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I've enclosed the sections of the UMC & National Fuel Code that apply to venting the PowerMax™ Booster heater through a type II (ventilating) hood system. The key thing here is that the hood system fan is roof-mounted (outside the building) and so the hood and ducting operate under a negative pressure (suction), the hood fan is much more powerful than the PowerMax™ fan and thus, if there are any leaks in the ducting, air will be drawn into the duct and not forced out into the conditioned area. Additionally, the connection between the PowerMax™ vent and the hood system (or pant-leg vent on dishwasher) is an indirect connection and so all exhaust is diluted by the much larger volume of exhausted steam, air and heat from the dishwasher. The PowerMax™ vent is sealed from the outlet of the appliance to its termination at the hood or pant-leg vent, so exhaust can not escape until it is in the "capture zone" of the ventilating system. The PowerMax™'s exhaust is 200° or less which is approximately the temperature of the steam coming off of the dishwasher. Also per section 7.3.5, a proving switch must be installed in the ventilating duct system, to "prove" the existence of draft (suction) in the vent system before allowing the PowerMax™ Booster to be powered. No draft, no booster operation, no exhaust gas.

There is actually another provision in the code that will sometimes allow a single booster heater at the dishwasher to be "free-vented" into the dish room. However, we do not recommend that this be done.

We have hundreds of the PowerMax™ Boosters vented through type II hoods according to our approved specification across the country and have had no problems (odor, sickness, heat) or complaints. Another advantage of this system is that kitchen air balance is affected much less because the PowerMax™ is only intercepting make-up air supplied to the kitchen and on its way out the ventilation hood. No additional make-up air is needed as would be necessary with dedicated outside venting. It also means at least one less roof (or wall) penetration for builders and owners to deal with. I hope this satisfies your concerns. If you have any other questions, please call.

Best Regards,

A handwritten signature in black ink that reads "Stephen Kujawa". The signature is written in a cursive style with a large, stylized initial 'S'.

Stephen Kujawa
President

encl

7.3.3 Design and Construction. Gas utilization equipment required to be vented shall be connected to a venting system designed and constructed in accordance with the provisions of Section 7.4 through 7.15.

7.3.4 Mechanical Draft Systems.

Mechanical or forced draft systems are systems in which a fan blows air into the appliance and through the vent to the outdoors. When a forced draft system is used, appliance leakage will enter the room in which the appliance is installed and can create a hazard. In induced draft systems the fan draws the products of combustion from the appliance into the vent to the outdoors. In both forced and induced draft systems, leakage of combustion products into the building can occur in the portion of the vent downstream from the fan.

- (a) Gas utilization equipment, except incinerators, requiring venting shall be permitted to be vented by means of mechanical draft systems of either forced or induced draft design.
- (b) Forced draft systems and all portions of induced draft systems under positive pressure during operation shall be designed and installed so as to prevent leakage of flue or vent gases into a building.
- (c) Vent connectors serving equipment vented by natural draft shall not be connected into any portion of mechanical draft systems operating under positive pressure.
- (d) When a mechanical draft system is employed, provision shall be made to prevent the flow of gas to the main burners when the draft system is not performing so as to satisfy the operating requirements of the equipment for safe performance.
- (e) The exit terminals of mechanical draft systems shall be not less than 7 feet (2.1 m) above grade where located adjacent to public walkways and shall be located as specified in 7.8(a) and (b).

Sections 7.8(a) and (b) specify location of vent terminals in relation to air inlets, doors, and windows. The information is shown in Figure A.7.8 also.

7.8.5* Ventilating Hoods and Exhaust Systems.

- (a) Ventilating hoods and exhaust systems shall be permitted to be used to vent gas utilization equipment installed in commercial applications.
- (b) Where automatically operated gas utilization equipment is vented through a ventilating hood or exhaust system equipped with a damper or with a power means of exhaust, provisions shall be made to allow the flow of gas to the main burners only when the damper is open to a position to properly vent the equipment and when the power means of exhaust is in operation.

7.4

Table IX Type of Venting System
Gas Utilization Equipment

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7.3.6 Circulating Air Ducts and Plenums. No portion of a venting system shall extend into or pass through any circulating air duct or plenum.

