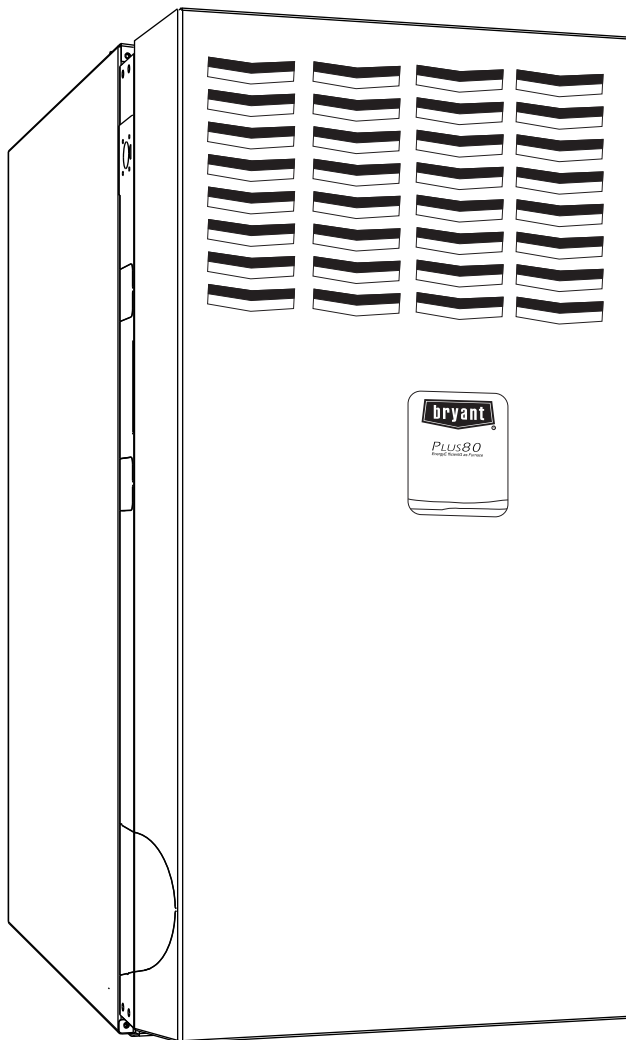


311AAV/311JAV
4-Way Multipoise Induced Combustion Gas Furnace
Sizes 045 thru 155
Series D



Product Data

LEGACY™
LINE



A02180

The Plus 80 Deluxe 4-Way Multipoise Gas Furnace offers outstanding features in an 80% AFUE furnace. Deluxe features include: third fan relay for discrete continuous fan speed, the ability to change continuous fan speeds from the thermostat (Fan on Plus™), dehumidify mode, standard Media Filter Cabinet, fault code storage, and more. The Plus 80 is very quiet thanks to a new combustion design that eliminates noise, rather than just muffle or box it in. Applications are easy with 4-way multipoise design, through-the-furnace downflow venting, 13 different venting options, and a door designed for easy service access. An inner blower door is provided for tighter sealing in sensitive applications. The 311AAV/JAV furnace is approved for use with natural or propane gas, and the 311JAV is approved for use in Low NOx Air Quality Management Districts.

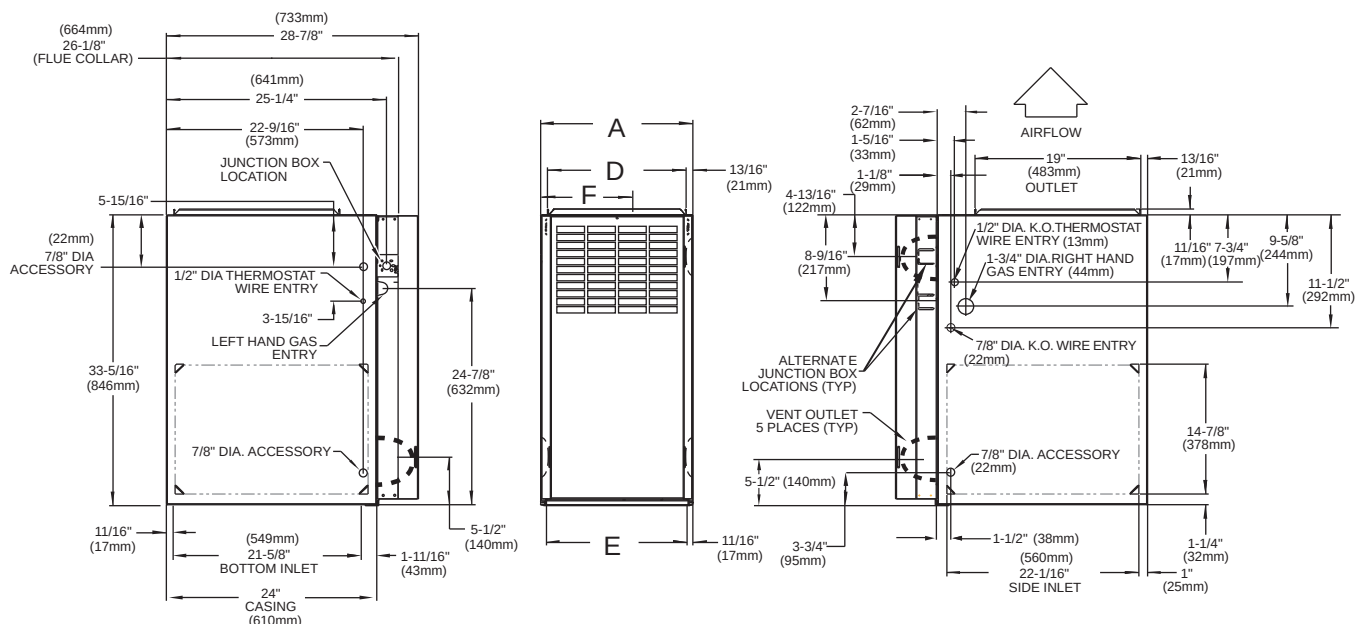
STANDARD FEATURES

- **Noise elimination combustion system**
- **SmartEvap™** can lower the humidity level in the home by nearly 10%
- **Four-position furnace: Upflow, Horizontal Right, Horizontal Left, Downflow**
Thirteen different vent options
- **Compact design only 33-1/3 in. (846 mm) tall**
- **High-Efficiency Media Filtration Cabinet included**
- **Microprocessor based “smart” control center**
“Fan on Plus™”-Continuous Fan speed adjustable from thermostat
Adjustable heating air temperature rise
Dehumidify mode
LED diagnostics, non-volatile fault code memory, and self-test feature
On-board fuse for transformer protection
- **Patented blocked-vent safeguard to ensure proper furnace venting**
- **Insulated blower compartment**
- **HYBRID HEAT® Dual Fuel System compatible**
- **All models are chimney friendly when used with accessory vent kit**
- **Twinning in Upflow, Downflow, and Horizontal**
- **Perfect Light™ Igniter**
- **Residential installations eligible for consumer financing through the Comfort Credit Program**



MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.



