

Premium Air Systems, Inc.

1051 Naughton
Troy, MI 48083

Tel: (248) 680-8800
Fax: (248) 680-8808

www.premiumair.net

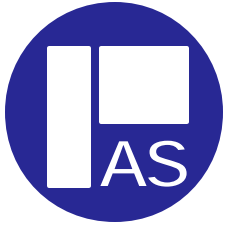
HV Series Direct Fired Make-up Air Units

From 1,200 to 7,500 CFM

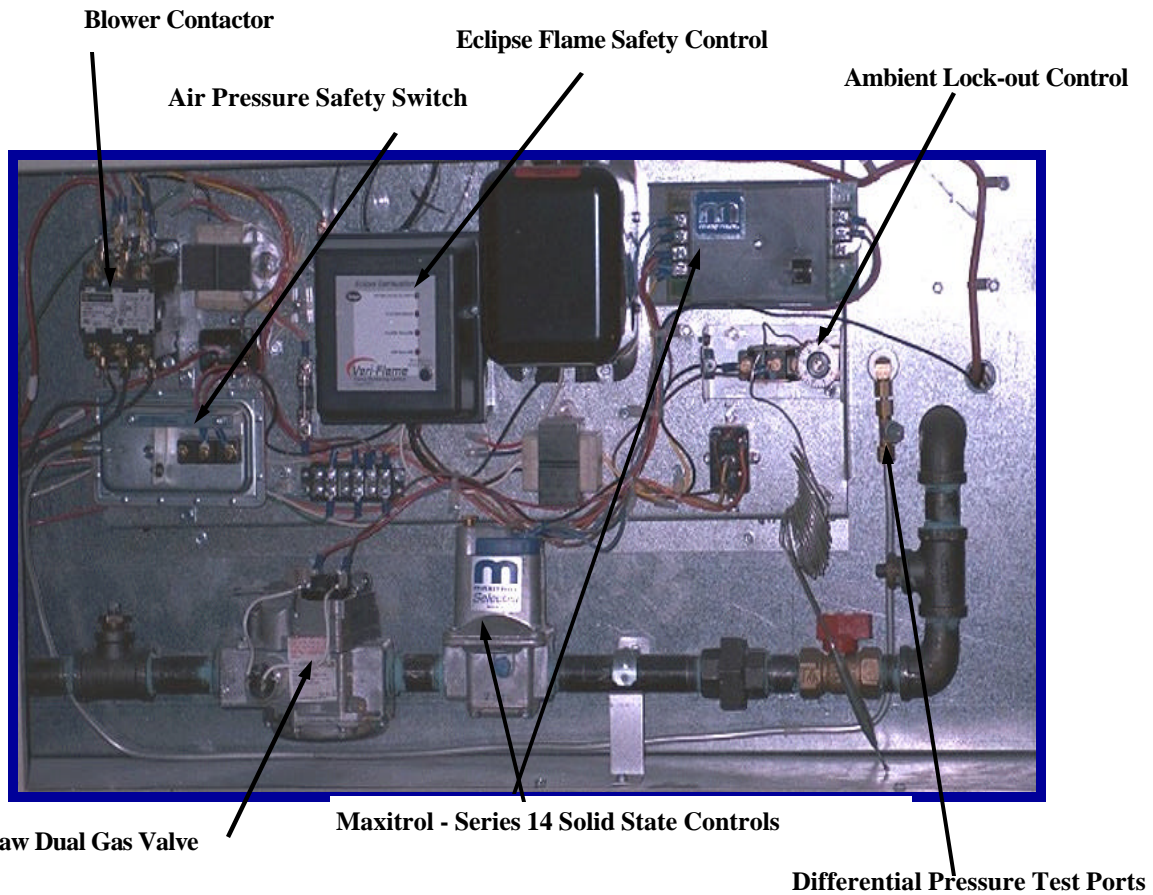
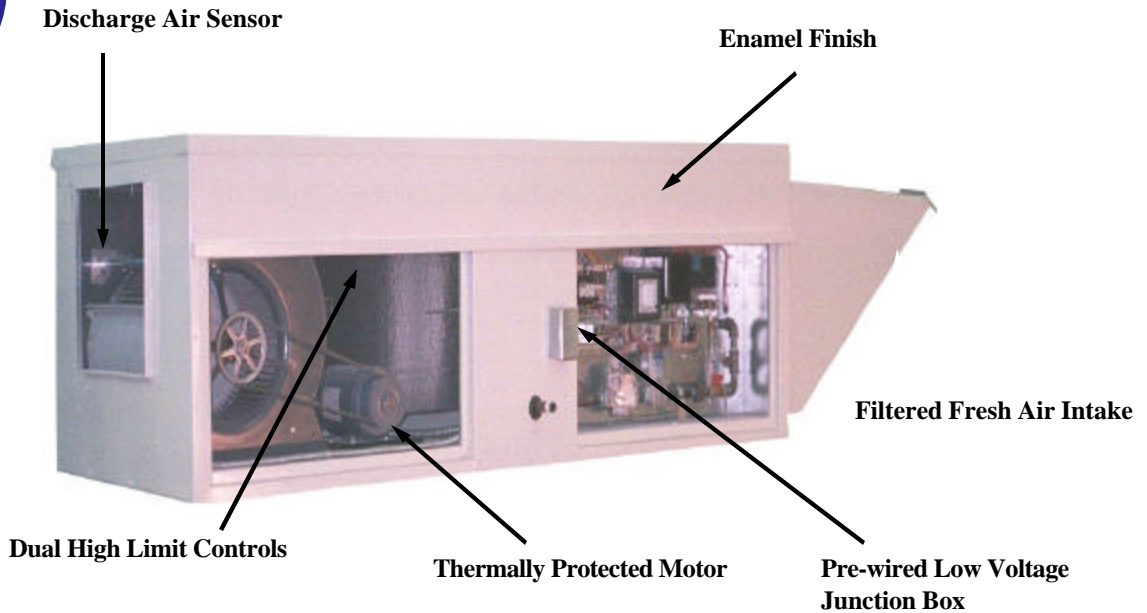


The Premium Air Systems HV Series offers these advantages....

