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Sommario/riassunto	This work aims at developing a strategy how the energy which has to be applied to transport incompressible and Newtonian fluids through straight ducts can be reduced. Based on the physical properties of laminar and turbulent flow, models are derived which theoretically lead to the reduction of the dissipated energy. The possibility to implement the proposed state due to appropriate design aspects in the cross section shape of the duct is investigated based on numerical simulations of the flow