MULTIPLE VENTING OF SIMILAR MODEL

Venting Connections between the unit and the chimney should in no case be less than the size of the draft diverter on the unit. Rectangular vents are acceptable if the cross section area is equal to the normal round vent pipe and if a minimum of 3" on a side is maintained. An upward pitch from the unit to the chimney should be a minimum of 1/4" per foot of run. Take as much vertical run of flue directly above the unit as is possible before breaking over to the chimney.

CONNECTING TO FLUES WITH APPLIANCES USING OTHER FUELS

The proper methods of venting are shown in the portions of the section. Avoid connecting gas fired units to a common chimney with oil or coal burning equipment. This practice is prohibited by many local building codes. Where a separate chimney connection is not available and the flue pipe from the unit must be connected to a common flue with a coal or oil burning furnace, the flue pipe should enter the common flue or chimney at a point ABOVE the flue pipe from the coal or oil burning equipment.

LOCATION OF UNITS

Locate the unit close to the chimney and as close to the major source of hot water usage as possible.

SINGLE WALL METAL PIPE

The proper method of venting gas-fired units using single wall metal pipe is shown in figure 1. For one unit the vent should be equal in size to the opening of the draft hood outlet. For each additional unit connected to the breaching, increase the cross sectional area of the breaching by an amount equal to one half of the area of the single vent required for the additional unit(s).

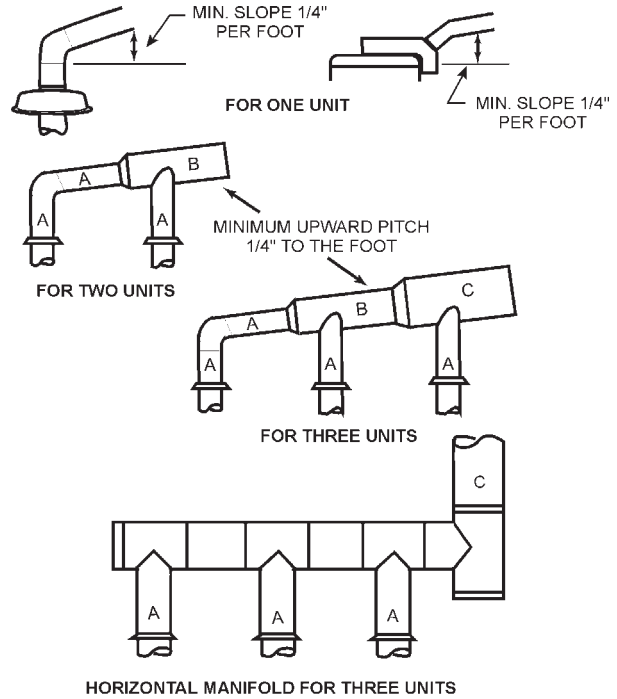

FIGURE 1

NOTE:
Local codes should be followed in all cases. In the absence of local codes, etc., it is suggested that the recommended practices set forth in the most recent edition of American National Standards Institute booklet ANSI Z223.1 National Fuel Gas Code be followed.

15.1

SINGLE WALL MULTIPLE VENT TABLE*

MODELS**		Vent Pipe Diameters (in inches) Refer to Diagrams A***	B	C
Copper Heat Exchanger Type				
Two	HW-300	8	12	
Two	HW-420	10	14	
Three	HW-420	10	14	16
Two	HW-520	10	14	
Three	HW-520	10	14	16
Two	HW-670	12	16	
Three	HW-670	12	16	18
Tank Type				
Two	BT-100	4	7	
Two	BTR-120	5	7	
Two	BTR-154 or BTR-180	6	8	
Two	BTR-197 or BTR-198	6	8	
Two	BTR-199 or BTR-200	6	8	
Two	BTR-250 or BTR-251	6	8	
Two	BTR-275	6	8	
Two	BTR-305 or BTR-365	8	10	
Three	BTR-305 or BTR-365	8	10	12
Two	BTR-400 or BTR-500	8	10	
Three	BTR-400 or BTR-500	8	10	12

*Connector and chimney size for a single unit should be equal to the draft hood outlet.
**Most common models in multiples shown.
***"A" dimension indicates individual unit drafthood outlet size

TYPE B MULTIPLE VENT TABLES (COPPER HEAT EXCHANGER UNITS)

When venting multiple copper heat exchanger units using type B vent pipe, follow the installation diagram (figure 2) and the tables below which give dimensional data.

MODEL HW-300 BOILER — **16.1**

Input: 300,000 Btuh — **Draft Hood Outlet: 8"**

Required Connector Or Vent Diameter

	Connector Rise in Feet	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Connector Diameter (in inches)					
	1	10	10	10	9	9	9
	2	9	9	9	9	8	8
	3	9	9	8	8	8	8
Number Of Units Combined	Total Input MBTUH	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Manifold And Common Vent Diameter (in inches)					
2	600	14	12	10	9	9	9

MODELS HW-399, HW-420

Input: 399,000; 420,000 Btuh — **Draft Hood Outlet: 10"** — **16.2**

Required Connector Or Vent Diameter

	Connector Rise in Feet	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Connector Diameter (in inches)					
	1	12	12	12	12	12	12
	2	12	12	12	10	10	10
	3	12	10	10	10	10	10
Number Of Units Combined	Total Input MBTUH	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Manifold And Common Vent Diameter (in inches)					
2	798 840	14	14	12	12	12	12
3	1197 1260	16	16	14	14	12	12
4	1596 1680	20	18	16	16	12	14

MODEL HW-520 BOILER — **16.2.1**

Input: 520,000 Btuh — **Draft Hood Outlet: 10"**

Required Connector Or Vent Diameter

	Connector Rise in Feet	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Connector Diameter (in inches)					
	2	12	12	12	12	12	12
	4	12	12	12	12	12	12
	6	12	12	12	12	10	10
Number Of Units Combined	Total Input MBTUH	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Manifold And Common Vent Diameter (in inches)					
2	1040	16	14	14	14	12	12
3	1560	18	18	16	16	14	12
4	2080	22	20	18	18	16	14

MODEL HW-670 BOILER — **16.3**

Input: 670,000 Btuh — **Draft Hood Outlet: 12"**

Required Connector Or Vent Diameter

	Connector Rise in Feet	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Connector Diameter (in inches)					
	2	14	14	14	14	12	12
	4	14	12	12	12	12	12
	6	12	12	12	12	12	12
Number Of Units Combined	Total Input MBTUH	Total Vent Height (Measured in Feet Above Draft Hood)					
		10	15	20	30	50	100
		Manifold And Common Vent Diameter (in inches)					
2	1340	18	16	16	14	14	14
3	2010	20	20	18	18	16	14
4	2680	24	22	22	20	18	16
5	3350		24	24	22	20	18
6	4020				24	22	18
7	4690					24	20
8	5360						
9	6030						
10	6700						
11	7370						
12	8040						

Consult venting supplier for suggested sizing & design

NOTES: Connector and chimney size for a single unit should be equal to the draft hood outlet. Only those models that are normally used in multiples are shown here.

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