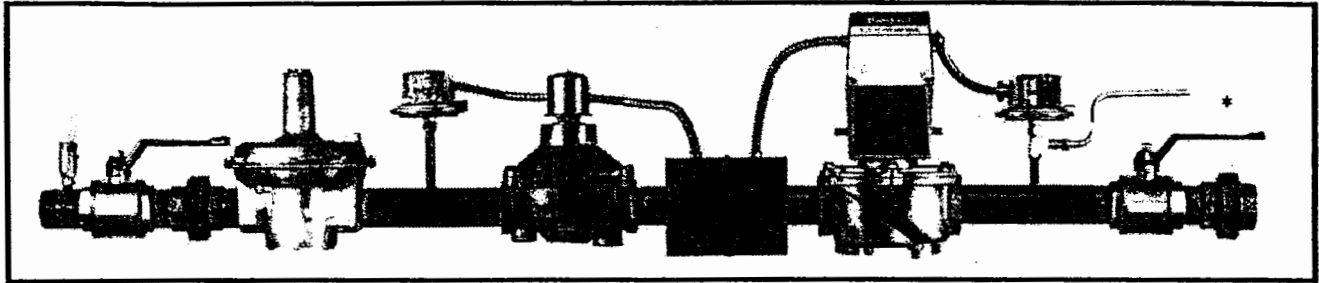


UL, CSD-1, FM and IRI Gas Control Train Systems



TYPICAL PRE-PIPED JOHN ZINK GAS TRAIN

(John Zink DOES NOT furnish the piping unless a pre-piped gas train is ordered with an additional charge.)

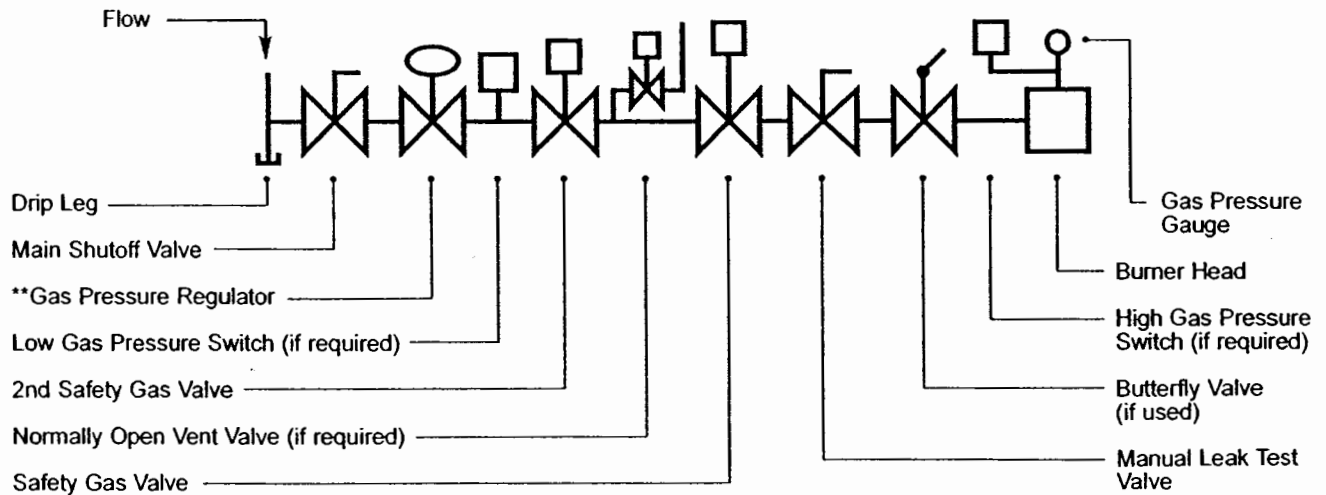
* Gas pressure to the high pressure switch comes from the burner head. A plugged half coupling welded to the gas train is used for mounting the high gas pressure switch.

GENERAL

Proper operation of a gas or gas-fired forced draft burner is very dependent on a properly selected and assembled gas train.

The data contained in this bulletin has been compiled to assist in the selection of a UL, CSD-1, FM or IRI gas control train and the individual gas controls used in conjunction with these approval agencies. For other agency gas control trains, consult factory.

The schematic below gives the location of the various components in a typical gas train. In the interest of SAFETY, John Zink's standard policy is to supply TWO safety gas valves.



NOTE

Underwriters Laboratories (UL) regulations require that all gas or gas-oil burners bearing the UL label must be furnished with a gas train which meets UL requirements matching the input rating of the burner.

