



INSTALLATION INSTRUCTIONS

NAHA001DH & NAHA002DH Chimney Adapter Kit

This kit allows induced draft furnace series N8MPN, N8MPL, *8MPN, *8MPL, *8MPT & *8MPV to operate as draft hood equipped, Category I appliances in DOE Regions I - V (99% winter design temperature of -10°F or above). The added dilution air through the draft hood kit decreases the condensate wet time allowing these fan induced combustion furnaces to be vented into properly constructed and sized, clay-tile lined, masonry chimneys per these instructions.

* Denotes Brand

Read the entire instruction manual before starting the installation.

KEEP THESE INSTRUCTIONS WITH THE FURNACE

Guidelines

CAUTION

C.S.A. design certified furnaces for use with chimney adapter kits on masonry chimneys are identified on their rating plates. These markings identify which chimney adapter kit number is permitted to be used with each furnace model number. Chimney adapter kits are for use with **ONLY** furnaces having factory authorized chimney adapter kit numbers marked on the furnaces.

These kits are permitted to be used with only the following furnace models (See Table 1). Do not use this kit with any other furnace models.

Table 1	Kit Usage
Kit Part No.	Furnace Model and size
NAHA001DH	N8MPN/L050, 075 & 100 *8MPN/L050, 075 & 100 *8MPT075 & 100+ *8MPV075 & 100+
NAHA002DH	N8MPN/L125 & 150 *8MPN/L125 & 150 *8MPT125 & *8MPV125
* Denotes brand + *8MPT050B12A and *8MPV05012A are NOT permitted with NAHA001DH	

The furnace and kit combinations are C.S.A. design-certified as ALTERNATIVE VENTING DESIGNS.

Safety Considerations


Installing and servicing heating equipment can be hazardous due to fuel gas, vent gas, and electrical components. Improper installation, adjustments, alterations, accessories, service, maintenance, or use can cause explosion, fire, electrical shock, asphyxiation, or other conditions which may cause personal injury, death, or property damage. Only trained and qualified personnel should install, repair, or service heating equipment.

Wear safety glasses, protective clothing, and work gloves. Have a fire extinguisher available during start-up and adjustment procedures and service calls. Read these instructions thoroughly. Follow all warnings or cautions included in literature and attached to equipment.


Follow all safety codes including local building codes, the National Fuel Gas Code (NFGC) ANSI Z223.1-2002/NFPA 54-2002 in the United States, and National Standard of Canada for Natural Gas and Propane Installation Code (NSCNGPIC) CSA-B149.1-00 in Canada.

Portions of the text and tables reprinted from NFPA 54/ANSI Z223.1-2002 ©, with permission of National Fire Protection Association, Quincy, MA 02269 and C.S.A. Intentional, Cleveland, OH 44131. This reprinted material is not the complete and official position of the NFPA or ANSI, on the referenced subject, which is represented only by the standard in its entirety.

Recognize safety information. This is the safety-alert symbol

 . When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in minor personal injury or product and property damage.

 **WARNING**

ELECTRIC SHOCK HAZARD/FIRE AND/OR EXPLOSION HAZARD.

Turn OFF gas supply at manual gas valve before turning OFF electric power supply and starting installation.

Turn OFF electric power supply at disconnect switch or service panel before starting installation.

Failure to follow this warning can result in property damage, equipment damage, personal injury and/or death.

Masonry Chimney Applications

These kits and furnaces shall be applied in accordance with the following section titled Chimney Adapter Application Requirements. The Masonry Chimney Application Requirements section with Table 9A and Table 9B inside the back page of this instruction identifies a very small number of exterior masonry chimney applications that are permitted without the use of the chimney adapter kit.

Chimney Adapter Application Requirements

This chimney adapter kit is permitted in accordance with NFGC and NSCNGPIC as an ALTERNATIVE VENTING DESIGN.

The requirements that follow in part A apply to both single-furnace and multiple-appliance applications. After completing part A, continue to part B for a single furnace application, or continue to part C for a multiple appliance application. After completing part B or C, continue to the INSTALLATION OF CHIMNEY ADAPTER section.

A. Single Furnace and Multiple Appliances

(Single furnace, and single furnace and draft hood-equipped water heater(s) vented into a chimney.)

