



# ArcticVent®

## Installation Instructions for Hydronic Units

### AV-HYDR

## Installation Instructions

### General Information

Hydronic ArcticVents are designed for installation by professional tradespersons. This product is designed to be used in a closed loop system utilizing a plate heat exchanger in accordance standard and accepted hydronic heating procedures.

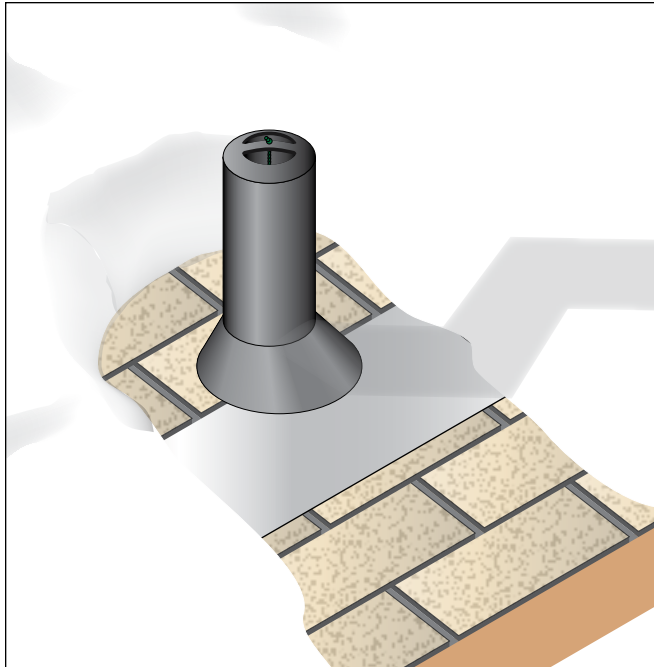
**Important:** The Hydronic ArcticVent is designed to be isolated from the complete hydronic system by use of a plate heat exchanger and circulating pump (not included). The reason for this is because the ArcticVent will be the highest zone or loop in the system. If not isolated, the possibility of air from other heating zones becoming static in the top of the ArcticVent exists and could lead to product failure. We suggest fluid temperatures of 120 degrees with an operating pressure of 15 PSI.

ArcticVent is designed to be used with closed hydronic heating circuits. As the hydronic ArcticVent will be part of an outdoor hydronic heating loop it must contain antifreeze protection in the fluid adequate for the application and environment. The "Typical Hydronic Circuit" on the last page of this document can be used as a guideline for installation.

- Pressure test connections before use.
- Never cut, drill or alter this product in any manner.
- Check connections before use.

**Proper completion of this installation will require the expertise of plumbing/mechanical trades. This is a professional product designed to be installed by licensed tradepersons and must be inspected by the proper mechanical authorities following completion of the finished installation.**

For technical support call Heat-Line a Division of Christopher MacLean Ltd. at (800) 584-4944.



This product must be installed in accordance with governing mechanical, plumbing and building authorities.

**CAUTION!** Failure to properly install and test this product while in use may be hazardous and may result in property damage.

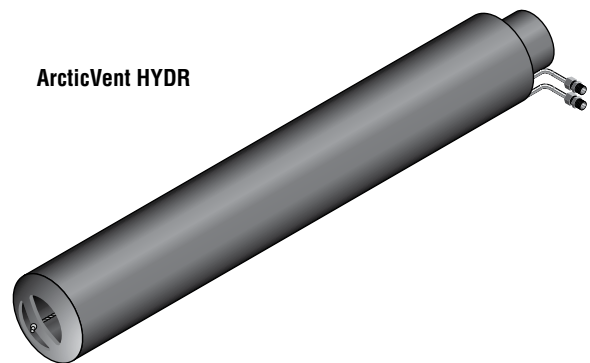
### Kit Contents

Qty	Description
1	ArcticVent HYDR

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ArcticVent HYDR



### WARNING:

This component is a device that must be installed correctly to ensure proper operation. Read these important warnings and carefully follow all of the installation instructions.

