

ACCESSORIES

MANOMETER FOR PRESSURE P_{MAX} = 60 MBAR • DATA-SHEET



Suitable for: RITTER Bellows-type Gas Meters p_{max} = 60 mbar

Type	Capsule pressure gauge
Measuring Range	0 to 60 mbar
Resolution	2 mbar

Material: Stainless steel (Cr-Ni)

Application

The Manometer for pressure p_{max} = 60 mbar can be used for measurement of the gas pressure while measuring the gas flow. Among other reasons, this is necessary if the measured and indicated actual volume of gas must be recalculated into the norm volume. The actual volume is the volume at the actual temperature and the actual pressure.



The **norm volume** of a gas is the volume at **norm conditions** which are (in Germany):

Norm Temperatur = 273,15 Kelvin (= 0 °C)

Norm Druck = 1.013,25 mbar

The formula for converting the actual volume into norm volume is:

$$V_u = V_i \times \frac{p_a}{p_u} \times \frac{T_u}{T_i} \quad \text{where}$$

V_u	= Norm Volume in	[ltr]
V_i	= indicated Volume in	[ltr]
p_u	= Norm Pressure in	[mbar]
p_a	= actual Pressure in	[mbar]
T_u	= Norm Temperature in	[Kelvin]
T_i	= indicated Temperature in	[Kelvin]

Note: The indicated gas pressure at the manometer is the differential pressure between the gas pressure at the gas inlet and the actual atmospheric air pressure. Thus, the actual gas pressure (p_a) to use in the above formula is the indicated gas pressure at the manometer plus the actual atmospheric air pressure in [mbar].

Installation

Unpack the Manometer which is mounted into a T-piece. According to the rules for calibration and measurement with gas meters, the Manometer must be positioned at the gas inlet of the meter. The gas inlet nozzle is labelled accordingly. Mount the Manometer onto the gas inlet nozzle by tightly screwing the union nut which is attached to the Thermometer. Thus, the Manometer is ready for use.

V 2.3 / Rev. 2019-02-06 / Subject to alterations.

The most recent version of this data-sheet can be found at <https://www.ritter.de/en/data-sheets/manometer-bg/>

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