

# Selkirk LLC

---

Selkirk LLC – Research & Development  
State Route 93 North & Sutton Road  
P.O. Box 631  
Logan, OH 43138

9/21/2006

TO: Our Valued Customers

FROM: Glen Edgar – Director – R&D

SUBJECT: SELKIRK MODEL DT DIRECT VENT SYSTEM FOR PELLET & CORN FIRED APPLIANCES / TERMINATION CLEARANCES TO OPENINGS IN BUILDINGS

Since developing, qualifying and introducing our Model DT Direct Vent System parts permitting the expanded use of Model DT for pellet / corn fired appliance applications, we've received a number of inquires concerning required minimum clearance from the horizontal termination to openings in buildings.

Pellet / corn fired appliances installed with a stand-alone, co-axial direct vent system are such a new combination that code requirements have not yet been formalized for them.

In drafting the original installation instructions, we mistakenly assumed that for this application, the horizontal terminations would be automatically interpreted as mechanical draft systems; not direct vent appliance systems. As such, the first set of installation instructions for this (new) application contained NFPA211 specified clearances to terminations for "mechanical draft systems". This resulted in reference to fairly significant, specified, minimum distances away from doors and windows (4' horizontally and beneath, 1' above), etc. – per Sec. 10.4.5 of NFPA211 (2006 Ed.)

Since then and based upon customer feedback and more careful review, two facts have become clear:

1. This is definitely a "gray" area – per current code requirements.
2. A very sound technical argument can be made that clearances associated with "direct vent appliances" – not "mechanical draft systems" - are appropriate and adequate.

We recently discussed the issue with Underwriters Laboratories, Inc (UL) – who safety certifies the DT system for these applications - and others. Based upon their feedback and agreement with our technical logic, we implemented changes to this area of the instructions and are referencing minimum clearances consistent with direct vent appliance horizontal terminations; not mechanical draft systems.

9/21/06

Selkirk DT for Pellet / Corn Applications – Clearances for Horizontal Terminations

Page 2 of 2

These updated minimum clearances for horizontal installations are as follows:

- The vent terminal of a direct vent appliance with an input of 10,000 Btu/hr (2930 W) or less shall be located at least 6 in. (152 mm) from any opening into a building
- The vent terminal of a direct vent appliance with an input of over 10,000 Btu/hr (2930 W) but not over 50,000 Btu/hr (14,650 W) shall be located not less than 9 in. (229 mm) from any opening through which vent gases could enter a building,
- The vent terminal of a direct vent appliance with an input over 50,000 Btu/hr (14,650 W) shall be located not less than 12 in. (305 mm) from the opening.
- In all cases, the bottom of the vent terminal and the air intake shall be located at least 12 in. (305 mm) above grade.

Of course it is always a good idea to maintain larger clearances than the minimum recommended, whenever possible. In most cases, these minimums will not come into consideration.

Attached is a set of updated installation instructions for the Model DT when used to vent pellet and corn fired appliances, reflecting this change. As indicated, UL has accepted these changes as part of the UL Listed system.

We hope this information is of assistance.

Sincerely Yours,  
SELKIRK LLC



Glen Edgar  
Director – Research & Development  
Ph. 800-848-2149 / 740-385-5666 – Ext. 2203

#### GENERAL

This Instruction Supplement covers important information concerning the use/adaptation of Model DT Direct Vent for pellet appliance venting applications. In this application Model DT provides necessary outside combustion air directly to the appliance.

#### Listing

Model DT Direct Vent is also listed as an L-Vent for pellet stoves. It has been tested and listed by Underwriters Laboratories, Inc. in accordance with UL641, the Standard for Low Temperature Gas Venting Systems and ULC/ORD-CC441, "Pellet Vents". Model DT is rated for flue temperatures up to 570° F.

**NOTE:** Refer to the main Model DT Direct Temp installation Instructions for further details on the use of this product. (Flashings, Supports, Offsets, Adjustables ..... Etc.)

Model DT L-Vent System may be used for venting gas or oil fired appliances listed for use with Type L-Vent in addition to Listed pellet burning appliances.

Selkirk Metalbestos Model DT has a 4" inner liner and a 6-5/8" outer jacket. It is permissible to adapt the Model DT to both a 3" and a 4" pellet stove outlet collar. Model DT can be adapted to Pellet Stoves with specially designed Adapters used in conjunction with one or more components (Tee, Short Length) of Selkirk Model VP L-Vent for Pellet Stoves.

