

The following table lists theoretical gas correction factors for various gases with respect to Nitrogen for thermal mass flow controllers.

Gas	Symbol	Specific Heat, CP cal/g°C	Density g/l @ 0°C	Conversion Factor
Air	- - -	0.240	1.293	1.00
Ammonia	NH ₃	0.492	0.760	0.73
Argon	Ar	0.1244	1.782	1.39
Arsine	AsH ₃	0.1167	3.478	0.67
Boron Trichloride	BCl ₃	0.1279	5.227	0.41
Carbon Dioxide	CO₂	0.2016	1.964	0.70
Carbon Monoxide	CO	0.2488	1.250	1.00
Carbon Tetrafluoride (Freon - 14)	CF ₄	0.1654	3.926	0.42
Chlorine	Cl ₂	0.1144	3.163	0.86
Chlorodifluoromethane (Freon - 22)	CHClF ₂	0.1544	3.858	0.46
Chloropentafluoroethane (Freon - 115)	C ₂ ClF ₅	0.164	6.892	0.24
Chlorotrifluoromethane (Freon - 13)	CClF ₃	0.153	4.660	0.38
Cyanogen	C ₂ N ₂	0.2613	2.322	0.61
Deuterium	D ₂	1.722	0.1799	1.00
Diborane	B ₂ H ₆	0.508	1.235	0.44
Dibromodifluoromethane	CBr ₂ F ₂	0.15	9.362	0.19
Dichlorodifluoromethane (Freon - 12)	CCl ₂ F ₂	0.1432	5.395	0.35
Dichlorofluoromethane (Freon - 21)	CHCl ₂ F	0.140	4.592	0.42
Dichloromethylsilane	(CH ₃) ₂ SiCl ₂	0.1882	5.758	0.25
Dichlorosilane	SiH ₂ Cl ₂	0.150	4.506	0.40
1,2-Dichlorotetrafluoroethane (Freon - 114)	C ₂ Cl ₂ F ₄	0.160	7.626	0.22
1,1-Difluoroethylene (Freon - 1132A)	C ₂ H ₂ F ₂	0.224	2.857	0.43
2,2-Dimethylpropane	C ₅ H ₁₂	0.3914	3.219	0.22
Ethane	C ₂ H ₆	0.4097	1.342	0.50
Fluorine	F ₂	0.1873	1.695	0.98
Fluoroform (Freon - 23)	CHF ₃	0.176	3.127	0.50
Freon - 11	CCl ₃ F	0.1357	6.129	0.33
Freon - 12	CCl ₂ F ₂	0.1432	5.395	0.35
Freon - 13	CClF ₃	0.153	4.660	0.38
Freon - 13 B1	CBrF ₃	0.1113	6.644	0.37
Freon - 14	CF ₄	0.1654	3.926	0.42
Freon - 21	CHCl ₂ F	0.140	4.592	0.42
Freon - 22	CHClF ₂	0.1544	3.858	0.46
Freon - 23	CHF ₃	0.176	3.127	0.50
Freon - 113	C ₂ Cl ₂ F ₃	0.161	8.360	0.20
Freon - 114	C ₂ Cl ₂ F ₄	0.160	7.626	0.22

Freon - 115	C2CIF5	0.164	6.892	0.24
Freon - 116	C2F6	0.1843	6.157	0.24
Freon - C318	C4F8	0.1866	8.93	0.16
Freon - 1132A	C2H2F2	0.224	2.857	0.43
Helium	He	1.241	0.1786	1.45
Hexafluoroethane (Freon - 116)	C2F6	0.1843	6.157	0.24
Hydrogen	H2	3.419	0.0899	1.01
Hydrogen Bromide	HBr	0.0861	3.610	1.00
Hydrogen Chloride	HCl	0.1912	1.627	1.00
Hydrogen Fluoride	HF	0.3479	0.893	1.00
Isobutylene	C4H8	0.3701	2.503	0.29
Krypton	Kr	0.0593	3.739	1.54
Methane	CH4	0.5328	0.715	0.72
Methyl Fluoride	CH3F	0.3221	1.518	0.56
Molybdenum Hexafluoride	MoF6	0.1373	9.366	0.21
Neon	Ne	0.246	0.900	1.46
Nitric Oxide	NO	0.2328	1.339	0.99
Nitrogen	N2	0.2485	1.250	1.00
Nitrous Oxide	N2O	0.2088	1.964	0.71
Octafluorocyclobutane (Freon - C318)	C4F8	0.1866	8.93	0.16
Oxygen	O2	0.2193	1.427	0.99
Pentane	C5H12	0.398	3.219	0.21
Perfluoropropane	C3F8	0.194	8.388	0.17
Phosgene	COCl2	0.1394	4.418	0.44
Phosphine	PH3	0.2374	1.517	0.76
Propane	C3H8	0.3885	1.967	0.36
Propylene	C3H6	0.3541	1.877	0.41
Silane	SiH4	0.3189	1.433	0.60
Silicon Tetrachloride	SiCl4	0.1270	7.580	0.28
Silicon Tetrafluoride	SiF4	0.1691	4.643	0.35
Sulfur Dioxide	SO2	0.1488	2.858	0.69
Sulfur Hexafluoride	SF6	0.1592	6.516	0.26
Trichlorofluoromethane (Freon - 11)	CCl3F	0.1357	6.129	0.33
Trichlorosilane	SiHCl3	0.1380	6.043	0.33
Tungsten Hexafluoride	WF6	0.0810	13.28	0.25
Xenon	Xe	0.0378	5.858	1.32

Note: Standard pressure is defined as 760 mmHg (14.7 psia). Standard temperature is defined as 0°C.