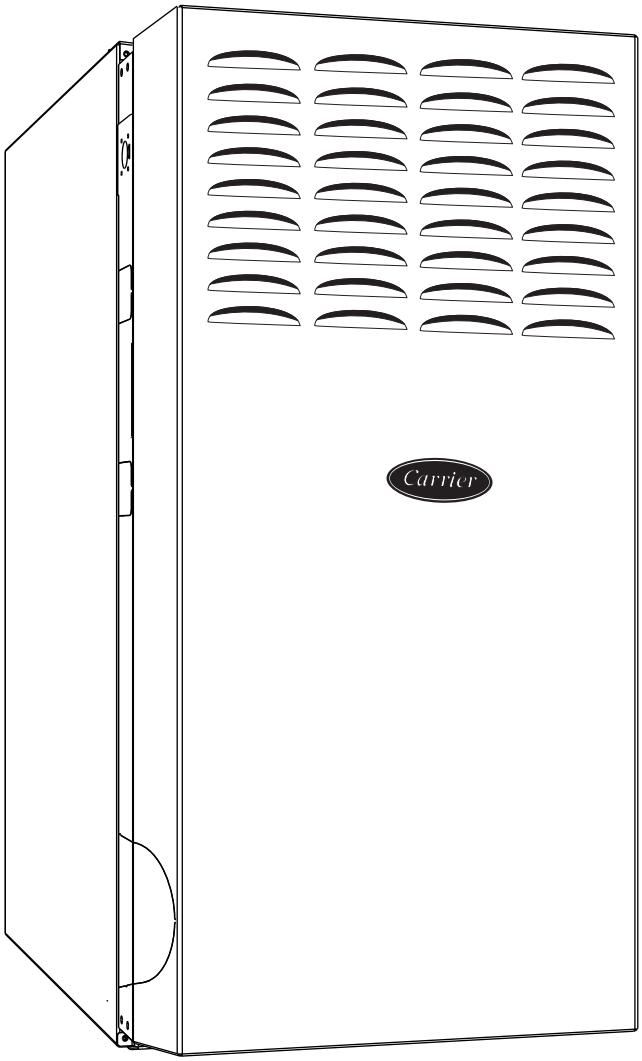
58STA/STX
4-WAY MULTIPOISE INDUCED-COMBUSTION GAS FURNACE
Input Capacities: 45,000 thru 155,000 Btuh

Carrier®
Turn to the Experts℠

Product Data



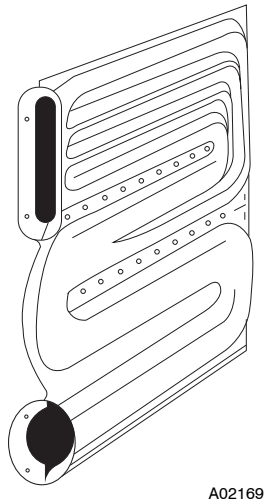
A04039

THE CARRIER 58STA/STX GAS FURNACE

The 58STA/STX 4-way Multipoise Gas Furnaces feature Carrier's QuieTech™ noise reduction system for incredibly quiet induced draft operation. 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 58STA/STX furnaces are approved for use with natural or propane gas, and the 58STX is approved for use in Low NOx Air Management Districts.

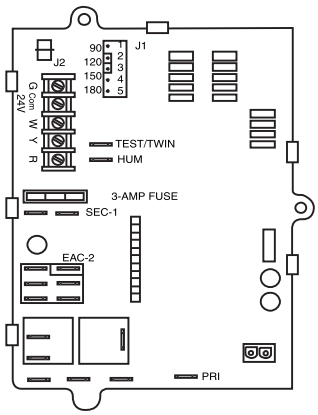
STANDARD FEATURES

- **QuieTech™ noise reduction system**
- **Microprocessor based control center**
  LED diagnostics and self test feature
  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**
- **Inner door for tighter sealing**
- **HYBRID HEAT® Dual Fuel System compatible**
- **All models are chimney friendly when used with accessory vent kit**
- **Twinning in Upflow, Downflow and Horizontal**
- **Residential installations eligible for consumer financing through the Retail Credit Program**