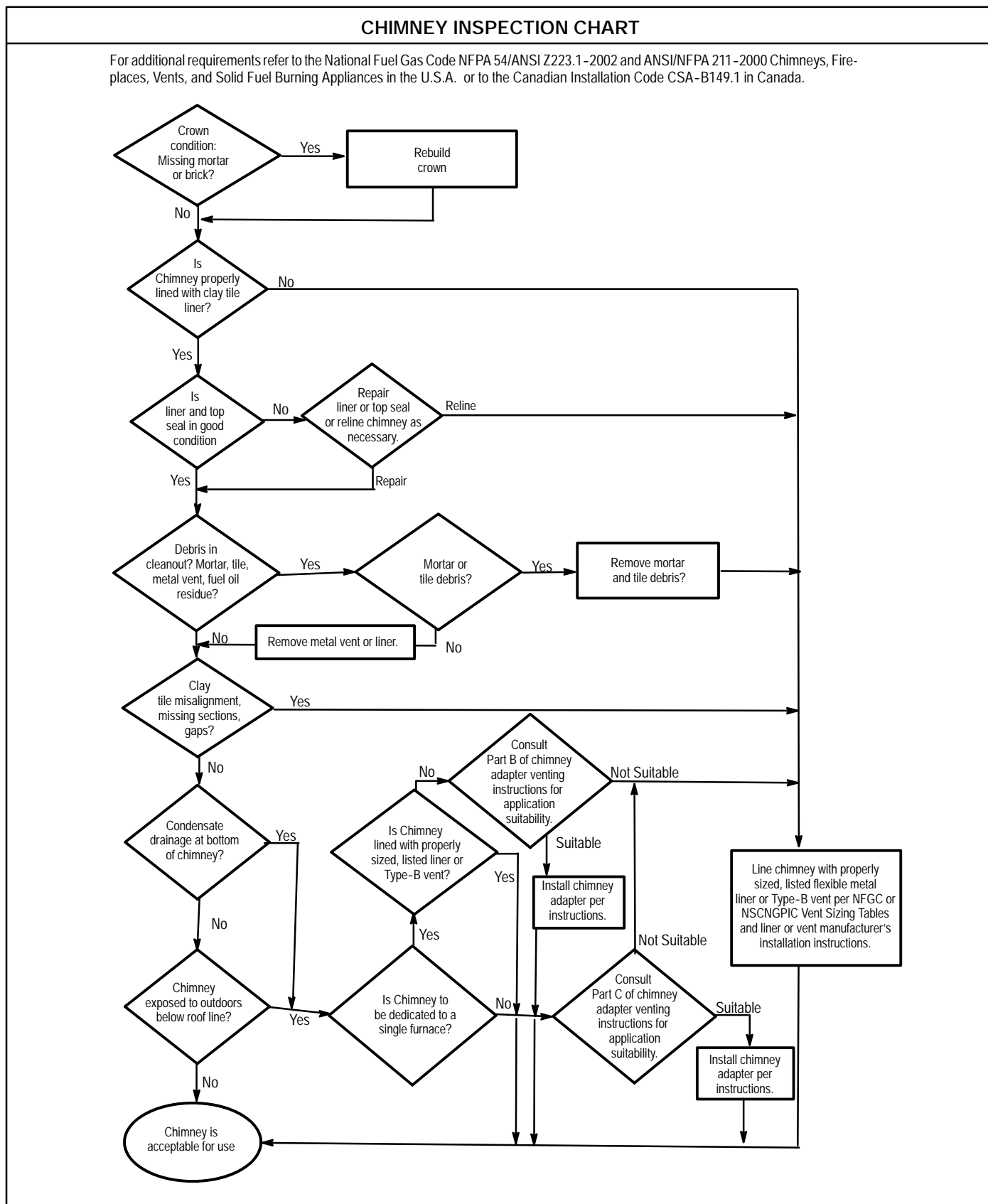
1. This kit is permitted to be used in any building in which the space surrounding the furnace is not depressurized by more than 0.02" wc (5Pa) below outdoor pressure by equipment such as exhaust fans and clothes dryers.
2. Temperature of air surrounding furnace and vent connector(s) shall be 60° F (15.5° C) or warmer.
3. Furnace rating plate is marked with kit number that is permitted to be used.
4. Chimney construction shall be in good condition and shall conform to the Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances ANSI/NFPA 211-2000 in the United States and to a Provincial or Territorial Building Code in Canada (in its absence, the National Building Code of Canada). See inspection chart on next page.
5. High altitude: Although appliance input is derated starting at 2000' altitude, use sea level input for all altitudes in this chimney sizing instruction.
6. Furnace vent connector lateral length, clay tile liner size, and chimney height shall conform to Table 2.

Table 2	Chimney Sizing Table			
Furnace Model No. N8MPN/L *8MPN/L *8MPT *8MPV	Chimney Adapter Kit Part No.	Furnace Vent Connector Lateral Max. Length (Ft.)	Chimney Clay Tile Liner Max. Nominal Size or Inside Area (In. or In. ²)	Chimney Max. Height (Ft.)
050+	NAHA001DH	9	8 x 8 or 42.7	30
			8 x 12 or 63.6	25
075	NAHA001DH	9	8 x 8 or 42.7	30
			8 x 12 or 63.6	25
100	NAHA001DH	9	8 x 12 or 63.6	35
125	NAHA002DH	10	12 x 12 or 83.3	35
N8MPN/L *8MPN/L 150	NAHA002DH	10	12 x 12 or 83.3	35
* Denotes brand +*8MPT050B12A and *8MPV050B12A are NOT permitted with NAHA001DH.				

7. Maintain required clearance to combustible materials. See furnace rating plate for Minimum-Clearance-to-Combustion-Construction, which includes minimum clearance to combustible construction for chimney adapter, when used.
8. Appliance application and operation has significant impact on successful chimney performance. Follow furnace installation instructions in general and, in particular, the APPLIANCE APPLICATION REQUIREMENTS in the Masonry Chimney Venting section. See the NFGC, NSCNGPIC, or authority having jurisdiction for all other venting requirements.

Chimney Inspection

All masonry chimney construction must conform to Standard ANSI/NFPA211–2002 and to any state or local codes applicable. The chimney must be in good condition and a complete chimney inspection must be conducted prior to furnace installation. If the inspection reveals damage or abnormal conditions, make necessary repairs or seek expert help. See “The Chimney Inspection Chart”. Measure inside area of tile-liner and exact height of chimney per **Figure 5**.



B. Single Furnace

(Single furnace without a draft hood–equipped water heater vented into a chimney.)

1. The 99% winter design temperature * shall determine permitted locations for clay tile-lined masonry chimneys as shown in **Table 3**:

Table 3	Chimney Conditions	
	MINIMUM 99% WINTER DESIGN TEMPERATURE*	PERMITTED CHIMNEY LOCATION
	-25° F (-32° C) or Warmer	Interior Masonry Chimney**
	+17° F (-8° C) or Warmer	Exterior Masonry Chimneys***

* The 99% Winter Design Dry-Bulb (db) temperatures are found in the 1993 ASHRAE Fundamentals Handbook, Chapter 24, Table 1 (United States) and 2 (Canada), or use the 99.6% heating db temperatures found in the 1997 or 2001 ASHRAE Fundamentals Handbook, Climatic Design Information chapter, Table 1A (United States) and 2A (Canada). Figure G.2.4 in the NFGC (Appendix G) also provides winter design temperatures for some locations.

** Chimneys not exposed to the outdoors below the roof-line.

*** Chimneys with one or more sides exposed to the outdoors below the roof-line.

2. Type-B double-wall metal vent (with up to 4 elbows) shall be used exclusively for furnace vent connector.
3. Furnace vent connector shall be same size as Chimney Adapter outlet.
4. See **Table 2** for maximum length of furnace vent connector lateral.

NOTE: See **Figure 5** while reviewing the following requirements.