A04037

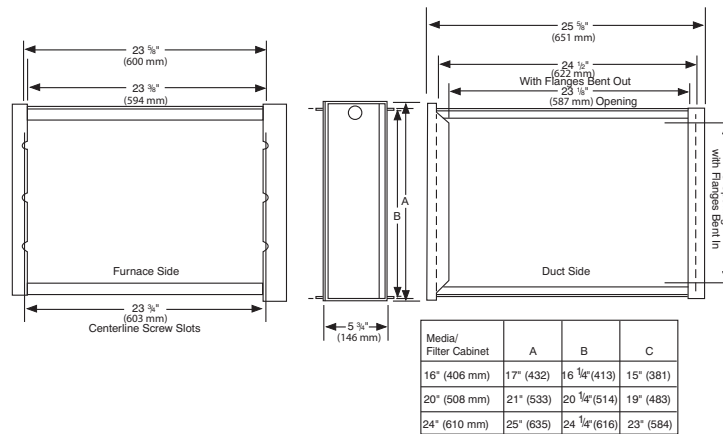
NOTES:

- Two additional 7/8-in. (22 mm) diameter holes are located in the top plate.
- Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 - For 800 CFM—16-in. (406 mm) round or 14 1/2 x 12-in. (368 x 305 mm) rectangle.
 - For 1200 CFM—20-in. (508 mm) round or 14 1/2 x 19 1/2-in. (368 x 495 mm) rectangle.
 - For 1600 CFM—22-in. (559 mm) round or 14 1/2 x 22 1/16-in. (368 x 560mm) rectangle.
- For airflow requirements above 1800 CFM, see Air Delivery table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM.

FURNACE SIZE	A CABINET WIDTH	D SUPPLY-AIR WIDTH IN. (MM)	E RETURN-AIR WIDTH IN. (MM)	F CENTER LINE TOP AND BOTTOM FLUE COLLAR IN. (MM)	FLUE COLLAR* IN. (MM)	SHIP WT LB (KG)	FILTER MEDIA CABINET SIZE IN. (MM)
024045	14-3/16 (360)	12-9/16 (319)	12-11/16 (322)	9-5/16 (237)	4 (102)	114 (52)	16 (406)
036045	14-3/16 (360)	12-9/16 (319)	12-11/16 (322)	9-5/16 (237)	4 (102)	117 (53)	16 (406)
024070	14-3/16 (360)	12-9/16 (319)	12-11/16 (322)	9-5/16 (237)	4 (102)	121 (55)	16 (406)
036070	14-3/16 (360)	12-9/16 (319)	12-11/16 (322)	9-5/16 (237)	4 (102)	125 (57)	16 (406)
048070	17-1/2 (445)	15-7/8 (403)	16-1/8 (410)	11-9/16 (294)	4 (102)	136 (62)	16 (406)
042090	17-1/2 (445)	15-7/8 (403)	16-1/8 (410)	11-9/16 (294)	4 (102)	135 (61)	16 (406)
048090	21 (533)	19-3/8 (492)	19-1/2 (495)	13-5/16 (338)	4 (102)	150 (68)	20 (508)
060090	21 (533)	19-3/8 (492)	19-1/2 (495)	13-5/16 (338)	4 (102)	156 (71)	20 (508)
036110	17-1/2 (445)	15-7/8 (403)	16-1/8 (410)	11-9/16 (294)	4 (102)	143 (65)	16 (406)
048110	21 (533)	19-3/8 (492)	19-1/2 (495)	13-5/16 (338)	4 (102)	156 (71)	20 (508)
066110	21 (533)	19-3/8 (492)	19-1/2 (495)	13-5/16 (338)	4 (102)	162 (73)	20 (508)
048135	21 (533)	19-3/8 (492)	19-1/2 (495)	13-5/16 (338)	4 (102)†	159 (72)	20 (508)
066135	24-1/2 (622)	22-7/8 (581)	23 (584)	15-1/16 (383)	4 (102)†	173 (78)	24 (610)
060155	24-1/2 (622)	22-7/8 (581)	23 (584)	15-1/16 (383)	4 (102)†	180 (82)	24 (610)

* 5 in. or 6 in. (127 or 152 mm) vent connector may be required in some cases. See Installation Instructions for complete installation requirements.

† 135 and 155 size furnaces require 5-in. (127 mm) vents. use a 4-5 in. (102-127 mm) vent adapter between furnace and vent stack.



A00444

311AAV / JAV

WARNING

AVERTISSEMENT

FIRE, EXPLOSION, ASPHYXIATION HAZARD RISQUE D'INCENDIE, D'EXPLOSION ET ASPHYXIE

Improper adjustment, alteration, service, maintenance, or installation can cause serious injury or death.

Read and follow instructions and precautions in User's Information Manual provided with this furnace. Installation and service must be performed by a qualified service agency or the gas supplier.

Une réglage, une modification, un reparation, un enretien ou une installation incorrect puet entrainer des blessures graves ou la mort.

Suivre les instructions et les consignes qui figurent dans la notice d'utilisation qui accompagne ce générateur d'air chaud. L'installation et l'entretien doivent être effectués par un réparateur qualifié ou par le fournisseur de gaz.

CAUTION

MISE EN GARDE

Check entire gas assembly for leaks after lighting this appliance.

Vérifier tous les éléments à gaz pour rechercher les fuites après avoir allumé cet appareil.

INSTALLATION

- This furnace must be installed in accordance with the manufacturer's instructions and local codes. In the absence of local codes, follow the National Fuel Gas Code ANSI Z223.1 / NFPA54 or CSA B-149. 1 Gas Installation Code.

Ce fournaise à air chaud doit être installé conformément aux instructions du fabricant et aux codes locaux. En l'absence de ces derniers, la norme ANSI Z223.1/NFPA54 intitulée National Fuel Gas Code ou les code d'installation CSA B149.1.