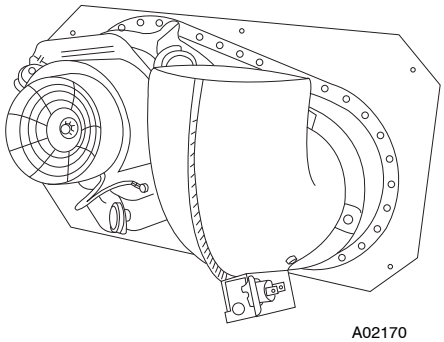
A02169

HEAT EXCHANGER



A02015

CONTROL BOARD



A02170

INDUCER BLOWER

MODEL NUMBER NOMENCLATURE

58STA **045** **100** **08**

58STA 4–Way Multipoise
58STX Low NOx version

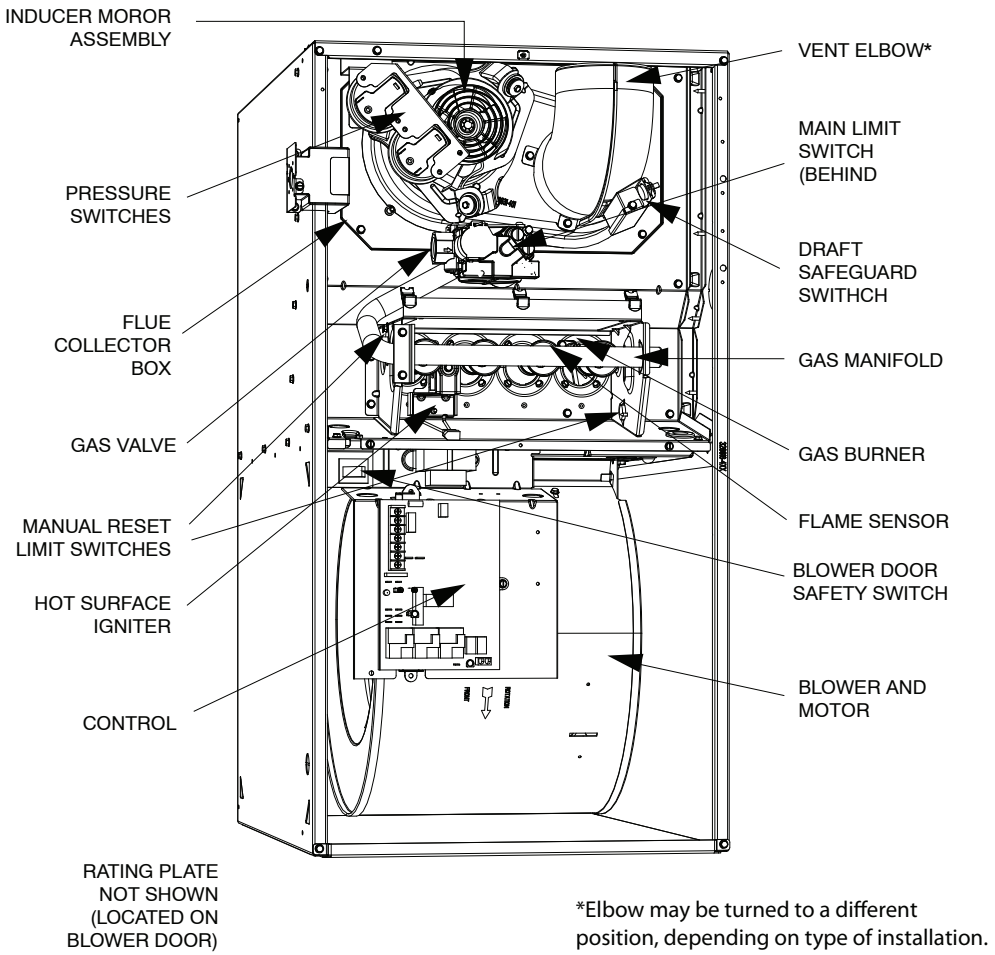
Input Capacity

045 – 44,000 Btuh	110 – 110,000 Btuh
070 – 66,000 Btuh	135 – 132,000 Btuh
090 – 88,000 Btuh	155 – 154,000 Btuh

Series Number

Nominal Cooling Size
(Airflow at .5 e.s.p.)
(400 CFM per 12,000 Btuh)
08 – 800 CFM
12 – 1200 CFM
14 – 1400 CFM
16 – 1600 CFM
20 – 2000 CFM
22 – 2200 CFM

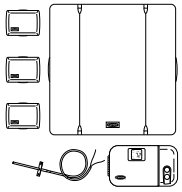
FURNACE COMPONENTS



A04138

NOTE: The 58STA/STX 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.

CARRIER ACCESSORIES

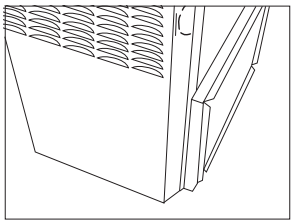


A97432

CONTROLS: THERMOSTATS AND ZONING

Available in programmable and non-programmable models, Carrier thermostats maintain a constant temperature level in the home.

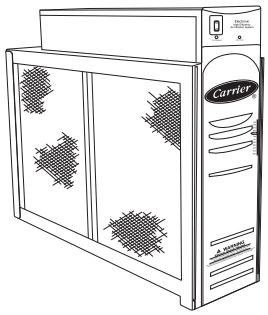
For the ultimate in home comfort, Carrier's 2, 4, and 8-zone systems allow temperature control of individual "zones" of the home. This is accomplished through a series of electronic dampers and remote room sensors. The 4-zone system is shown.



A02121

EXTERNAL FILTER RACK (SIDE OR BOTTOM)

Custom-made filter rack for easy connection when a return plenum already exists. Provides easy access for cleaning filter.

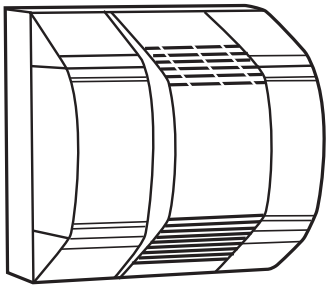


A04008

MECHANICAL OR ELECTRONIC AIR CLEANER

Cleans the air of smoke, dirt, and many pollens commonly found. Saves decorating and cleaning expenses by keeping carpets, furniture, and drapes cleaner.

Electronic air cleaner is shown.



A01484

MODEL HUMCCLFP HUMIDIFIER

By adding moisture to winter-dry air, a Carrier humidifier can often improve comfort and keep furniture, rugs, and draperies in better condition. Moisturizing household air also helps to retain normal body heat and provides comfort at lower temperatures.

