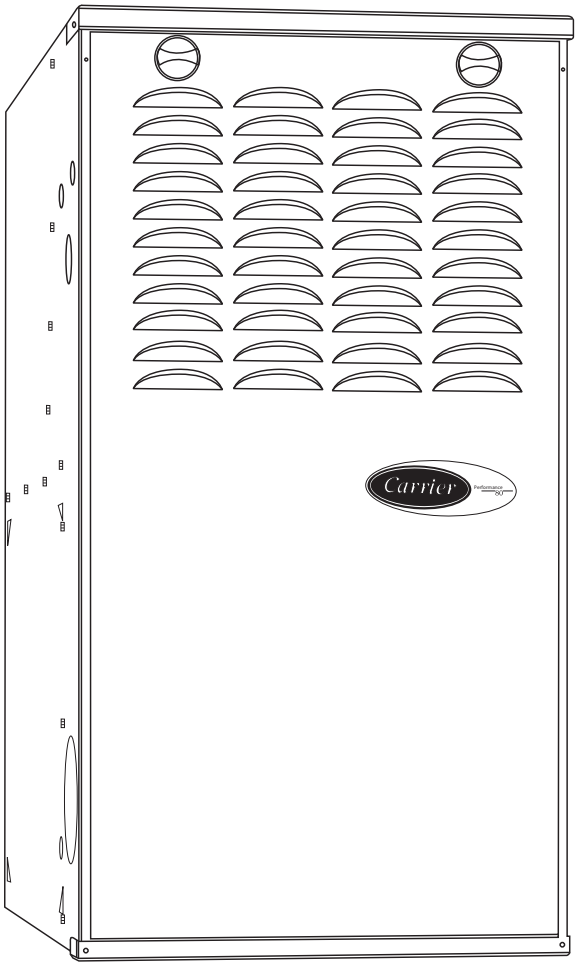
58CTW
PERFORMANCE™ 80 TWO–STAGE VARIABLE–SPEED 4–WAY MULTIPOISE INDUCED–COMBUSTION GAS FURNACE
Input Capacities: 45,000 thru 135,000 Btuh
Series 100

Carrier
turn to the experts

Product Data



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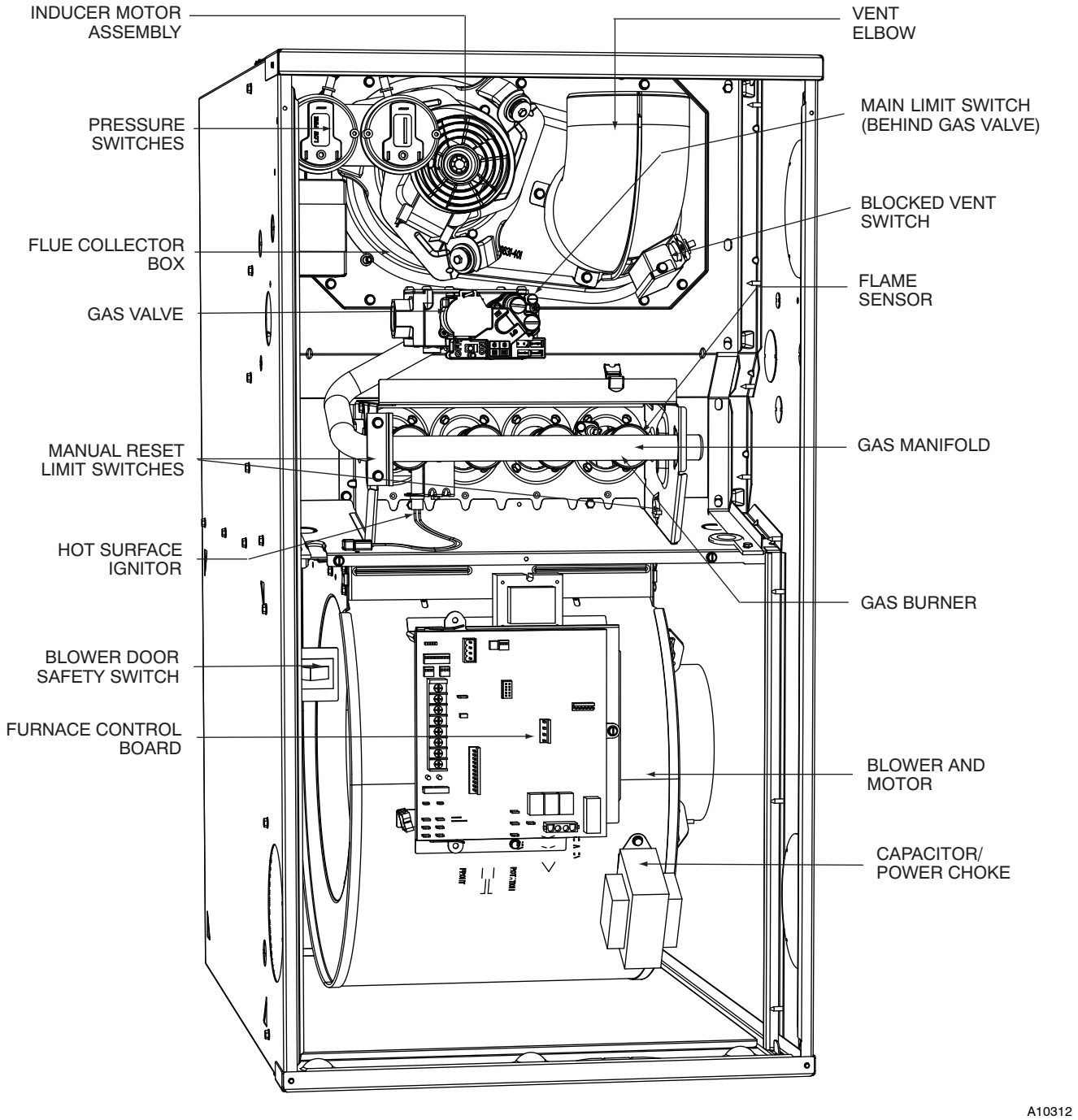
THE PERFORMANCE 80 GAS FURNACE

