

Standard Liter

A standard liter is the amount of gas that occupies 1 liter under standard physical conditions (0°C and 1013 mbar).

1 standard liter is not a measure of volume, but an amount of gas expressed in spatial dimensions.

For leak testing, this means that when specifying the leak rate in standard liters per hour (Nl/h) or standard cubic centimeters per minute [Ncm³/min] or [Nml/min], either measurement must be performed using the mass flow method or the pressure measurement signal must be corrected for the influence of barometric pressure and ambient temperature.

If this is not done, the leak rate must correctly be specified in [l/h] or [cm³/min] or [ml/min].

The difference between the standard state (Q-norm) and the test state (Q-operation) averages approximately 10%.

$$Q\text{-norm} = Q\text{-operation} * 273K/T * P/1013mbar$$

T=Room temperature in K

P=Absolute pressure in [mbar]