Supplemental Instructions	Part Number: 110108-01 , 10/7/2019
Product: AMP/BFIT 1000-4000	Supplements I&O manuals: 108588-01 Rev. 1 108588-02 Rev. 1

NOTICE: This supplement was created to replace the associated sections and figures contained in the Installation, Operation, and Maintenance Manual for the listed product(s). This supplement supersedes the sections and figures listed below.

Sections:

Section VI.H: Clearances

This section is directly replaced by the following.

C. Clearances

1. The AMP is approved for 0" clearance to combustible materials. The clearances for serviceability are found in Table 5.
2. Minimum clearances from combustible or noncombustible construction, 0" sides, 0" back, 0" top.
3. It is the installers responsibility to provide enough clearance for servicing the appliance in the installed location.

D. Clearances (French)

1. Dégagements minimaux à assurer entre les parois de l'appareil et les constructions combustibles ou incombustibles : 0 po (côtés), 0 po (arrière) et 0 po (dessus).
2. Installation dans une garde-robe : assurer un dégagement de 24 po devant l'appareil.

E. Closet and Alcove installation

1. Include ventilation air openings in closet installations.
2. Provide a 1" minimum clearance around water pipes.
3. Follow vent material manufacturer's instructions for vent clearances.
4. Clearances for closet or alcove Installation:

   Front - 48"

   Sides - 36"

   Rear - 22"

   Top - 20"

NOTICE

This appliance is approved for zero inch clearance to combustible or noncombustible material, but installing the appliance with smaller than the clearances for serviceability will limit access for maintenance.

Consult local codes and inspectors before installing multiple appliances adjacent to each other with zero clearance.

Closet and alcove installation can cause elevated temperatures. Follow the required clearances and use only stainless steel, CPVC, or polypropylene vent material.

Table 5: Clearances for Serviceability

AMP Model	Front (In.)	Rear (In.)	Right (In.)	Left (In.)	Top (In.)
1000	20	22	6	24	20
1250	20	22	6	24	20
1500	24	22	6	24	20
2000	24	22	6	24	20
2500	36	22	6	36	20
3000	36	22	6	36	20
3500	48	22	6	36	20
4000	48	22	6	36	20

Section VII.A: Venting, General Guidelines and Requirements

Requirements and tables in this section are replaced with the following.

A. General Venting Guidelines

1. Install vent system in accordance with N*ational Fuel Gas Code, ANSI Z223.1/NFPA 54* or Natural Gas and Propane Installation Code, CAN/CSA B149.1 Installation Code for Canada, or, applicable provisions of local building codes.
2. The AMP is certified as a direct vent appliance but can also be used with indoor air for combustion.
   a. Direct vent installation is not complete without screwing down the front door for a proper seal of the combustion air system.
3. Vent/combustion system materials that are approved for use with the AMP appliances are listed in Table 11. Venting manufacturers not listed in this manual may be acceptable. It is the responsibility of the installer or vent supplier to use compatible adapters and materials.
   a. It is recommended to consult with venting professionals and designers when determining the vent system for this appliance.
4. Enclose vent passing through occupied or unoccupied spaces above the appliance with material having a fire resistance rating at least equal to the rating of adjoining floor or ceiling.
5. Slope horizontal vent pipe minimum 1/4 in/ft (21 mm/m) downward towards the heat exchanger to allow condensate to drain freely.
6. If possible, slope horizontal combustion air pipe minimum 1/4 in/ft (21 mm/m) downward towards terminal. If not, slope towards the appliance.
7. It is recommended that a Carbon Monoxide detector be installed and interlocked to the appliance. Consult your local jurisdiction for additional requirements.

B. Venting Design Requirements

At the discretion of the installing contractor, the venting system can be designed by consulting with approved venting engineers or by using the equivalent length method in this manual.

1. **Engineered Venting Method (recommended).** Using the operating characteristics and required conditions, an individual or common venting system can be designed to ensure the reliability of the appliance(s).
   a. Flue gas temperatures and flow rates can be found in Table 10.