The 58CTW Two-Stage, Variable-speed, 4-way Multipoise Gas Furnaces offer unmatched comfort in their class with ComfortHeat™ technology in an 80% AFUE gas furnace. You get the benefits of a ComfortHeat™ technology furnace: reduced drafts, reduced sound levels, longer cycles, less temperature swings between cycles, and less temperature differences between rooms. Its exclusive, intelligent microprocessor control adapts to the heating needs of the home by automatically adjusting high and low heat times to maximize comfort. The 58CTW furnaces are approved for use with natural or propane gas.

STANDARD FEATURES

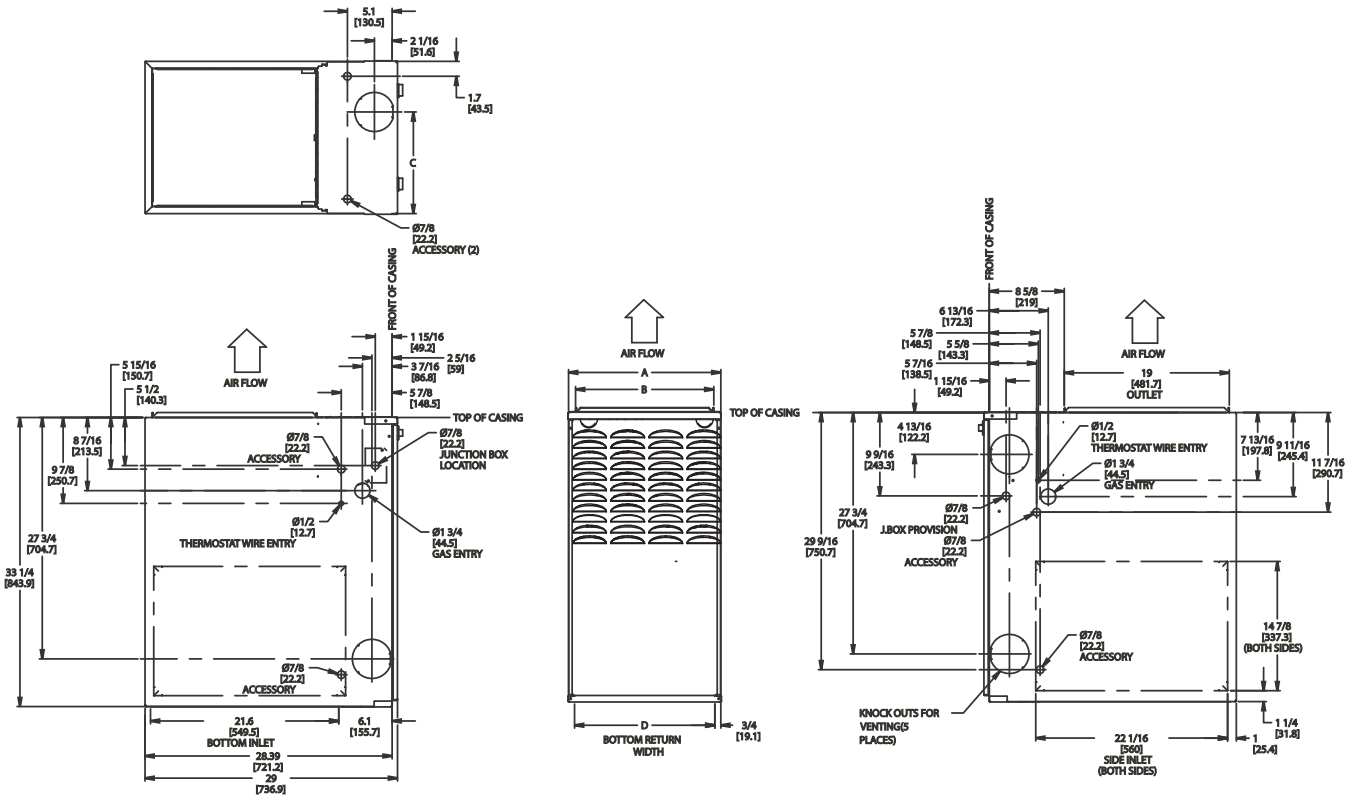
- **ComfortHeat™ Technology Intelligent microprocessor control**
- **Two-stage heating with single-stage thermostat with patented Adaptive Control Technology**
- **Very low operating sound through low-stage operation and QuieTech™ system**
- **SmartEvap™-Humidity control when using a Thermidistat™ control**
- **Comfort Fan™ adjustable constant fan speed from the thermostat**
- **Microprocessor based control center**
  Enhanced diagnostics with LED and reflective sight glass
  Stores fault codes during power outages
  Adjustable heating air temperature rise
  Adjustable cooling airflow
- **4-way Multipoise furnace, 13 vent applications**
- **Compact design - only 33-1/3 in. (847 mm) tall**
- **Power Heat™ Igniter**
- **Draft Safeguard switch to ensure proper furnace venting**
- **Insulated blower compartment**
- **Inner door for tighter sealing**
- **Certified to leak 2 percent or less of its nominal air conditioning CFM delivered when pressurized to 1-In. Water Gauge with all present air inlets and air outlets sealed.**
- **HYBRID HEAT® Dual Fuel System compatible**
- **All models are Chimney Friendly when used with accessory vent kit**
- **Variable-speed ECM blower motor**
  Increased SEER ratings for AC and HP systems as compared to the Air Conditioning Heating and Refrigeration Institute's standard coil-only rating when paired with selected Carrier evaporator coils.
  Perfectly matches CFM to cooling system at all static points
- **Residential installations eligible for consumer financing through the Retail Credit Program**