- This furnace must be installed so there are provisions for combustion and ventilation air. See manufacturer's installation information provided with this appliance.

Ce fournaise à air chaud doit être installé de manière à ce qu'il y ait suffisamment d'air de ventilation et combustion. Consulter les instructions d'installation du fabricant fournies avec cet appareil.

OPERATION

This furnace is equipped with manual reset limit switch(es) in burner compartment to protect against overheat conditions that can result from inadequate combustion air supply or blocked vent conditions.

- Do not bypass limit switches.
- If a limit opens, call a qualified serviceman to correct the condition and reset limit switch.

INSTALLATION

MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION DISTANCE MINIMALE EN POUCES AUX CONSTRUCTIONS COMBUSTIBLES

This forced air furnace is equipped for use with natural gas at altitudes 0-10,000 ft (0-3,050m).

An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.

This furnace is for indoor installation in a building constructed on site.

This furnace may be installed on combustible flooring in alcove or closet at minimum clearance as indicated by the diagram from combustible material.

This furnace may be used with a Type B-1 Vent and may be vented in common with other gas fired appliances.

Cette fournaise à air pulsé est équipée pour utilisation avec gaz naturel et altitudes comprises entre 0-3,050m (0-10,000 pi).

Utiliser une trousse de conversion, fournie par le fabricant, pour passer au gaz propane ou pour certaines installations au gaz naturel.

Cette fournaise est prévue pour être installée dans un bâtiment construit sur place.

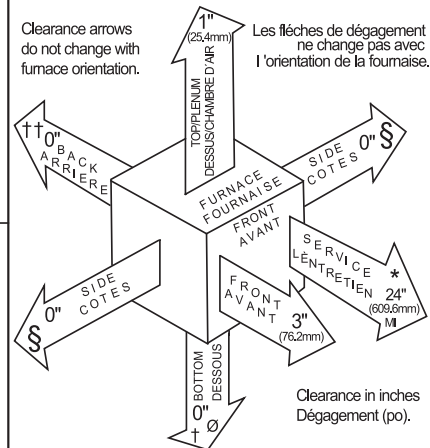
Cette fournaise peut être installée sur un plancher combustible dans une alcôve ou dans un garde-robe en respectant le minimum d'espace libre des matériaux combustibles, tel qu'indiqué sur le diagramme.

Cette fournaise peut être utilisée avec un conduit d'évacuation de Type B-1 ou connectée au conduit commun d'autres appareils à gaz.

This furnace is approved for UPFLOW, DOWNFLOW, and HORIZONTAL installations.

Cette fournaise est approuvée pour l'installation HORIZONTALE et la circulation d'air VERS LE HAUT et VERS LE BAS.

Clearance arrows do not change with furnace orientation.



Vent Clearance to combustibles:

For Single Wall vents 6 inches (6 po).

For Type B-1 vent type 1 inch (1 po).

Dégagement de l'évent avec combustibles:

Pour conduit d'évacuation à paroi simple 6 po (6 inches).

Pour conduit d'évacuation de Type B-1 1 po (1 inch).

MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION

DOWNFLOW POSITIONS:

- † Installation on non-combustible floors only.

For Installation on combustible flooring only when installed on special base, Part No. KGASB0201ALL or NAHA01101SB, Coil Assembly, Part No. CAR, CAP, CNPV, CNRV, WENC or WTNC.

- Ø 18 inches front clearance required for alcove.

- * Indicates supply or return sides when furnace is in the horizontal position. Line contact only permissible between lines formed by intersections of the Top and two Sides of the furnace jacket, and building joists, studs or framing.

DÉGAGEMENT MINIMUM EN POUCES AVEC ÉLÉMENTS DE CONSTRUCTION COMBUSTIBLES

POUR LA POSITION COURANT DESCENDANT:

- † Pour l'installation sur plancher non combustible seulement.

Pour l'installation sur un plancher combustible seulement quand on utilise la base spéciale, pièce n° KGASB0201ALL ou NAHA01101SB, l'ensemble serpentin, pièce n° CAR, CAP, CNPV, CNRV, WENC ou WTNC, ou le carter de serpentin.

- Ø Dans une alcôve, on doit maintenir un dégagement à l'avant de 18 po (450mm).

- * La position indiquée concerne le côté d'entrée ou de retour quand la fournaise est dans la position horizontale.

Le contact n'est permis qu'entre les lignes formées par les intersections du dessus et des deux côtés de la chemise de la fournaise et les solives, montant sous cadre de charpente.

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A08471

SPECIFICATIONS

UNIT SIZE		024045	036045	024070	036070	048070	042090	048090
RATINGS AND PERFORMANCE								
Input Btuh*	311JAV Upflow; all 311AAV	44,000	44,000	66,000	66,000	66,000	88,000	88,000
Nonweatherized ICS	311JAV Downflow/Horizontal	42,000	42,000	63,000	63,000	63,000	84,000	84,000
Output Capacity (Btuh)†	311JAV Upflow; all 311AAV	35,000	36,000	53,000	54,000	53,000	71,000	71,000
Nonweatherized ICS	311JAV Downflow/Horizontal	34,000	34,000	51,000	51,000	51,000	68,000	68,000
AFUE†		80.0	80.0	80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range – °F (°C)		30-60 (17–33)	20-50 (11–28)	40-70 (22–39)	30-60 (17–33)	25-55 (14–30)	40-70 (22–39)	30-60 (17–33)
Certified External Static Pressure	Heat/Cool	0.10/0.50	0.10/0.50	0.12/0.50	0.12/0.50	0.12/0.50	0.15/0.50	0.15/0.50
Airflow CFM‡	Heating	920	1250	720	1195	1450	1375	1505
	Cooling	845	1160	900	1200	1530	1385	1720
ELECTRICAL								
Unit Volts – Hertz – Phase		115-60-1						
Operating Voltage Range Min-Max		104-127						
Maximum Unit Amps		5.4	7.0	5.0	6.8	9.5	8.2	10.0
Maximum Wire Length (Measure one way in Ft (M))		49 (14.9)	39 (11.8)	52 (15.8)	40 (12.1)	29 (8.8)	34 (10.3)	28 (8.5)
Minimum Wire Size		14						
Maximum Fuse or Ckt Bkr Size (Amps)**		15						
Transformer (24v)		40va						
External Control	Heating	12va						
Power Available	Cooling	35va						
Air Conditioning Blower Relay		Standard						
CONTROLS								
Limit Control		SPST						
Heating Blower Control		Solid-State Time Operation						
Burners (Monoport)		2	2	3	3	3	4	4
Gas Connection Size		1/2-in. NPT						
GAS CONTROLS								
Gas Valve (Redundant)	Mfr.	White-Rodgers						
	Min. inlet pressure (in. wc)	4.5 (Natural Gas)						
	Max. inlet pressure (in. wc)	13.6 (Natural Gas)						
Ignition Device		Hot Surface						
Factory-installed orifice		Size 43						
BLOWER DATA								
Direct-Drive Motor HP (PSC)		1/5	1/3	1/5	1/3	1/2	1/3	1/2
Motor Full Load Amps		2.9	5.2	2.9	5.2	5.2	5.2	7.9
RPM (Nominal)-Speeds		1075-3	1075-4	1075-3	1075-4	1075-4	1075-4	1075-4
Blower Wheel Diameter x Width – In. (mm)		10 x 6 (254 x 152)	10 x 6 (254 x 152)	10 x 6 (254 x 152)	10 x 6 (254 x 152)	11 x 8 (279 x 203)	10 x 8 (254 x 203)	10 x 10 (254 x 254)

* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, for elevations above 2000 ft. (610 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. In Canada, derate the unit 10 percent for elevations 2000 ft. (610 M) to 4500 ft. (1372) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1 – 2006 Table F.1 (d) or furnace installation instructions.

† Capacity in accordance with U.S. Government DOE test procedures.

‡ Airflow shown is for bottom only return-air supply for the as-shipped speed tap. For air delivery above 1800 CFM, see Air Delivery table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using the factory-specified 4-5/16 in. wide, high efficiency media filter.

** Time-delay type is recommended.

ICS Isolated Combustion System

SPECIFICATIONS continued

UNIT SIZE		060090	036110	048110	066110	048135	066135	060155
RATINGS AND PERFORMANCE								
Input Btuh*	311JAV Upflow; all 310AAV	88,000	110,000	110,000	110,000	132,000	132,000	154,000
Nonweatherized ICS	311JAV Downflow/Horizontal	84,000	105,000	105,000	105,000	126,000	126,000	147,000
Output Capacity (Btuh)†	311JAV Upflow; all 310AAV	71,000	89,000	89,000	89,000	107,000	107,000	125,000
Nonweatherized ICS	311JAV Downflow/Horizontal	68,000	85,000	85,000	85,000	102,000	102,000	119,000
AFUE†		80.0	80.0	80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range ° F		25-55 (14–30)	50-80 (28–44)	40-70 (22–39)	30-60 (17–33)	50-80 (28–44)	40-70 (22–39)	45-75 (25–42)
Certified External Static Pressure	Heat/Cool	0.15/0.50	0.20/0.50	0.20/0.50	0.20/0.80	0.20/0.50	0.20/0.50	0.20/0.50
Airflow CFM‡	Heating	1990	1335	1515	1900	1525	1850	1790
	Cooling	2025	1355	1680	2220	1710	2110	2230
ELECTRICAL								
Unit Volts – Hertz – Phase		115-60-1						
Operating Voltage Range Min-Max		104-127						
Maximum Unit Amps		13.6	8.2	10.2	14.8	10.2	14.4	15.0
Maximum Wire Length (Measure one Way in Ft (M))		32 (9.7)	34 (10.3)	28 (8.5)	30 (9.1)	27 (8.2)	30 (9.1)	29 (8.8)
Minimum Wire Size		12	14		12	14	12	
Maximum Fuse or Ckt Bkr Size (Amps)**		20	15		20	15	20	
Transformer (24v)		40va						
External Control Heating		12va						
Power Available Cooling		35va						
Air Conditioning Blower Relay		Standard						
CONTROLS								
Limit Control		SPST						
Heating Blower Control		Solid-State Time Operation						
Burners (Monoport)		4	5	5	5	6	6	7
Gas Connection Size		1/2-in. NPT						
GAS CONTROLS								
Gas Valve (Redundant)	Mfr.	White-Rodgers						
	Min. inlet pressure (in. wc)	4.5 (Natural Gas)						
	Max. inlet pressure (in. wc)	13.6 (Natural Gas)						
Ignition Device		Hot Surface						
Factory-installed orifice		Size 43						
BLOWER DATA								
Direct-Drive Motor HP (PSC)		3/4	1/3	1/2	3/4	1/2	3/4	3/4
Motor Full Load Amps		11.1	5.2	7.9	11.1	7.9	11.1	11.1
RPM (Nominal)-Speeds		1075-4	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4
Blower Wheel Diameter x Width (in.)		11 x 11 (279 x 279)	10 x 8 (254 x 203)	10 x 10 (254 x 254)	11 x 11 (279 x 279)	10 x 10 (254 x 254)	11 x 11 (279 x 279)	11 x 11 (279 x 279)

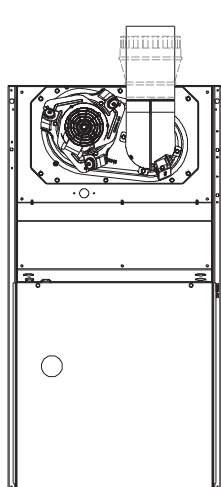
* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, For elevations above 2000 ft. (610 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. In Canada, derate the unit 10 percent for elevations 2000 ft. (610 M) to 4500 ft. (1372 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1–2006 Table F.1 (d) or furnace installation instructions.

† Capacity in accordance with U.S. Government DOE test procedures.

‡ Airflow shown is for bottom only return-air supply for the as-shipped speed tap. For air delivery above 1800 CFM, see Air Delivery table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using the factory-specified 4-5/16 in. (110 mm) wide, high efficiency media filter.

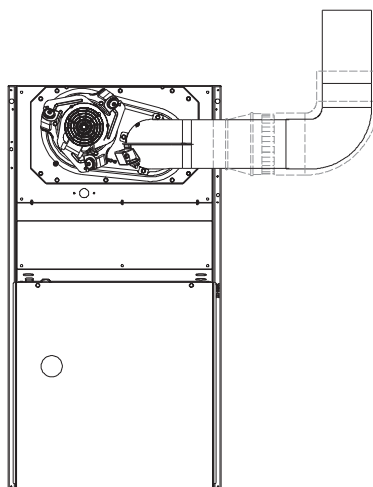
** Time–delay type is recommended.