- Convertible end or down discharge
- Pre-piped and wired for quick and economical installation
- Remote ignition reset
- Natural gas operation to 650 MBH
- Listed for indoor or outdoor installation
- U.L. Listed thermally protected motors
- Low voltage controls
- One year parts warranty
- Make-up air units in stock for “quick ship”



HV Series - Standard Features



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Installation

Mechanical Installation

The Premium Air heated make-up air unit must be carefully hoisted to the intended place of installation. The unit must be installed either on the Premium Air Systems supplied knock down curb or roof stations for roof top installations, or the Premium Air Systems solid base for slab/ground mounting applications. The roof top curb or stations provide a minimum of 14" height above the roof surface. The installing contractor must make sure that the intended location provided by the owner or the owner's agent must be accessible for connecting ductwork to be fastened to the blower discharge air side of the unit. If the curb is used for a down discharge application, the roof curb must be roofed in watertight (a roofer is strongly recommended) and the provided gasket applied to the top edge of the curb prior to setting the unit.

All connecting ductwork must be sized, manufactured, and installed per all applicable state and local codes. The end discharge duct must be insulated and watertight. The installing contractor must ensure the heated make up air unit is installed in a leveled position for proper installation. **All warranties are negated if the unit is improperly installed.**

Once the unit is set, the lift brackets can be removed and discarded, however, all the screws must be reinstalled to assure the water tightness of the unit.

Plumbing Installation

The Premium Air heated make-up air unit's gas inlet is located between the two metal access doors. The gas piping size for the units are as follows:

<u>Unit Model</u>	<u>Gas Pipe Size (NPT)</u>
HV1000	3/4"
HV2000	1"

Only approved gas piping is to be installed on the units. All connections to the units must be sealed using Teflon tape or sealing pipe dope. The installing contractor shall provide a manual shut-off valve to be installed before the gas inlet on the unit to allow for shut-off of the gas supply to the unit when service is required. To measure the gas pressures, there are two (2) 1/4" taps located on the manifold before the regulator and after the valves. It is required that the unit be disconnected to any gas supply during pressure testing in excess of 1/2 psi. The unit must have 7 1/2" water column gas pressure supplied and this pressure must be checked upon start-up.

Electrical Installation

Consult the performance data label on the unit and the chart on the next page for electrical connection data. The unit must be electrically grounded in accordance with the National Electrical Code and a neutral wire is required. If the site has a “wild leg” (240 volt to ground), this wild leg must be wired to the centerline terminal of the blower contactor (the controls are 115 volt and are supplied off the two outside line terminals of the blower contactor). The disconnect must be field installed on the panel between the two access doors and wired to the line side of the contactor, neutral lug, and ground lug. The field wired control wiring will terminate in the weather tight box located on the access door side of the unit (follow the wiring diagram for options and wiring the remote panel.)

The blower assembly must be free from any clutter and any loose parts. The blower rotation must be checked to be rotating in the direction as shown by the directional arrow on the blower. If the unit is not rotating properly, on three phase units interchange any two power legs to reverse the rotation. Motor amp draw must be checked to verify the motor is not exceeding the stated full load amps (FLA) plus service factor as noted on the motor. Contact the factory if unit is exceeding full amp loads.



Operation Basics

Sequence of operation

The switchgear breaker must be on and the field installed safety disconnect must be closed to energize the make up air unit.

The System On/Off switch renders the make-up air unit off in the off position. Turning the switch to the on position energizes the make-up air unit to open the outside air damper (optional), and energize the blower to provide outside air to the conditioned space. The optional fan interlock relay would replace this on/off switch and, when the exhaust fan is turned on, the make-up air unit will automatically energize.

The Heat off mode (selected at the remote panel) allows the make-up air motor starter to energize, bring on the blower motor, and the outside air damper (optional) to open without the heating circuit/components being enabled.

The Heat on mode allows the same operation of the make-up air and includes the heating process. The ambient thermostat monitors outside air temperature and, below the set point, energizes the heating circuit. The modulation system senses discharge air temperature at the blower vs. the selector temperature set point and regulates the flame accordingly. In the event of blower overload or failure, the air pressure switch disables the entire heating circuit.

Unit Reset

If the flame safety control locks-out (no heat in the heating mode), the unit can be reset with the reset switch (push-button). The reset switch resembles the one shown on this page. Press reset once to reset unit heating.



MAKE-UP AIR UNIT WARNING AND CAUTION NOTATIONS

FOR YOUR SAFETY

IF YOU SMELL GAS:

1. OPEN WINDOWS
2. DON'T TOUCH ELECTRICAL SWITCHES
3. EXTINGUISH ANY OPEN FLAME
4. IMMEDIATELY CALL YOUR GAS SUPPLIER

FOR YOUR SAFETY

THE USE OR STORAGE OF GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN OPEN CONTAINERS IN THE VICINITY OF THIS APPLIANCE IS HAZARDOUS.



NOTICE



REFER TO THE HEATER PLATE FOR DETERMINING THE MINIMUM GAS SUPPLY PRESSURE FOR OBTAINING THE MAXIMUM GAS CAPACITY FOR WHICH THIS HEATER IS SPECIFIED.



WARNING



IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE DAMAGE, INJURY OR DEATH READ INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.



CAUTION



THIS HEATER REQUIRES AT LEAST 4 C.F.M. OUTSIDE AIR PER 1,000 BTU PER HOUR. FOR DETAILS AND RECIRCULATION APPLICATION LIMITATIONS, SEE MANUFACTURER'S INSTRUCTIONS. MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.