FURNACE COMPONENTS



NOTE: The 58CTW Furnaces are factory shipped for use with natural gas. These furnaces can be field-converted for propane gas with a factory-authorized and listed accessory conversion kit.

DIMENSIONS



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NOTES:
1. Two additional 7/8–in. (22 mm) diameter holes are located in the top plate.
2. Minimum return–air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
   a. For 800 CFM–16–in. (406 mm) round or 14 1/2 x 12–in. (368 x 305 mm) rectangle.
   b. For 1200 CFM–20–in. (508 mm) round or 14 1/2 x 19 1/2–in. (368 x 495 mm) rectangle.
   c. For 1600 CFM–22–in. (559 mm) round or 14 1/2 x 22 1/16–in. (368 x 560mm) rectangle.
   d. 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	B OUTLET WIDTH	C TOP AND BOTTOM FLUE COLLAR	D BOTTOM INLET WIDTH	VENT CONNECTION SIZE	SHIP WT. LB (KG)	ACCESSORY FILTER MEDIA CABINET SIZE
045–12	14-3/16 (360)	12-9/16 (319)	9-5/16 (237)	12–11/16 (322)	4 (102)	107 (49)	16 (406)
070–16	17–1/2 (445)	15-7/8 (403)	11-9/16 (294)	16 (406)	4 (102)	126 (57)	16 (406)
090–16	21 (533)	19-3/8 (492)	13-5/16 (338)	19–1/2 (495)	4 (102)	140 (64)	20 (506)
110–22	21 (533)	19-3/8 (492)	13-5/16 (338)	19–1/2 (495)	4 (102)	152 (69)	20 (506)
135–22	24-1/2 (622)	22-7/8 (581	15-1/16 (383)	23 (584)	4 (102)	163 (74)	24 (610)

*135 size furnaces require a 5 or 6–in. (127 or 152 mm) vent. Use a vent adapter between furnace and vent stack. See Installation Instructions for complete installation requirements.

MODEL NUMBER NOMENCLATURE

58CTW **045** **100** **08**

58CTW Two-Stage 4-Way Multipoise

Nominal Cooling Size
(Airflow at .5 e.s.p.)
(400 CFM per 12,000 Btuh)
12–1200 CFM
16–1600 CFM
22–2200 CFM

Input Capacity
045–44,000 Btuh 110–110,000 Btuh
070–66,000 Btuh 135–132,000 Btuh
090–88,000 Btuh