ICS Isolated Combustion System



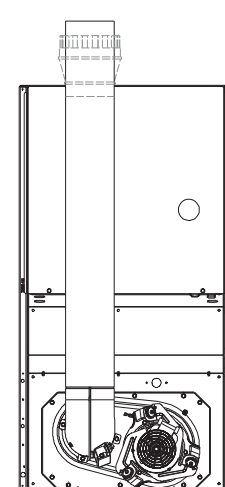
SEE NOTES: 1,2,4,7,8,9
UPFLOW

A02058



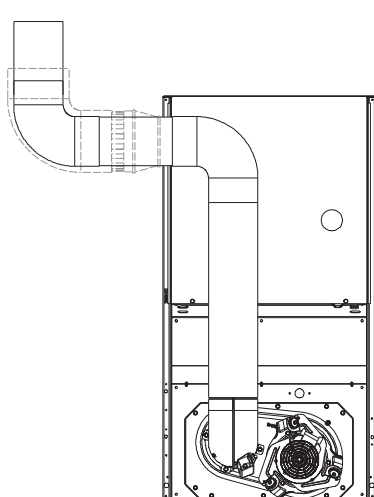
SEE NOTES: 1,2,3,4,7,8,9
UPFLOW

A02059



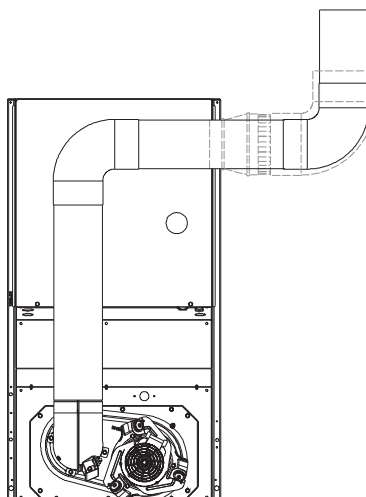
SEE NOTES: 1,2,4,5,7,8,9
DOWNFLOW

A02061



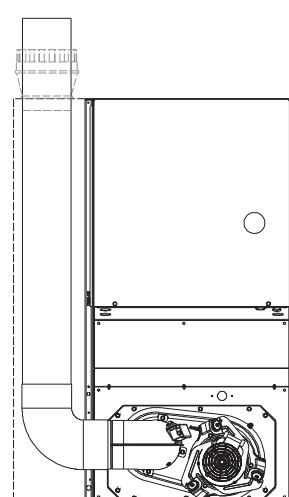
SEE NOTES: 1,2,3,4,5,7,8,9
DOWNFLOW

A02060



SEE NOTES: 1,2,3,4,5,7,8,9
DOWNFLOW

A02063

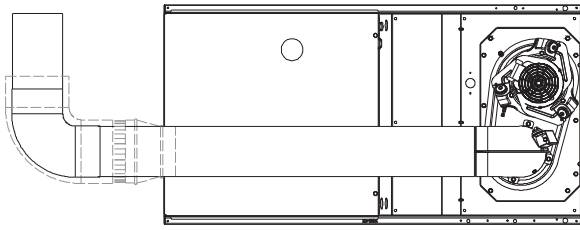


SEE NOTES: 1,2,4,5,6,7,8,9
DOWNFLOW

A02062

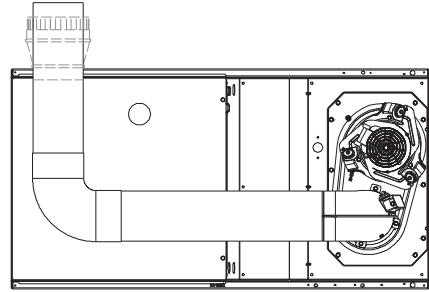
Venting Notes

1. For common vent, vent connector sizing and vent material: United States, latest edition of the National Fuel Gas Code (NFGC), ANSI Z223.1/NFPA 54. In Canada, latest edition of the National Standards of Canada, Natural Gas and Propane Installation Code (NSCNGPIC), CSA B149.1.
2. Immediately increase to 5-in. (127 mm) vent connector outside furnace casing when 5-in. (127 mm) vent connector required, refer to Note 1.
3. Side outlet vent for upflow and downflow installations must use Type B vent immediately after exiting the furnace, except when KGAVG0101DFG is used in downflow position.
4. Type B vent where required, refer to Note 1.
5. 4-in. (102 mm) single wall vent must be used inside furnace casing and the KGAVG0101DFG Downflow Vent Guard Kit.
6. Accessory Downflow Vent Guard Kit, KGAVG0101DFG required in downflow installations with bottom vent configuration.
7. Chimney Adapter Kit required for exterior masonry chimney applications. Refer to Chimney Adapter Kit, KGACA02014FC and KGACA02015FC for sizing and complete application details.
8. Secure vent connector to furnace elbow with (2) corrosion-resistant sheet metal screws, space approximately 180° apart.
9. Secure all other single wall vent connector joints with (3) corrosion-resistant screws spaced approximately 120° apart. Secure Type B vent connectors per vent connector manufacturer's recommendations.



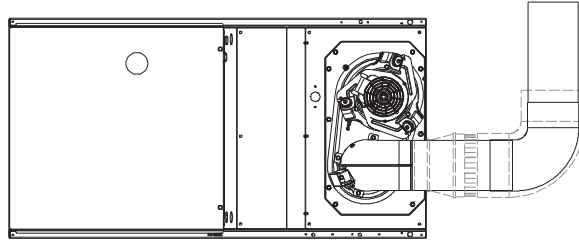
SEE NOTES: 1,2,4,5,7,8,9
HORIZONTAL RIGHT

A02068



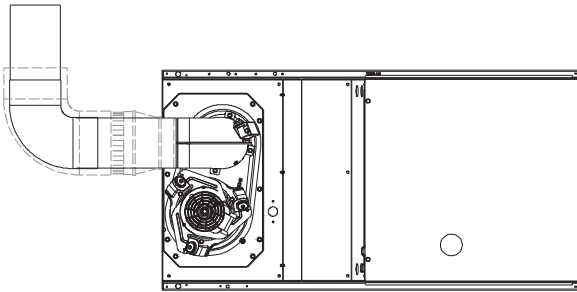
SEE NOTES: 1,2,4,5,7,8,9
HORIZONTAL RIGHT

