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AC & DC Powered Heated Concorde RG® Series Batteries Optimizing Performance and Convenience for Cold Weather Operators



Cold temperatures increase the internal resistance which decreases a battery's capacity and slows the battery's ability to accept charge current. For years, operators in cold climates have made it a practice to endure the inconvenience of removing batteries from aircraft, transporting and storing them in a heated environment, then reinstalling prior to departure. Some also use external heater blankets that wrap around the battery and heat the outermost cells when the aircraft is parked. Although this solution increases capacity, in some cases the battery cells are not equally heated resulting in diminished capacity and disproportionate recharge across battery cells.



In order to maximize battery performance, Concorde has developed heated batteries in our most popular sizes to mitigate these problems. Concorde's RG-380E/44, RG-380E/60 and RG-390E series of heated batteries incorporate internal AC (115 V nominal) and DC (28 V nominal) heater blankets that surround cells in the most optimal manor for equalizing cell heating. These blankets are controlled by a Heater Control Unit (HCU) offered in four different TSO authorized varieties. HCU-1 is a DC only unit and uses DC power supply to operate the heaters. HCU-2 is an AC only unit that heats the battery using AC power. HCU-3 and HCU-4 are dual power units that allow for either AC or DC power supply. HCU-3 accommodates AC or DC power supplied through a single receptacle whereas HCU-4 has separate receptacles for AC and DC power. Each HCU controls battery temperature with thermal switches that automatically turn on or off depending on the temperature of the battery. Redundant switches are in place to prevent the possibility of overheating.



Some airframe manufacturers have already incorporated this design into their aircraft to provide end users with optimal performance and zero inconvenience.

Top to bottom:
RG-380E/60KSH
RG-380E/44LH
RG-390E/KH

Heated batteries are TSO authorized and available in the following part numbers: RG-380E/44KH, RG-380E/44KSH, RG-380E/44LH, RG-380E/44LSH, RG-380E/60KH, RG-380E/60KSH, RG-380E/60LH, RG-380E/60LSH, RG-390E/KH, RG-390E/KSH, RG-390E/LH and RG-390E/LSH.

Concorde has designed and manufactured application specific solutions for over 3 decades in West Covina, California. Concorde supplies over 90 models of Original Equipment and direct replacement lead acid batteries for fixed wing and rotary aircraft. Concorde batteries are installed as Original Equipment by the majority of aircraft manufacturers and adopted by military aircraft operators worldwide.

For more information about this release please contact Customer Service at Concorde Battery. Call 626-813-1234 or email customer-service@concordebattery.com.

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