100
Series Number

58CTW

SPECIFICATIONS

UNIT SIZE			045–12	070–16	090–16	110–22	135–22
RATINGS AND PERFORMANCE							
Input Btuh* Nonweatherized ICS	All 314AAV	High	44,000	66,000	88,000	110,000	132,000
		Low	29,000	43,500	58,000	72,500	87,000
Output Capacity (Btuh)† Nonweatherized ICS	All 314AAV	High	35,000	53,000	71.000	89,000	107,000
		Low	23,000	35,000	47,000	59,000	70,000
AFUE†			80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range – °F (°C)		High	30-60 (17–33)	25-55 (14–30)	30-60 (17–33)	30-60 (17–33)	40-70 (22–39)
		Low	20-50 (11–28)	15-45 (8–25)	25-55 (14–30)	20-50 (11–28)	25-55 (14–30)
Certified External Static Pressure		Heat/Cool	0.10/0.50	0.12/0.50	0.15/0.50	0.20/0.50	0.20/0.50
Airflow CFM‡		Heating High/Low	820/725	1570/1045	1265/1030	1555/1295	1865/1640
		Cooling	1175	1685	1770	2230	2290
ELECTRICAL							
Unit Volts–Hertz–Phase			115-60-1				
Operating Voltage Range		Min-Max	104-127				
Maximum Unit Amps			8.1	9.7	10.2	13.0	13.0
Maximum Wire Length (Measure 1 Way in Ft. (M))			34 (10.4)	28 (8.5)	27 (8.2)	34 (10.4)	34 (10.4)
Minimum Wire Size			14			12	
Maximum Fuse or Ckt Bkr Size (Amps)**			15			20	
Transformer (24v)			40va				
External Control Power Available		Heating	12va				
		Cooling	35va				
Air Conditioning Blower Relay			Standard				
CONTROLS							
Limit Control			SPST				
Heating Blower Control			Solid-State Time Operation				
Burners (Monoport)			2	3	4	5	6
Gas Connection Size			1/2-in. NPT				
GAS CONTROLS							
Gas Valve (Redundant)	Mfr.		White-Rodgers				
	Min. inlet pressure (In. W.C.)		4.5 (Natural Gas)				
	Max. inlet pressure (In. W.C.)		13.6 (Natural Gas)				
Ignition Device			Hot Surface				
Factory-installed orifice			Size 43				
BLOWER DATA							
Direct-Drive Motor HP (ECM)			1/2	3/4	3/4	1	1
Motor Full Load Amps			6.8	8.4	8.4	10.9	10.9
RPM (Nominal)			1200				
Blower Wheel Diameter x Width – In. (mm)			10 x 6 (254x152)	11 x 8 (279x203)	10 x 10 (254x254)	11 x 11 (279x279)	11 x 11 (279x279)

* Gas input ratings are certified for elevations to 2000 ft. (610 M). For elevations above 2000 ft. (610 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1–2012 Table F.4 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

CARRIER ACCESSORIES

58CTW DESCRIPTION	PART NO.	045-12	070-16	090-16	110-22	135-22
Media Filter Cabinet	FILCABXL0016	X	X			
	FILCABXL0020			X	X	
	FILCABXL0024					X
Cartridge Media Filter	FILCCCAR0016	X	X			
	FILCCCAR0020			X	X	
	FILCCCAR0024					X
EZ Flex Media Filter with End Caps	EXPXXUNV0016	X	X			
	EXPXXUNV0020			X	X	
	EXPXXUNV0024					X
Replacement EZ Flex Filter Media	EXPXXFIL0016	X	X			
	EXPXXFIL0020			X	X	
	EXPXXFIL0024					X
External Bottom Return Filter Rack	KGBFR0401B14	X				
	KGBFR0501B17		X			
	KGBFR0601B21			X	X	
	KGBFR0701B24					X
External Side Return Filter Rack	KGAFR0201ALL	X	X	X	X	X
Unframed Filter 3/4-in. (19 mm)	KGAWF1306UFR†	X	X			
	KGAWF1406UFR			X	X	
	KGAWF1506UFR					X
Flue Extension	KGAFE0112UPH	X	X	X	X	X
Combustible Floor Base	KGASB0201ALL	X	X	X	X	X
Downflow Vent Guard	KGBVG0101DFG	X	X	X	X	X
Vent Extension Kit	KGAVE0101DNH	X	X	X	X	X
Chimney Adapter Kit	KGACA02014FC	X	X	X	X	
	KGACA02015FC					X
Natural-to-Propane Conversion Kit*	KGBNP5201VSP	X	X	X	X	X
Propane-to-Natural Conversion Kit	KGBPN4401VSP	X	X	X	X	X
Label Kit	KGALB0101KIT	X	X	X	X	X
Gas Orifice	LH32DB207	See Installation Instructions for model, altitude, and heat value usages				
	LH32DB202					
	LH32DB200					
	LH32DB205					
	LH32DB208					
	LH32DB078					
	LH32DB076					
	LH32DB203					
	LH32DB201					
	LH32DB206					
	LH32DB209					
	LH32DB210					