A02070



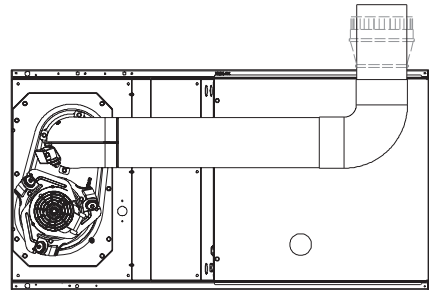
SEE NOTES: 1,2,4,7,8,9
HORIZONTAL RIGHT

A02069



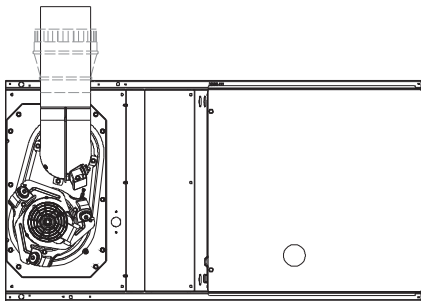
SEE NOTES: 1,2,4,7,8,9
HORIZONTAL LEFT

A02064



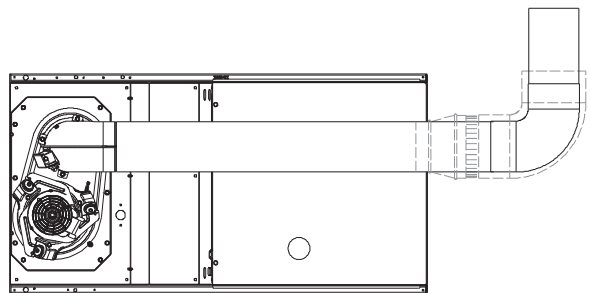
SEE NOTES: 1,2,4,5,7,8,9
HORIZONTAL LEFT

A02065



SEE NOTES: 1,2,4,5,7,8,9
HORIZONTAL LEFT

A02066



SEE NOTES: 1,2,4,5,7,8,9
HORIZONTAL LEFT

A02067

311AAV/JAV

ACCESSORIES

DESCRIPTION	PART NO.	024045	036045	024070	036070	048070	042090	048090	060090	036110	048110	066110	048135	066135	060155
Preferred Series Filter Cabinet	FILCABBB0016	X	X	X	X	X	X			X					
	FILCABBB0020							X	X		X	X	X		
	FILCABBB0024													X	X
Cartridge Media Filter	FILBBCAR0016	X	X	X	X	X	X			X					
	FILBBCAR0020							X	X		X	X	X		
	FILBBCAR0024													X	X
EZ Flex Media Filter with End Caps	EXPXXUNV0016	X	X	X	X	X	X			X					
	EXPXXUNV0020							X	X		X	X	X		
	EXPXXUNV0024													X	X
Replacement EZ Flex Filter Media	EXPXXFIL0016	X	X	X	X	X	X			X					
	EXPXXFIL0020							X	X		X	X	X		
	EXPXXFIL0024													X	X
External Bottom Return Filter Rack	KGAFR0401B14	X	X	X	X										
	KGAFR0501B17					X	X			X					
	KGAFR0601B21							X	X		X	X	X		
	KGAFR0701B24													X	X
External Side Return Filter Rack	KGAFR0801SRE	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Unframed Filter, 3/4–in. (19 mm)	KGAWF1301UFR†	X	X	X	X	X	X			X					
	KGAWF1401UFR							X	X		X	X	X		
	KGAWF1501UFR													X	X
	KGAWF1306UFR†	X	X	X	X	X	X			X					
	KGAWF1406UFR							X	X		X	X	X		
	KGAWF1506UFR													X	X
Flue Extension	KGAFE0112UPH	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Twinning Kit	KGATW0601HSI	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Combustible Floor Base	KGASB0201ALL	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Downflow Vent Guard	KGAVG0101DFG	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vent Extension Kit	KGAVE0101DNH	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chimney Adapter Kit	KGACA02014FC	X	X	X	X	X	X	X	X	X	X	X			
	KGACA02015FC												X	X	X
Natural–to–Propane Conversion Kit *	KGANP4601ALL	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Propane–to–Natural Conversion Kit	KGAPN3901ALL	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Label Kit	KGALB0101KIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Air Leakage Kit (Qty 10)	KGBAC0110DGK	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Gas Orifice Kit (Qty 50)	KGAHA0150N42	See Installation Instructions for model, altitude, and heat value usages.													
	KGAHA0250N43 (factory supplied)														
	KGAHA0350N44														
	KGAHA0450N45														
	KGAHA0550N46														
	KGAHA1550N47														
	KGAHA1650N48														
	KGAHA0650P54														
	KGAHA0750P55														
	KGAHA5750125														
	KGAHA5750130														
	KGAHA0850P56														
UV Lights	Model UVL														
Heat/Energy Recovery Ventilator	Models HRV or ERV														
Humidifier	Model HUM														
Electronic or Mechanical Air Cleaner†	Model EACA, EZXCAB, or FILCAB														

* Factory authorized, field installed. Fuel conversion kits are CSA recognized.

† Suitable for Side Return Filter Rack (KGAFR0801SRE)

‡ An external filter is required for all side return-air installations.

X = Accessory

S = Standard

CONTROLS — THERMOSTAT AND ZONING

DESCRIPTION	PART NO.
NON-PROGRAMMABLE	
For use with 1-speed Air Conditioner – deg. F/C, Auto Changeover	TP–NAC, TC–NAC
For use with 1-speed Heat Pump – deg. F/C, Auto Changeover	TP–NHP, TC–NHP*
For use with 2-speed Air Conditioner – deg. F/C, Auto Changeover	TP–NRH*
For use with multi-use / stage configurations – deg. F/C, Auto Changeover/Temperature and Humidity Control	TP–PRH†
PROGRAMMABLE THERMOSTAT SELECTION	
For use with 1-speed Air Conditioner – deg. F/C, Auto Changeover, 7-Day Programmable	T6–PAC
For use with 1-speed Heat Pump – deg. F/C, Auto Changeover, 7-Day Programmable	T6–PHP*
For use with 2-speed Air Conditioner – deg. F/C, Auto Changeover, 7-Day Programmable	T6–PRH*
For use with 1-speed Air Conditioner – deg. F/C, 5–2 Day Programmable	T6–PAC
For use with multi-stage applications – deg. F/C, Auto Changeover, 7-Day Programmable	T2–PHP‡
For multi-use / stage configurations – deg. F/C, Auto Changeover, 7-Day Programmable/Temperature and Humidity Control	T6–PRH†
ZONING CONTROL SELECTION	
Zone Perfect 3-Zone kit	ZONEBB3ZAC01, ZONEBB3ZHP01
2–Zone Perfect Plus 2-Zone kit/Temperature and Humidity Control	ZONEBB2KIT01-B
4–Zone Perfect Plus 4-Zone kit/Temperature and Humidity Control	ZONEBB4KIT01-B
8–Zone Perfect Plus 8-Zone kit/Temperature and Humidity Control	ZONEBB8KIT01-B

* Model HP and 2S thermostat must be field converted to air conditioner operation.

