

ABSTRACT

Systems and methods are disclosed for providing a controlled temperature in a control volume. Such systems include a main chamber (defining the control volume), a mixing chamber and a gasflow source. The mixing chamber is in selective fluid
5 communication with the main chamber, and has at least one mixing chamber inlet, and a ram air inlet for allowing ram airflow at a first temperature to be channeled into the mixing chamber. The gasflow source provides a source gasflow at a greater, second temperature to the mixing chamber. The mixing chamber provides the mixing chamber outflow at a third temperature by selectively allowing the ram airflow and the source
10 gasflow in the mixing chamber to mix therein, or, by selectively allowing the ram airflow in the mixing chamber to flow to the main chamber (in absence of source gasflow). A controller is operative to provide a desired level for the third temperature.

[Fig. 5]