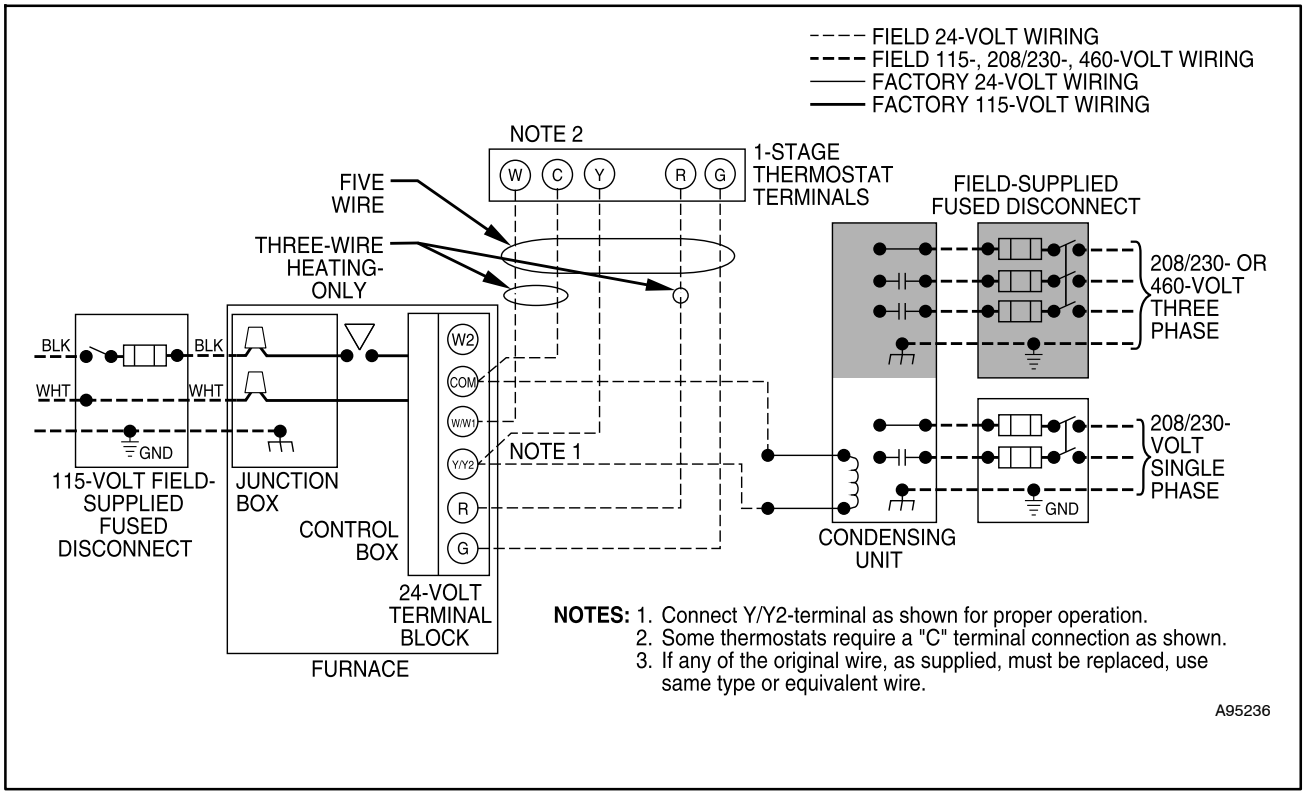
* Factory-authorized and field installed. Fuel conversion kits are CSA (formerly AGA/CGA) recognized.
† Suitable for Side Return Filter Rack
X = Accessory
S = Standard

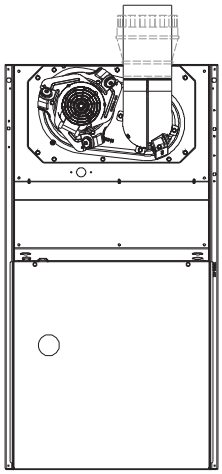
CARRIER ACCESSORIES

Accessories	
ELECTRONIC AIR CLEANER (EAC)	Model EACB
MECHANICAL AIR CLEANER	Models EZXCAB, FILCAB
HUMIDIFIER	Model HUM
HEAT RECOVERY VENTILATOR	Model HRV
ENERGY RECOVERY VENTILATOR	Model ERV
THERMOSTAT – 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†
THERMOSTAT – PROGRAMMABLE	For use with 1–speed Air Conditioner – deg. F/C, Auto Changeover, 7–Day Programmable –TP–PAC For use with 1–speed Heat Pump – deg. F/C, Auto Changeover, 7–Day Programmable –TP–PHP* For use with 2–speed Air conditioner – deg. F/C, Auto Changeover, 7–Day Programmable –TP–PRH* For use with 1–speed Air Conditioner – deg. F/C, 5–2 Day Programmable – TP–PAC For use with multi–stage applications – deg. F/C, Auto Changeover, 7–Day Programmable – TC–PRH† For multi–use / stage configurations – deg. F/C, Auto Changeover, 7–Day Programmable/ Temperature and Humidity Control – TP–PRH†

* Model HP and 2S thermostat must be field converted to air conditioner operation.
† Thermidistat Control can be configured for multiple use and staging, it must be configured for each specific application.

TYPICAL WIRING SCHEMATIC





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

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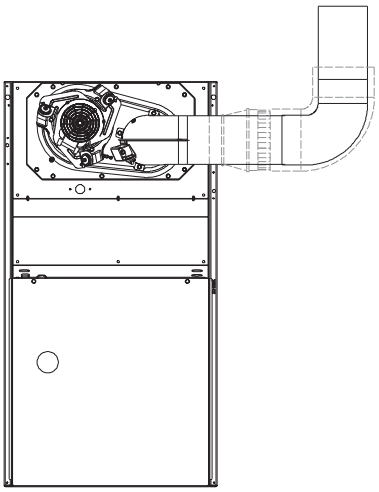

