Can your fridge be upgraded?

Most Isotherm refrigeration products and other brands that use Danfoss/Secop compressors with DC-only electronics can be upgraded with the Isotherm Smart Energy Control. Please contact Indel Webasto Marine USA to request more information.

Multiple benefits from a simple kit:
- Up to 35% savings due to a more efficient use of the compressor
- Up to 50% savings with combined effects of stored cooling energy in food and drinks
- No need for eutectic plates/special storage devices
- Easy to retrofit
- Quick cooling in boost mode
- Soft start option to avoid starting surges

External factors
- Cabinet air temperature
- Temperature set point
- Battery charge status
- Battery voltage

Configuration Parameters
- Cabinet size
- Offset values

Available potential of DC fridges
- Energy storage potential of loaded food/drinks
- Variable speed capability of DC compressors

Energy Savings
- Maximized performance/battery drain ratio (COP)
- Reuse of energy stored in food/drinks
- Speed modulation: Soft start up and boost mode

The Isotherm Smart Energy Control kit (ISEC) not only makes your fridge intelligent but also allows the storage of a significant amount of cold energy in the loaded food and drinks. The Smart Energy Control reduces the cabinet temperature more than a conventional fridge without freezing the food. The temperature is continuously monitored via an air sensor in the cabinet. Cold energy is quickly generated by running the compressor at the highest rate of speed when a power surplus is available - such as when an engine is running or when connected to a charging system. The cold that is stored in the food and beverages acts like a holding plate, keeping fridge temperatures lower for a longer period of time, causing the compressor to run less. When the ISEC microprocessor senses the fridge is running on battery alone, it runs the compressor at the slowest rate of speed to maintain proper temperatures.

The combination of stored energy and variable compressor speeds results in a significant energy savings.