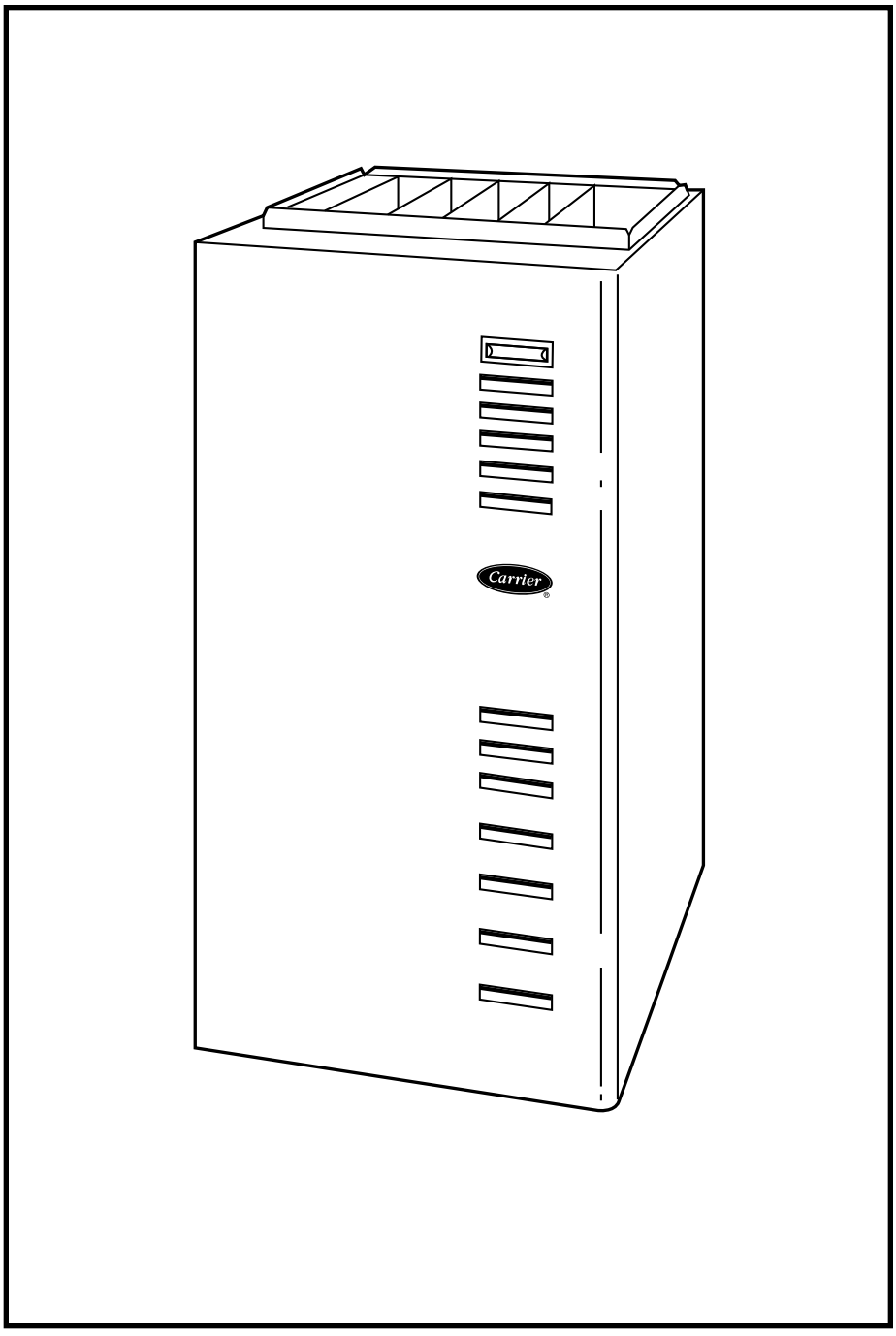
Carrier®
HEATING & COOLING

Product Data

58MCA
4-Way Multipoise Fixed-Capacity Direct-Vent Condensing Gas Furnace

Series 140
Input Capacities: 40,000 thru 138,000 Btuh



High Efficiency and Flexibility Designed to Meet the Needs of New Homes

The model 58MCA combines high efficiency with flexibility to meet the changing needs of new home construction. The unique 4-way, multipoise design of the 58MCA allows for installation in upflow, downflow, horizontal left, and horizontal right orientations, meaning it is perfect for a variety of installation applications. With the exception of the 140 size unit, all sizes of the 58MCA can be installed in a manufactured (mobile) home when the optional kit is used. The furnace is factory configured for upflow application but can easily be made ready for downflow or horizontal installation.

Horizontal applications offer the advantage of reduced space requirements by locating the furnace in an attic or crawlspace, freeing space formerly dedicated to a furnace or utility room.

The 58MCA is specifically designed to meet the needs of home builders and new home owners. Home builders benefit from the 58MCA's unmatched flexibility and by building a reputation of using quality appliances in homes. Home owners benefit by energy savings from 1 of the most important home appliances.

The components of the 58MCA represent the finest in the industry. Hot surface ignition (HSI) and a control center provide reliable and efficient ignition. The combustion inducer is unique in that efficient operation is achieved in any type of

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installation. Standard 2-in. PVC pipe connects the combustion-air and vent pipes to the furnace. The primary and secondary heat exchangers are backed by a 25-year Limited Warranty.

The 58MCA is a standard part of a quality-built new home. This high-efficiency furnace will provide years of quality service to home builders and home owners alike.

As with other Carrier furnaces, this model is designed to work as a part of the total home comfort system which includes elements for cooling, air cleaning, humidification, ventilation, and zoning.

