

# **INSTALLATION INSTRUCTIONS** **Pro-Form DIRECT VENT SYSTEM**

# **BDM**

**BERNARD DAL SIN MFG. CO.**

**Tested to ANSI Z21.88-2009 /CSA 2.33-2009**



REPORT # 369-P-02b-6.5



BDM Direct Vent systems are for use with direct vent gas fired appliances.

Read through all venting and appliance instructions before beginning your installation. Check your local codes as they may vary. A major cause of vent-related fires is the failure to maintain appliances required clearances. Failure to install as described in the instructions will void warranty and may have an effect on homeowners insurance. Keep these instructions for future reference.

- Always maintain clearances to combustibles. Clearances may vary between appliances.
- Wear gloves and glasses during installation
- Watch for electrical wiring during installation.
- Consult your local building codes before installation.
- Do not modify any part unless noted in instructions.
- Do not fill air spaces with insulation.
- Do not discard this manual.
- **Refer to [www.omni-test.com](http://www.omni-test.com) for additional current models**

For technical support or product information contact BDM, 5205 208th ST Farmington MN 55024 at:

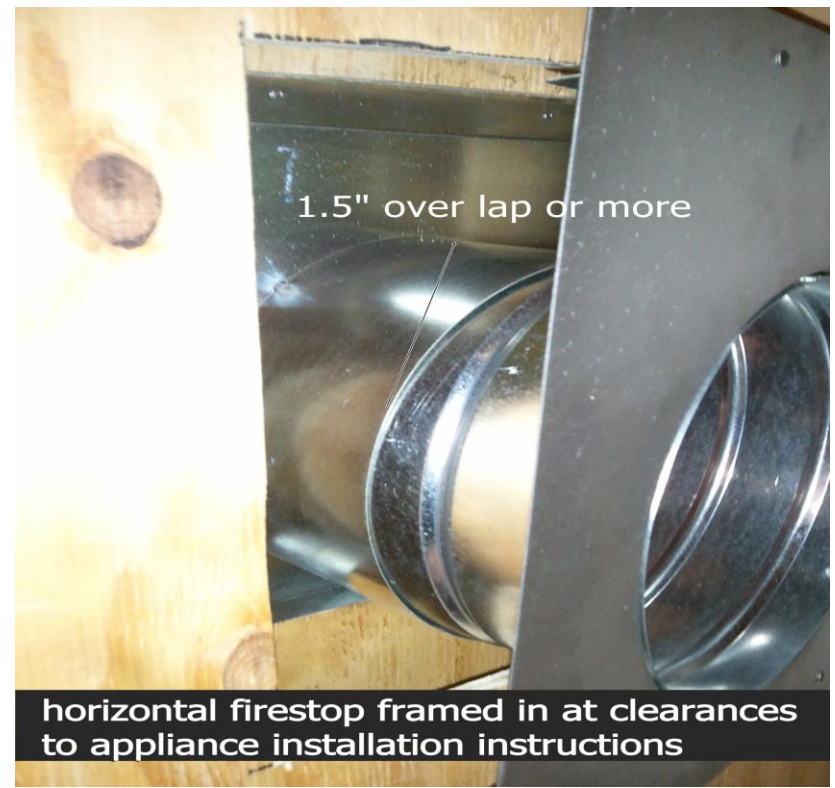
Toll-free: 1-800-729-9505

Phone: 651-460-1080

Fax: 651-460-6080

## **HORIZONTAL INSTALLATION**

- Check appliance requirements for placement of appliance to the wall and termination options. Also max horizontal length run.
- Check appliance requirement for vertical to horizontal requirements and limitations.
- Determine the length of pipe that will be required. BDM direct-vent measures a true length minus 1 5/8" overlap of pipe. Two style Slip joints are available that slip over the standard sections of pipe. They range from 3" to 7" and 3" to 14' for installations requiring a nonstandard length.
- Horizontal runs should be supported every 4 feet to prevent downward sags in the horizontal run.
- The termination should be at least 12" above grade.
- A vinyl siding standoff is not required before installing termination cap unless stated by appliance instructions.
- If a vertical rise is needed at the outside a snorkel cap is required
- Your venting must run level on a horizontal run. Never allow a downward run on the pipe, this could trap heat and be a possible fire hazard.
- The wall thimble is used when penetrating a combustible wall. The wall thimble is designed to be used in a 4 3/8" wall to a 8 5/8" wall. A wall thimble extension will be needed if going through a thicker wall.
- Horizontal venting shall have a slope not less than 1/4 inch (6.4mm) every 12 inches (305mm)
- Termination of the venting system shall not be in traffic areas such as walkways unless 7 feet (305mm) above the ground.



- The heat shield within the wall thimble must overlap a min of 1.5".
- When using slip joint cap a 1.5" overlap on pipe is still required. Secure cap using screws and holes provided. Seal around base next to siding.
- Cap may not be recessed in the wall past the base mount.
- No sealant is required on pipe joints unless specified by the appliance requirements



- The wall pass thru has tabs for 1", 2", and 3" clearances on the top. The sides and bottom are all 1" clearance. Bend tabs manually for the appropriate clearance the appliance instructions call out.