** Gas Pressure regulators with internal control require a length of five (5) pipe diameters of straight uninterrupted pipe on the outlet side. Consult manufacturer's instructions for all other regulators.

Additional information on gas trains can be found in the John Zink catalog sheet 1-gen-10.53.

GAS SYSTEM SCHEMATICS

UL & FM Systems

Figure I - 400 MBh - 2500 MBh

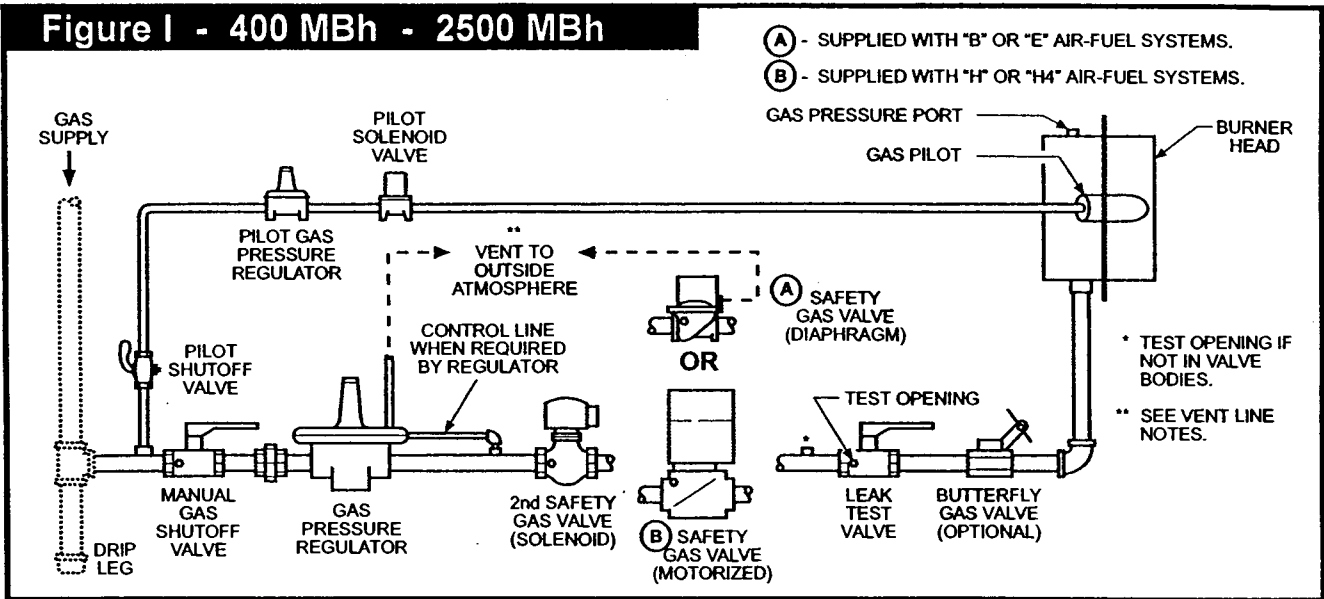


Figure II - 2501 MBh - 5000 MBh

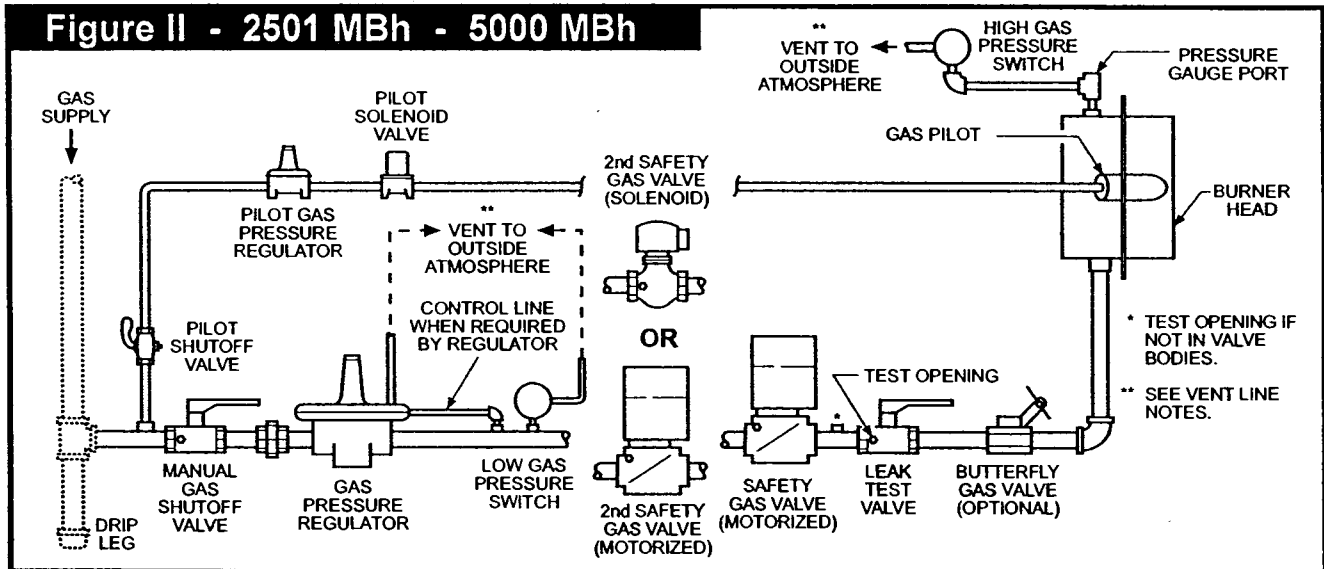
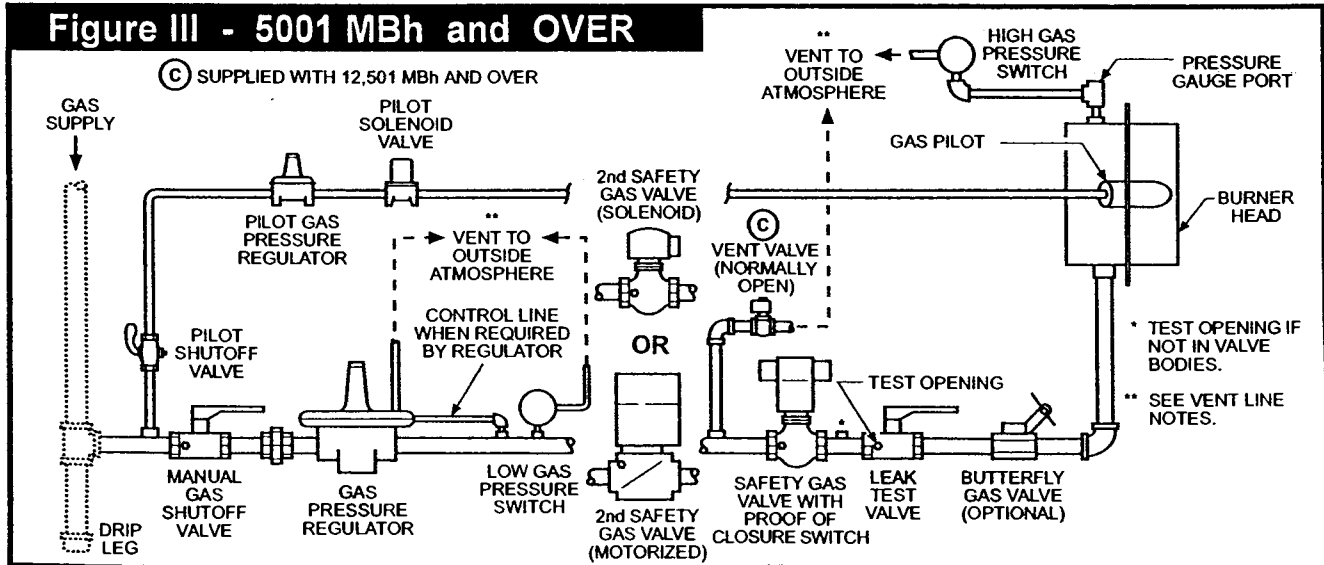


Figure III - 5001 MBh and OVER



CSD-1 Systems

400 MBh - 12,500 MBh

CSD-1 schematics will be the same as Figure I, II, and III with the addition of a plugged, leak test cock downstream of each Safety Gas Valve.

12,501 MBh and Over

Not applicable.

** VENT LINE NOTES

Some gas pressure switches may not require vent lines. See manufacturer's specifications.

All vent lines must be sized, located, protected and installed in accordance with the requirements of the local or governing codes or if not applicable, the burner installation manual.

When manifolded, a common vent line shall have a cross sectional area not less than the area of the largest vent line plus 50 percent of the areas of all the additional vent lines.

Gas vent lines with normally open, fully ported, electrically operated valves shall be sized as follows:

VENT LINE SIZING	
Fuel Line size, Nominal Pipe Size, Inches	Vent Line Size, Nominal Pipe Size, Inches
Up to 1-1/2	3/4
2	1
2-1/2	1-1/4
3	1-1/4
4	2