WARNING

This appliance must not be installed in a room under negative pressure. These direct vent gas fired appliances are allowed a maximum leakage of 2% from the venting/combustion chamber and 8% from the air inlet portion when pressurized to operating conditions in a neutral pressure room. An equipment room under negative pressure could deplete the combustion air supply to the appliance and cause leakage of flue gas from the venting system.

Exhaust fans installed in equipment rooms can create negative pressure conditions strong enough to cause nuisance shutdowns of the appliance.

Failure to install the appliance in accordance with this manual can cause property damage, personal injury, or loss of life.

NOTICE

Common venting with other manufacturers' appliances or different Thermal Solutions models is prohibited.

   b. The combustion CO_2 and O_2 ranges are shown in Table 37.
   c. The pressure at the flue outlet of the appliance at any given firing rate must be within the range of negative 0.25" W.C. to positive 0.5" W.C.
   d. The pressure at the intake of the appliance at any given firing rate must be within the range of 0.0" WC to positive 0.1" WC.
   e. **Manifolded venting** without backflow prevention can allow flue gas from one appliance to interact with the other appliances in the system. Common venting systems must be designed with backflow protection.
2. **Equivalent length method:** Do not exceed maximum vent/combustion air lengths listed in Table 6. Equivalent lengths of fittings are given in Table 7.

Table 6: Vent and Combustion Air Pipe Diameters and Maximum Lengths

AMP Model	Combustion Air Length			Vent Length		
	Pipe Dia. in. (mm)	Minimum ft. (m)	Maximum ft. (m)	Pipe Dia. in. (mm)	Minimum ft. (m)	Maximum ft. (m)
1000	8 (200)	0	150 (45.7)	8 (200)	3 (0.9)	150 (45.7)
	6 (160)	0	70 (21.3)	6 (160)	3 (0.9)	70 (21.3)
1250	8 (200)	0	150 (45.7)	8 (200)	3 (0.9)	150 (45.7)
	6 (160)	0	50 (15.2)	6 (160)	3 (0.9)	50 (15.2)
1500	8 (200)	0	150 (45.7)	8 (200)	3 (0.9)	150 (45.7)
	6 (160)	0	50 (15.2)	6 (160)	3 (0.9)	50 (15.2)
2000	8 (200)	0	100 (30.5)	8 (200)	3 (0.9)	100 (30.5)
2500	10 (250)	0	150 (45.7)	10 (250)	3 (0.9)	150 (45.7)
3000	10 (250)	0	150 (45.7)	10 (250)	3 (0.9)	150 (45.7)
3500	12 (315)	0	150 (45.7)	12 (315)	3 (0.9)	150 (45.7)
4000	12 (315)	0	150 (45.7)	12 (315)	3 (0.9)	150 (45.7)

NOTE:
Contact factory for assistance on maximum vent length applications.
This table applies to all listed vent/combustion air system options.

Table 7: Equivalent lengths of Vent and Combustion Air Components

Diameter	6 in. (160 mm)	8 in. (200 mm)	10 in. (250 mm)	12 in. (315 mm)
90° Elbow	7 ft. (2.1 m)	11 ft. (3.4 m)	14 ft. (4.3 m)	18 ft. (5.5 m)
45° Elbow	3 ft. (0.9 m)	4 ft. (1.2 m)	5 ft. (1.5 m)	7 ft. (2.1 m)

Table 37: Combustion O_2/CO_2 Levels

	Natural Gas		LP Gas	
AMP Model	CO_2 %	O_2 %	CO_2 %	O_2 %
1000	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
1250	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
1500	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
2000	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
2500	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
3000	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
3500	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0
4000	8.4-9.5	4.0-6.0	9.8-11.1	4.0-6.0

Section VII.G: Common Venting Requirements

This section is obsolete and shall be disregarded.