7.4 Type of Venting System to be Used.

7.4.1 The type of venting system to be used shall be in accordance with Table IX.

7.4.2 Plastic Piping. Approved plastic piping shall be permitted to be used for venting equipment listed for use with such venting materials.

7.4.3 Special Gas Vent. Special gas vent shall be listed and installed in accordance with the terms of the special gas vent listing and the manufacturers' instructions.

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Listed eq
with dr
Equipme.
Type I

Listed ve
Category

Category

Category

Incinera
Incinera

Equipme
conve
Unlisted
oil-bu
Listed c
oil-bu
Combin
burnir

Equipm
chimn
Unlistec
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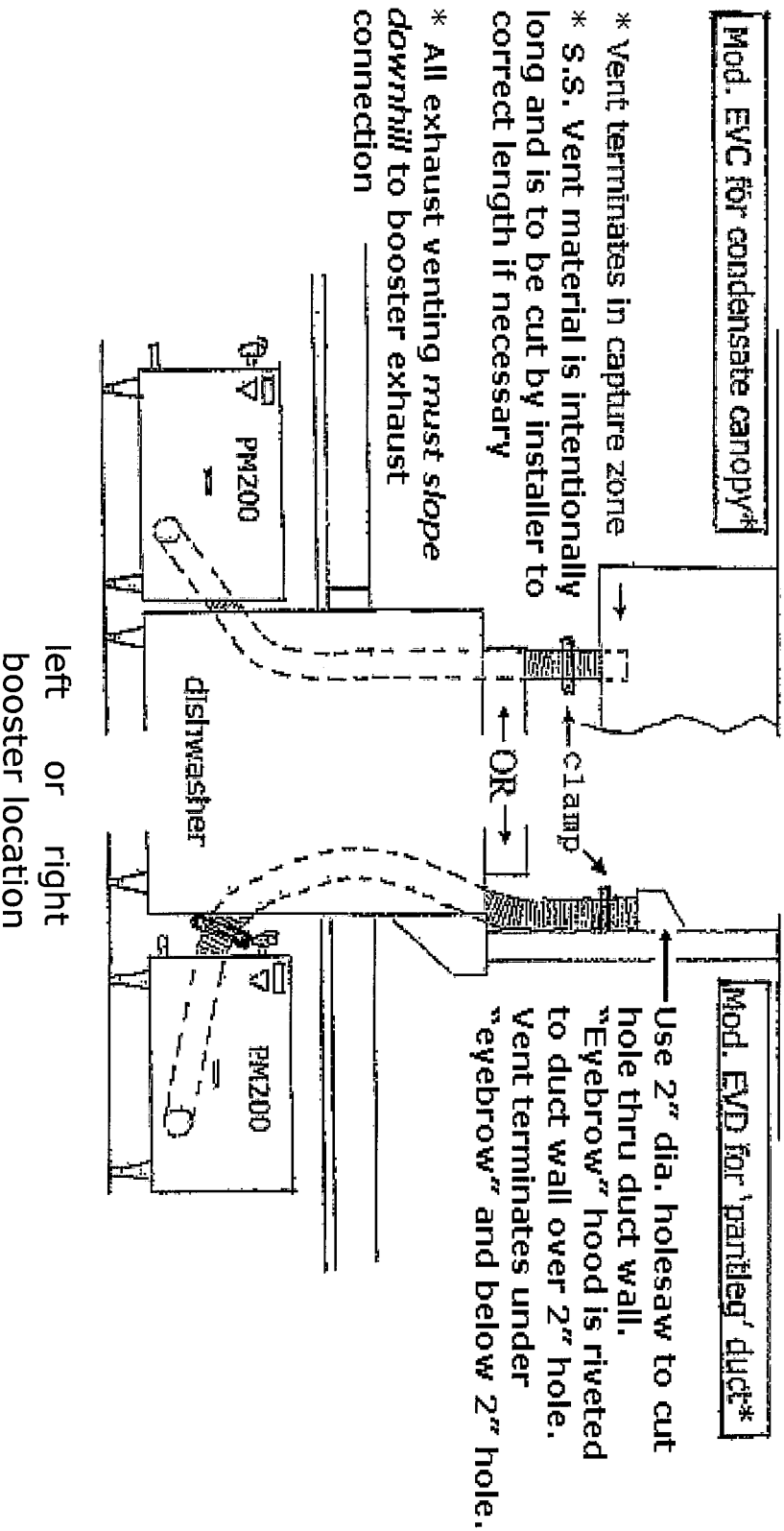
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(a) l
listing