PREMIUM AIR SYSTEMS

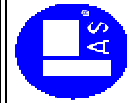
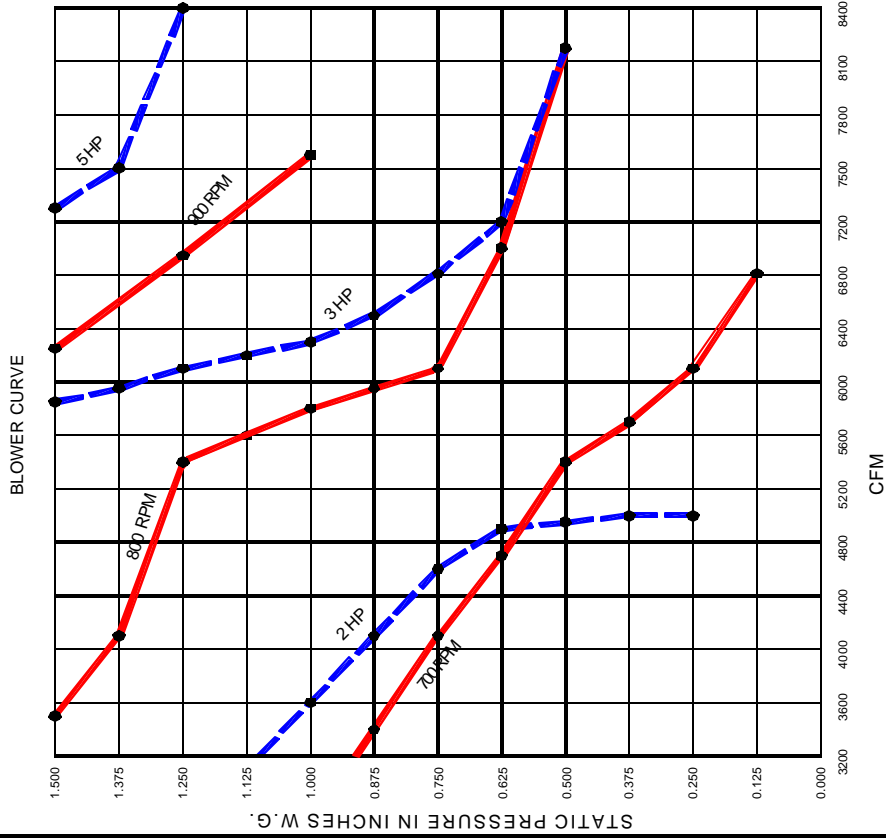
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PREMIUM AIR SYSTEMS

