

(3) Given that the heart of a resting person pumps about 75 gallons of blood per hour at a systolic pressure of 120 Torr, estimate the minimum pump power required, in watts.

The pressure 120 Torr is approximately 1.6×10^5 dyne/cm² and a flow rate of 75 gallons per hour is equivalent to 80 cm³/s. The product of pressure and flow rate is then 1.3 watts.