5. The minimum chimney size shall conform to **Table 4**.

Table 4		Single-furnace - Masonry Chimney Flue Capacity With Type-B Double-wall Vent Connector					
VENT HEIGHT H (FT)	LATERAL L (FT)	MINIMUM "NAT Max" INTERNAL AREA OF MASONRY CHIMNEY FLUE, SQUARE IN.					
		28	38	50	63	78	95
		Furnace Input Rating in Thousands of Btu per Hour					
		NAT Max	NAT Max	NAT Max	NAT Max	NAT Max	NAT Max
6	2	86	130	180	247	320	401
	5	82	117	165	231	298	376
8	2	93	145	198	266	350	446
	5	88	134	183	247	328	423
	8	83	127	175	239	318	410
10	2	103	162	221	298	388	491
	5	96	148	204	277	365	466
	10	87	139	191	263	347	444
15	2	114	179	250	336	441	562
	5	107	164	231	313	416	513
	10	97	153	216	296	394	567
20	2	124	201	274	375	491	627
	5	116	184	254	350	463	597
	10	107	172	237	332	440	566
30	2	137	216	303	421	558	717
	5	128	198	281	393	526	683
	10	115	184	236	373	500	648
35	2	143	225	315	435	577	741
	5	134	206	291	406	544	706
	10	121	192	273	386	517	669

NOTE: **Table 4** was extracted from "NAT Max" columns in Table 13.3 of Chapter 13 of NFGC in United States, or Table C.5 of Appendix C of the NSCNGPIC in Canada.

6. See **Table 2** for maximum chimney size and maximum chimney height.

C. Multiple Appliances

(Single furnace common-vented with a draft hood-equipped water heater(s) into a chimney.)

1. The minimum 99% winter design temperature* and chimney location shall determine permitted vent connector material shown in **Table 5**:

Table 5	Vent Connector Materials		
MINIMUM 99% WINTER DESIGN TEMPERATURE ¹	CHIMNEY LOCATION	FURNACE VENT CONNECTOR MATERIAL	WATER HEATER VENT CONNECTOR MATERIAL
-25° F (-32° C) to -10° (-23° C)	Interior Masonry Chimneys ²	Listed Type-B Double-Wall Metal Pipe	Listed Type-B Double-Wall Metal Pipe or Single-Wall Galvanized Steel Pipe
	Exterior Masonry Chimneys ³	Not Permitted	Not Permitted
-10° F (-23° C) or Warmer	Interior Masonry Chimneys ²	Listed Type-B Double-Wall Metal Pipe or Single-Wall Galvanized Steel Pipe	Listed Type-B Double-Wall Metal Pipe or Single-Wall Galvanized Steel Pipe
	Exterior Masonry Chimneys ³	Listed Type-B Double-Wall Metal Pipe	Listed Type-B Double-Wall Metal Pipe or Single-Wall Galvanized Steel Pipe

¹ The 99% Winter Design Dry-Bulb (db) temperatures are found in the 1993 ASHRAE Fundamentals Handbook, Chapter 24, Table 1 (United States) and 2 (Canada), or use the 99.6% heating db temperatures found in the 1997 or 2001 ASHRAE Fundamentals Handbook, Climatic Design Information chapter, Table 1A (United States) and 2A (Canada). Figure G.2.4 in the NFGC (Appendix G) also provides winter design temperatures for some locations.

² Chimneys not exposed to outdoors below roof-line.

³ Chimneys with 1 or more sides exposed to outdoors below roof-line.

2. Furnace vent connector rises shall not exceed 3'.
3. An operational draft hood-equipped water heater shall be common-vented with furnace. Additional draft hood-equipped appliances are permitted to be common-vented with furnace.
4. Each vent connector is permitted up to 4 elbows.
5. Furnace vent connector shall be same size as Chimney Adapter outlet.
6. Water heater vent connector shall be 4" diameter with no more than 6' of lateral (horizontal connector length), with water heater draft hood outlet sizes of 3" and 4" diameter. Use a 3" X 4" vent increaser with a 3" draft hood outlet.
7. Water heater gas inputs* shall not exceed the following rates as shown in **Table 6**.

NOTE: See **Figure 5** while reviewing the following requirements.

Table 6	Water Heater		
VENT HEIGHT H (FT)	4" dia. Connector Rise R (FT)	Water Heater Maximum Input Rating in Thousands of BTU per Hour	
		B	S
6	1	40	39
	2	52	52
	3	61	61
8	1	41	40
	2	53	52
	3	62	62
10	1	42	41
	2	54	53
	3	63	62
15	1	44	43
	2	55	54
	3	64	63
20	1	46	45
	2	56	55
	3	65	64
30	1	48	47
	2	58	57
	3	66	65
35	1	49	48
	2	59	58
	3	69	66

B = Listed Type-B Double-Wall metal pipe.

S = Single-Wall galvanized-steel pipe.

*These rise requirements are based on NFGC and NSCNGPIC.

8. Minimum chimney size shall conform to "NAT+NAT" columns for common vent capacity in Table 13.8 of Chapter 13 of NFGC in United States, or Table C 7 of Appendix C of NSCNGPIC in Canada. The chimney sizing requirements in **Table 7** (below) were extracted from these codes.

Table 7	Multiple Appliance Chimney Capacity					
VENT HEIGHT H (FT)	MINIMUM INTERNAL AREA OF MASONRY CHIMNEY FLUE, (SQUARE IN.)					
	28	38	50	63	78	113
	Combined Appliance Maximum Input Rating in Thousands of Btu per Hour					
	NAT +NAT	NAT +NAT	NAT +NAT	NAT +NAT	NAT +NAT	NAT +NAT
6	NP	103	143	188	246	NP
8	NP	119	163	218	278	408
10	NP	131	177	236	302	454
15	106	152	212	283	365	546
20	122	172	243	325	419	648
30	137	198	278	381	496	749
35	NP	NP	291	401	524	792

NP = Not Permitted

9. Permitted exceptions to -10° F (-23°C) minimum 99% winter design temperature and furnace connector diameters are provided in **Table 8**. If Table 8 permits a furnace connector size that is smaller than the chimney adapter outlet, a tapered decreaser is permitted at the chimney adapter outlet.
10. Manifolded common-vent connectors: See Fig.G.1(k), in NFGC in U.S.A. or Fig. C. 5 of NSCNGPIC in Canada. For chimney heights of 8' or more, Type-B manifolded common-vent connectors with no elbows are permitted. The manifolded common-vent connector diameter shall be 1" greater than required furnace vent connector size. The combined horizontal length of longest vent connector (fur-

nace or water heater) plus manifolded common-vent connector shall not exceed vent connector lateral specified in section A.6. Each connector is permitted up to 2 elbows. No exceptions from **Table 8** are permitted. The minimum winter

design temperature permitted with manifolded common-vent connector is -10° F (-23° C).

