Boiler power output

In a boiler, coal with a heating value of 30 MJ/kg is burned. The boiler efficiency is 75%. Itheats a saturated liquid at 8 MPa to 500°C. The mass flow is 1 kg/s. How much coal is burnt per second?

Answer: 0.09 kg/s.

Explanation:
$P_1 = 8MPa$, $x_1 = 0$, $h_1 = 1317.1kJ/kg$
$P_2 = 8MPa$, $T_2 = 500°C$, $h_2 = 3400kJ/kg$

$$\Delta h = 3400 - 1317.1 = 2082.9\frac{kJ}{kg}$$

$$\frac{2082.9 \cdot 1}{30000 \cdot 0.75} = 0.0926\frac{kg}{s}$$