

# Xcelion<sup>®</sup> 6T

## Rechargeable Li-ion battery system

### SUPER LITHIUM-IRON PHOSPHATE 6T HIGH PERFORMANCE BATTERY

One 24V Xcelion 6T<sup>®</sup> replaces two 12V Pb-acid 6T batteries at a quarter of the weight and half the volume.

Saft's Xcelion 6T<sup>®</sup> 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<sup>®</sup> 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 power
- Starting, lights, and ignition (SLI)
- Silent watch
- Applications requiring balance of power and energy

#### Electrical characteristics

Nominal capacity	60 Ah
Nominal voltage	26.4 V
Voltage at full state of charge	30.0 VDC
Voltage at zero state of charge	20.0 VDC
Energy	1.6 kWh
Cold cranking amps (CCA) at -18°C for 30 seconds	1,100 A
at -40°C for 30 seconds	400 A
Maximum discharge current Continuous	400 A
Pulse	3,000 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

\*Battery manages charge energy to ensure maximum battery life. At low temperature the battery will automatically engage built-in heaters for optimum charging.

\*\*Sustained high temperature storage will reduce life.

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NATO STOCK NUMBER: 6140-99-380-7294

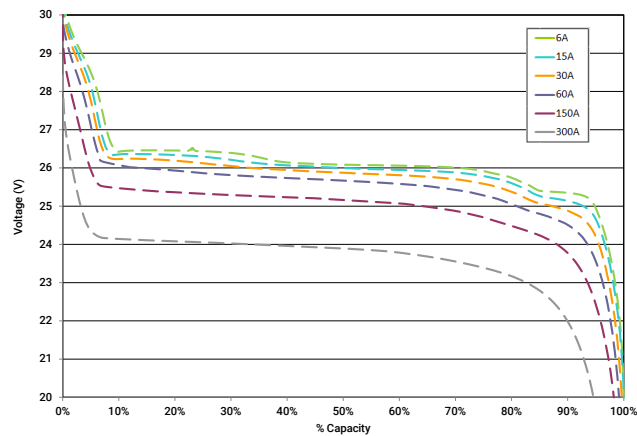
### Top level system functions

- 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

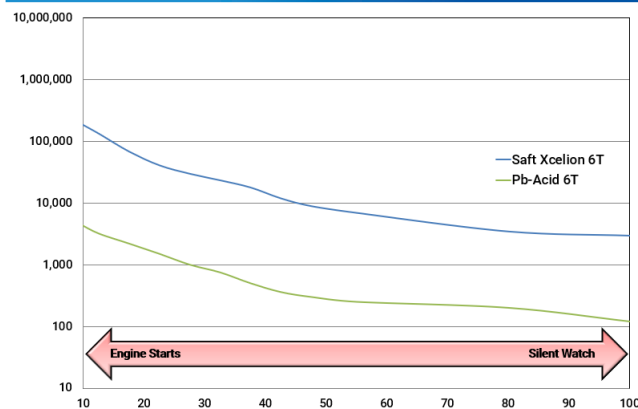
### Safety heritage

- 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.

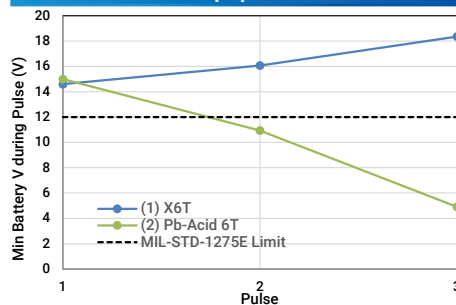
Xcelion® 6T 25°C Rate Capability



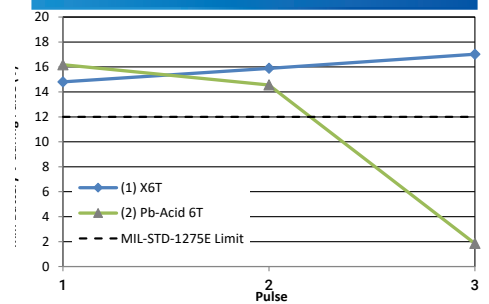
Battery life -: Xcelion® 6T versus Pb-acid 6T



-40°C: 30s 400 Amp pulse



-18°C: 30s 1,100 Amp pulse



### Saft

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Saft, a subsidiary of TotalEnergies SE  
S.A.S. au capital de 31 944 000 euros  
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