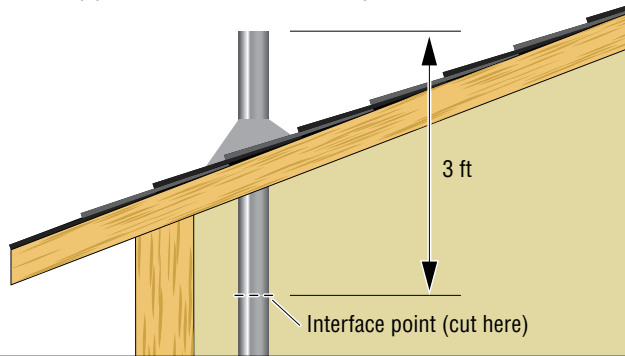
- Component approvals and performance are based on the use of Heat-Line a Division of Christopher MacLean Ltd. specified parts only.
- Use only fire resistant insulation materials, such as fiberglass wrap or flame-retardant foam.
- This is a professional product designed to be installed by licensed tradepersons and must be inspected by the proper authorities following completion of the finished installation.
- Must be installed with water and antifreeze mixture protected to 5 degrees Celsius below minimum outdoor temperature. The antifreeze used should contain copper based inhibitors.

**Plumbing / Mechanical Installation**

**ArcticVent Standard Installation**

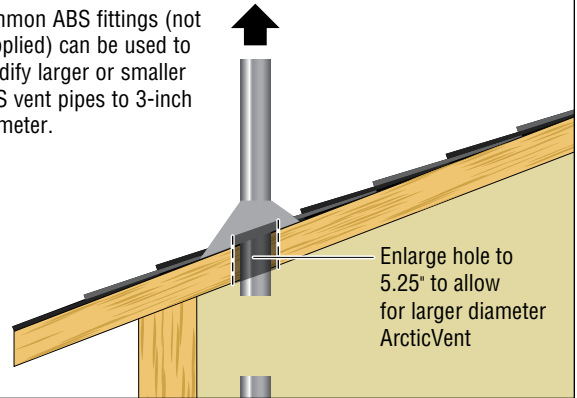
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- Carefully unpack the ArcticVent and inspect for any shipping damage.
- Determine the interface point of the 3-inch stack to the ArcticVent inside the dwelling.
- Use a pipe cutter or saw, cut the existing 3-inch diameter stack.



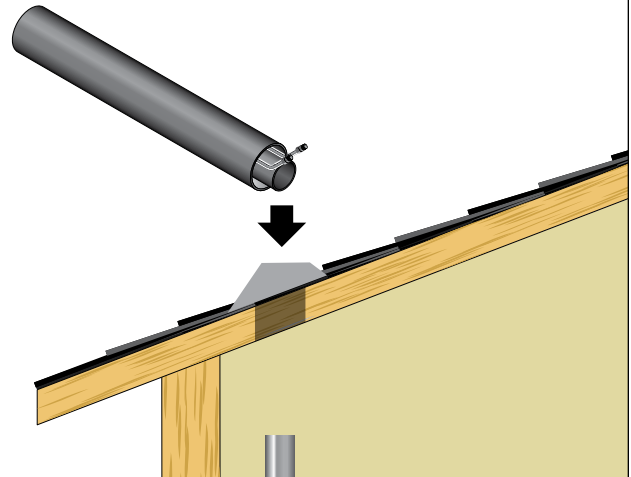
**1**

- Remove cut stack by pulling it up through the roof. Enlarge the hole in the roof (if necessary) to accommodate the larger diameter ArcticVent. Approximately 5.25 inches or as required.
- Common ABS fittings (not supplied) can be used to modify larger or smaller ABS vent pipes to 3-inch diameter.