PowerMax200™ E-Z Vent Kit Models EVC and EVD



- * Vent terminates in capture zone
- * S.S. Vent material is intentionally long and is to be cut by installer to correct length if necessary

* All exhaust venting must slope downhill to booster exhaust connection

left or right
booster location

Model **EVC** includes:

- 10 feet of 3" stainless steel flex duct
- 1-Stainless steel flue collar adaptor
- 1-Stainless steel duct attachment clamps
- 1-Draft proving switch
- 2-Stainless steel wall standoff (1" clearance) bracket

Model **EVD** includes:

- 10 feet of 3" stainless steel flex duct
- 1-Stainless steel flue collar adaptor
- 1-Stainless steel duct attachment clamps
- 1-Draft proving switch
- 1-Stainless steel eyebrow hood and s/s rivets.
- 2-Stainless steel wall standoff (1" clearance) bracket

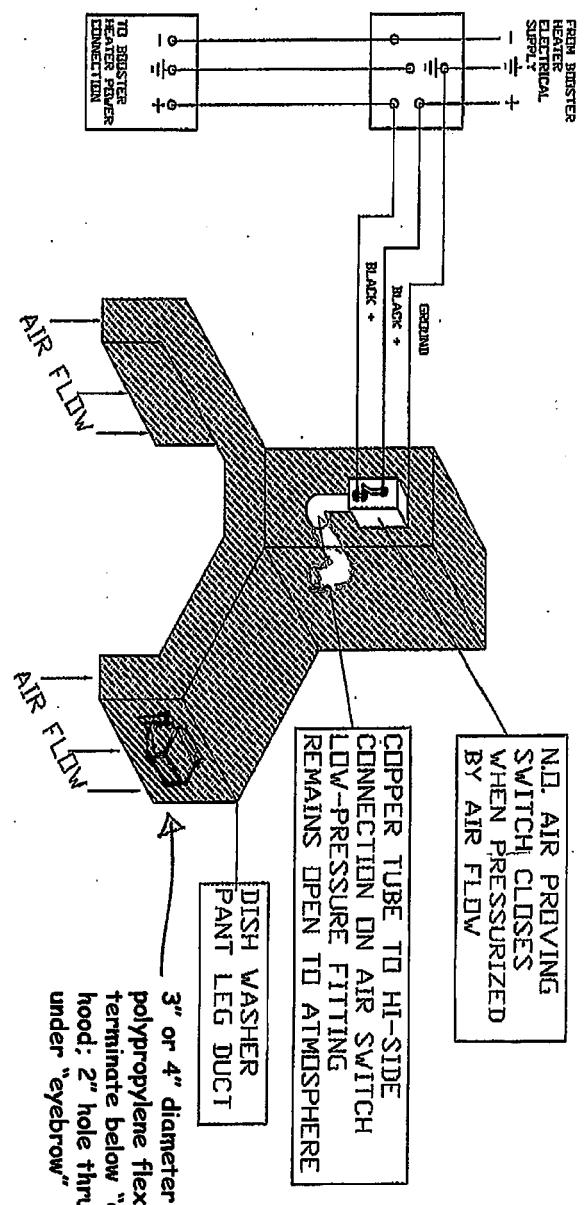
*Conforms to Uniform Mechanical Code Sec. 916 & 917 and National Fuel Gas Code Sec. 7.3.4 & 7.3.5.
Confirm acceptance with local authority



