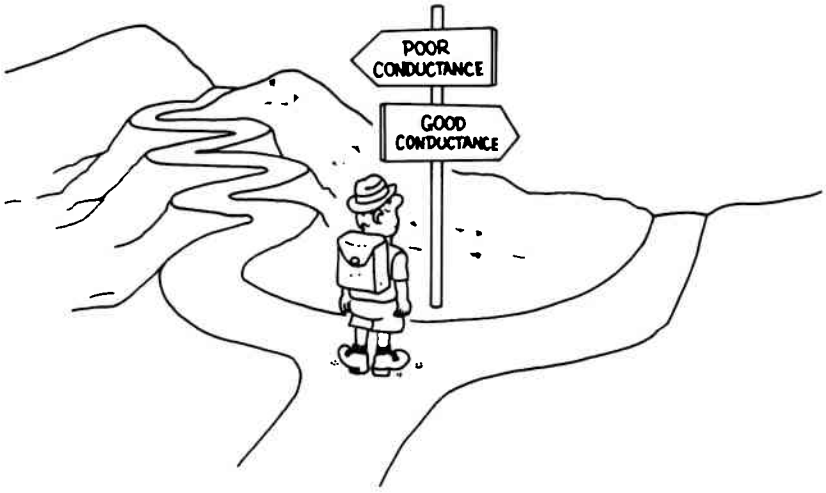
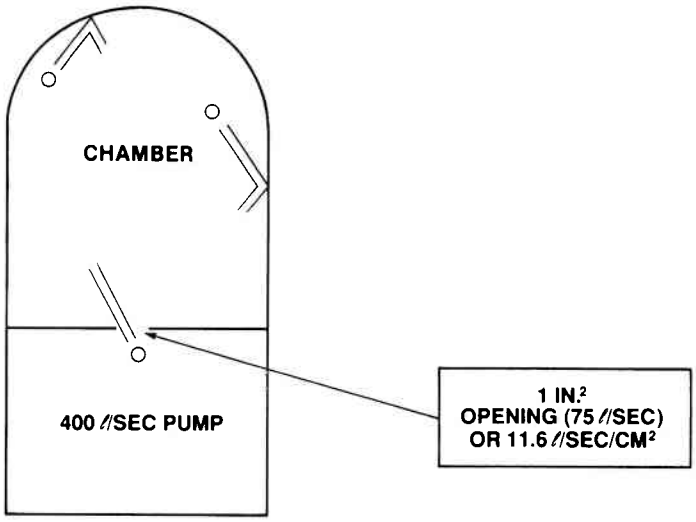
Conductance

conductance

When we talk about moving a gas through a vacuum system, we use the term conductance. *Conductance* is the ability of an opening or pipe to allow a given volume of gas to pass through in a given time. It is expressed in such units as liters per second, cubic feet per minute or cubic meters per hour.



In molecular flow, a good conductance path is wide and short. It has few turns, thus allowing free gas flow. In viscous flow, these conditions are not so important. This is because the molecules tend to push one another along under the influence of a pressure difference.



MOLECULAR FLOW

In the molecular flow range, a 1 in.² opening has a 75 ℓ/sec conductance. The pump speed, in this case 400 ℓ/sec, is really 75 ℓ/sec as far as the chamber is concerned because the mole-