† Thermostat Control can be configured for multiple use and staging. It must be configured for each specific application.

‡ Dual Fuel thermostat is used with furnace and heat pump application.

AIR DELIVERY—CFM (With Filter)*

311AAV/JAV UNIT SIZE	RETURN-AIR SUPPLY	SPEED	EXTERNAL STATIC PRESSURE (In. wc)									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
024045	Bottom or Side(s)	High	1085	1035	975	915	845	770	675	565	390	195
		Med-High	920	875	830	770	710	640	555	440	250	—
		Med-Low	820	775	730	680	620	555	470	360	190	—
036045	Bottom or Side(s)	High	1440	1375	1305	1240	1160	1070	975	870	730	560
		Med-High	1360	1300	1240	1175	1115	1040	950	850	725	575
		Med-Low	1250	1210	1160	1100	1040	965	885	790	670	520
		Low	1085	1055	1035	990	945	885	810	715	595	435
024070	Bottom or Side(s)	High	1030	1010	980	945	900	845	775	680	490	335
		Med-High	835	815	790	760	720	675	610	490	375	265
		Med-Low	725	700	675	645	600	555	475	390	300	—
036070	Bottom or Side(s)	High	1425	1375	1320	1265	1200	1125	1035	940	830	655
		Med-High	1320	1280	1240	1205	1140	1075	995	905	790	620
		Med-Low	1200	1175	1145	1105	1050	990	920	840	725	555
		Low	1040	1030	1010	985	945	895	845	765	655	505
048070	Bottom or Side(s)	High	1805	1740	1670	1600	1530	1445	1360	1280	1180	1075
		Med-High	1630	1585	1530	1470	1405	1330	1255	1170	1080	990
		Med-Low	1460	1420	1385	1325	1260	1220	1155	1080	995	910
		Low	1275	1250	1225	1195	1155	1105	1050	980	910	835
042090	Bottom or Side(s)	High	1650	1600	1535	1465	1385	1285	1175	1055	895	645
		Med-High	1515	1485	1440	1380	1300	1220	1115	990	830	600
		Med-Low	1385	1360	1320	1260	1195	1120	1025	915	710	565
		Low	1205	1180	1160	1120	1065	1005	925	810	630	510
048090	Bottom or Side(s)	High	2060	1985	1915	1820	1720	1610	1490	1340	1135	925
		Med-High	1790	1765	1715	1645	1560	1470	1345	1195	1010	820
		Med-Low	1505	1505	1480	1440	1375	1300	1190	1045	890	740
		Low	1225	1225	1220	1195	1155	1085	985	870	735	620
060090	Bottom Only	High	2405	2310	2220	2130	2025	1920	1790	1660	1530	1350
		Med-High	2225	2155	2080	1995	1895	1785	1675	1565	1420	1260
		Med-Low	2020	1955	1880	1805	1730	1630	1535	1420	1275	1135
		Low	1810	1765	1715	1645	1565	1480	1390	1280	1145	1005
	Both Sides or 1 Side & Bottom	High	2530	2450	2365	2270	2165	2065	1940	1805	1670	1505
		Med-High	2285	2215	2150	2075	1985	1890	1780	1660	1525	1360
		Med-Low	1995	1945	1900	1840	1770	1685	1600	1480	1350	1180
		Low	1770	1740	1700	1645	1575	1505	1415	1325	1190	1040
	1 Side Only	High	2475	2395	2300	2200	2090	1985	1865	1730	1585	1425
		Med-High	2260	2190	2110	2035	1940	1845	1735	1620	1475	1325
		Med-Low	1950	1910	1855	1795	1730	1650	1555	1445	1310	1150
		Low	1730	1695	1650	1600	1535	1470	1385	1285	1165	1000
036110	Bottom or Side(s)	High	1625	1575	1515	1445	1355	1260	1165	990	785	595
		Med-High	1510	1470	1415	1355	1285	1185	1070	890	725	530
		Med-Low	1360	1335	1295	1250	1180	1100	985	810	670	475
		Low	1195	1180	1155	1115	1065	980	860	740	605	410
048110	Bottom or Side(s)	High	2035	1965	1880	1790	1680	1495	1365	1215	1075	875
		Med-High	1745	1710	1650	1560	1450	1340	1205	1090	955	750
		Med-Low	1530	1515	1470	1400	1310	1215	1095	990	830	670
		Low	1270	1265	1235	1195	1130	1055	970	875	720	600

- * A filter is required for each return – air supply. Airflow performance includes 3/4 in. (19 mm) washable filter media such as contained in factory – authorized accessory filter rack. To determine airflow performance without this filter, assume an additional .1 available external static pressure.
- Indicates unstable operating conditions.