SEE NOTES: 1,2,3,4,7,8,9
UPFLOW

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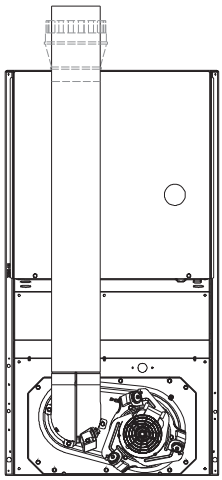
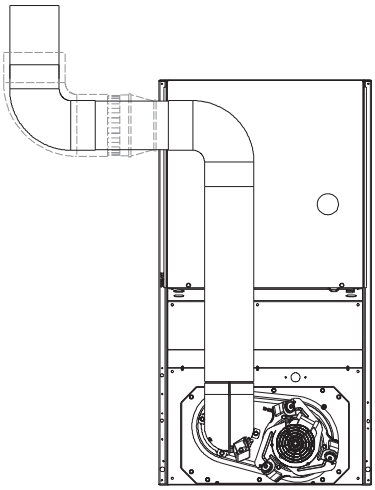


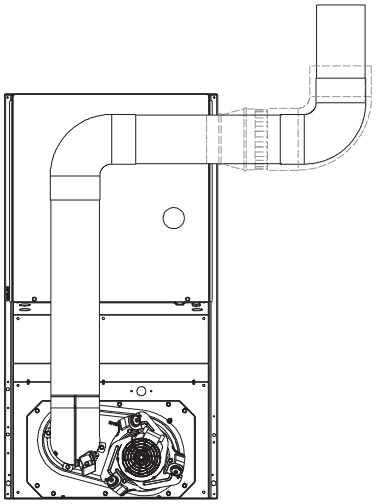
SEE NOTES: 1,2,4,5,7,8,9
DOWNFLOW

A02061



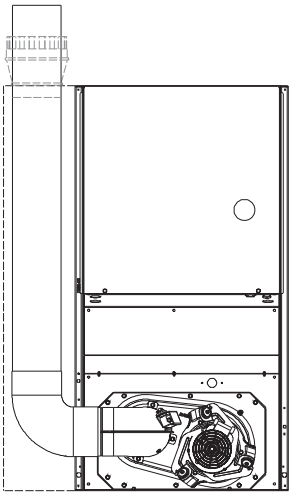
SEE NOTES:1,2,3,4,5,7,8,9
DOWNFLOW

A02060



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

A02063



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

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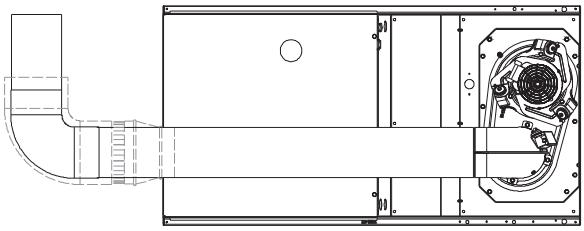
Venting Notes

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.
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 Downflow Vent Guard 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 Downflow Vent Guard Kit.
6. Accessory Downflow Vent Guard Kit, required in downflow installations with bottom vent configuration.
7. Chimney Adapter Kit required for exterior masonry chimney applications. Refer to Chimney Adapter Kits 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

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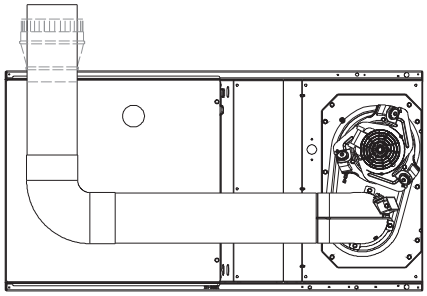

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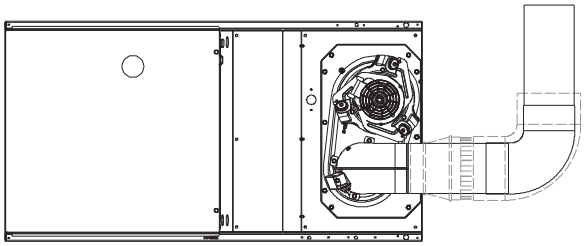

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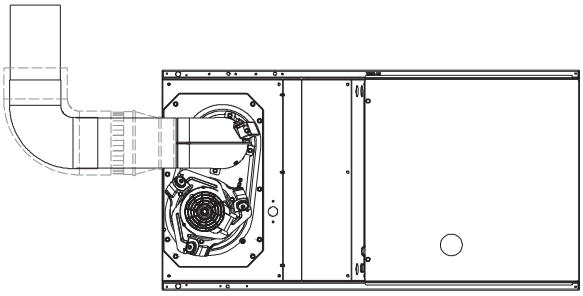

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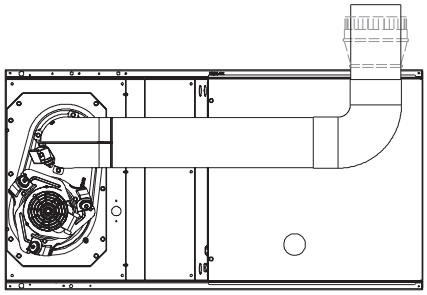

