



GENERAL INFORMATION

- 2019 developed
- For various special applications
- Oil & gas / PV / medical / defense
- Fulfillment of highest safety standards
- Manufactured in EU



KEY FEATURES

- Hard case cells in different formats and capacities
- Operation at wide temperature range
- Rechargeable up to 150 °C
- Safety tested up to 170 °C
- Temperature range: 0 to 150 °C



CUSTOMIZING

CUSTOMCELLS® HT-Li-Ion rechargeable cells can be customized in different cylindrical and prismatic sizes as well as performance wise to different applications.



BENEFITS

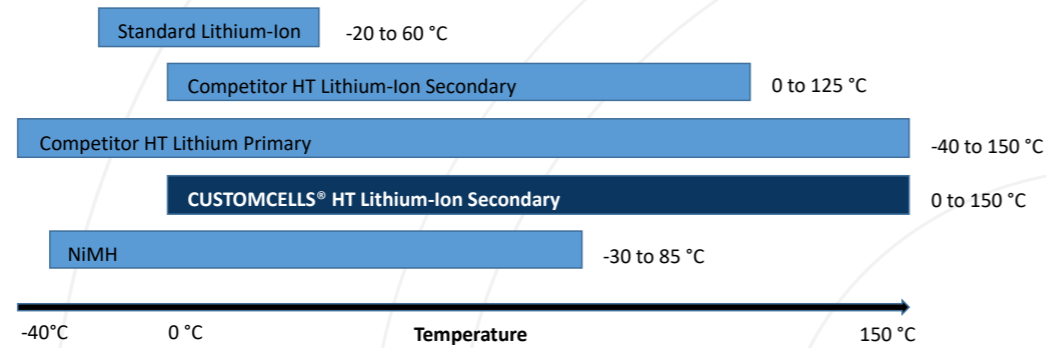
- Rechargeable at elevated temperatures
- Adaptable cell geometry for different battery setups
- Very safe, durable and stable up to 150 °C

New high temperature technology from CUSTOMCELLS®

RECHARGEABLE LI-ION BATTERY CELLS TEMPERATURE RESISTANT UP TO 150 °C

Previously available lithium-ion battery cells are usually limited to a very narrow temperature range, which is close to room temperature. Even at slightly higher temperatures, such as in a car during summer time, lithium-ion batteries can be damaged. For example, if lithium-ion batteries from power tools are left in the trunk of a car. Other energy storage systems such as lithium metal batteries may allow for higher application temperatures under certain circumstances, but at the same time have a high-risk potential and are not rechargeable. Still other battery systems only tolerate a temperature range of few degrees higher than that of classic lithium-ion batteries, but again do not cover the very high temperatures that occur, for example, during autoclaving of medical products or deep geological drilling.

+ HIGH TEMPERATURE TECHNOLOGY IN COMPETITOR COMPARISON -



+ YOUR STORAGE SOLUTION FOR AN EXTENDED TEMPERATURE RANGE -

With its rechargeable high-temperature technology, CUSTOMCELLS® offers a solution that satisfies the most important requirements such as particularly high intrinsic safety, reliability and performance at particularly high temperatures of up to 150 °C. This combination of outstanding properties is particularly well suited for demanding applications in a wide range of fields such as medical technology or in the oil & gas industry.

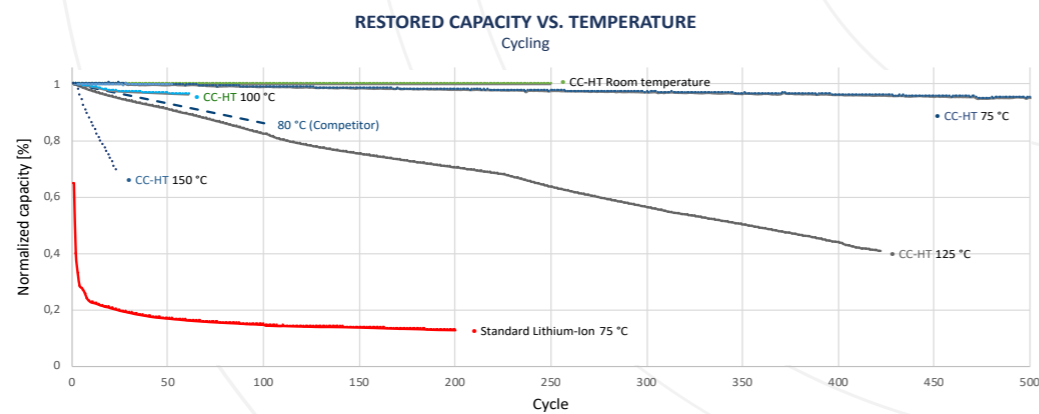


ILLUSTRATION NOTES

- + Conventional lithium-ion battery cells only guarantee a high life expectancy within a very limited temperature range (typically 0-40 °C). They age quickly when operated or stored at temperatures above 60 °C. This is reflected in a very rapid reduction in storage capacity.
- + The lithium-ion high-temperature technology of CUSTOMCELLS® enables particularly long operating times at elevated temperatures. The comparison with a previously available lithium-ion battery for higher temperatures shows the technological advantage of the new development of CUSTOMCELLS®.
- + CUSTOMCELLS® high-temperature technology means that the life (remaining capacity of 80%) of a battery cell at 75 °C is significantly longer.
- + At unusually high temperatures, the cell with new technology - compared to previous rechargeable battery cells - can be in use for much longer periods of time.



EXEMPLARY APPLICATIONS



OIL & GAS

- MWD/LWD/D
- Inspection
- Pipeline Inspection (PIG)
- Low magnetic signature



MEDICAL INDUSTRY

Sterilizable



DEFENSE

Safe to use and reliable under extreme conditions (over 50 °C)



INDUSTRIAL

Safe to use and reliable under extreme conditions (over 50 °C)



PHOTOVOLTAIK

Safe to use and reliable under high ambient temperatures (over 50 °C)

+ HIGH TEMPERATURE TECHNOLOGY – USE IN VARIOUS APPLICATIONS -

In the field of **medical devices**, high-temperature battery technology is suitable, for example, for the wireless power supply of devices that have to be sterilized above 120 °C. In the **oil & gas sector**, the new battery technology is suitable, for example, for the power supply of logging and monitoring equipment in combination with a generator. In the context of **industrial plants**, high-temperature battery technology is relevant e.g. as an energy back-up system for servomotors in safety-critical areas where high temperatures occur in the event of a disaster, but where lithium metal batteries should be avoided for safety reasons.

The CUSTOMCELLS® high temperature technology is also suitable for the area of **monitoring and surveillance** - especially in safety-relevant or particularly hazardous areas - where high ambient temperatures can occur.



+ THE HIGH TEMPERATURE TECHNOLOGY IS FLEXIBLE IN FORMAT -

The CUSTOMCELLS® high temperature battery technology can be manufactured in various sizes in hard cases. Starting with a DD cell size with M8 terminals, a number of other cell sizes can be realized in flexible or standardized dimensions. CUSTOMCELLS® accompanies customers from the initial adaptation of the cell to the specific application, through the investigation of technical feasibility and the construction of pilot series including relevant tests, to further development of the series product including certification for a wide range of applications.



+ YOUR CONTACT FOR HIGH TEMPERATURE TECHNOLOGY -



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