HV2000



LISTED
FILE #MH 26052



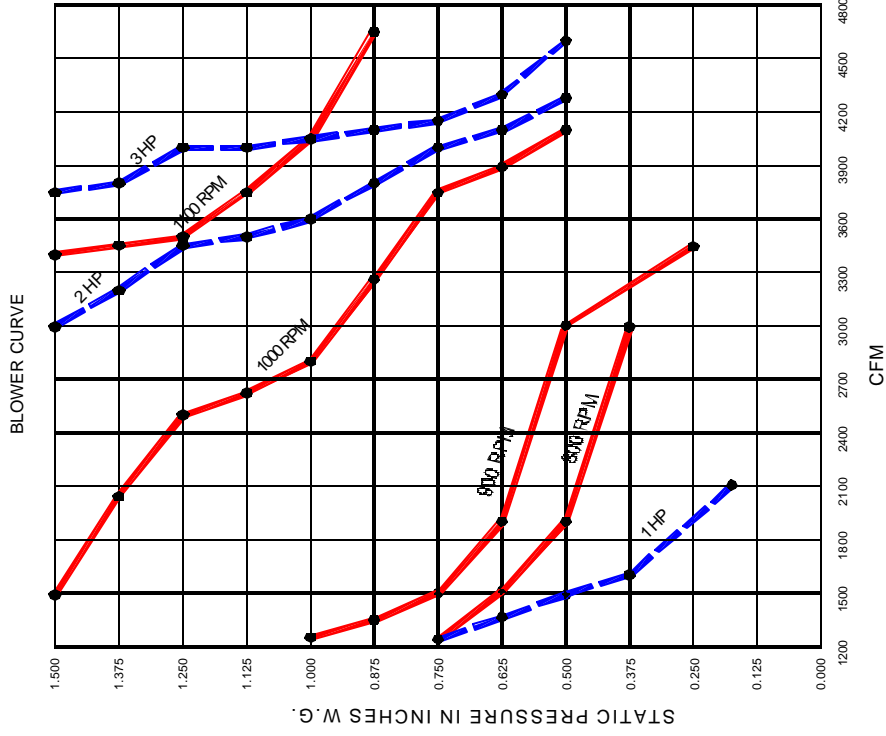
PREMIUM AIR SYSTEMS

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DATE: 01/29/01

PREMIUM AIR SYSTEMS

HV1000



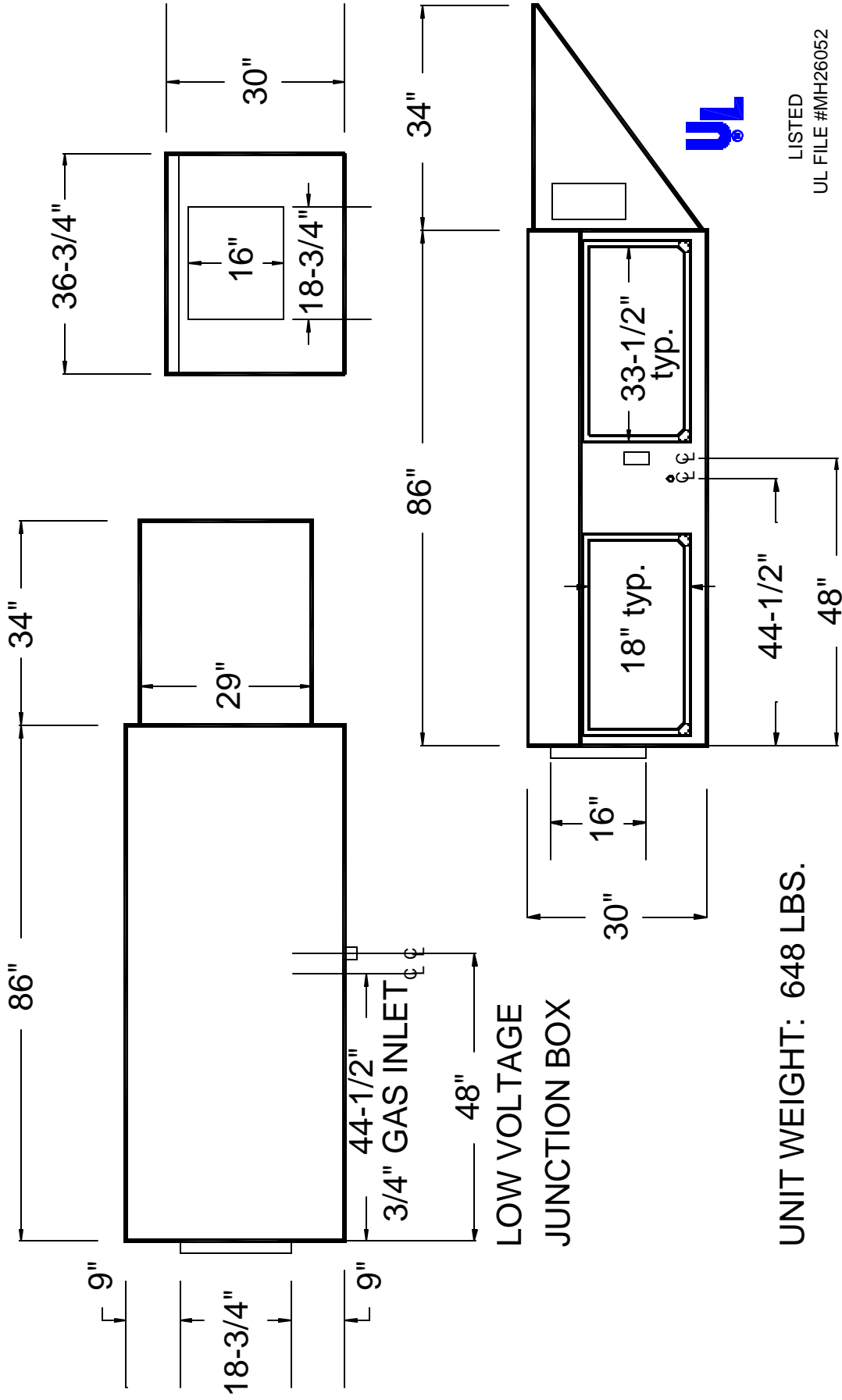
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PREMIUM AIR SYSTEMS

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**HV1000 SERIES DIRECT FIRED
MAKE-UP AIR UNITS**

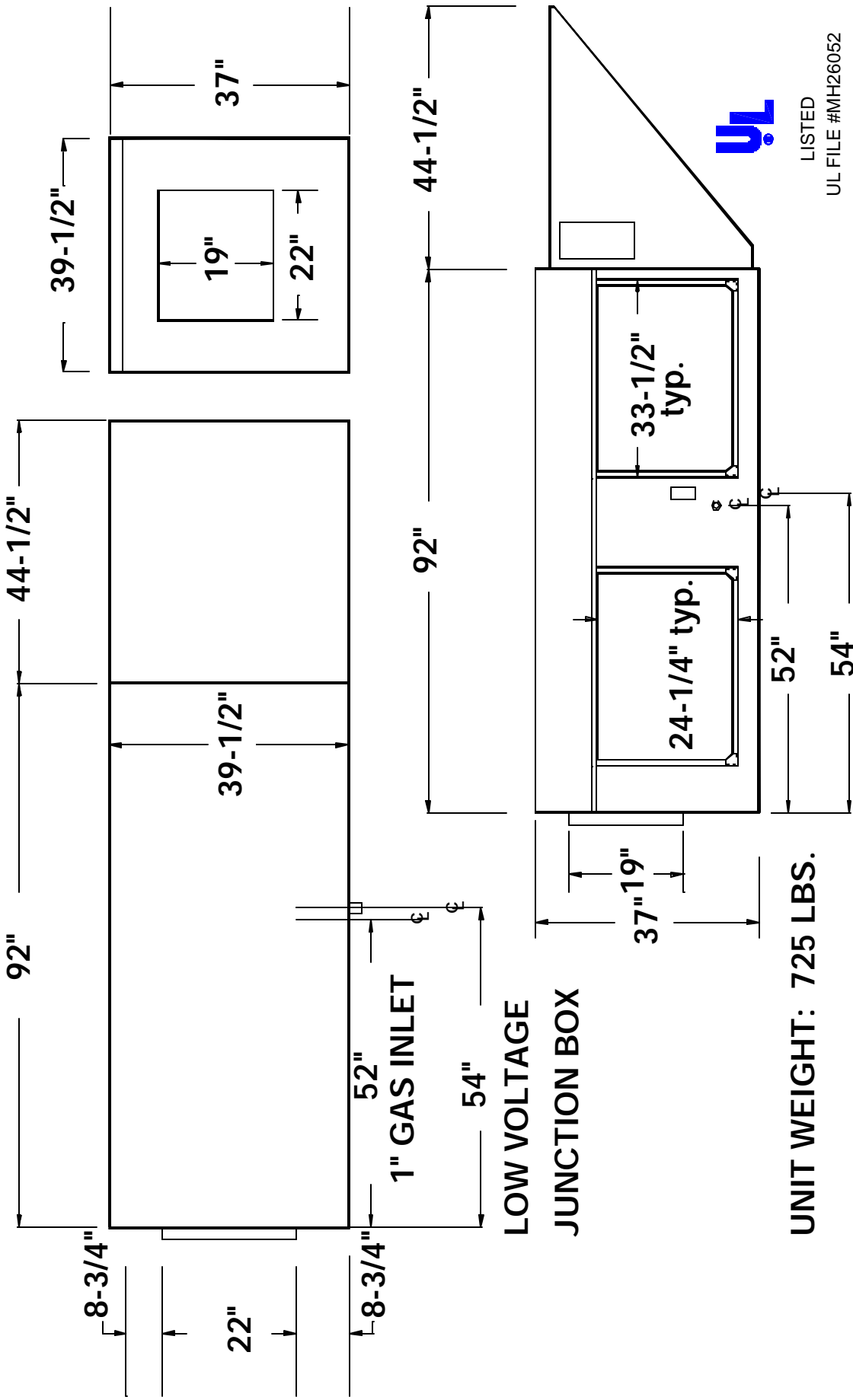
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REVISION DATE:

