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Title:	Maximum power point characteristics of generalized heat engines with finite time and finite heat capacities.
Authors:	Khanna, Abhishek (/jspui/browse?type=author&value=Khanna%2C+Abhishek) Johal, R.S. (/jspui/browse?type=author&value=Johal%2C+R.S.)
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Abstract:	We revisit the problem of optimal power extraction in four-step cycles (two adiabatic and two heat-transfer branches) when the finite-rate heat transfer obeys a linear law and the heat reservoirs have finite heat capacities. The heat-transfer branch follows a polytropic process in which the heat capacity of the working fluid stays constant. For the case of ideal gas as working fluid and a given switching time, it is shown that maximum work is obtained at Curzon-Ahlborn efficiency. Our expressions clearly show the dependence on the relative magnitudes of heat capacities of the fluid and the reservoirs. Many previous formulae, including infinite reservoirs, infinite-time cycles, and Carnot-like and non-Carnot-like cycles, are recovered as special cases of our model.
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