Table 8	MINIMUM WINTER DESIGN TEMPERATURES° F (°C)								
FURNACE MODEL SIZES	CHIMNEY CLAY TILE LINER NOMINAL SIZE OR INSIDE AREA (IN.OR SQUARE IN.)								
	8 X 8 or 42.7			8 X 12 or 63.6			12 X 12 or 83.3		
	Furnace Type- B Vent Connector Diameter (In.)								
	6	5	4	6	5	4	7	6	5
Models N8MPN/L, *8MPN/L, *8MPT & *8MPV Note:T/C/H8MPT050B12A is NOT permitted with NAHA001DH									
050	-10 (-23) ^F	-10 (-23)	+5 (15) ^A	-10 (-23) ^{D,E}	-10 (-23)	-10 (-23) ^A	NP	NP	NP
075	-10 (-23) ^E	-10 (-23) ^B	NP	-10 (-23) ^E	NP	NP	NP	NP	NP
100	-10 (-23) ^C	NP	NP	-10 (-23) ^C	NP	NP	NP	NP	NP
125	-10 (-23) ^{A,B,E}	NP	NP	-10 (-23) ^{A,E}	NP	NP	-10 (-23) ^E	NP	NP
150	NP	NP	NP	NP	NP	NP	-10 (-23) ^C	NP	NP

NP = Not Permitted

Temperatures in parentheses are Celsius temperatures.

^A Furnace connector rise shall be at least 3'.

^B Chimney height shall be at least 10'.

^C Furnace connector rise shall be at least 2' and chimney height shall be at least 15'.

^D 6" X 5" or 6" X 4" tapered furnace vent connector deceiver is permitted at chimney inlet opening. However, better resistance to chimney condensation will result, if connector diameter is not reduced. 7" X 6" @ chimney is also acceptable

^E 4" X 3" tapered water heater vent connector deceiver is permitted at chimney inlet opening. However, better resistance to chimney condensation will result, if connector diameter is not reduced.

^F Either ^D or ^E is permitted, but not both.

Installation Of Chimney Adapter

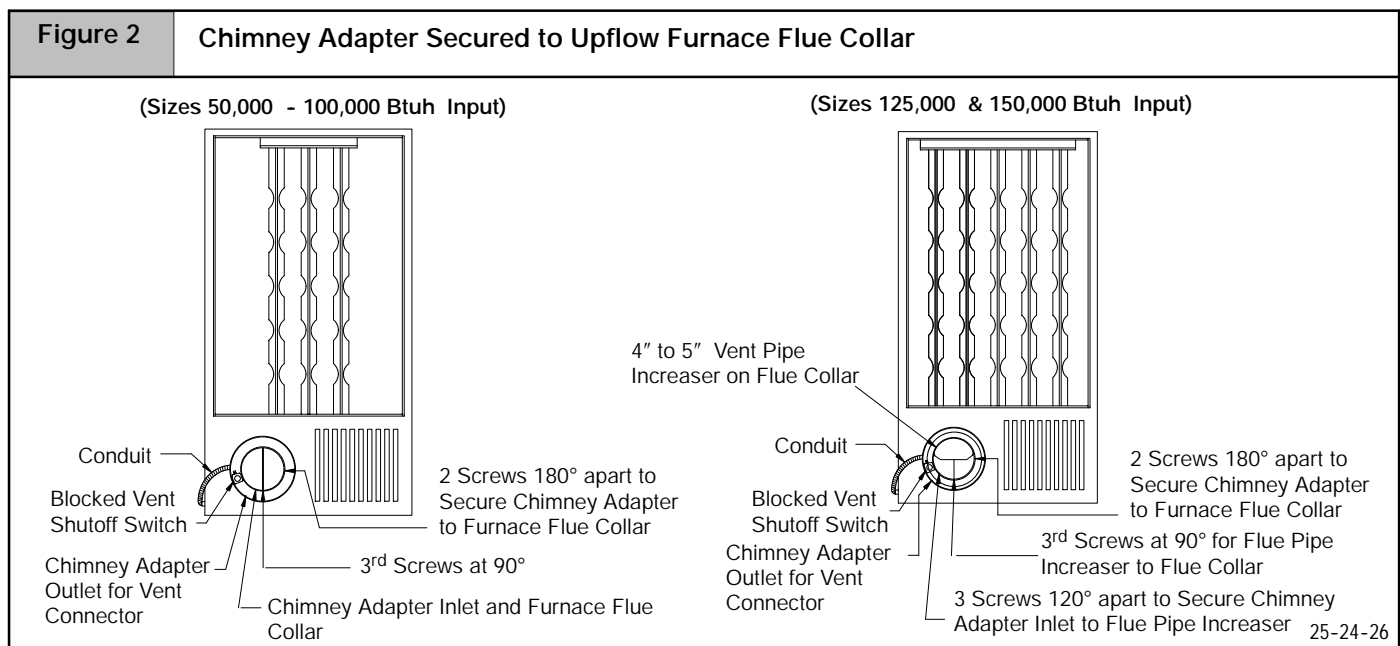
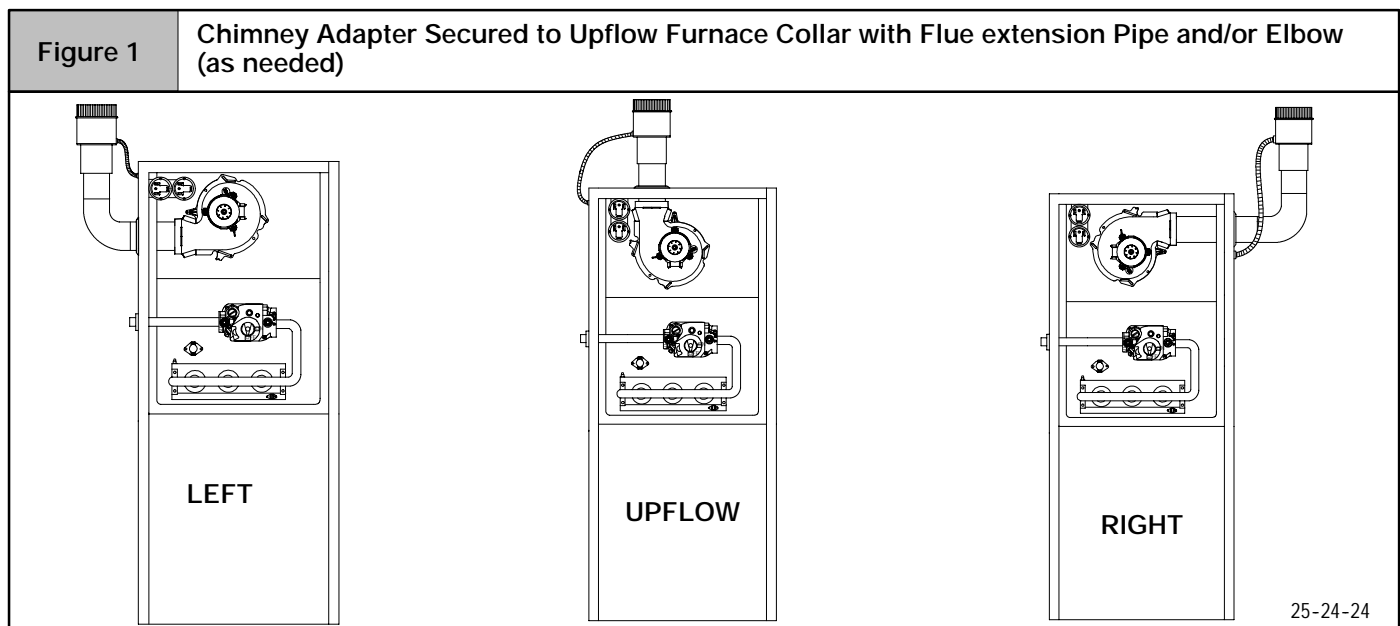
1. Turn off gas supply at manual gas valve before turning off electric power supply to furnace.
2. Turn off electric power supply to furnace at disconnect switch.
3. The chimney adapter must always be installed for vertical flow of vent gas from bottom to top of chimney adapter.

