

Given:

$$v = 20 \frac{m}{s}$$

$$a = 20 \text{ litres/min}$$

Solution:

$$a = 20 \text{ litres/min} = \frac{20}{60} \frac{\text{kg}}{s} = \frac{1}{3} \frac{\text{kg}}{s}$$

force:

$$F = v \cdot a = \frac{20}{3} \frac{\text{kg} \cdot \text{m}}{s^2} = \frac{20}{3} N \approx 6.67 N$$

usefull power:

$$P = \frac{F \cdot s}{t} = F \cdot v = \frac{20}{3} \frac{\text{kg} \cdot \text{m}}{s^2} \cdot 20 \frac{\text{m}}{s} = \frac{400}{3} \frac{\text{kg} \cdot \text{m}^2}{s^3} = \frac{400}{3} W \approx 133.3 W$$

Answer: $F = 6.67 N$ force
 $P = 133.3 W$ usefull power