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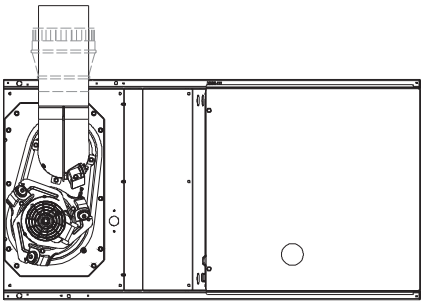

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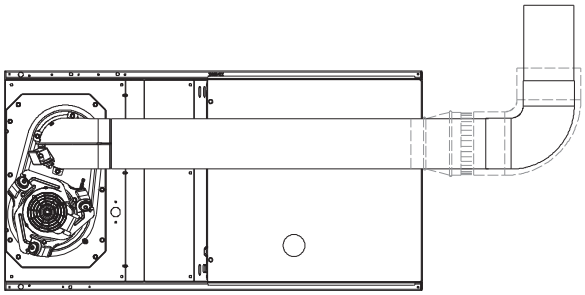


SEE NOTES: 1,2,4,5,7,8,9
HORIZONTAL LEFT

A02067

AIR DELIVERY—CFM (With Filter)*

COOLING[4] AND HEATING AIR DELIVERY - CFM (Bottom Return[5] With Filter) (SW1-5 and SW4-3 set to OFF, except as indicated. See notes 1 and 2.)													
Unit Size	**Cooling Switch Settings**			**External Static Pressure (ESP)**									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
045-12/ 036045													
	OFF	OFF	OFF	1190	1140	1100	1065	1020	985	905	800	665	525
	OFF	OFF	ON	620	560	520	455	410	355	305	255	See note 4	
	OFF	ON	OFF	795	755	705	670	615	585	530	490	440	405
	OFF	ON	ON	1020	955	930	890	840	805	755	715	645	490
	ON	OFF	OFF	1190	1140	1100	1065	1020	985	905	800	665	525
	ON	OFF	ON	1455	1390	1325	1255	1175	1085	1000	880	755	575
	ON	ON	OFF	1455	1390	1325	1255	1175	1085	1000	880	755	575
	ON	ON	ON	1455	1390	1325	1255	1175	1085	1000	880	755	575
	Maximum Clg Airflow[2]			1455	1390	1325	1255	1175	1085	1000	880	755	575
	High Heat Airflow[3]			915	860	825	790	735	700	650	610	550	450
	Low Heat Airflow[3]			780	730	685	635	585	545	495	450	400	370
Unit Size	**Cooling Switch Settings**			**External Static Pressure (ESP)**									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
070-16/ 048070													
	OFF	OFF	OFF	1615	1570	1530	1490	1450	1405	1365	1325	1280	1210
	OFF	OFF	ON	640	See note 4								
	OFF	ON	OFF	840	775	700	640	See note 4					
	OFF	ON	ON	1045	980	920	860	805	750	690	640	See note 4	
	ON	OFF	OFF	1220	1175	1120	1075	1025	970	925	875	820	775
	ON	OFF	ON	1390	1335	1290	1245	1200	1155	1105	1055	1015	970
	ON	ON	OFF	1615	1570	1530	1490	1450	1405	1365	1325	1280	1210
	ON	ON	ON	1890	1850	1810	1750	1685	1615	1545	1475	1395	1275
	Maximum Clg Airflow[2]			1890	1850	1810	1750	1685	1615	1545	1475	1395	1275
	High Heat Airflow[3]			1540	1490	1450	1410	1365	1320	1275	1235	1190	1140
	Low Heat Airflow[3]			1370	1320	1275	1225	1180	1135	1085	1040	995	950
Unit Size	**Cooling Switch Settings**			**External Static Pressure (ESP)**									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
090-16/ 048090													
	OFF	OFF	OFF	1625	1580	1535	1490	1445	1390	1325	1215	1070	910
	OFF	OFF	ON	555	See note 4								
	OFF	ON	OFF	845	770	670	595	See note 4					
	OFF	ON	ON	1010	950	880	790	725	670	580	See note 4		
	ON	OFF	OFF	1210	1155	1105	1035	970	910	850	800	730	660
	ON	OFF	ON	1405	1360	1305	1255	1185	1130	1070	1015	960	875
	ON	ON	OFF	1625	1580	1535	1490	1445	1390	1325	1215	1070	910
	ON	ON	ON	2095	2010	1935	1855	1770	1675	1540	1300	1120	940
	Maximum Clg Airflow[2]			2095	2010	1935	1855	1770	1675	1540	1300	1120	940
	High Heat Airflow[3]			1735	1685	1630	1580	1520	1455	1375	1235	1085	915
	Low Heat Airflow[3]			780	730	685	635	585	545	495	450	400	370

AIR DELIVERY—CFM (With Filter)* (Continued)