DRAWN BY: K.COMITO, C.F.S.P.

DRAWING SCALE: 1/2" = 1' - 0"

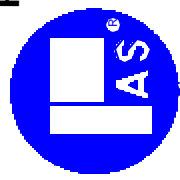


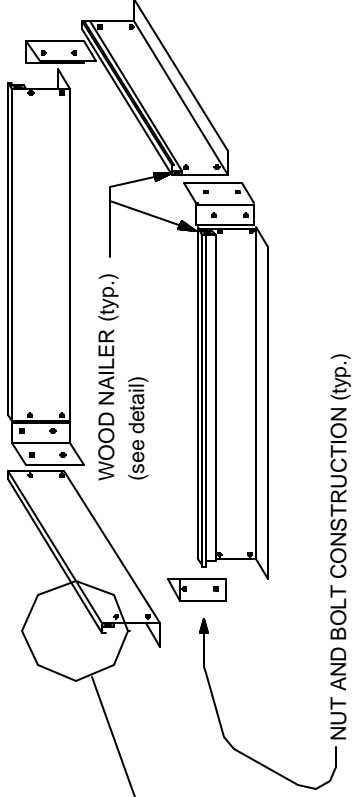
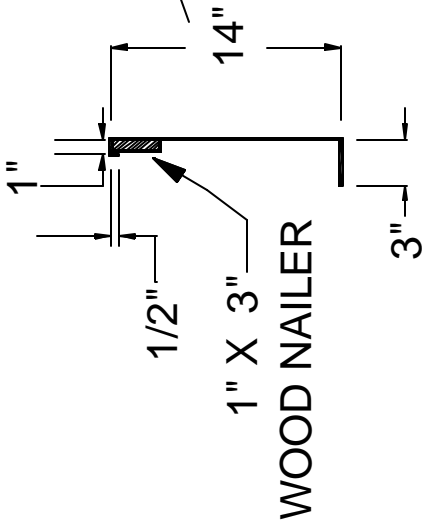


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**HV2000 SERIES DIRECT FIRED
 MAKE-UP AIR UNITS**

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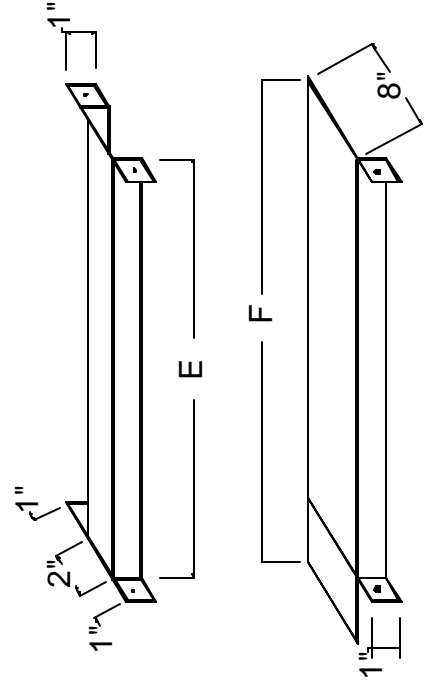
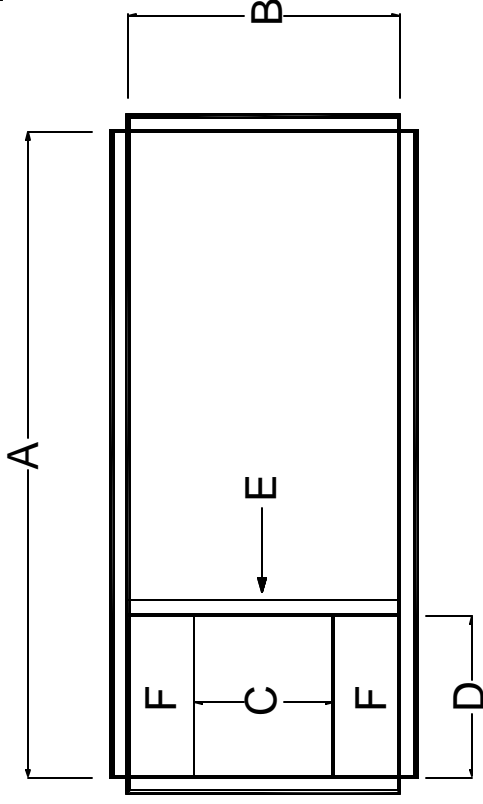




GENERAL CONSTRUCTION
SHIPPED "KNOCKED DOWN"
NOT TO SCALE

CURB DIMENSIONS

UNIT	A	B	C	D	E	F	WGT.
HV1000	81"	31"	20"	19"	30-7/8"	21"	80 lbs.
HV2000	88"	35"	22"	21"	34-7/8"	23"	95 lbs.



