

# **SUPPLEMENTAL INSTALLATION INSTRUCTIONS**

## **CATEGORY III SIDEWALL VENTING FOR IH, IC AND IL SERIES GAS FIRED CENTRAL FURNACES**

**READ ALL INSTRUCTIONS CAREFULLY BEFORE  
BEGINNING THE INSTALLATION.**

**THE INSTALLATION MUST COMPLY WITH THESE  
INSTRUCTIONS AND THE REQUIREMENTS OF ALL  
GOVERNING CODES AND ORDINANCES FOR THE  
INSTALLATION LOCATION.**

**IT IS THE RESPONSIBILITY OF INSTALLER TO KNOW AND  
UNDERSTAND ALL OF THESE REQUIREMENTS.**

**FAILURE TO DO SO COULD CREATE A HAZARD RESULTING  
IN PROPERTY DAMAGE, BODILY INJURY OR DEATH.**

**INSTALLER: LEAVE THESE INSTRUCTIONS WITH THE  
FURNACE FOR FUTURE REFERENCE.**



**BARD MANUFACTURING COMPANY  
BRYAN, OHIO 43506**

*Since 1914...Moving ahead,  
just as planned.*

Manual: 2100-296  
Rev: —  
Date: 03-19-97

# CATEGORY III VENTING OPTION

## STAINLESS STEEL – RIGID GAS VENT

Bard IH, IC and IL-Series Gas Furnaces are American Gas Association (AGA) Design Certified as Category I Gas Fired Central Furnaces. Category I furnaces are those which operate with non-positive vent static pressure, and are vented vertically with Listed metallic vent systems following the Furnace Installation Instruction, the Nation Fuel Gas Code NFPA 54/ANSI Z223.1, latest edition, and any local codes. In some cases lined masonry chimneys are also permitted as outlined in the codes.

IH, IC and IL-Series furnaces manufactured prior to August, 1994 were approved for Category I and Alternate Sidewall Vent System which was High Temperature Plastic Vent (HTPV). These furnaces met all the requirements for Category III designation but were instead marked for Alternate Sidewall Vent System. Because of industry-wide concerns relating to HTPV, Bard suspended authorization for HTPV in August, 1994 and removed from the serial plate and Installation Instructions all references to Alternate Sidewall Vent and HTPV. Bard date codes are part of the serial number for each product. On Furnaces the letter and first two (2) digits of the serial number sequence are the date code, and the last seven (7) digits are the serial number unique to the individual furnace. EXAMPLE: J94xxxxxxx = July 94, and K94xxxxxxx = August 94.

Additional evaluation and testing has been done by both Bard and AGA, and AGA has issued Bard authorization for use of the 29-4C Stainless Steel venting systems described below as an alternate venting system for any IH, IC, IL-Series furnace produced either before or after August, 1994. This would apply to new installations and also to any installation that was installed with HTPV if that venting system had to be replaced for any reason. When the furnace is installed with the stainless steel venting system in a sidewall vent configuration it becomes a Category III installation.

Category III (sidewall) installations are permitted only when in accordance with the following requirements:

1. The Installation Instructions from the vent manufacturers referenced below must be followed exactly except as noted in this set of instructions.

2. Authorized venting systems are: **StaR-34 SS – Rigid Gas Vent**

Supplier: **Flex-L International Inc.**  
CDA: 6035 Kestrel Rd. • Mississauga • ON • L5T 1Y8  
USA: POB 29140 • Columbus • OH • 43229-0140  
Telephone 800-561-1980 Fax 800-267-1980

### **Saf-T Vent Special Gas Vent**

Supplier: **Heat-Fab Incorporated**  
38 Haywood Street  
Greenfield, MA 01301  
Telephone 800-772-0739 Fax 413-773-3133

### **SVE Special Gas Vent**

Supplier: **Z-Flex U.S. Inc.**  
20 Commerce Park North  
Bedford, NH 03110-6911  
Telephone 603-669-5136 Fax 603-669-0309  
Outside NH 800-654-5600

3. The Category III installation can only be used for a single furnace installation and no other appliances are to be vented as part of this installation.

