

2a. Vacuum Principles 15.Sept.97

Vacuum Ranges

We typically identify three ranges of vacuum.

Type	Pressure Range ($P \times d_v$ in Pa m)	Kn	Fluid Flow
low	> 0.6	$< 10^{-2}$	Re > 4.0 turbulent Re < 2.3 laminar
medium	$0.6 - 10^{-2}$	$10^{-2} - 0.5$	Knudsen
high/ ultra-high	$< 10^{-2}$	> 0.5	molecular

MTS 723 9

Units and Dimensions

Pressure has many forms in "vacuum technology"

to ->	Torr	mbar	Pa
v from			
Torr	1	1.333	133.322
mbar	0.75006	1	100
Pa	750.06×10^{-5}	0.01	1

Multiply by the factor given in the table.

MTS 723 10