

# Design of small thermal vacuum chamber for 125-U CubeSat satellite

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## **Abstract.**

The thermal vacuum chamber is a specialized chamber to test any mechanical system, which is planned to be launched to outer space. The research is about designing a new thermal vacuum chamber to accommodate a 125-U CubeSat satellite. The role is to create a space condition environment with ultra-high vacuum in high and low temperature and induced radiation. Liquid nitrogen is utilized as the thermal medium. The proposed design is simulated and tested according to the working parameters. The velocity result indicates a sensible output velocity of 3.841 m/s with an input velocity of 10m/s. The pressure contour provides a maximum of 13,280 Pa.