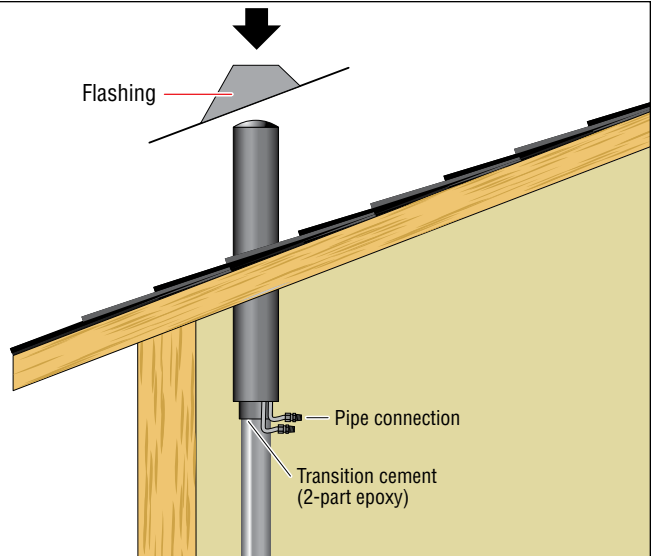
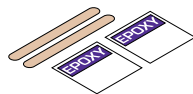
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- Install the ArcticVent from the roof down (coupling down) and connect the ArcticVent bottom coupling to the unheated stack at the interface point using approved transition cement or 2-part epoxy.
- Be careful not to damage plumbing interfaces when passing the vent through structures and while positioning it.
- The ArcticVent has a 5-inch outside diameter and the existing metal or neoprene flashing may require some alteration. Neoprene flashings are usually capable of accommodating the larger pipe diameter with little or no alteration but it may be very tight fitting. Non-toxic lubricants may be used to alleviate the friction while pushing ArcticVent through the Neoprene gasket.



**4**

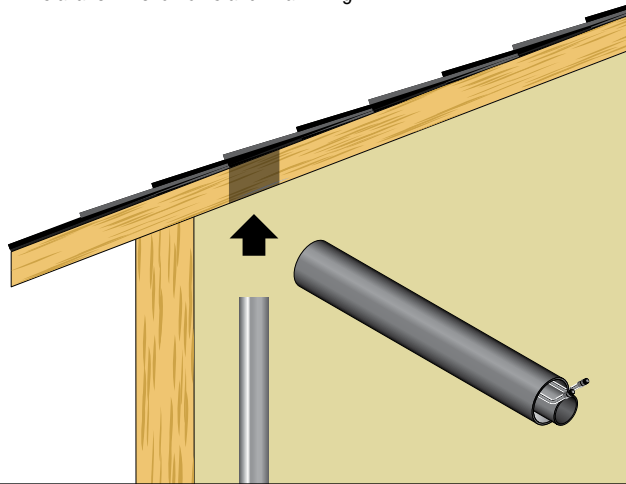
- Install the ArcticVent from the roof down (coupling down) and connect the ArcticVent bottom coupling to the unheated stack at the interface point using approved transition cement or 2-part epoxy. Be careful not to damage the plumbing interfaces when passing the vent through structures and while positioning it.
- Support may be required (not supplied) to carry the added weight (11 lbs) of the ArcticVent. Use common approved construction practices to achieve this if necessary.



## New Installations

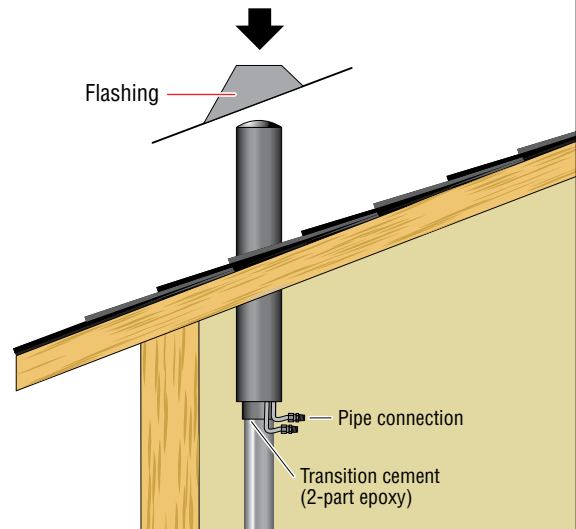
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- On new installations the ArcticVent may be installed from below and pushed up through the roof and by using standard vent stack installation and flashing practices. Always be careful not to damage the plumbing interface fittings during installation movements and final fitting.



