

NTP is commonly used as a standard condition for testing and documentation of fan capacities:

NTP - Normal Temperature and Pressure - is defined as air at 20°C (293.15 K,) and 1 atm (101.325 kPa).

For solving this task you need to use the ideal gas law, is the equation of state of a hypothetical ideal gas. It is a good approximation to the behaviour of many gases under many conditions, although it has several limitations. The ideal gas law is often introduced in its common form:

$$PV = nRT$$

where P is the pressure of the gas, V is the volume of the gas, n is the amount of substance of gas (also known as number of moles), T is the temperature of the gas and R is the ideal, or universal, gas constant.

As you can see, you need to find amount:

$n = m (\text{ in g })/M_w$, where M_w is molecular weight, for CO_2 it is 44.

$$n = 5000/44 = 113,64 \text{ mol}$$

Now,

$$PV = nRT$$

$$V = nRT/P$$

$$V = 113,64 * 8,31 * 293,15 / 101,325 = 2732,07 \text{ L}$$

Volume of CO_2 at NTP is **2732,07 L**