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2 K Quantum cryoooler development

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We present the development of a compact, rack-mountable cryocooler capable of achieving temperatures down to 2 K, designed specifically for quantum sensing environments. The system integrates pulse tube and Joule-Thomson cooling technologies to deliver high thermal stability and ultra-low vibration performance, critical for quantum applications. Engineered for maintenance-free operation, the cryocooler features a robust architecture with no moving parts in the cold head, ensuring exceptional lifetime and reliability. Its modular design supports seamless integration into laboratory and industrial setups, offering a scalable solution for next-generation quantum instrumentation.

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