LISTED
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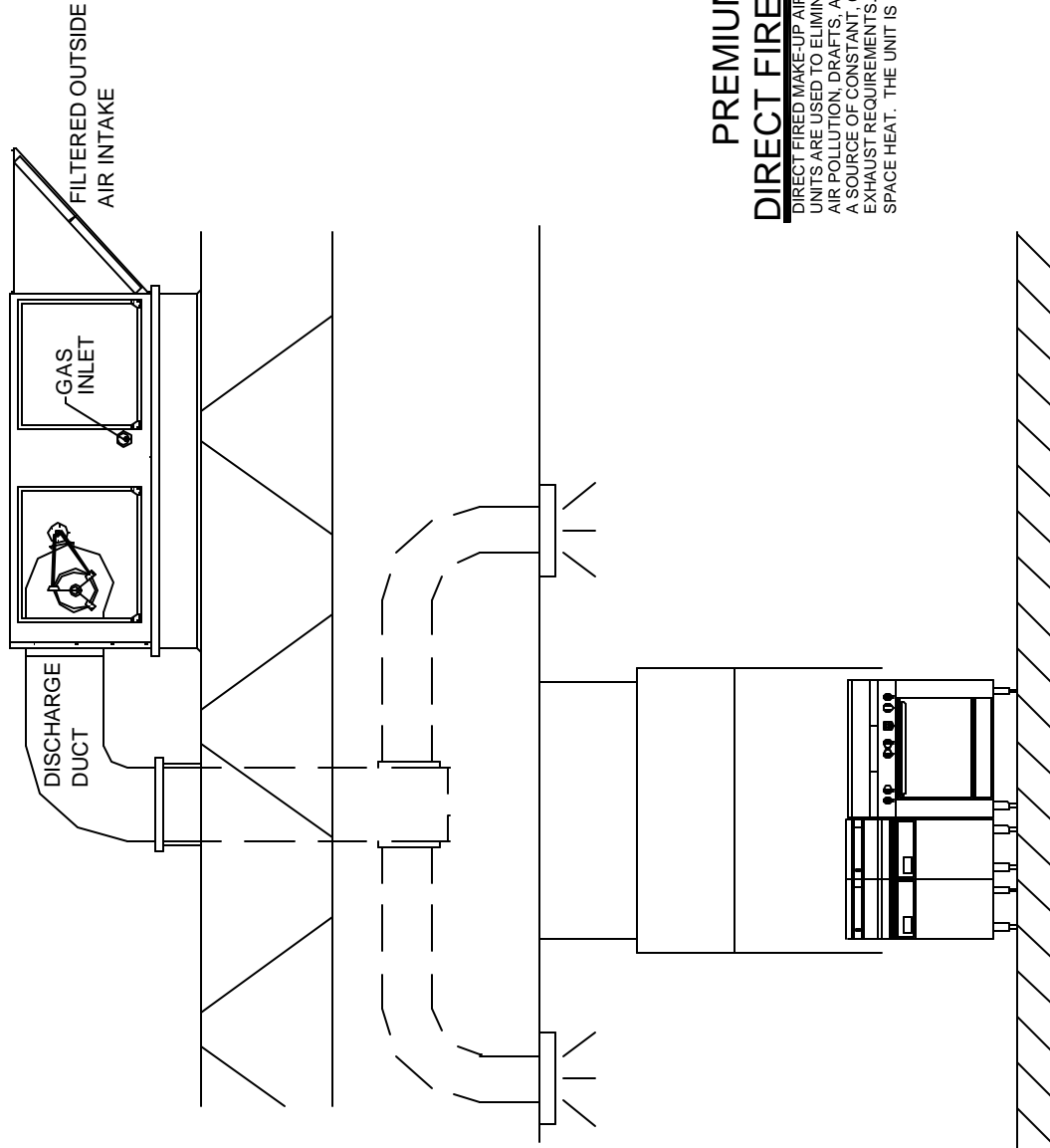
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**HV MAKE-UP AIR UNITS
CURB DETAILS**

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SIDE VIEW END DISCHARGE



LISTED

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PREMIUM AIR SYSTEMS DIRECT FIRED MAKE-UP AIR UNITS

DIRECT FIRED MAKE-UP AIR UNITS PROVIDE FOR A BALANCED SYSTEM. UNITS ARE USED TO ELIMINATE PROBLEMS WITH NEGATIVE AIR PRESSURE, AIR POLLUTION, DRAFTS, AND EMPLOYEE DISCOMFORT. UNITS PROVIDE A SOURCE OF CONSTANT, COMFORTABLE, FRESH SUPPLY AIR TO MATCH EXHAUST REQUIREMENTS. THE TEMPERED AIR MAY BE ALSO USED FOR SPACE HEAT. THE UNIT IS NOT INTENDED BE A RECIRCULATING TYPE UNIT.

