Heat Rejected from Refrigerator

A refrigerator receives 50 kW from a cold space and uses 15 kW of power for this. How much heat is rejected to the hot space?

Answer: 65 kW

Explanation: The heat rejected to the hot space is Q_H. The first law of thermodynamics (conversation of energy) for the refrigeration system shown in the picture is: $Q_L + W_{in} = Q_H$. $Q_L = 50$ kW and $W_{in} = 15$ kW. This gives $Q_H = 65$ kW.