

System operation

The principles of barocaloric cooling are shown below. Pressure is applied cyclically via a piston to BCE particles loaded into a pressure vessel. The BCE particles will become warmer upon application of positive pressure and cooler upon pressure release. A directional valve synchronised with the piston action directs alternately warmed and cooled heat transfer fluid to the hot sink and cold load respectively. Thus the cold load becomes progressively cooler and the hot sink progressively warmer with each pressure cycle.

