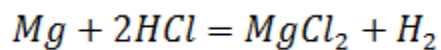A large piece of mg 20Kg is dropped into a vat container containing 500 litres of concentrated Hydrochloric solution. What will be the volume of Hydrogen released.

$$Mg + 2HCl = MgCl_2 + H_2$$

$$n(Mg) = \frac{m}{M} = \frac{20kg}{2.4 * 10^{-2} kg/mol} = 833.33 \, mol$$

$$n(HCl) = \frac{m}{M} = \frac{500kg}{3.65 * 10^{-2} kg/mol} = 1369.86 \, mol$$

$$n(Mg) < n(HCl)$$

$$n(H_2) = n(Mg) = 833.33 \, mol$$

$$V = n * V_m = 833.33 mol * 22.4L/mol = 18666.67L = 18.67m^3$$

Answer provided by AssignmentExpert.com