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
UV LIGHTS	Model UVL
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–PHP‡
	For multi-use / stage configurations – deg. F/C, Auto Changeover, 7-Day Programmable/Temperature and Humidity Control –TP–PRH†
ZONING CONTROL	Comfort™ Series 3-Zone Kit – ZONECC3ZAC01, ZONECC3ZHP01
	2 Performance™ Series ComfortZone™ II Zoning/Temperature and Humidity Control – ZONECC2KIT01–B
	4 Performance™ Series ComfortZone™ II Zoning/Temperature and Humidity Control – ZONECC4KIT01–B
	8 Performance™ Series ComfortZone™ II Zoning/Temperature and Humidity Control – ZONECC8KIT01–B

* 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.

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

CARRIER ACCESSORIES

DESCRIPTION 58STA/STX	PART NO.	045-08	045-12	070-08	070-12	070-16	090-14	090-16	090-20	110-12	110-16	110-22	135-16	135-22	155-20
Performance Series Filter Cabinet	FILCABCC0016	X	X	X	X	X	X			X					
	FILCABCC0020							X	X		X	X	X		
	FILCABCC0024													X	X
Cartridge Media Filter	FILCCCAR0016	X	X	X	X	X	X			X					
	FILCCCAR0020							X	X		X	X	X		
	FILCCCAR0024													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														

* Factory-authorized and field installed. Fuel conversion kits are AGA/CGA recognized.
† Suitable for Side Return Filter Rack (KGAFR0801SRE)

X = Accessory

S = Standard

PHYSICAL DATA

UNIT SIZE		045		070			090	
		08	12	08	12	16	14	16
OUTPUT CAPACITY BTUH* (Nonweatherized ICS) †	58STX Upflow; all 58STA	35,000	36,000	53,000	54,000	53,000	71,000	71,000
	58STX Downflow/Horizontal	34,000	34,000	51,000	51,000	51,000	68,000	68,000
INPUT BTUH*	58STX Upflow; all 58STA	44,000	44,000	66,000	66,000	66,000	88,000	88,000
	58STX Downflow/Horizontal	42,000	42,000	63,000	63,000	63,000	84,000	84,000
AFUE%*	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0	80.0	80.0
SHIPPING WEIGHT – LB (KG)		104 (47)	107 (49)	111 (50)	115 (52)	126 (57)	127 (58)	140 (64)
CERTIFIED TEMP 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 EXT STATIC PRESSURE	Heating	0.10	0.10	0.12	0.12	0.12	0.15	0.15
	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	0.50
AIRFLOW CFM‡	Heating	920	1250	720	1195	1450	1375	1505
	Cooling	845	1160	900	1200	1530	1385	1720
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 VALVE (Redundant) Manufacturer		White-Rodgers						
Minimum Inlet Pressure (In. wc)		4.5 (Natural Gas)						
Maximum Inlet Pressure (In. wc)		13.6 (Natural Gas)						
IGNITION DEVICE		Hot Surface						

* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, for elevations above 2000 ft. (605 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. In Canada, derate the unit 10 percent for elevations 2000 to 4500 ft (610 to 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 air delivery above 1800 CFM, see Air Delivery Table for other options. A filter is required for each return-air supply.

ICS — Isolated Combustion System

BLOWER PERFORMANCE DATA

UNIT SIZE	045		070			090	
	08	12	08	12	16	14	16
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	7.9	5.2	7.9
RPM (Nominal)	1075–3	1075–3	1075–3	1075–3	1075–3	1075–3	1075–3
BLOWER WHEEL DIAMETER X WIDTHS – 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)

ECM–Electronically Commutated Motor, Variable Speed

PHYSICAL DATA

UNIT SIZE		090	110			135		155
		20	12	16	22	16	22	20
OUTPUT CAPACITY BTUH* (Nonweatherized ICS) †	58STX Upflow; all 58STA	71,000	89,000	89,000	89,000	107,000	107,000	125,000
	58STX Downflow/Horizontal	68,000	85,000	85,000	85,000	102,000	102,000	119,000
INPUT BTUH*	58STX Upflow; all 58STA	88,000	110,000	110,000	110,000	132,000	132,000	154,000
	58STX Downflow/Horizontal	84,000	105,000	105,000	105,000	126,000	126,000	147,000
AFUE%*	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0	80.0	80.0
SHIPPING WEIGHT – LB. (KG)		146 (66)	135 (61)	146 (66)	152 (69)	149 (68)	163 (74)	170 (77)
CERTIFIED TEMP RISE RANGE – °F (°C)		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 (25–41)
CERTIFIED EXT STATIC PRESSURE	Heating	0.15	0.20	0.20	0.20	0.20	0.20	0.20
	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	0.50
AIRFLOW CFM‡	Heating	1990	1335	1515	1900	1525	1850	1790
	Cooling	2025	1355	1680	2220	1710	2110	2230
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 VALVE (Redundant) Manufacturer		White-Rodgers						
Minimum Inlet Pressure (In. wc)		4.5 (Natural Gas)						
Maximum Inlet Pressure (In. wc)		13.6 (Natural Gas)						
IGNITION DEVICE		Hot Surface						

* 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 to 4500 ft. (610 to 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.