#### Minimum Clearance and Framing

Model DT has a 1" minimum airspace clearance to combustibles requirement when used as L Vent. This applies whether DT is being used to bring outside air to the pellet appliance or not.

"Combustibles" include framing lumber, drywall, plaster, plywood, paneling and other building materials.

For penetrating walls, ceiling joists or roof joists the required framing dimensions are 8-5/8" x 8-5/8". This will provide a 1" clearance for a properly centered vent.

**NOTE:** While these instructions focus on proper installation of DT when outside air is being drawn to appliance, if other sources of combustion air are provided, DT may be used with the combustion air passageway blocked, still at 1" airspace clearance.

**⚠ WARNING**

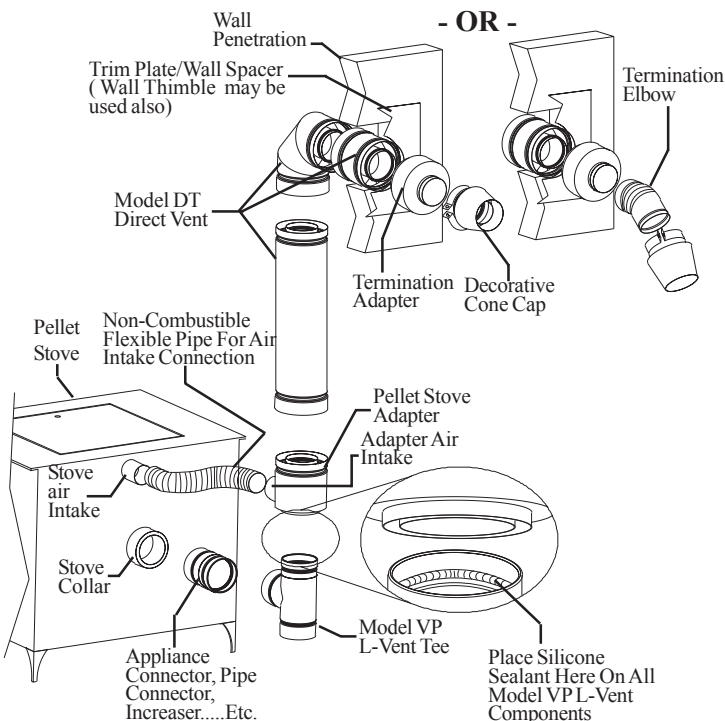
Failure to follow the installation instructions could cause **FIRE, CARBON MONOXIDE POISONING, OR DEATH.** If you are unsure of installation requirements, call the Phone Number listed on the instructions, 1-800-992-8368 or visit [www.selkirkinc.com](http://www.selkirkinc.com).

#### ADAPTERS

##### Pellet Stove Adapter

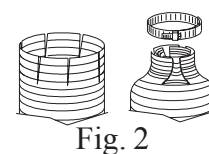
The Pellet Stove Adapter comes with an inlet end that will properly connect to Selkirk Model VP L-Vent and a standard Model DT outlet. It can be recognized by the presence of a 3" diameter air intake for bringing combustion air to the stove.

After obtaining the necessary parts of Model VP L-Vent that will be needed to convert the system to L-Vent, attach them to the pellet stove outlet.



Through the Wall Installation

Fig. 1



Horizontal Installation

Fig. 3

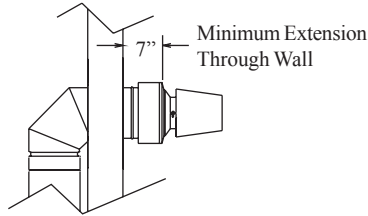
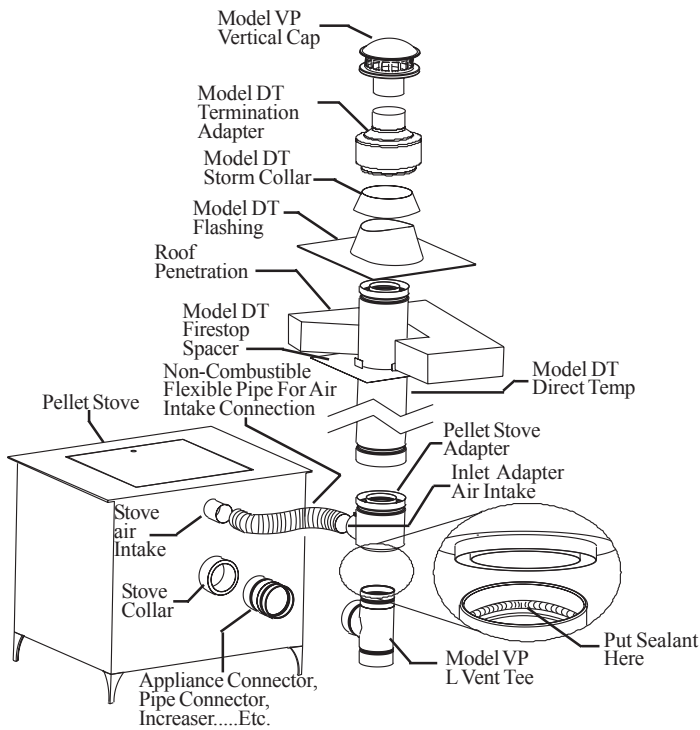


