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Figure 1: a) Three main positions of Driving Cylinder of the Proposed Stirling Device (simplified) b) Nesting Grids of Heat Retaining Material with Interstitial Spaces



Figure 2. Stirling Cycle Dead Volume vs. a) Power (Abdullah et al.) and b) Efficiency (Hoegel)



Figure 3. Simplified primary cylinder assembly without any actuator mechanism.

Left to right, Heated head, Mating heated mass disk that transitions geometry between head and first regenerator disk, Regenerator disks, Cylinder, Mating cool mass disk, Cool head.

Kongtragool, B. and Wongwises, S. (March 2006). Thermodynamic Analysis of a Stirling Engine Including Dead Volumes of Hot Space, Cold Space and Regenerator. *Renewable Energy*, 31(3), 345 – 359.

Abdullah, S., et al. (2005). Renewable Energy, 30, 1923 – 1941.

Hoegel, B. (2014). *Thermodynamic-based Design of Stirling Engines for Low-Temperature Heat Sources*. [Doctoral Dissertation, University of Canterbury].