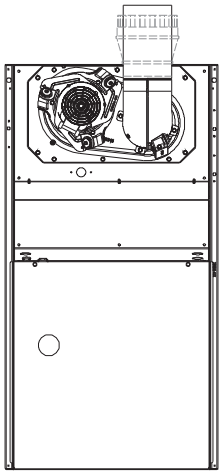
‡ Airflow shown is for bottom only return-air supply. For air delivery above 1800 CFM, see Air Delivery Table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using a Carrier 4-5/16 in. (110 mm) high efficiency media filter.

ICS — Isolated Combustion System

BLOWER PERFORMANCE DATA

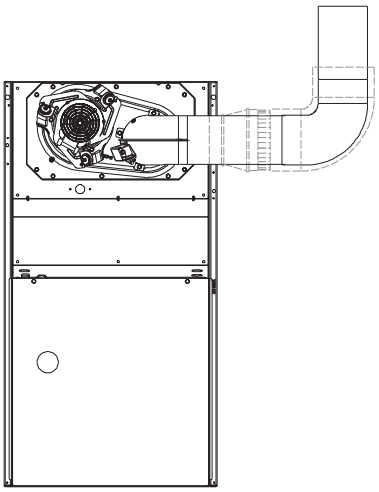
UNIT SIZE	090	110			135		155
	20	12	16	22	16	22	20
DIRECT–DRIVE MOTOR Hp (PSC)	3/4	1/3	1/2	3/4	1/2	3/4	3/4
MOTOR FULL LOAD AMPS	11.1	5.2	7.9	11.1	7.9	11.1	11.1
RPM (Nominal)–Speeds	1075–3	1075–3	1075–3	1075–3	1075–3	1075–3	1075–3
BLOWER WHEEL DIAMETER X WIDTHS – IN. (mm)	11 x 11 (279 x 279)	10 x 8 (254 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)

PSC–Permanent Split Capacitor



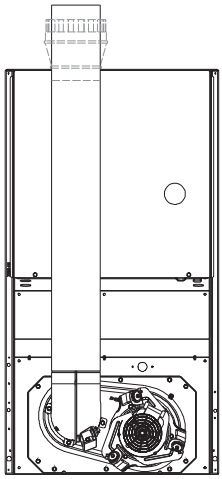
SEE NOTES: 1,2,4,7,8,9
UPFLOW

A02058



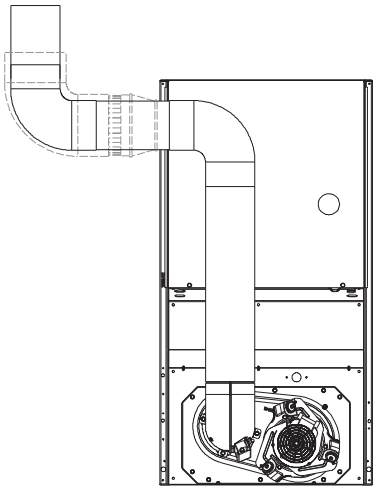
SEE NOTES: 1,2,3,4,7,8,9
UPFLOW

A02059



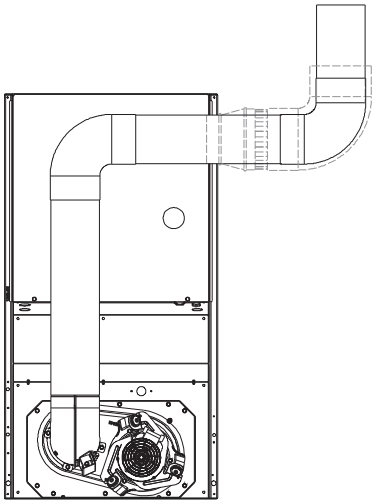
SEE NOTES: 1,2,4,5,7,8,9
DOWNFLOW

A02061



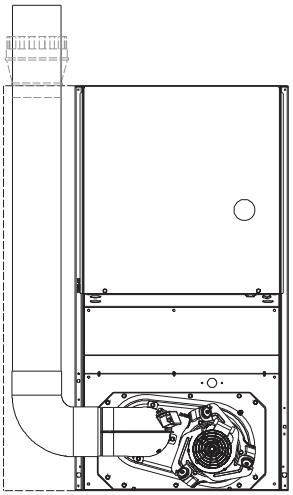
SEE NOTES:1,2,3,4,5,7,8,9
DOWNFLOW

A02060



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

A02063

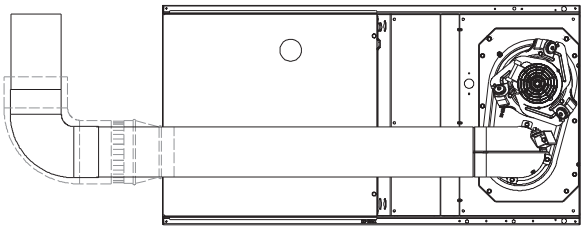


SEE NOTES: 1,2,4,5,6,7,8,9
DOWNFLOW

A02062

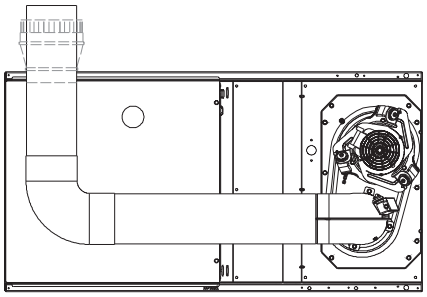
Venting Notes

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.



