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C2Po1C-09: Design and refurbishment of End Station Refrigerator 2 at JLab

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The future operation of the 4 kW 15 Kelvin MOLLER experiment at Jefferson lab necessitates an increase of cryogenic capacity at the End Station Refrigerator. The current plant is the former 1.5 kW (4.5 K) ESCAR plant that has been operating at Jefferson Lab since 1994. The existing 1.5 kW plant is not able to support the load for MOLLER and will be replaced with a refurbished plant comprised of the cold box and compressors of the 4 kW ASST-A plant from the Superconducting Super Collider in Texas. This paper outlines the assembly, repair and modifications made to the cold box, along with the design of the plant as a whole and its integration into the existing distribution system.

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