Fig. 4



Vertical Installation  
Fig. 5

Place a bead of high temperature silicone sealant around the perimeter of interior liner (at the end of the outlet) of the section of Model VP that will be connected to the Pellet Stove Adapter. **(Note: All Model VP components should be sealed in this manner.)** See Fig. 1

Connect the pellet pipe to the Model DT Pellet Stove Adapter by pushing the inlet end of the adapter down over the outlet of the pellet pipe until fully seated. Screw the adapter to the pellet pipe using the four 1/4" #8 sheet metal screws provided. Connect other sections of Model DT Direct Vent as needed following Model DT main instructions.

### Connecting to Stove Air Intake

Connection of the stove air intake to the Pellet Stove Adapter (4DT-VPSA) can be made with the use of Selkirk's Combustion Air Kit (4DT-CAK) which comes with a 3 foot long section of aluminum flexible pipe (3" in diameter) and a hose clamp. Connect the flex pipe by inserting it into the combustion air snout of the Stove Adapter. Tighten by using the adapters integrated clamp tabs. Cut the aluminum flex pipe to the length necessary to reach the pellet stove combustion air inlet. Fit the aluminum flex pipe over the pellet stove combustion air inlet.

If the diameter (OD) of the inlet is less than 3", make 4 to 6 three inch long parallel cuts equidistant around the circumference of the flex pipe end. Overlap the cut edges to reduce the flex pipe end diameter to the diameter of the stove combustion air inlet. Secure the flex pipe to the inlet using the hose clamp. (See Fig 2)

Note: The connection can be made as described with most non-combustible 3" flexible pipe and a hose clamp.

### Outlet Termination Adapter

The Termination Adapter comes with a standard Model DT Inlet connection and an outlet that will accommodate Selkirk's Decorative Cone Cap (4DT-DCC) and Vertical Cap (VP-VC). It can be recognized by the presence of an extra housing around the outlet end of the adapter which provides an intake air passage way.

**NOTE: The intake air passage way must remain free from obstruction at all times.**

Connect the adapter to the Model DT by sliding it over the Direct Vent that is either extending through the wall or through the roof depending on the type of installation. For through-the-wall installations using the Termination Elbow (4DT-VPTE), install and attach using one 1/4" stainless steel screw.

Attach the Decorative Cone Cap (4DT-DCC) or Vertical Cap (VP-HC) to complete the system.

See Sections on Vertical Termination, Horizontal Termination and Termination Elbow for more detail.

Reference Figs 1-5 for guidance.

## ENCLOSURES

The vent system should be enclosed in occupied areas, closets, storage rooms, and accessible attics. This does not apply to the portion of the system that is in the same room as the Pellet Stove. Enclosures may be built of ordinary drywall or plywood at the required minimum of 1 INCH AIRSPACE CLEARANCE. There are no special parts to maintain clearance to inside surfaces of walls or enclosures. Therefore, the vent installer should take all necessary precautions to assure that this 1 inch minimum airspace is maintained.

In unoccupied attics, it is very important to be sure that blown-in or other insulation does not come in contact with the vent system. A full enclosure in the attic should extend to the roof. However, it need only be finished well enough to keep insulation and stored furnishings away from the vent system.

**NOTE - Enclosures maintaining the minimum airspace clearance are especially important in attics insulated with CELLULOSE type insulation which may be composed of old newspapers and other cellulose materials which are very susceptible to ignition of a fire.**

Also the enclosure, by protecting the vent from cold outdoor temperatures, may improve appliance operation. A vent system enclosure is also recommended for any exterior systems and portions extending through unheated areas. This enclosure is helpful in reducing internal condensation, residue buildup from products of combustion and metal deterioration.