HV SERIES DIRECT FIRED MAKE-UP AIR UNITS ROOF MOUNTED - END DISCHARGE APPLICATION

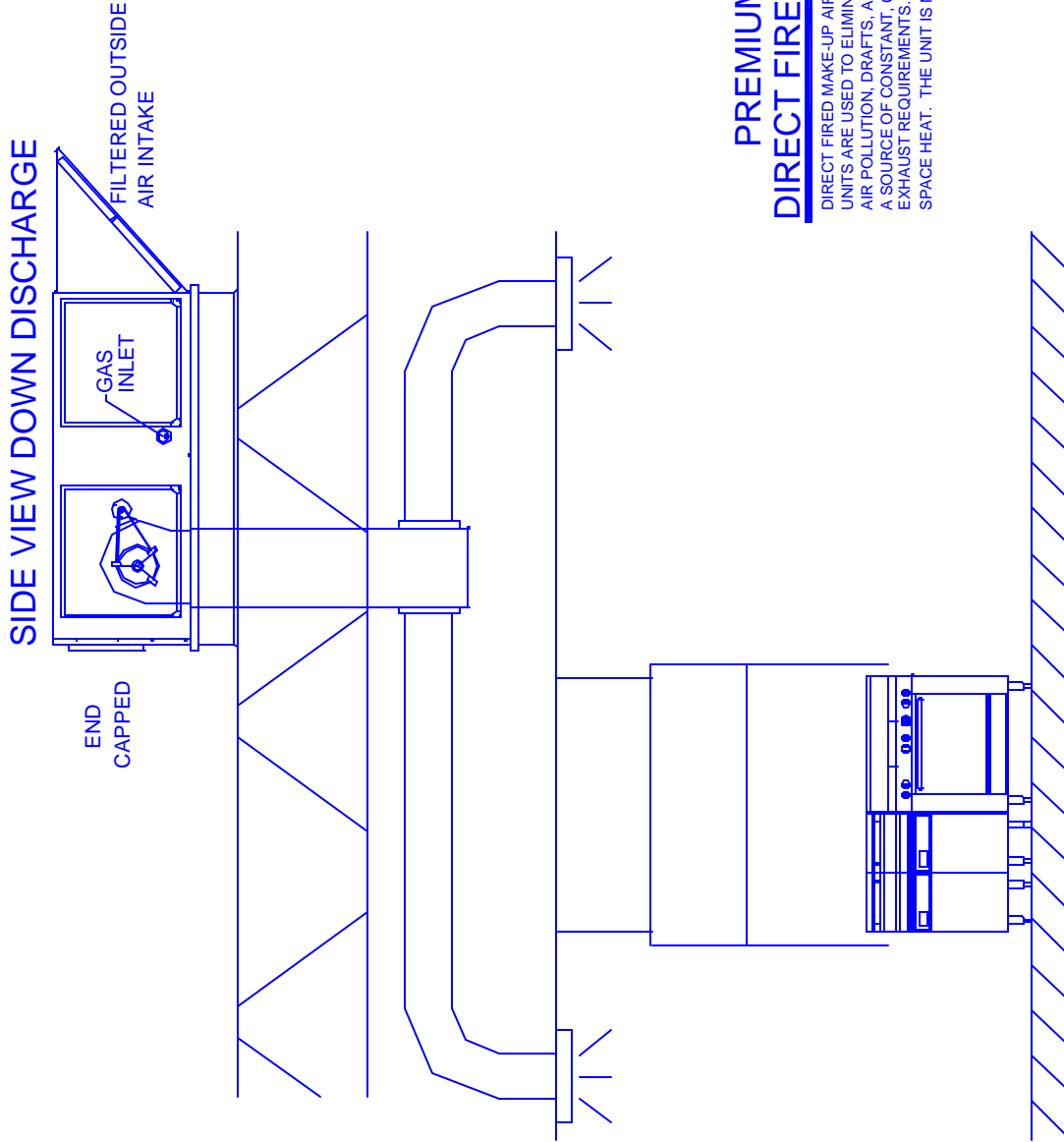
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**HV SERIES DIRECT FIRED
MAKE-UP AIR UNITS
ROOF MOUNTED - DOWN
DISCHARGE APPLICATION**

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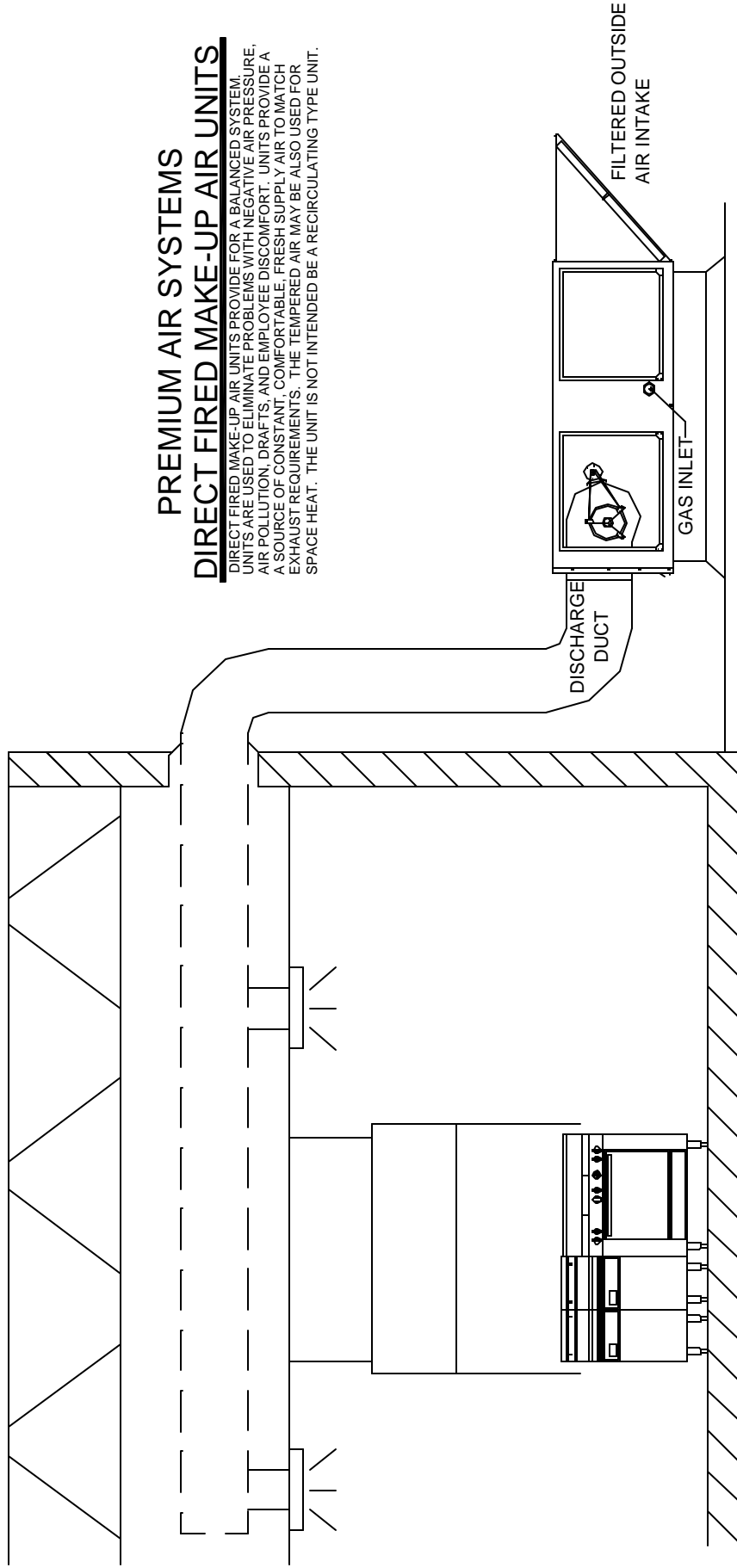