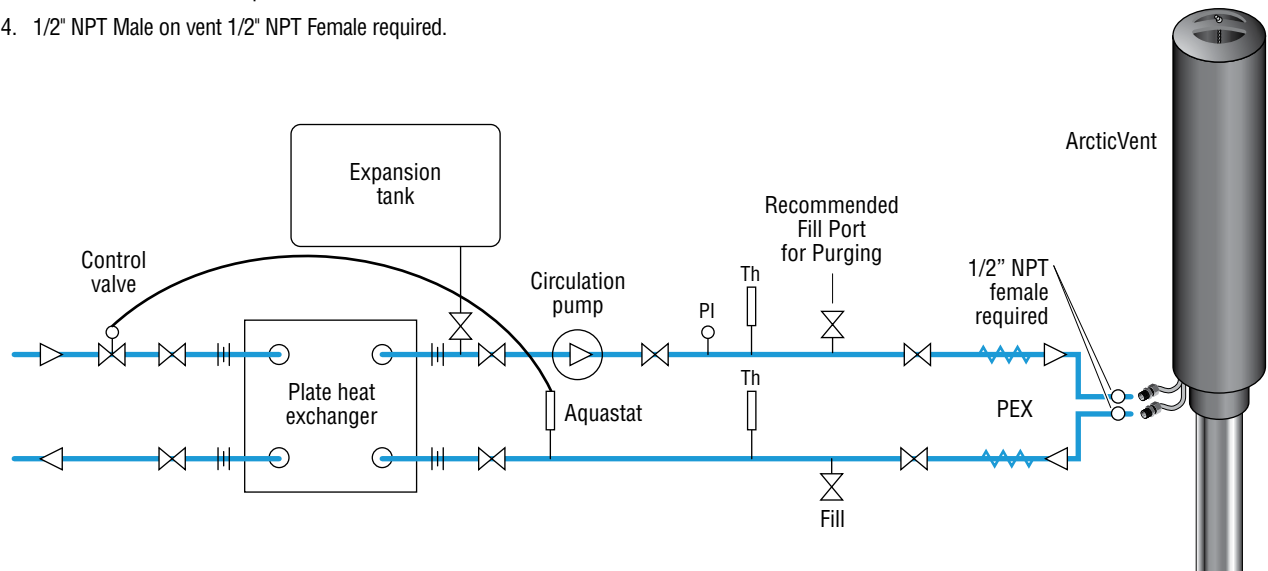
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- If metal flashings or other types of flashings are used, be sure to weatherproof the ArcticVent around the flashing using standard and approved construction practices.