4. See **Figure 1** to **Figure 4**. The chimney adapter relief opening must be at least 2" above the furnace casing and other adjacent surfaces. A field-supplied 0.0304" (0.7 mm) minimum-thickness galvanized-steel flue extension pipe and/or a flue elbow may be needed between the furnace inducer flue-collar and the chimney adapter, if the furnace inducer flue-collar does not extend far enough to directly attach the chimney adapter to the flue collar with proper clearance to relief opening. A flue extension pipe should be no longer than needed to attach the chimney adapter to the flue collar with proper clearance at relief opening.

UPFLOW (Figure 1)

KIT NO. NAHA001DH: Attach chimney adapter to furnace inducer flue-collar (or flue extension pipe and/or elbow) with 3 sheet metal screws (field-supplied) through two $\frac{1}{8}$ " holes and a third field-drilled $\frac{1}{8}$ " hole at inlet (small end) of chimney adapter. Third hole should be 90° from other two holes. (See **Figure 2**) Chimney adapter inlet must fully overlap inducer flue-collar $\frac{5}{8}$ " before fastening with screws. Be careful not to collapse brackets within chimney adapter when pushing it onto flue-collar.

KIT NO. NAHA002DH: Use same procedure as for NAHA001DH, except a standard 4" dia. to 5" dia. tapered flue pipe increaser (field-supplied) is required between furnace inducer flue-collar and chimney adapter inlet. If a flue extension pipe and/or elbow is needed, the tapered flue pipe increaser must be downstream of the extension pipe and upstream of the elbow. An elbow must be the same diameter as the inlet of the chimney adapter to minimize restriction of the flue elbow.

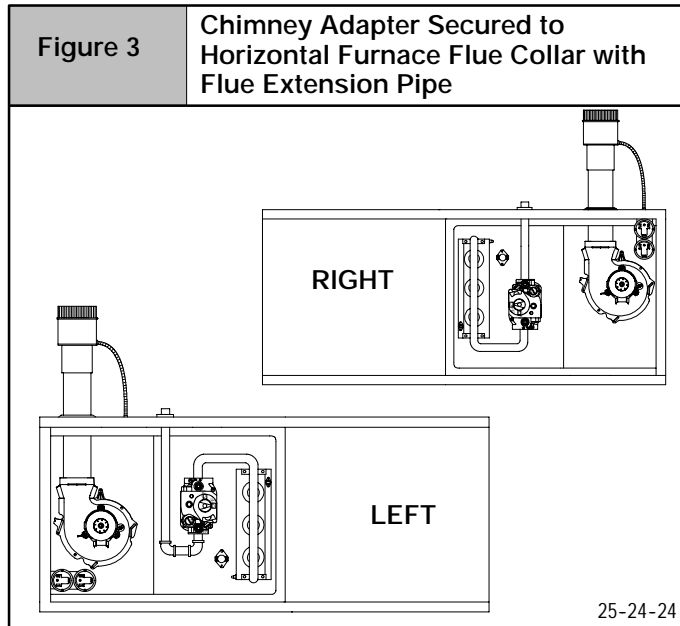


HORIZONTAL AIRFLOW - Either Kit (Figure 3)

Before installing the chimney adapter, rotate the venter assembly to exit the flue pipe to the left or right side of the furnace casing as described in the "SIDE VENTING" section of the furnace Installation Instructions.

The chimney adapter relief opening must be at least 2" above the furnace casing and other adjacent surfaces.

Install the chimney adapter to furnace flue collar, flue pipe extension, or tapered flue pipe increaser as described for installing chimney adapter in UPFLOW applications.