58MCA FEATURES/ BENEFITS

Casing—One piece, seamless wrap-around construction of prepainted galvanized steel resists corrosion.

Certifications—The 58MCA units are A.G.A. and C.G.A. design certified for use with natural and propane gases. The furnace is factory-shipped for use with natural gas. An A.G.A./C.G.A. listed gas conversion kit is required to convert furnace for use with propane gas. The efficiency is GAMA efficiency rating certified. The 58MCA meets California Air Quality Management District emission requirements. Except for the 140 size unit, all sizes of the 58MCA can be installed in a manufactured (mobile) home when the optional kit is used.

Warranties—25-year Limited Warranty on the heat exchangers. One-year Limited Warranty on entire unit. Contact your dealer for details.

Combustion Products Venting—The combustion-air and vent pipes can terminate through a side wall or through the roof when used with a factory-authorized vent termination kit.

Hot Surface Ignitor—No pilot flame to waste gas or cause ignition problems.

Insulation—Foil-faced insulation in heat exchanger section of the casing minimizes heat loss.

Control Center—Controls sequencing and furnace operation. Equipped with a component test feature and status indicator light to assist in troubleshooting. Control times blower start after main burners ignite to eliminate cold air blowing into rooms.

Adjustable Blower Speed—For precise airflow selection of heating or cooling operation.

Direct Vent Sealed Combustion System—Model 58MCA uses 100% outdoor air, which results in especially quiet operation. Direct venting minimizes the possibility of chloride contamination which can result in heat exchanger corrosion. Direct venting also reduces air infiltration into the home increasing comfort.

Serpentuff™—Exclusive Serpentuff coating, a patented polypropylene laminate is used on the secondary heat exchanger.

Quality Registration—The 58MCA is engineered and manufactured under an ISO 9001 registered quality system.

