

# Microscopic heat engine subjected to stochastic resetting

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**Abstract :** Quantum heat engines have been the subject of intense research in recent years. We explore the thermodynamics of stochastic heat engines in the presence of stochastic resetting. The setup comprises a Stirling engine whose working substance is a Brownian particle undergoing overdamped Langevin dynamics in a harmonic potential with a time-dependent stiffness . The position of the particle is reset at random times to a given location, and the resulting dynamics is observed to have a significant impact on the output power and efficiency. The effect of changing the reset position of the particle is also studied.