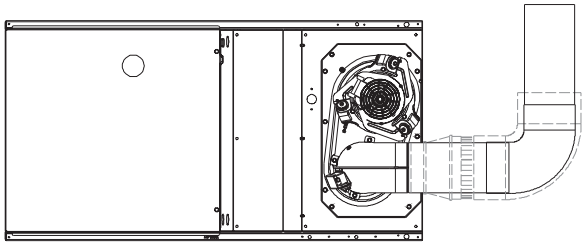
SEE NOTES 1,2,4,5,7,8,9
HORIZONTAL RIGHT

A02068



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

A02070



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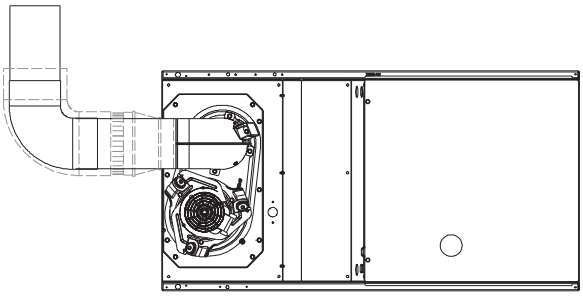

SEE NOTES 1,2,4,7,8,9
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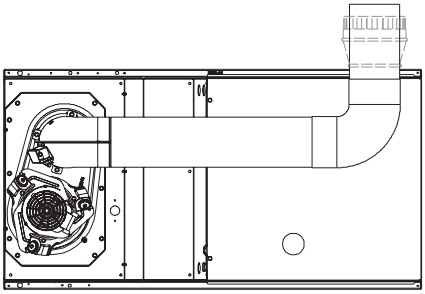

SEE NOTES 1,2,4,5,7,8,9
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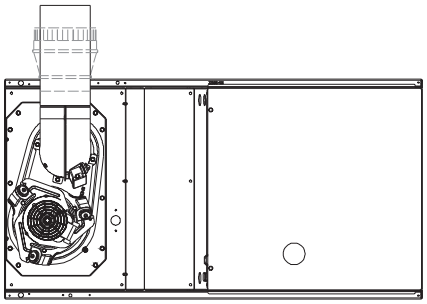

SEE NOTES 1,2,4,5,7,8,9
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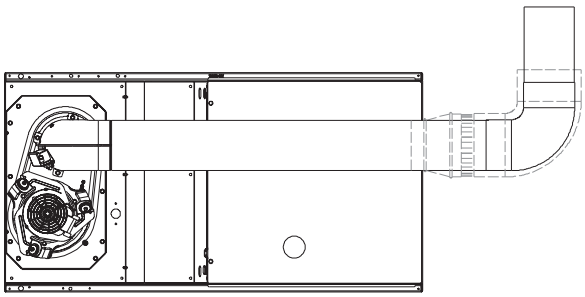

SEE NOTES 1,2,4,5,7,8,9
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A02067

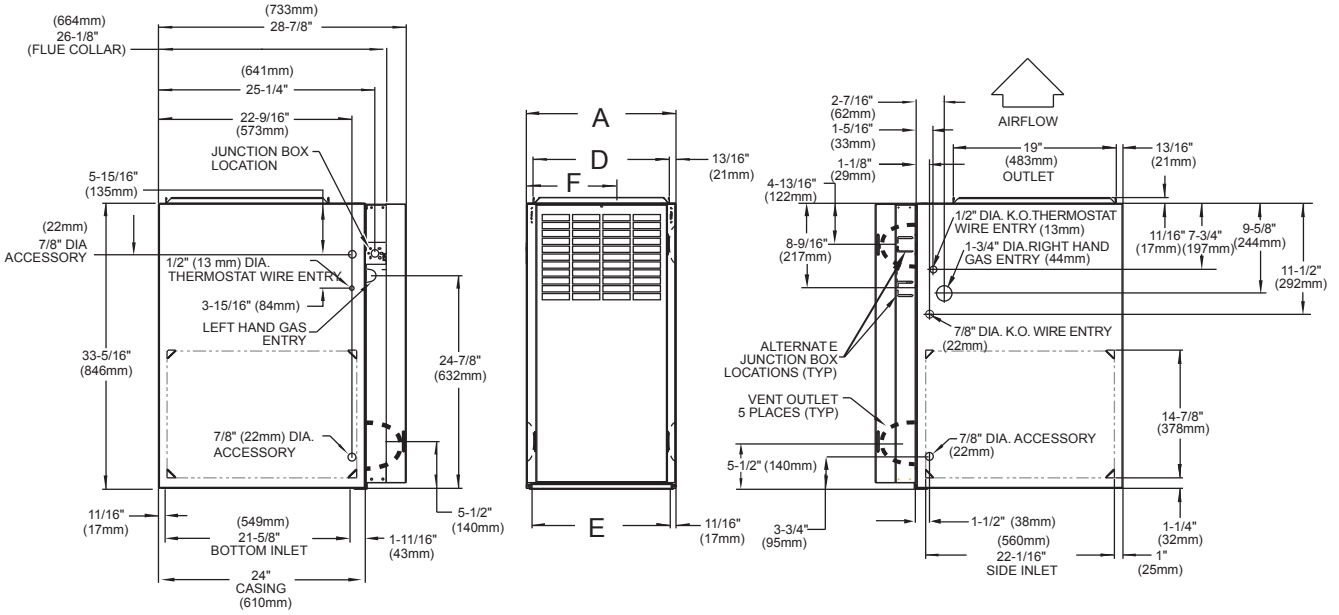
AIR DELIVERY - CFM (With Filter)

