ECCO EQUIPMENT CONTROLS COMPANY

GAS FACTS & RULES OF THUMB*

*Not intended for use as engineering criteria

GAS IS COMPRESSIBLE AND ITS VOLUME IS AFFECTED BY BOTH PRESSURE AND TEMPERATURE

Information Required to Select Gas Regulators and Flow Meters

- Flow rate of gas expressed in CFH or BTU/hr.
- Inlet pressure of gas flowing into the regulator/flow meter.
- Regulated or desired outlet pressure leaving the regulator.
- Flowing media (i.e. Natural Gas, Propane Gas, Compressed Air, etc) and physical properties if other than common gases.
- Line size of the piping system in which the regulator or meter will be installed.
- Desired mechanical or electrical characteristics coming from the flow meter (i.e. Pulse, Current, or Voltage Relative to Flow Rate.)

Gas Pressure Regulator Venting **(To be used as a general rule of thumb only)**

- Use the same size or larger pipe as the vent connection on the regulator. Vent piping runs should be kept as short as possible with limited bends and elbows
- For every fifteen feet of straight pipe run beyond the first ten feet from the regulator increase vent line size 1 nominal pipe size back to the regulator vent connection. 1 pipe elbow = 5 feet of straight pipe run
- Never vent multiple regulators together with the same vent line.
- Note: Special care is required not to screw vent piping too deeply into the vent connection. This can cause improper vent operation
- Line size of the piping system in which the regulator or meter will be installed
- Desired mechanical or electrical characteristics coming from the flow meter (i.e. pulse, current, or voltage relative to flow rate

Useful Conversions & Definitions

1 PSIG = 27.68 inches Water Column (WC)

BTU = British Thermal Unit

1 MSCFH natural Gas = 1,000 SCFH

1 Standard Cubic Foot of natural Gas = 1,000 BTU's

1 Cubic Foot of Propane Gas = 2,500 BTU's

1,000 BTU's = 1 CFH (Cubic Feet per Hour)

1 Unit of Natural Gas = 10 Therms = 1,000 BTU's

1 Boiler Horse Power = 42,000 BTU Input
(Assumes 80% Efficiency)