

Ideal gas

with reference to all amounts of pressure and temperature are called Ideal gas. But it's impossible so.

Real gases

them those gases which follows the gas law are known as real gases. Hence all gases are real gases.

Real gas law \rightarrow

The physicist Johannes van der Waals modified the ideal gas law to explain the behavior of real gases by explicitly incorporating the effects of molecular shape and intermolecular forces. The van der Waals real

gas equation is

$$\frac{(P + \frac{a}{V^2})}{V} = (V - nb) nRT$$

Here $\frac{n^2}{V}$ is constant of gas and b is empirical constant (Uniq for each gas)

Where P is pressure, T is temperature, R is universal gas constant