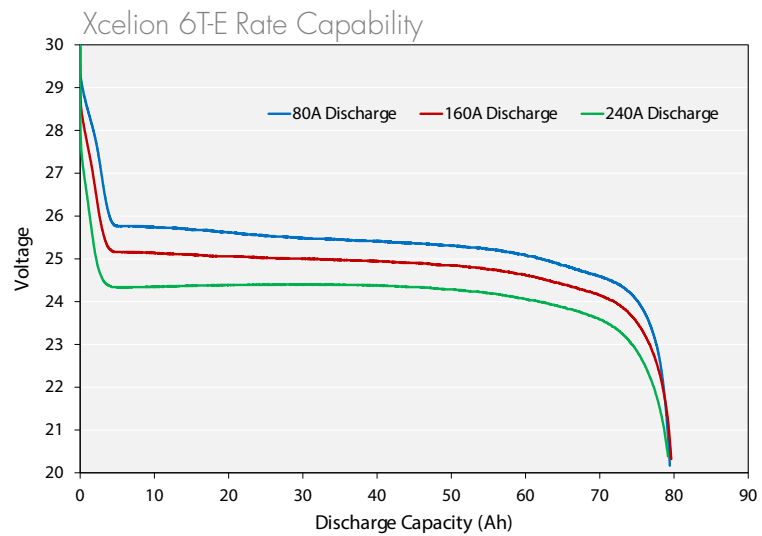
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Top-level system functions

- Graphical User Interface Tool allows detailed view of battery status
- Communication of battery state of charge, temperature, and other key parameters via J1939 CAN Bus
- Redundant overcharge protection
- Overload protection
- Short circuit protection
- Over-discharge protection
- Battery reserve protection (preserves energy for engine start)
- Battery monitoring
- Built-in-Test
- Cell heating (allows full battery capability over operating temperature)
- Continuous cell balancing

Safety heritage

- System design includes Saft's field proven electronic control architecture that includes overcharge protection, and over discharge, over temperature and overload protection.
- Cells equipped with hermetic seal and over pressure safety vent
- Rechargeable Li-FePO₄ cells ideally suited for applications requiring high discharge, continuous or pulse power, fast re-charge, long cycle and calendar life, and high levels of safety.



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