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
045-08	Bottom or Side(s)	High Med-High Med-Low	1085 920 820	1035 875 775	975 830 730	915 770 680	845 710 620	770 640 555	675 555 470	565 440 360	390 250 190	195 — —
045-12	Bottom or Side(s) Low	High Med-High Med-Low	1450 1360 1250	1375 1300 1210	1305 1240 1160	1225 1175 1100	1145 1115 1040	1050 1040 965	955 950 885	845 850 790	705 725 670	510 575 520
070-08	Bottom or Side(s)	High Med-High Med-Low	1030 835 725	1010 815 700	980 790 675	945 760 645	900 720 600	845 675 555	775 610 475	680 490 390	490 375 300	335 265 —
070-12	Bottom or Side(s)	High Med-High Med-Low	1425 1320 1200	1375 1280 1175	1320 1240 1145	1265 1205 1105	1200 1140 1050	1125 1075 990	1035 995 920	940 905 840	830 790 725	655 620 555
070-16	Bottom or Side(s)	High Med-High Med-Low	1805 1630 1460	1740 1585 1420	1670 1530 1385	1600 1470 1325	1530 1405 1280	1445 1330 1220	1360 1255 1155	1280 1170 1080	1180 1080 995	1075 990 910
090-14	Bottom or Side(s)	High Med-High Med-Low	1650 1515 1385	1600 1485 1360	1535 1440 1320	1465 1380 1260	1385 1300 1195	1285 1220 1120	1175 1115 1025	1055 990 915	895 830 710	645 600 565
090-16	Bottom or Side(s)	High Med-High Med-Low	2060 1790 1505	1985 1765 1505	1915 1715 1480	1820 1645 1440	1720 1560 1375	1610 1470 1300	1490 1345 1190	1340 1195 1045	1135 1010 890	925 820 740
090-20	Bottom Only	High Med-High Med-Low	2405 2225 2020	2310 2155 1955	2220 2080 1880	2130 1995 1805	2025 1895 1730	1920 1785 1630	1790 1675 1535	1660 1565 1420	1530 1420 1275	1350 1260 1135
	Both Sides or 1 Side & Bottom	High Med-High Med-Low	2530 2285 1995	2450 2215 1945	2365 2150 1900	2270 2075 1840	2165 1985 1770	2065 1890 1685	1940 1780 1600	1805 1660 1480	1670 1525 1350	1505 1360 1180
	1 Side Only	High Med-High Med-Low	2475 2260 1950	2395 2190 1910	2300 2110 1855	2200 2035 1795	2090 1940 1730	1985 1845 1650	1865 1735 1555	1730 1620 1445	1585 1475 1310	1425 1325 1150
110–12	Bottom or 1 Side(s)	High Med-High Med-Low	1625 1510 1360	1575 1470 1335	1515 1415 1295	1445 1355 1250	1355 1285 1180	1260 1185 1100	1165 1070 985	990 890 810	785 725 —	— — —
110–16	Bottom or 1 Side	High Med-High Med-Low	2035 1745 1530	1965 1710 1515	1880 1650 1470	1790 1560 1400	1680 1450 1310	1495 1340 1215	1365 1205 1095	1215 1090 990	1075 955 830	875 750 670
110–22	Bottom Only	High Med-High Med-Low	2530 2230 1920	2470 2205 1900	2400 2165 1880	2320 2110 1845	2220 2035 1795	2115 1950 1730	2000 1855 1650	1865 1740 1555	1730 1615 1460	1590 1485 1340
	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	2540 2125 1790	2495 2120 1795	2430 2105 1790	2355 2060 1765	2265 2010 1720	2175 1940 1650	2065 1840 1585	1935 1730 1500	1785 1615 1390	1650 1485 1280
135–16	Bottom or 1 Side	High Med-High Med-Low	2090 1790 1545	2010 1755 1525	1930 1705 1500	1835 1640 1450	1710 1550 1380	1590 1465 1315	1470 1360 1215	1335 1210 1005	1025 945 855	835 785 670
135–22	Bottom Only	High Med-High Med-Low	2485 2195 1880	2400 2150 1850	2310 2090 1820	2215 2000 1780	2110 1920 1715	2000 1825 1635	1880 1720 1540	1725 1565 1415	1535 1405 1290	1355 1255 1160
	Both Sides or 1 Side & Bottom	High Med–High	— 2180	— 2145	2385 2060	2305 2010	2195 1945	2085 1865	1960 1765	1825 1660	1670 1515	1465 1325
	1 Side Only	High Med-High Med-Low	— 2135 1880	— 2085 1850	2245 2035 1820	2155 1975 1780	2055 1895 1715	1940 1795 1635	1825 1685 1540	1695 1565 1415	1555 1445 1290	1385 1265 1160
155–20	Bottom Only	High Med-High Med-Low	2465 2115 1800	2430 2105 1790	2375 2075 1770	2305 2030 1735	2230 1980 1695	2110 1910 1640	2000 1830 1570	1865 1725 1465	1725 1590 1345	1545 1425 1225
	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 Med-Low	— 2140 1800	— 2095 1790	2260 2040 1770	2180 1975 1735	2085 1890 1695	1975 1810 1640	1865 1705 1570	1740 1595 1465	1605 1480 1345	1455 1325 1225

* 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.