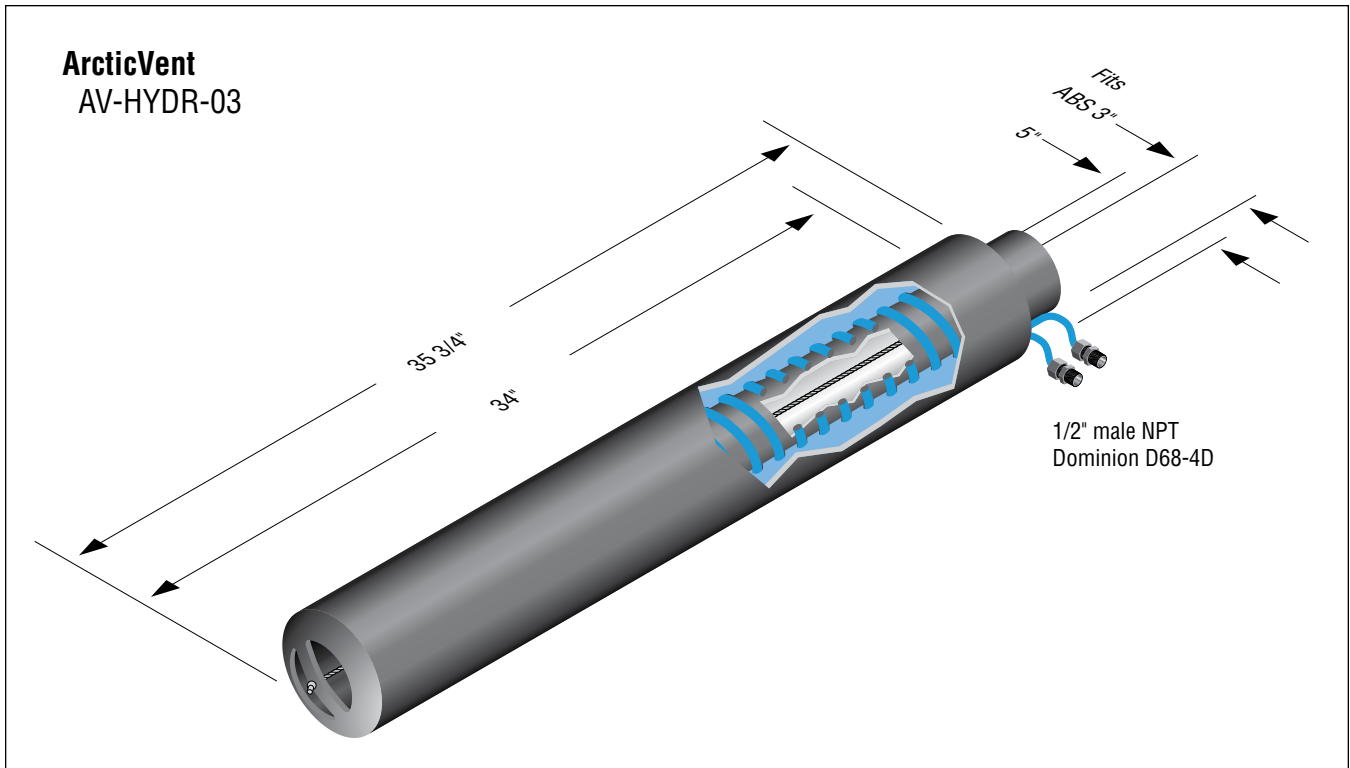
## Installation and Testing

- Aquastat setting 120°F (50°C).
- When temperature reaches 120°F (50°C) in the closed loop the aquastat will signal the control valve to close.
- Pressure in the closed loop to be maintained at 15 PSI.
- 1/2" NPT Male on vent 1/2" NPT Female required.



## SAFETY WARNINGS!

- PRESSURE TEST CONNECTIONS BEFORE USE.**
- NEVER CUT OR ALTER THIS PRODUCT IN ANY MANNER.**
- CHECK CONNECTIONS BEFORE USE.**



**Specifications**

Heating coil:	20 ft X 1/4" copper
Usage:	System designed for use with closed loop and plate exchanger
Recommended temp:	120°F
Weight:	11 lbs

**Copper Heating Coil Tube**

ASTM B75-99	
Outside Diameter:	0.250 inches
Inside Diameter:	0.190 inches
Wall Thickness:	0.030 inches

**Allowable Internal Pressure**

@100°F:	1450 psi
@200°F:	1270 psi
@300°F:	1130 psi

**Mechanical Thread Interface**

1/2 inch Male NPT on vent
1/2 inch Female NPT required

**Tubes**

Outer:	5 inch
Inner:	3 inch
Material:	Lexan EXL9330 Resin
Impact Resistance:	11.0 ft lb/in @ -58°F
Flame Rating:	UL – UL94 (.0590 in): V-0 (.118 in): 5VA

**Suggested Coupling Adhesive**

2-part Epoxy or Loctite E-90FL

**Heat-Line Freeze Protection Systems**

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