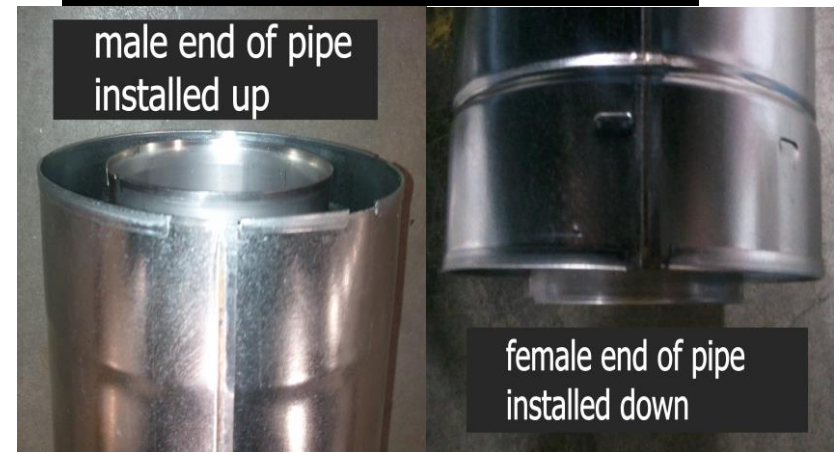
- Framing dimensions on wall pass threw:

Clearance	6 5/8"	8"
1"	9 1/2" x 9 1/2"	11" x 11"
2"	9 1/2" x 10 1/2"	12" x 12"
3"	9 1/2" x 11 1/2"	13" x 13"

- Base pan dimensions on horizontal cap

6 5/8"	14" x 14"
8"	15" x 15"

### Assembly of pipe sections



- To join two pieces of pipe, align male end and female end, and push. They will snap together confirming a tight seal.
- A seam offset of 1" to either side is best to avoid disconnection of pipe.



## Pipe material list

- The outside shell of the pipe is seam welded 26 gage galvanized with a factory locking system.
- The inside shell of the pipe is a seam welded 28 gage stainless steel, with factory-formed ends.
- The spacer is a 24 gage stainless steel factory-formed to make the pipe align and assemble with ease.
- No screws or caulking are required unless specified by the appliance manufacturer.

## Adapting to the stove

- BDM direct-vent will adapt to most starter collars coming off the appliance.
- If no collar is supplied you will need a starter collar provided by BDM.



## Vertical Installations

- Refer to the appliance manufacturer's installation instructions for clearances to combustibles when venting vertically.
- Check the appliance manufacturer's installation instructions for max run and offset limitations with elbows.
- Do not fill air spaces with insulation.
- When locating your appliance mark penetration spots through the ceiling/attic to make sure there are no obstructions.
- The hole you cut through the combustible wall or ceiling will be square, keeping clearances and framed. The flat ceiling fire stop installed and decorator collar over if desired.



- Vaulted ceilings may require a cathedral box.
- An attic insulation shield is required when passing into attic. It will telescope to the necessary height and be fixed with a set of screws. The attic insulation shield must also be capped off with a storm collar.
- An offset may be required going through the attic. Whenever possible use a 45 degree elbow instead of 90 deg to help maintain proper draft.
- Elbow straps are used in attic offsets to support the pipe.
- When cutting through the roof refer to appliance installation instructions for clearances. Allow the pipe to go through the roofline and slip roof flashing over the penetrating pipe.

- Mount flashing with roof nails and caulk to seal the flashing and prevent leaking. Install storm collar tight around pipe over the flashing and seal with caulk to prevent leaking.

## DIRECT-VENT FLEX INSTALLS

- For vertical and horizontal installations.
- Do not bend flex over 90 degrees.
- Refer to appliance instructions for max offsets and length of runs.
- Any bend over 45deg constitutes a 90deg
- Any bend over 30 deg constitutes a 45deg



- The height above the roofline will depend on the pitch of the roof and your local building codes. Refer to table below:

Roof pitch	Minimum Height
Flat to 7/12	1 foot
Over 7/12 to 8/12	1.5 feet
Over 8/12 to 9/12	2 feet
Over 9/12 to 10/12	2.5 feet
Over 10/12 to 11/12	3.25 feet
Over 11/12 to 12/12	4 feet
Over 12/12 to 14/12	5 feet
Over 14/12 to 16/12	6 feet
Over 16/12 to 18/12	7 feet
Over 18/12 to 20/12	7.5 feet



### RIGID PIPE - TO FLEX - BACK TO RIGID PIPE

- Used for attic offset installations

- A roof support is required to be used going through the ceiling and the roof to support the rigid pipe at both ends of the flex pipe.
- Any bend in the flex length is considered an elbow and is required to have an elbow strap
- The lock on the flex ends are for install ease only in this application. Three Additional self tapping screws should be added at both ends securing the flex pipe to the rigid pipe.
- When using 6 5/8" pipe, you may need convert to 4" inside 7" flex using an increaser adapter. The reason is 6 5/8" corrugated flex can restrict the intake too much for some appliances. See manufacture instructions for this application.



