

## ***Research on the Influence of Linear Compressors on Space Hybrid 4K J-T Cooler***

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The oil-free linear J-T compressor is one of the key components in space 4K J-T cooler. The performance of the J-T compressor affects the performance of the hybrid J-T cooler directly. Based on the J-T compressors developed by our laboratory, series of experimental research is carried out to explore the influence of the JT compressor on the performance of the JT cooler at different operating conditions. When only the power consumption of JT compressors is considered, the coefficient of performance (COP) of the JT cycle is proposed to evaluate the performance of JT cycle. And experimental results suggest that two-stage compression presents higher COP comparing with one-stage compression