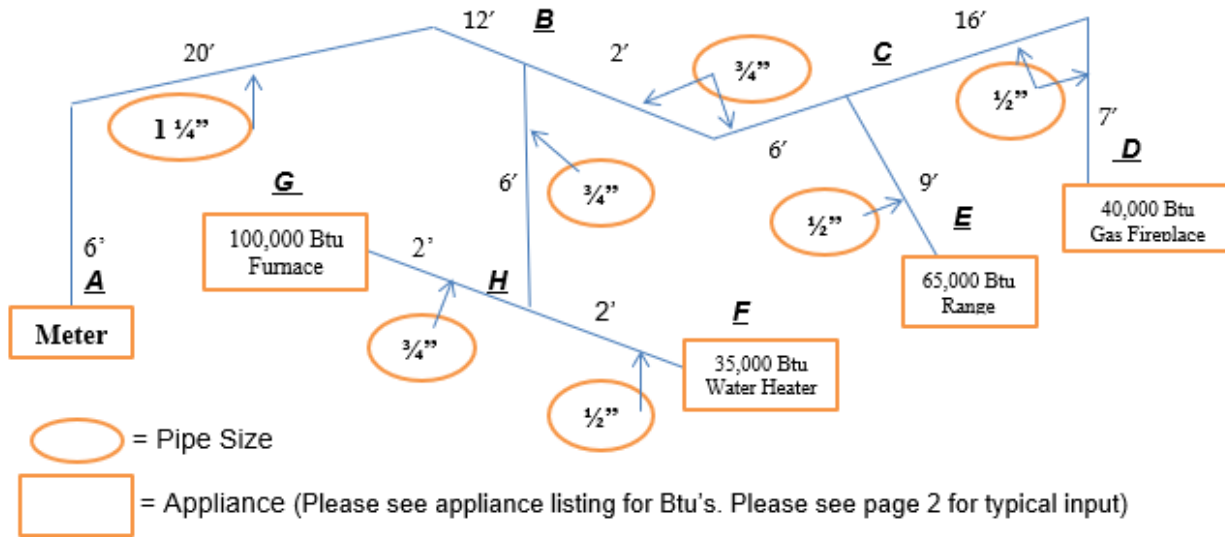




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GAS PIPE CALCULATION Informational Handout



Procedure for determining the size of each section of pipe per CPC- Figure 1216.1.1

1. Measure the length to the most remote outlet. In this case it's the gas fireplace. The length of branch A,B,C and D is 6+20+12+2+6+16=69
2. Select length in table 12-8 that is equal to or greater than 69', use 70'.
3. The size of all sections of pipe in the main branch will be determined using the same row table
4. Convert Btu to cfh as follows: 1,100 Btu= 1 cfh

A portion of Table 12-8 for sch 40 metallic pipe is shown below

Length(ft)	Pipe size (in)				
	1/2"	3/4"	1"	1-1/4"	1-1/2"
50	72	151	284	583	873
60	65	137	257	528	791
70	60	126	237	486	728
80	56	117	220	428	677

Use this row for all sections



Branch C-D has 40 cfh, 1/2" pipe required
 Branch B-C has 105 cfh, 3/4" pipe required
 Branch A-B has 240 cfh, 1-1/4" pipe required

5. Subsequent branches not previously sized are determined similarly based on the distance from the meter

Branch C-E has 65 cfh, distance= 55', use 60' row, 1/2" pipe required
 Branch B-F has 35 cfh, distance= 46', use 50' row, 1/2" pipe required
 Branch B-G has 100 cfh, distance= 46', use 50' row, 3/4" pipe required
 Branch B-H has 135 cfh, distance= 44', use 50' row, 3/4" pipe required

Table 12-1, Approximate Gas Input for Typical Appliances

Appliance	Input Btu/h.	Appliance	Input Btu/h.
Space Heating Units		Cooking Appliances	
Warm air furnace		Range freestanding	
Single family	100,000	domestic	65,000
Multi family	60,000	Built in oven or broiler unit	
Hydronic boiler		domestic	25,000
Single family	100,000	Built in top unit,	
Multi family	60,000	domestic	40,000
Space and Water Heating		Other Appliances	
Hydronic boiler		Refrigerator	3,000
Single family	120,000	Clothes dryer, type 1	
Multi family	75,000	domestic	35,000
Water Heating Appliances		Gas fireplace direct vent	40,000
Storage 30 to 40 gallons	35,000	Gas log	80,000
storage 50 gallons	50,000	Barbeque	40,000
Water heater, instantaneous		Gaslight	2,500
Capacity at 2 gal/min	142,800		
Capacity at 4 gal/min	285,000		
Capacity at 6 gal/min	428,400		