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SIDE VIEW END DISCHARGE



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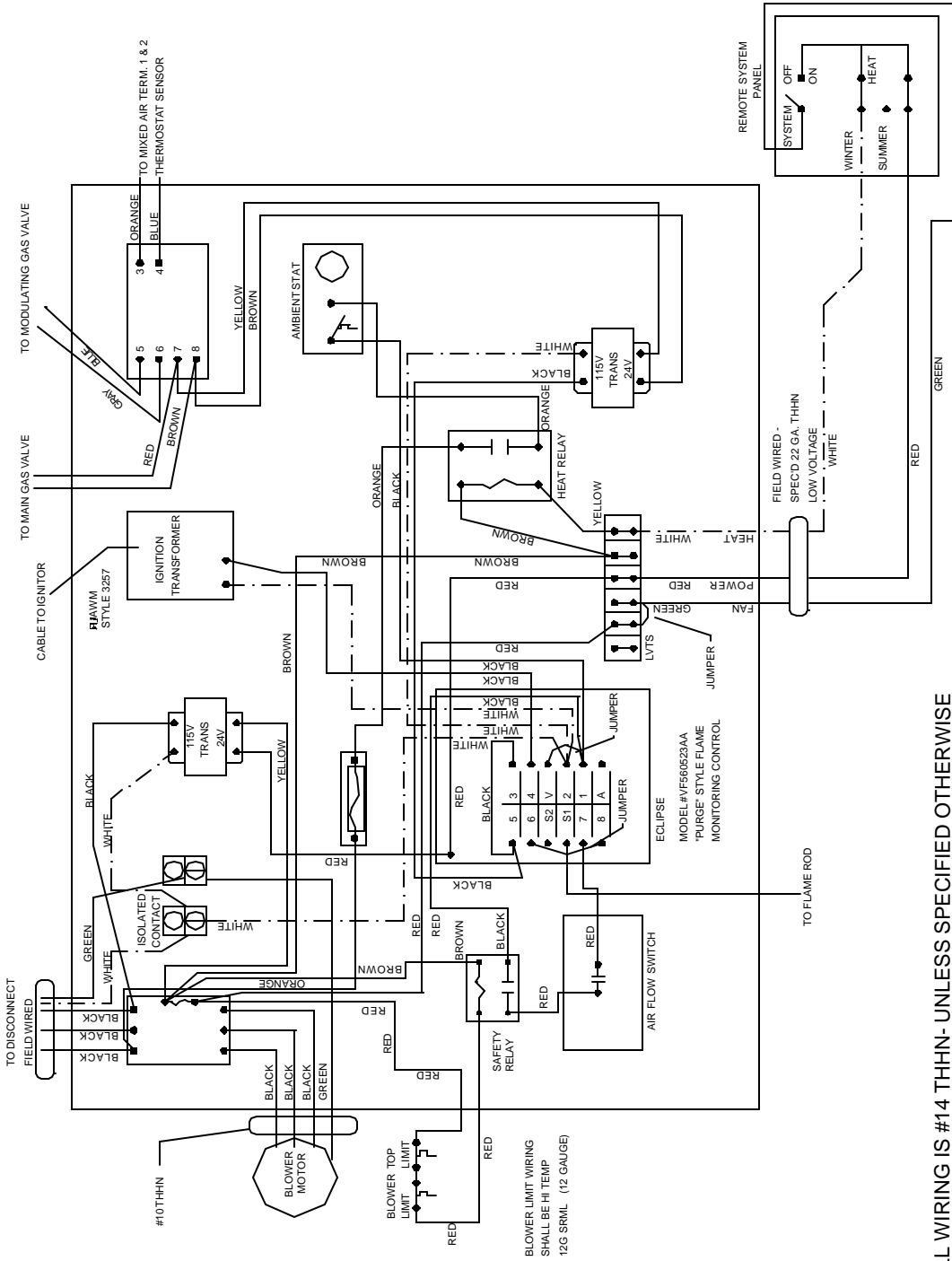
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HV SERIES DIRECT FIRED
MAKE-UP AIR UNITS
SLAB MOUNTED - END
DISCHARGE APPLICATION

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ALL WIRING IS #14 THHN- UNLESS SPECIFIED OTHERWISE



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PREMIUM AIR SYSTEMS
1051 NAUGHTON, TROY, MI 48083
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**STANDARD WIRING DIAGRAM
HV SERIES MAKE-UP AIR UNITS**

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