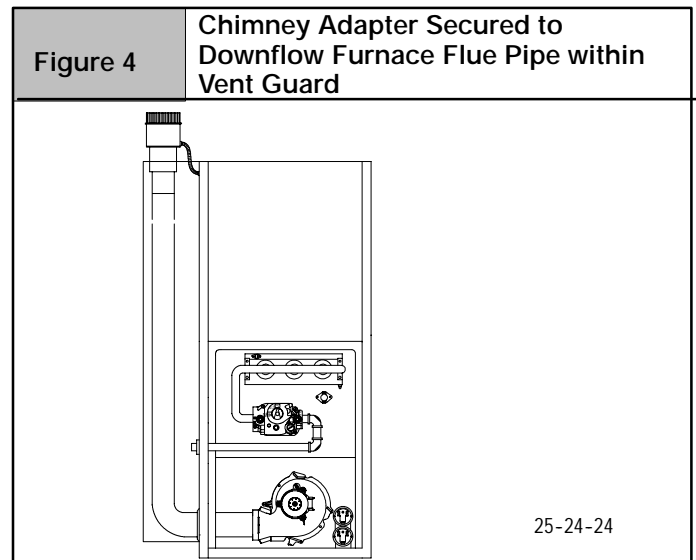
DOWNFLOW APPLICATIONS - Either Kit (Figure 4)

Before installing the chimney adapter, complete the installation of the flue pipe to exit the left or right side of the furnace casing as described in the "DOWNFLOW VENTING" section of the furnace Installation Instructions.

When using the NAHA002DH kit in downflow, the field-supplied elbow within the Vent Pipe Shield should be 4" dia. A standard 4" dia. to 5" dia. tapered flue pipe increaser (field-supplied) is required between the elbow and the vertical 5" dia. flue pipe within the Vent Pipe Shield.

The chimney adapter relief opening must be at least 2" above the furnace casing, the Vent Pipe Shield, and other adjacent surfaces.

Install the chimney adapter to top of the vertical flue pipe as described for installing chimney adapter directly to furnace flue collar in UPFLOW applications.



5. Remove locknut from fitting on free end of electrical conduit attached to chimney adapter. Route wire ends through a $\frac{7}{8}$ " hole in furnace casing near the chimney adapter. Holes are provided on left and right sides near front of furnace and toward rear at supply air end of furnace. If the downflow Vent Pipe Shield is used, use a $\frac{7}{8}$ " hole, on side toward rear of furnace and use tube clamp in kit to hold conduit against side of furnace. Secure conduit to furnace hole with locknut. Route the blue wires from the blocked vent shutoff switch (BVSS) of chimney adapter to the area of the pressure switch (low-pressure switch on 2-stage furnaces). Two metal wire-routing clips and three wire ties are included in the kit to secure the blue extension wires away from hot surfaces, sharp edges, and rotating parts.

NOTE: For applications where the chimney adapter wire leads will not reach the (low-) pressure switch, use the factory-supplied extension wires between the BVSS leads and the (low-) pressure switch.

6. See Figures 6 to 9 in kit instructions for wiring connections. Find furnace blue wires that connect to (low-) pressure switch. Disconnect one blue wire with insulated female, $\frac{1}{4}$ " quick-connect terminal from (low-) pressure switch, and connect this blue wire to blue wire from BVSS that has insulated, male, $\frac{1}{4}$ " quick-connect terminal. Male and female $\frac{1}{4}$ " terminals must be oriented so that insulators fit together. Connect other chimney adapter BVSS blue wire to pressure switch terminal from which blue wire was disconnected.

Position blue wire so that they are directed away from hot surfaces, sharp edges, and rotating parts. The BVSS should be in series with the (low-)pressure switch.

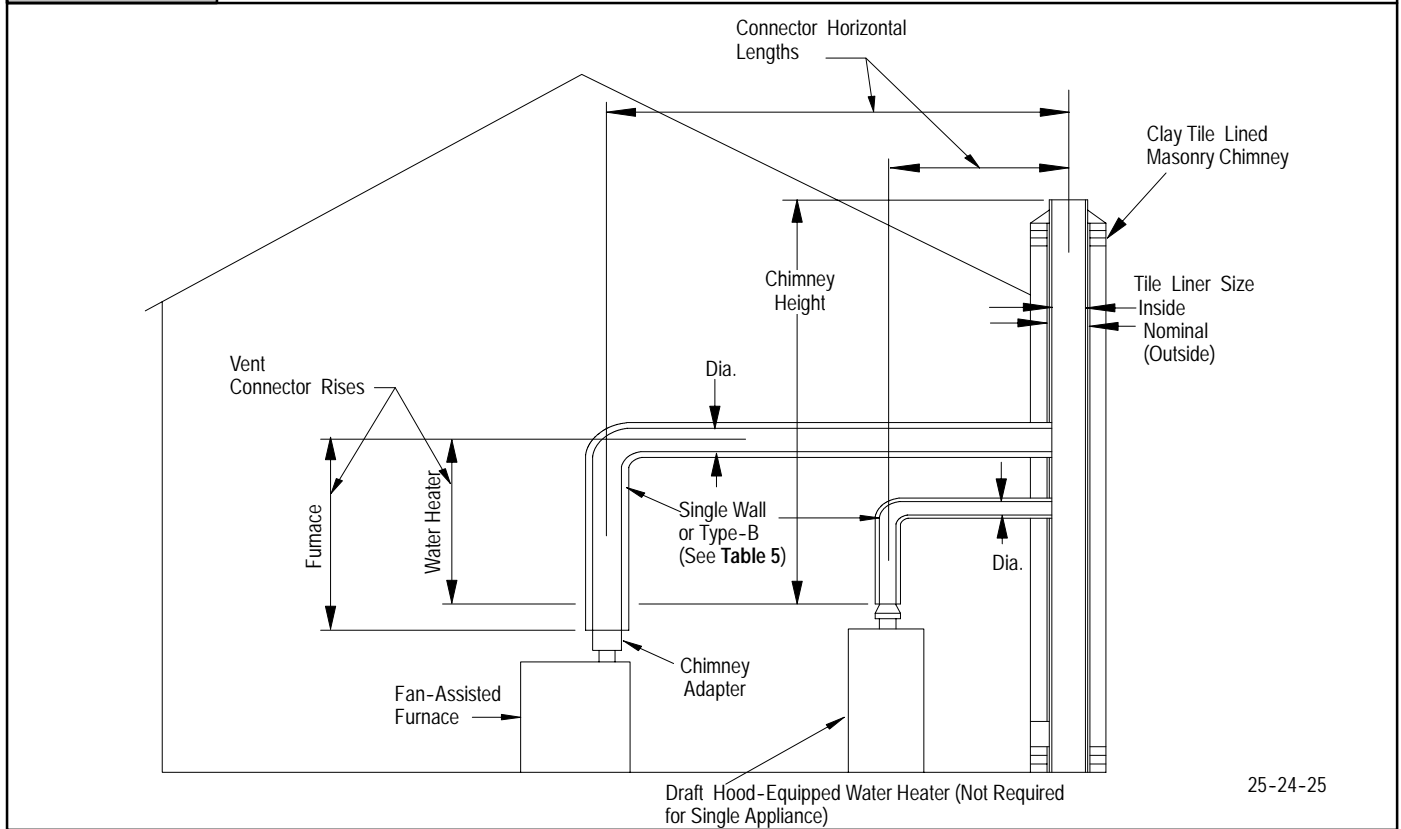
7. No other wire connection changes should be made for chimney adapter. Be certain that no terminals can be shorted to other circuits or to any grounded parts.
8. Refer to **Figure 5**. Secure a Type-B draft hood connector to top of chimney adapter with 3 sheet metal screws (field-supplied). Install Type-B double-wall metal vent connector from draft hood connector to chimney flue opening in accordance with Type-B vent pipe manufacturer's Installation Instructions. The horizontal portion of venting system shall maintain a minimum of $\frac{1}{4}$ " upward slope per linear foot away from furnace, and shall be rigidly supported every 5' or less with hangers and straps to ensure that there will be no movement after installation. The connector shall conform to size, rise, and lateral requirements under Chimney Adapter Application Requirements and **Table 2** of these instructions.