## INSERT VENT INSTALLS

Follow all of the manufacturers installation instructions with regard to the installation and clearances required for your fireplace insert and any specific venting requirements.

- The PRO-FORM® venting kit contains a termination cap and 2 lengths of aluminum flexible liner. You will want to mark the liner that will be used for the exhaust on both ends of the liner.



## AT THE ROOF:

- Connect the exhaust (end with the marking) liner to the exhaust port of the termination cap and screw in three zip screws to secure.

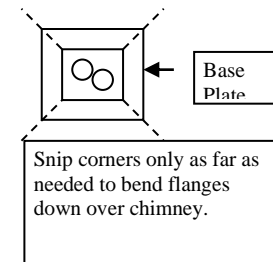


- Connect the air intake (without marking) to the air intake port of the termination cap and screw in three zip screws to secure.
  - Note: For part numbers 942033430, 942034430, and 942044430 the intake liner is only 4' long and is not to be connected to the termination cap. This only gets connected to the air intake port of the fireplace insert itself.

- Extend the liners to the sufficient length in order to connect to the exhaust and intake ports of the fireplace insert.

**NOTE:** Extend the flex liner carefully making sure to extend the flex liner in approximately 5' sections at a time. Pulling and twisting slightly will provide best results.

- Place the liners down the chimney until the termination cap rests on the flue tile or crown of the chimney.
- Using sheet metal snips, cut the corners of the base plate at a 45 degree angle up to the outside of the chimney. (See Diagram)



- Place a generous bead of silicone or adhesive caulk to the top of the chimney where it will come into contact with the base plate of the cap.
- Secure the cap down onto the chimney and allow to adhesive to cure. Double check after adhesive has had time to cure that the cap is secured to the top of the chimney. (In some situations the cap will need to be screwed into the chimney with the use of masonry screws.)

## **AT THE FIREPLACE INSERT:**

- At the fireplace insert, locate the flex liner with the red marking and is connected to the exhaust port on the termination cap. Attach the exhaust liner to the exhaust port on the fireplace insert. Secure with three sheet metal screws.
- At the fireplace insert, locate the flex liner without the red marking and is connected to the air intake port on the cap. (For part #'s 942033430, 942034430, and 942044430, the fresh air will not be attached to the air intake port of the termination cap). Attach the air intake liner to the air intake port on the fireplace insert. Secure with 3 sheet metal screws.
- Continue installing the fireplace insert in place according to the manufacturer's installation instructions.

## **General Maintenance**

- Perform an inspection on your venting system annually.
- Check for corrosion on the pipe. If any corrosion is noticeable it should be replaced.
- Shine a flashlight down from pipe and look for foreign material such as nests from critters.
- Inspect joints for loose connections.

## **OMNI Certification**

Check the OMNI-Test Laboratories webpage ([www.omni-test.com](http://www.omni-test.com)) for additional BDM Models added since (3/9/11).

These instructions provide the minimum requirements for the safe installation of a listed co-linear chimney system exiting in the house vertically through a

chase for single or multiple termination applications. Multiple termination cap applications require divider plates.

Failure to install the Fireplace, Insert or Stove, the Chimney System or the Chimney Shroud per their respective installation instructions will void the manufacturers' warranties, and may have an effect on your homeowner insurance and OMNI listing status.

As specified per the instructions & drawings, BDM piping systems are OMNI listed for use with Gas Direct Vent Fireplaces Inserts, decorative gas appliances, and direct vent heater systems OMNI labeled components meet the current International Building Code 2000 Standards (Int. Mechanical, Residential, Fuel & Gas, and Fire Codes), as well as NFPA 211 & 54.

### **PARTS LIST**

The PRO-FORM® Direct Vent System is designed for installation on direct vent fireplaces and inserts. Horizontal and vertical installation procedures are illustrated within. The flexible direct vent should not be used for directly out the back horizontal installations. Use a listed rigid slip joint section for this application. The flexible vent is however intended for corner and up and out horizontal installations as well as vertical chase or chimney installations. The following is a list of all PRO-FORM® Direct Vent components.

**FOR A COMPLETE PARTS LIST VISIT: [www.dalsinmfg.com](http://www.dalsinmfg.com)**

Pro-Form Direct-Vent Caps:

- 940033 3" X 3" VCL TERM CAP
- 940034 3"x 4" VCL TERM CAP
- 940044 4"x 4" VCL TERM CAP
- 940033RD 3"X 3" ROUND VCL TERM CAP WITH ROUND BASE
- 940034RD 3"X 4" ROUND VCL TERM CAP WITH ROUND BASE
- 940033HWS INSERT CAP 3"X 3" HIGH WIND WITH SQUARE BASE
- 940034HWS INSERT CAP 3"X 4" HIGH WIND SQ BASE
- DVR6-VCH 6 5/8 SLP VERT, HIGH WIND CAP, W/STORM CLR
- DVR8-VCH 8/5 DVP VERT, HIGH WIND CAP, W/STORM CLR