As helpful tools we provide formulas which will allow you to calculate expended gas yields for iSi Carbon Dioxide, Argon and Nitrogen gas filled cylinders.

Carbon Dioxide Filled Cylinders: *At 1 atmosphere (1 bar pressure)*

1 gram of CO^2 at -30°C = 0.455 liters of expanded gas
1 gram of CO^2 at -15°C = 0.484 liters of expanded gas
1 gram of CO^2 at 0°C = 0.513 liters of expanded gas
1 gram of CO^2 at 15°C = 0.541 liters of expanded gas
1 gram of CO^2 at 20°C = 0.551 liters of expanded gas
1 gram of CO^2 at 30°C = 0.570 liters of expanded gas
1 gram of CO^2 at 40°C = 0.589 liters of expanded gas

For example- A 16 gram CO^2 filled cylinder at 20°C and atmospheric pressure will provide 8.816 liters of expanded gas (16 x 0.551)

Argon Filled Cylinders: *At 15°C and 1 atmosphere (1 bar pressure)*

Yield of expanded Ar (liters) = Weight of Ar (grams) ÷ 1.669 grams/liter (density of Ar)

For example- A 10.3 gram Ar filled cylinder at 15°C and atmospheric pressure will provide 6.171 liters of expanded gas (10.3 ÷ 1.669)

Nitrogen Filled Cylinders: *At 15°C and 1 atmosphere (1 bar pressure)*

Yield of expanded N^2 (liters) = Weight of N^2 (grams) ÷ 1.170 grams/liter (density of N^2)

For example- A 13.5 gram N^2 filled cylinder at 15°C and atmospheric pressure will provide 11.538 liters of expanded gas (13.5 ÷ 1.170)