Note: Do NOT use the NFGC or NSCNGPIC for vent connector SIZING requirements.

9. (Not required for single furnace, Appliance Requirements Section B.) Complete installation of water heater Type-B double-wall vent connector in same manner as used for furnace connector, except that a chimney adapter is not required at Type-B draft hood connector for water heater.

Figure 5

Furnace & Water Heater Vent Connections, Chimney Adapter & Chimney

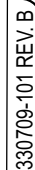


25-24-25

Start-up, Adjustment, And Safety Check

- With furnace blower operating, check for air leakage from supply-air plenum or coil casing that could interfere with BVSS operation. If air leaks are found they must be properly sealed.
- Complete Start-Up, Adjustment, and Safety Check in furnace Installation Instructions. Adjust furnace air temperature rise to be near high end of air temperature rise range specified on furnace rating plate (without exceeding high end of rise range). A higher air temperature rise reduces chimney condensation. While doing furnace check, the following steps shall be performed with each appliance that is connected to common-vented chimney. Put each appliance in operation while other appliance(s) are not in operation.
 - Inspect venting system for blockage or restriction, leakage, corrosion, and other deficiencies that could cause an unsafe condition.
 - Insofar as practical, close all building doors and windows, and all doors between space in which appliances are located and other spaces of building. Turn on clothes dryer and any appliance not connected to this chimney flue. Turn on all exhaust fans such as range hoods and bathroom exhausts, so they will operate at maximum speed. Do not operate a summer exhaust fan. Close fireplace dampers.
 - Follow operating instructions for each appliance being checked. Adjust each thermostat so appliance will operate continuously.
 - Test for vent gas spillage at water heater draft hood (when applicable) and at furnace chimney adapter relief openings after 5 minutes of main burner operation. Use the flame of a match or candle.
 - Operate ALL appliances that are common-vent connected to chimney flue, and again test for vent gas spillage.
 - If improper venting is observed during any of above tests (e.g., vent gas spillage at water heater draft hood or furnace chimney adapter, or leakage from vent system), the common-venting chimney system must be corrected.
 - After it has been determined that each appliance properly vents when tested as outlined above, return doors, windows, exhaust fans, fireplace dampers, and any other gas-burning appliances to their previous conditions of use.
- Check chimney adapter BVSS. The purpose of the BVSS is to cause safe shutdown of furnace, if furnace vent connector or chimney becomes blocked.
 - Disconnect power to furnace, and remove vent connector from chimney adapter. Be sure to allow time for vent pipe to cool down before handling pipe.
 - Restore power to furnace, and jumper R-to-W for single-stage furnace (or R-to-W1-and-W-2 for 2-stage furnaces) to operate furnace (high-fire for 2-stage furnaces).
 - After normal start-up, allow furnace to operate for 2 minutes, then block chimney adapter outlet 100%. Furnace should shut off within 2 minutes. If shut-off does not occur, correct the malfunction and retest.
 - Remove jumper from R-to-W-1-and-W-2.
 - Remove blockage and reconnect vent connector to chimney adapter.
 - Wait 5 minutes, then reset BVSS.
- Leave Installation Instructions for chimney adapter and for furnace near furnace.

Single Stage Models - N8MP, *8MP, *8DN Furnace Wiring Diagram with Chimney Adapter

