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(57) Abstract :

ABSTRACT HYBRID COOLING IN MOTORCYCLIST APPAREL FOR HEAT TO COLD TRANSITIONS The present invention relates to thermal management in motorcyclist apparel, providing a hybrid cooling system that seamlessly transitions between heat and cold conditions. A garment with an internal cavity features multiple pre-defined pockets designed to accommodate pre-cooled cooling gel pads made from medical-grade hydrogel that absorb body heat through conduction and promote evaporative cooling. Integrated moisture-wicking fabric lining efficiently transports sweat, while battery-powered brushless fans mounted on a fan mounting panel circulate ambient air through internal airflow channels and expel warmed air via a shoulder ventilation panel. A battery power system connected by wiring ensures continuous operation, making this innovative apparatus an effective solution for managing localized thermal conditions in high-performance motorcyclist apparel.

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