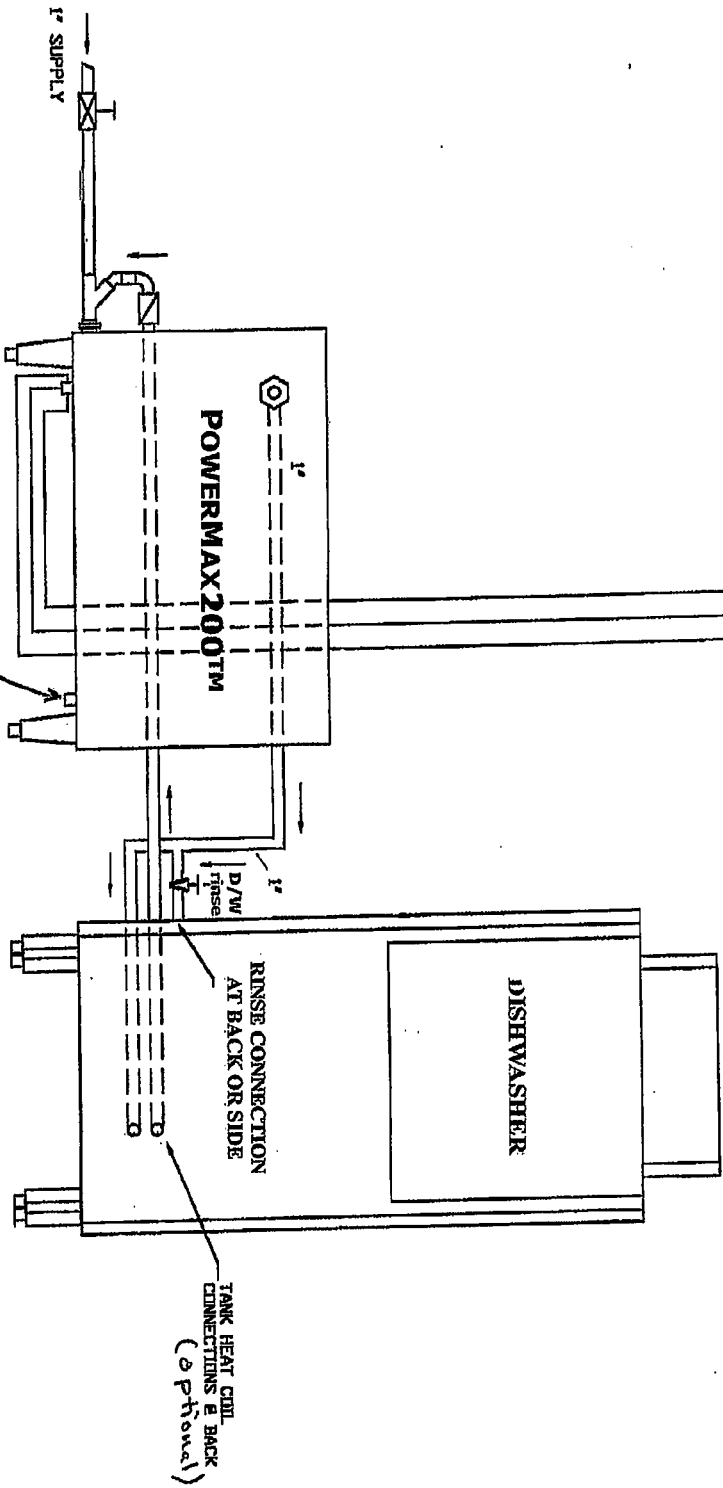
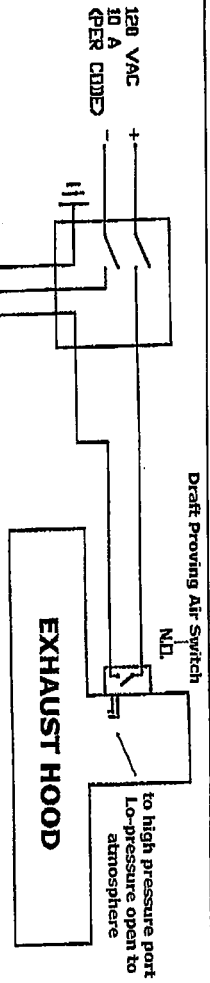
Vanguard Technology Inc., Eugene, OR 97402 - 800-624-4809

R10/08

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



VANGUARD TECHNOLOGY			
SIZE	FSCM NO.	DWG NO.	REV
SCALE	SHEET		



$\frac{3}{4}$ " N.G. supply,
 $\frac{1}{2}$ " psig.
 200K btah

PIPING & WIRING IS THE SAME WHEN USING A PANT LEG VENT.
 EYEBROW HOOD IS PROVIDED FOR PANTLEG APPLICATION. SEE DETAILS

PIPING AND ELECTRICAL ARE
 SCHEMATIC REPRESENTATION ONLY