Unit Size	Cooling Switch Settings			External Static Pressure (ESP)									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
110-22/ 066110													
	OFF	OFF	OFF	2055	2000	1950	1900	1840	1790	1740	1675	1625	1565
	OFF	OFF	ON	855	755	See note 4							
	OFF	ON	OFF	1060	985	875	800	700	See note 4				
	OFF	ON	ON	1250	1180	1095	1025	925	860	775	715	See note 4	
	ON	OFF	OFF	1445	1380	1320	1235	1175	1100	1035	955	900	825
	ON	OFF	ON	1685	1630	1560	1505	1445	1375	1320	1265	1195	1140
	ON	ON	OFF	2055	2000	1950	1900	1840	1790	1740	1675	1625	1565
	ON	ON	ON	2465	2415	2365	2305	2230	2140	2045	1925	1805	1655
	Maximum Clg Airflow[2]			2465	2415	2365	2305	2230	2140	2045	1925	1805	1655
	High Heat Airflow[3]			2105	2055	2005	1955	1895	1850	1795	1735	1665	1580
	Low Heat Airflow[3]			1740	1685	1620	1560	1505	1440	1385	1325	1260	1205
Unit Size	**Cooling Switch Settings**			**External Static Pressure (ESP)**									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
135-22/ 066135													
	OFF	OFF	OFF	2040	1985	1930	1880	1830	1775	1715	1660	1595	1510
	OFF	OFF	ON	850	740	See note 4							
	OFF	ON	OFF	1040	960	865	755	See note 4					
	OFF	ON	ON	1245	1170	1080	1005	920	835	750	See note 4		
	ON	OFF	OFF	1450	1385	1305	1245	1180	1085	1015	935	880	805
	ON	OFF	ON	1670	1605	1540	1480	1425	1350	1280	1220	1135	1070
	ON	ON	OFF	2040	1985	1930	1880	1830	1775	1715	1660	1595	1510
	ON	ON	ON	2520	2455	2405	2350	2290	2195	2090	1965	1815	1615
	Maximum Clg Airflow[2]			2520	2455	2405	2350	2290	2195	2090	1965	1815	1615
	High Heat Airflow[3]			2260	2205	2150	2100	2045	1985	1925	1855	1745	1600
	Low Heat Airflow[3]			2005	1950	1895	1845	1790	1735	1675	1620	1550	1475

1. Nominal 350 CFM/ton cooling airflow is delivered with SW1-5 and SW4-2 set to OFF.
   Set both SW1-5 and SW4-3 to ON for +7% airflow (nominal 370 CFM/ton).
   Set SW1-5 to ON and SW4-3 to OFF for +15% airflow (nominal 400 CFM/ton).
   Set SW4-3 to ON and SW1-5 to OFF for -7% airflow (nominal 325 CFM/ton).
2. Maximum cooling airflow is achieved when switches SW3-1, SW3-2, SW3-3 and SW1-5 are set to ON, and SW4-3 is set to OFF.
3. All heating CFM's are when low heat rise adjustment switch (SW1-3) and comfort/efficiency adjustment switch (SW1-4) are both set to OFF
4. Ductwork must be sized for high-heating CFM within the operational range of ESP. Operation within the blank areas of the chart is not recommended because high-heat operation will be above 1.0 ESP.
5. All airflows on 21" casing size furnaces are 5% less on side return only installations.
6. Side returns for 24.5" casing sizes require two sides, or side and bottom, to allow sufficient airflow at the return of the furnace.

⚠ WARNING

FIRE, EXPLOSION, ASPHYXIATION HAZARD

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.

⚠ CAUTION

Check entire gas assembly for leaks after lighting this appliance.

INSTALLATION

1. 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.
2. This furnace must be installed so there are provisions for combustion and ventilation air. See manufacturer's installation information provided with this appliance.

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.

1. Do not bypass limit switches.
2. If a limit opens, call a quallified serviceman to correct the condition and reset limit switch.

INSTALLATION

MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION

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

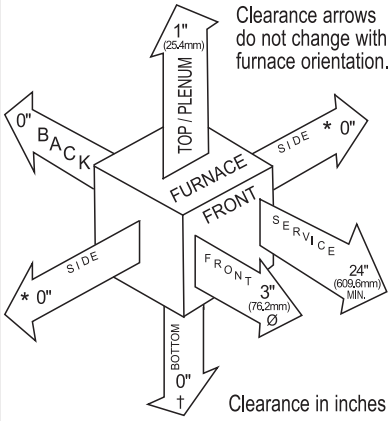
An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.

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.

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



Vent Clearance to combustibles:
For Single Wall vents 6 inches (6 po).
For Type B-1 vent type 1 inch (1 po).

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, END4X, ENW4X, WENC, WTNC, WENW OR WTNW.

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.

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58CTW

Certified System ISO 9001 QMI-SAI Global

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GUIDE SPECIFICATIONS

Gas Furnace
58CTW
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.

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® label.

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 AHRI 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. only. Warranty certificate available upon request.

Products

EQUIPMENT

Components shall include: slow-opening two stage 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 ECM 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. (mm). An accessory high efficiency Media Filter is available as an option. _____ Media Filter.

Casing

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

Two Speed Inducer Motor

Two Speed 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 enhanced 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 low heat, high heat, low cooling, high 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 control or Thermidistat™ 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. W.C. external static pressure.

Dimensions shall be: depth _____ in. (mm); width _____ in. (mm); height_____in. (mm). (casing only). Height shall be_____in. (mm). with A/C coil and _____in. (mm) 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.

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