DIMENSIONS



A04037

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 IN (mm)	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 WEIGHT LB (KG)
045−08	14−3/16 (360)	12−9/16 (319)	12−11/16 (322)	9−5/16 (237)	4 (102)	104 (47)
045−12	14−3/16 (360)	12−9/16 (319)	12−11/16 (322)	9−5/16 (237)	4 (102)	107 (48)
070−08	14−3/16 (360)	12−9/16 (319)	12−11/16 (322)	9−5/16 (237)	4 (102)	111 (50)
070−12	14−3/16 (360)	12−9/16 (319)	12−11/16 (322)	9−5/16 (237)	4 (102)	115 (52)
070−16	17−1/2 (445)	15−7/8 (403)	16−1/8 (410)	11−9/16 (294)	4 (102)	126 (57)
090−14	17−1/2 (445)	15−7/8 (403)	16−1/8 (410)	11−9/16 (294)	4 (102)	127 (58)
090−16	21 (533)	19−3/8 (492)	19−1/2 (495)	13−5/16 (338)	4 (102)	140 (64)
090−20	21 (533)	19−3/8 (492)	19−1/2 (495)	13−5/16 (338)	4 (102)	146 (66)
110−12	17−1/2 (445)	15−7/8 (403)	16−1/8 (410)	11−9/16 (294)	4 (102)	135 (61)
110−16	21 (533)	19−3/8 (492)	19−1/2 (495)	13−5/16 (338)	4 (102)	146 (66)
110−22	21 (533)	19−3/8 (492)	19−1/2 (495)	13−5/16 (338)	4 (102)	152 (69)
135−16	21 (533)	19−3/8 (492)	19−1/2 (495)	13−5/16 (338)	4 (102)†	149 (68)
135−22	24−1/2 (622)	22−7/8 (581)	23 (584)	15−1/16 (383)	4 (102)†	163 (74)
155−20	24−1/2 (622)	22−7/8 (581)	23 (584)	15−1/16 (383)	4 (102)†	170 (77)

*5−in. or 6−in. (127 or 152 mm) vent connector may be required in some cases.

†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.
See Installation Instructions for complete installation requirements.

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⚠ 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 entraîner 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 effecturés 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

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.

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

2. 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 á air chaud doit être installé de manière à ce qu´ilyait 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.

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
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.

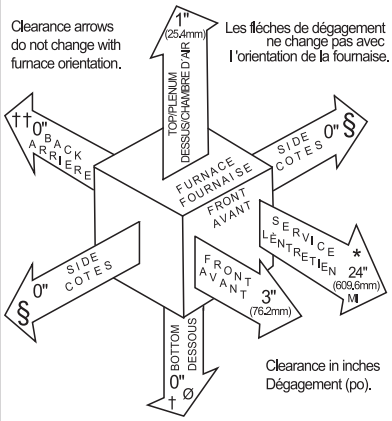
Cette fournaise peut être utilisée avec un conduit d´évacuation de Type B-1 ou connectée au conduit ommun d 'autres appareils à gaz.

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.

Les flèches de dégagement ne change pas avec l 'orientation de la fournaise.



Clearance in inches
Dégagement (po).

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 nº KGASB0201ALL ou NAHA01101SB, l´ensemble serpentin, pièce nº 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 poistion 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 cherrise de la fournaise et les solives, montant sous cadre de charpente.

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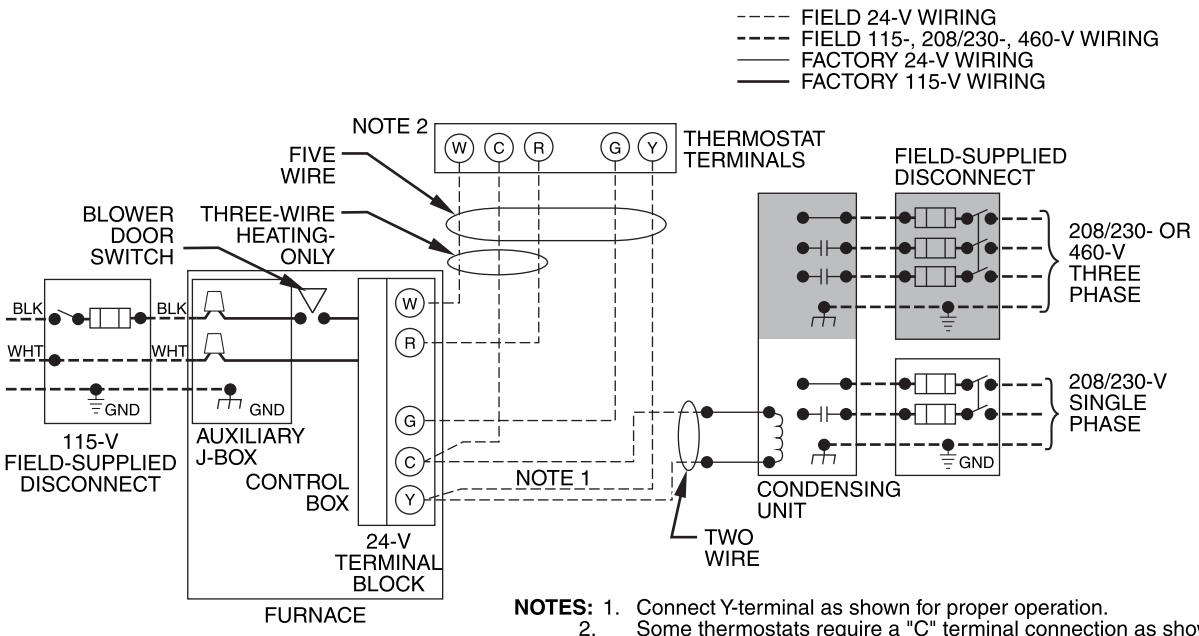
ISO 9001:2000

MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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

TYPICAL WIRING SCHEMATIC



NOTES: 1. Connect Y-terminal as shown for proper operation.
2. Some thermostats require a "C" terminal connection as shown.
3. If any of the original wire, as supplied, must be replaced, use same type or equivalent wire.

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ELECTRICAL DATA

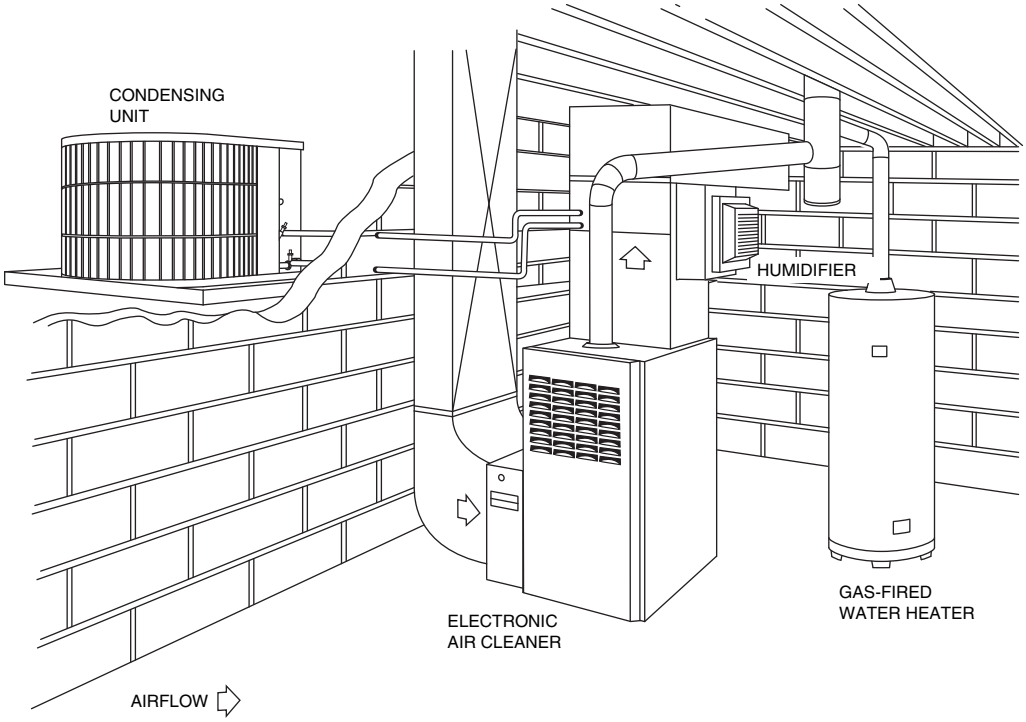
58STA/STX UNIT SIZE	VOLTS HERTZ PHASE	OPERATING VOLTAGE RANGE		MAXIMUM UNIT AMPS	MAXIMUM WIRE LENGTH FT (M)‡	MAXIMUM FUSE OR CKT BKR AMPS†	MINIMUM WIRE GAGE
		Maximum*	Minimum*				
045-08	115-60-1	127	104	5.4	49 (14.9)	15	14
045-12	115-60-1	127	104	7.0	39 (11.8)	15	14
070-08	115-60-1	127	104	5.0	52 (15.8)	15	14
070-12	115-60-1	127	104	6.8	40 (12.1)	15	14
070-16	115-60-1	127	104	9.5	29 (8.8)	15	14
090-14	115-60-1	127	104	8.2	34 (10.3)	15	14
090-16	115-60-1	127	104	10.0	28 (8.5)	15	14
090-20	115-60-1	127	104	13.6	32 (9.7)	20	12
110-12	115-60-1	127	104	8.2	34 (10.3)	15	14
110-16	115-60-1	127	104	10.1	28 (8.5)	15	14
110-22	115-60-1	127	104	14.8	30 (9.1)	20	12
135-16	115-60-1	127	104	10.2	27 (8.2)	15	14
135-22	115-60-1	127	104	14.4	30 (9.1)	20	12
155-20	115-60-1	127	104	15.0	29 (8.8)	20	12

* Permissible limits of the voltage range at which unit operates satisfactorily.

† Time–delay type is recommended.

‡ Length shown is as measured 1 way along wire path between unit and service panel for maximum 2 percent voltage drop.

TYPICAL INSTALLATION



GUIDE SPECIFICATIONS

Gas Furnace

58STA/STX

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 external medial cabinet for use with accessory media filter or standard filter.

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 _____ in. (mm) (x) _____in. (mm). An accessory high efficiency Media Filter is available as an option. _____ Media Filter.

Casing

Casing shall be of .030 in. (.76) 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.

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. (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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Catalog No: 58ST–6PD

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

Replaces: 58ST–5PD