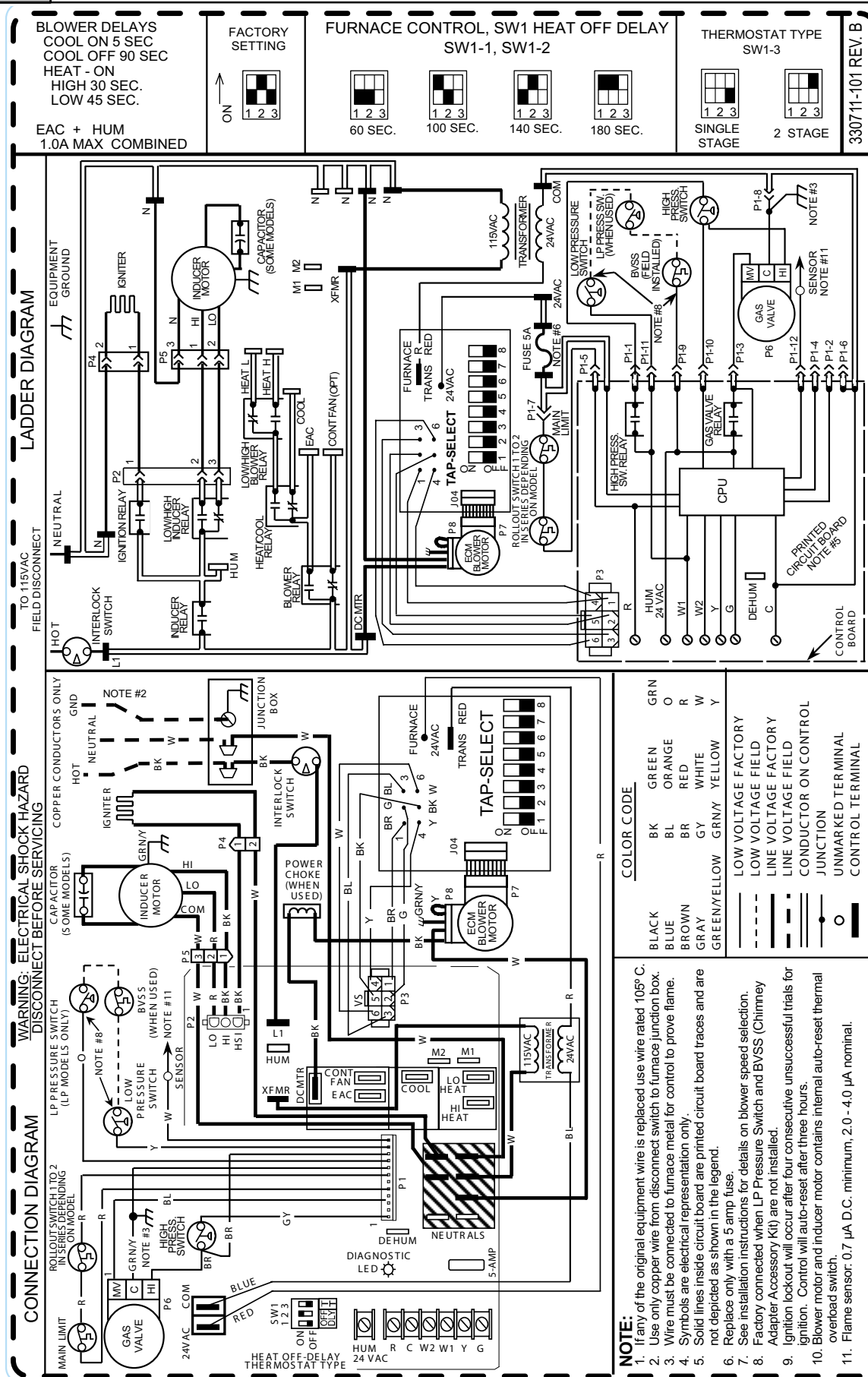


2-Stage Models - *8MPT Furnace Wiring Diagram with Chimney Adapter



Figure 8

2-Stage Variable Speed Models - *8MPV075, 100 & 125 Furnace Wiring Diagram with Chimney Adapter



Masonry Chimney Application Requirements

If a clay tile-lined masonry chimney is used, an alternative venting design might be required, such as a listed chimney lining system or this listed chimney adapter kit. ONE OF THE FOLLOWING METHODS SHALL BE USED TO DETERMINE IF AN ALTERNATIVE VENTING DESIGN IS NOT REQUIRED.

If all the requirements of these instructions have been met, select the correct draft hood kit model from **Table 4** and install per these instructions.

- In the U.S.A. - Refer to Sections 13.1.9 and 13.2.20 of the NFCC or the authority having jurisdiction to determine whether relining is required. If relining is required, use a properly sized listed metal liner, Type-B vent, or a listed alternative venting design, such as this listed chimney adapter kit (with a furnace listed for use with this kit), a listed chimney lining system, or a Type-B vent.

- In Canada (Also permitted in the U.S.A.) - A 78 or 80 percent AFUE, Category I, fan-assisted furnace is permitted to be vented into a clay tile-lined masonry chimney that is exposed to the outdoors below the roof line, provided:

- MULTIPLE APPLIANCES (A single furnace common-vented with a draft hood-equipped water heater(s) into a chimney.)

1. Vent connector is Type-B double-wall, and

2. The furnace is common vented with at least one draft hood-equipped appliance, and

3. The combined appliance input rating is less than the maximum capacity given in Table 9A, and

4. Input rating of each space heating appliance is greater than minimum input rating given in Table 9B and

5. The authority having jurisdiction approves.

If all of these conditions cannot be met, an alternative venting design is required, such as this listed chimney adapter kit (with a furnace listed for use with this kit), a listed chimney lining system, or a Type-B common vent

- SINGLE APPLIANCE (A single furnace vented into a chimney.) - Category I, fan-assisted furnaces without draft hoods are not permitted to be vented into clay tile-lined masonry chimneys that are exposed to the outdoors below the roof line.

Table 9A	Combined Appliance Maximum Input Rating in Thousands of Btu per Hr			
VENT HEIGHT (FT)	INTERNAL AREA OF CHIMNEY (SQ IN.)			
	12	19	28	38
6	74	119	178	257
8	80	130	193	279
10	84	138	207	299
15	NR	152	233	334
20	NR	NR	250	368
30	NR	NR	NR	404

Table 9B	Minimum Allowable Input Rating of Space-Heating Appliance in Thousands of Btu per Hr			
VENT HEIGHT (FT)	INTERNAL AREA OF CHIMNEY (SQ IN.)			
	12	19	28	38
Local 99% Winter Design Temperature: 17 to 26° F*				
17 to 26° F	6	0	55	99
	8	52	74	111
	10	NR	90	125
	15	NR	NR	167
	20	NR	NR	212
	30	NR	NR	362
Local 99% Winter Design Temperature: 5 to 16° F*				
5 to 16° F	6	NR	78	121
	8	NR	94	135
	10	NR	111	149
	15	NR	NR	193
	20	NR	NR	293
	30	NR	NR	377
Local 99% Winter Design Temperature: -10 to 4° F*				
-10 to 4° F	6	NR	NR	145
	8	NR	NR	159
	10	NR	NR	175
	15	NR	NR	283
	20	NR	NR	333
	30	NR	NR	NR
-11° F or lower	Local 99% Winter Design Temperature: -11° F or lower* Not recommended for any vent configuration			

*The 99% Winter Design Dry-Bulb (db) temperatures are found in the 1993 ASHRAE Fundamentals Handbook, Chapter 24, Table 1 (United States) and 2 (Canada), or use the 99.6% heating db temperatures found in the 1997 or 2001 ASHRAE Fundamentals Handbook, Climatic Design Information chapter, Table 1A (United States) and 2A (Canada).

Figure 9

Chimney Adapters