4. The size (diameter) of the vent system must be the same as the vent collar on the furnace draft inducer.
5. The minimum vent must consist on one (1) 90 degree elbow, drain tee, three (3) feet of pipe, and termination tee.
6. The maximum allowable vent system is based on forty (40) equivalent feet with each 90 degree elbow counting as five (5) equivalent feet. No allowance is required for the drain tee or the termination tee, and straight pipe counts as measure in feet.  
EXAMPLE: Three (3) elbows, drain tee, termination tee, and eighteen (18) feet of pipe =  
 $3 \text{ elbows} \times 5 + 18 = 15 + 18 = \underline{33 \text{ equivalent feet.}}$
7. Vertical vent installations using the one of the stainless steel systems referenced above are permissible but not recommended. ~~B-Vent double wall vent systems are the recommended vent system for vertical vent applications.~~
8. ***The following requirements are exceptions to and take precedence over any statements made in the Vent Manufacturers' Instructions regarding the subject being discussed:***
  - a.) A horizontal drain tee must be installed as near as practical to the first elbow coming off the top of the furnace.
  - b.) Only a single drain fitting is required as specified in *a.* above.
  - c.) The loop in the drain hose should be at least 3 feet (0.9m) from the connection point on bottom of drain tee to insure a positive water seal in the drain hose at all times.
  - d.) All horizontal portions of the vent system must slope upwards away from the furnace towards the vent termination tee.
  - e.) The termination tee is oriented with the side tee opening connected to the vent pipe, and the two (2) openings with the bird screen positioned up and down. The extension (spacing from wall surface to the backside of the vertical section of tee fitting) is 12 inches minimum and 18 inches maximum.
  - f.) The venting system termination shall be at least 4 feet (1.2 m) below, 4 feet (1.2 m) horizontally from, or 1 foot (30cm) above any door, window, or gravity air inlet into any building. The bottom of the vent terminal shall be located at least 12 inches (30cm) above grade.
  - g.) Connection to the flue outlet fitting on the furnace draft inducer is required as follows:
    - \* Flex-L system: apply approved sealant, push pipe section firmly onto flue collar, and use appropriately sized worm gear clamp to draw pipe tightly to the collar.
    - \* Heat-Fab system: apply approved sealant, and use adapter 7363GC for 3" or 7364GC for 4".
    - \* Z-Flex system: apply approved sealant, and use standard locking band to clamp pipe section to the flue collar.
9. Label 7961-073-0339 attached below must be affixed to the furnace adjacent to the serial plate. This will notify any inspectors or code officials of the acceptability of the Category III Vent System with the furnace.

Plant 1

Assembly 2100-296

Low Level Cd 0 Batch Size 1

U/M EA INSTALLATION INSTRUCTIONS

Rev Date 2/27/97 Rev Level 0

Drawing# 2100-296

<u>Level</u>	<u>Act Component</u>	<u>Description</u>	<u>U/M</u>	<u>Qty Req'd</u>	<u>Type</u>
1	1906-001	PAPER-WHITE 8-1/2 X 11	EA	2.00000	
1	7961-073-0339	SIDE WALL VENTING CONVER LABEL	EA	1.00000	
.2	7961-073	MYLAR BLK LABL 2-1/2" X 3-1/2"	EA	1.00000	

Txt Typ Asmb1/Comp

ROLL to Scroll F3=Exit F12=Select New Assembly F11=Fold

FURNACE COMPLIES WITH ALL  
CATEGORY III REQUIREMENTS OF  
ANSI Z21.47-1993.

REFER TO INSTALLATION  
INSTRUCTIONS 2100-296 FOR  
CATEGORY III SIDEWALL VENTING  
OPTION.

7961-073-0339