## VERTICAL TERMINATION CAP (VP-VC)

The Vertical Termination Cap is intended for use in all installations in which the vent terminates in a vertical orientation. The cap provides necessary protection of the vent system from rain and other elements.

To Install: Simply push the cap down onto the Pellet Stove Termination until fully seated. Attach using 4 sheet metal screws provided.

**TERMINATION HEIGHT ABOVE ROOF**—The termination of Model VP should be located a sufficient distance from the roof so that the discharge opening is at least two (2) feet above the roof surface, or nearby structure.

## HORIZONTAL DECORATIVE CONE CAP (4DT-DCC)

The Decorative Cone Cap is designed specifically for use on installations in which the vent terminates in a horizontal orientation on the outside of a structure.

To Install: Slide the Cone Cap onto the Outlet Adapter or Termination Elbow (if using) until fully seated. Using the screw and nut provided, tighten the Cone Cap clamp band around the adapter outlet until a snug fit is achieved.

## TERMINATION ELBOW (4DT-VPTE)

The Termination Elbow is used in through-the-wall installations and provides for redirection of exhaust gases if needed or desired. (See Fig. 1 and Fig.3)

To install: insert the inlet end of the elbow into the outlet end of the Termination Adapter until fully seated. Attach with one stainless steel, #8, 1/4" screw.

## RULES FOR DISTANCES FROM HORIZONTAL EXIT TERMINATIONS

Before beginning any installation which will result in a vent cap being installed adjacent to the side of a structure, check to confirm local code requirements.

At the time of printing of this document, many codes did not include clear and specific guidelines for the termination locations for pellet fired appliance incorporating direct vent systems.

Selkirk recommends installing the referenced terminations in accordance with the guidelines for "Direct Vent" termination locations per NFPA211. These guidelines are:

- The vent terminal of a direct vent appliance with an input of 10,000 Btu/hr (2930 W) or less shall be located at least 6 in. (152 mm) from any opening into a building
- The vent terminal of a direct vent appliance with an input of over 10,000 Btu/hr (2930 W) but not over 50,000 Btu/hr (14,650 W) shall be located not less than 9 in. (229 mm) from any opening through which vent gases could enter a building,
- The vent terminal of a direct vent appliance with an input over 50,000 Btu/hr (14,650 W) shall be located not less than 12 in. (305 mm) from the opening.
- In all cases, the bottom of the vent terminal and the air intake shall be located at least 12 in. (305 mm) above grade."

Alternatively, some code authorities may consider these terminations as “Mechanical Draft Systems” and insist they be located per NFPA211 requirements for same. In such case, the following guidelines for minimum distances from the exit termination to doors, windows, air inlets, etc. are applicable.

Terminations for mechanical draft systems shall be located:

- Not less than 3 ft. (0.91 m) above any forced air inlet located within 10 ft. (3m).
- Not less than 4 ft. (1.2m) below, 4 ft. (1.2m) horizontally from, or 1 ft. (305m) above any door, window or gravity inlet into any building, and
- Not less than 2 ft. (0.6m) from an adjacent building and not less than 7 ft. (2.1m) above grade when located adjacent to public walkways.
- So that flue gases are not directed so they jeopardize people, overheat combustible structures, or enter buildings.

## **MAINTENANCE REQUIREMENTS**

Refer to the appliance manufacturer’s maintenance instructions for recommendations relative to required maintenance of your appliance.

—Model DT L-Vent system requires periodic inspection and cleaning with an appropriately sized brush which will not scratch the inside surface of the flue. **DO NOT USE** chemical cleaners to clean your venting system

—Frequency of necessary vent system cleaning will vary with the appliance, vent system configuration and climate. Certain pellet burning appliances or pelletized fuels may give off more fine dust than others.

—In any case it is recommended that the complete assembly be inspected and cleaned (if any buildup has occurred) at the beginning of each heating season and at least monthly thereafter.

—**TO INSPECT AND CLEAN . . .** Remove the termination cap by removing any screws, then rotating and pulling until it disengages. Remove the tee cap(s) by removing the stop screw and pulling the cap off. Inspect system. If necessary clean by running a brush through the system several times in each direction. **NOTE -** Be sure that tee and termination caps are reinstalled and secured when Inspection/Cleaning is completed and before the system is put back in use.