

Ion Gauge Gas Correction Factors

The sensitivity of an ionization gauge is related to the ionization rate of the gas being measured. Small atoms are more difficult to ionize, thus give lower readings, and vice versa for larger, heavier atoms.

<u>Gas</u>	<u>Symbol</u>	<u>Factor</u>
Helium	He	0.18
Neon	Ne	0.30
Deuterium	D ₂	0.35
Hydrogen	H ₂	0.46
Nitrogen	N ₂	1.00
Air		1.00
Oxygen	O ₂	1.01
Carbon Monoxide	CO	1.05
Water	H ₂ O	1.12
Nitrogen Oxide	NO	1.15
Ammonia	NH ₃	1.23
Argon	Ar	1.29
Methane	CH ₄	1.40
Carbon Dioxide	CO ₂	1.42
Krypton	Kr	1.94
Sulfur Hexafluoride	SF ₆	2.20
Ethane	C ₂ H ₆	2.60
Xenon	Xe	2.87
Mercury	Hg	3.64

Example: In a gauge calibrated for nitrogen, where the dominant gas is other than nitrogen, divide the reading by the appropriate gas ionization factor.