AIR DELIVERY-CFM (With Filter)* continued

311 AAV/JAV UNIT SIZE	RETURN- AIR SUPPLY	SPEED	EXTERNAL STATIC PRESSURE (In. wc)									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
066110	Bottom Only	High Med-High Med-Low Low	2530 2230 1920 1640	2470 2205 1900 1650	2400 2165 1880 1635	2320 2110 1845 1610	2220 2035 1795 1575	2115 1950 1730 1520	2000 1855 1650 1455	1865 1740 1555 1375	1730 1615 1460 1285	1590 1485 1340 1170
	Both Sides or 1 Side & Bottom	High Med-High	— 2235	— 2200	2415 2155	2350 2100	2250 2040	2145 1955	2015 1850	1875 1740	1715 1595	1560 1470
	1 Side Only	High Med-High Med-Low Low	2540 2125 1790 1515	2495 2120 1795 1535	2430 2105 1790 1535	2355 2060 1765 1520	2265 2010 1720 1490	2175 1940 1650 1445	2065 1840 1585 1390	1935 1730 1500 1315	1785 1615 1390 1225	1650 1485 1280 1120
048135	Bottom or Side(s)	High Med-High Med-Low Low	2090 1790 1545 1325	2010 1755 1520 1320	1930 1705 1500 1295	1835 1640 1450 1265	1710 1550 1380 1210	1590 1465 1315 1150	1470 1360 1215 995	1335 1210 1005 865	1025 945 855 745	835 785 670 540
	Bottom Only	High Med-High Med-Low Low	2485 2195 1880 1640	2400 2150 1850 1635	2310 2090 1820 1615	2215 2000 1780 1585	2110 1920 1715 1530	2000 1825 1635 1465	1880 1720 1540 1370	1725 1565 1415 1255	1535 1405 1290 1150	1355 1255 1160 1040
066135	Both Sides or 1 Side & Bottom	High Med-High Med-Low Low	— 2180 1880 1640	— 2145 1850 1635	2385 2060 1820 1615	2305 2010 1780 1585	2195 1945 1715 1530	2085 1865 1635 1465	1960 1765 1540 1370	1825 1660 1415 1255	1670 1515 1290 1150	1465 1325 1160 1040
	1 Side Only	High Med-High Med-Low Low	— 2135 1880 1570	— 2085 1850 1620	2245 2035 1820 1580	2155 1975 1780 1540	2055 1895 1715 1485	1940 1795 1635 1410	1825 1685 1540 1370	1695 1565 1415 1255	1555 1445 1290 1080	1385 1265 1160 960
	Bottom Only	High Med-High Med-Low Low	2465 2115 1800 1570	2430 2105 1790 1565	2375 2075 1770 1550	2305 2030 1735 1525	2230 1980 1695 1495	2110 1910 1640 1445	2000 1830 1570 1370	1865 1725 1465 1270	1725 1590 1345 1175	1545 1425 1225 1070
060155	Both Sides or 1 Side & Bottom	High Med-High	— 2155	— 2135	2375 2095	2285 2040	2200 1975	2105 1895	1995 1790	1870 1685	1730 1550	1570 1400
	1 Side Only	High Med-High	— 2140	— 2095	2260 2040	2180 1975	2085 1890	1975 1810	1865 1705	1740 1595	1605 1480	1455 1325

* A filter is required for each return-air supply. Airflow performance includes 3/4 in. (19 mm) washable filter media such as contained in factory-authorized accessory filter rack. To determine airflow performance without this filter, assume an additional .1 available external static pressure.

— Indicates unstable operating conditions.

311AAV / JAV

GUIDE SPECIFICATIONS

Gas Furnace

311AAV/JAV

General

SYSTEM DESCRIPTION

Furnish a _____ fixed capacity gas-fired furnace for use with natural gas or propane (factory authorized conversion kit required for propane); furnish cold air return plenum; furnish side (external) filter rack.

QUALITY ASSURANCE

Unit will be designed, tested and constructed to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces.

Unit will be 3rd party certified by CSA to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces.

Unit will carry the CSA Blue Star® and Blue Flame® labels.

Unit efficiency testing will be performed per the current DOE test procedure as listed in the Federal Register.

Unit will be certified for capacity and efficiency and listed in the latest GAMA Consumer's Directory of Certified Efficiency Ratings.

Unit shall carry the current Federal Trade Commission Energy Guide efficiency label.

DELIVERY, STORAGE AND HANDLING

Unit shall be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

WARRANTY (for inclusion by specifying engineer)

U.S. and Canada only. Warranty certificate available upon request.

Products

EQUIPMENT

Components shall include: slow-opening gas valve to reduce ignition noise, regulate gas flow, with electric switch gas shut-off; flame proving sensor, hot surface igniter, pressure switch assembly, flame rollout switch, blower and inducer assembly, 40va transformer; low-voltage (heating) (heating/cooling) thermostat.

Blower Wheel and Blower Motor

Galvanized blower wheel shall be centrifugal type, statically and dynamically balanced. Blower motor of PSC type shall be permanently lubricated with sealed bearings, of _____ hp, and shall be multiple-speed direct drive. Blower motor shall be soft mounted to the blower scroll to reduce vibration transmission.

Filters

Furnace may have reusable-type filters. Filter shall be _____ (x) _____ in. or mm.

Casing

Casing shall be of .030-in. (.76 mm) thickness minimum, pre-painted galvanized steel.

Inducer Motor

Inducer motor shall be soft mounted to reduce vibration transmission.

Draft Safeguard Switch

Draft Safeguard Switch (blocked vent safeguard) shall be factory installed to reduce the possibility of vent gas infiltration due to a blocked or restricted vent pipe.

Heat Exchangers

Heat exchangers shall be a 4-Pass 20 gage aluminized steel of fold-and-crimp sectional design when applied operating under negative pressure.

Controls

Control shall include a micro-processor based integrated electronic control board with at least 11 service troubleshooting codes displayed via diagnostic flashing LED light on the control, a self-test feature that checks all major functions of the furnace within one minute, and a replaceable automotive-type circuit protection fuse. Multiple operational settings available including, separate blower speeds for heating, cooling, and continuous fan. Continuous fan speed may be adjusted from the thermostat. Cooling airflow will be selectable between 350 or 400 CFM per ton of air conditioning. Features will also include temporary reduced airflow in the cooling mode for improved dehumidification when a Thermostat® is selected as the thermostat.

OPERATING CHARACTERISTICS

Heating Capacity shall be _____ Btuh input; _____ Btuh output capacity.

Fuel Gas Efficiency shall be 80% AFUE.

Air delivery shall be _____ cfm minimum at 0.50 in. wc external static pressure.

Dimensions shall be: depth _____ in.; width _____ in.; height _____ in. (casing only). Height shall be _____ in. with A/C coil and _____ in. overall with plenum.

ELECTRICAL REQUIREMENTS

Electrical supply shall be 115 volts, 60 Hz, single-phase (nominal). Minimum wire size shall be _____ AWG; maximum fuse size or circuit breaker shall be _____ Amps.

SPECIAL FEATURES

Refer to section of the product data sheet identifying accessories and descriptions for specific features and available enhancements.