



## FOR IMMEDIATE RELEASE

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## **Mainstream Engineering Awarded a Contract from the Department of Energy for the Development of Autocascade Cryocooler.**

ROCKLEDGE, FL — April 5<sup>th</sup>, 2024 — Mainstream Engineering Corporation has been awarded a contract from the Department of Energy for the Development of Autocascade Cryocooler.

The Department of Energy has funded Mainstream Engineering Corporation to develop a low-cost cryocooler that can provide 250W of cooling at negative 234 degrees Fahrenheit, that is 266 degrees below the freezing point of water. Mainstream has developed a multi-stage autocascade vapor compression system to achieve the required cooling capacity and temperature. The autocascade system uses a refrigerant mixture and a series of heat exchanger stages. Each stage condenses a refrigerant constituent out of the mixture, expands it to a colder temperature, then uses that cooling to condense the next lower volatility refrigerant. By using this approach, conventional HVAC refrigerant components can be used (i.e. compressors, condensers, liquid-vapor phase separators, control valves, etc.). The use of readily available high-volume components drives down the cost.

### **About Mainstream Engineering Corporation**

[www.mainstream-engr.com](http://www.mainstream-engr.com)

Mainstream Engineering Corporation is a 38-year-old Brevard County, Florida manufacturer with a history of leading-edge research and development that has resulted in advanced cost-competitive products, which are made in the USA. Founded in 1986, Mainstream's mission is to transition advanced R&D into high-quality, environmentally-safe, green, commercial products using lean manufacturing techniques. Areas of research include thermal control, energy conversion, power electronics, biomass conversion, chemical technology and materials science.

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