Model number nomenclature

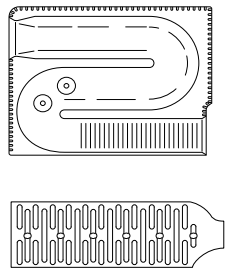
58MCA — **040** — **140** — **08**

4-Way Multipoise Fixed-Capacity Direct-Vent Condensing Gas Furnace

Input Capacity
040 — 40,000 Btuh
060 — 60,000 Btuh
080 — 80,000 Btuh
100 — 100,000 Btuh
120 — 120,000 Btuh
140 — 138,000 Btuh

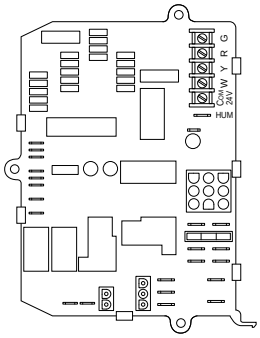
Series

Cooling Size Airflow
(Nominal 400 CFM per 12,000 Btuh Cooling)
08 — 800 CFM
12 — 1200 CFM
16 — 1600 CFM
20 — 2000 CFM



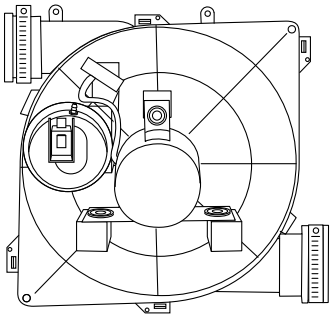
A92505

HEAT EXCHANGERS



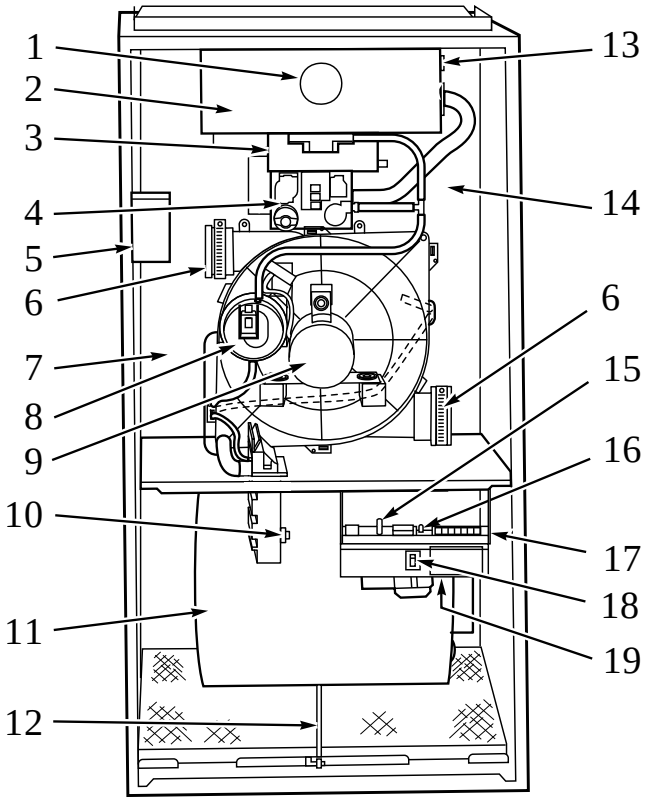
A95246

CONTROL CENTER



A94152

INDUCER ASSEMBLY



A98292

NOTES:

1. The 58MCA Furnaces are for use with natural gas, but can be field-converted for propane gas with a factory-authorized and listed accessory conversion kit.
2. Component location and configuration may be different than shown above.

1 Burner sight glass for viewing burner flame.

2 Burner assembly (inside) operates with energy-saving, inshot burners and hot surface ignitor for safe, dependable heating.

3 Combustion-air intake connection to ensure contaminant-free air (right or left side).

4 Redundant gas valve. Safe, efficient, features 1 gas control with 2 internal shutoff valves.

5 Junction box for 115-v electrical power supply.

6 Vent outlet uses sealed PVC pipe to carry vent gases from the furnace's combustion system (right or left side).

7 Secondary condensing heat exchanger (inside), wrings out more heat through condensation of gases. Constructed with Polypropylene-laminated steel to ensure durability.

8 Pressure switch ensures adequate flow of flue products through furnace and out vent system.

9 Combustion inducer pulls hot flue gases through the heat exchangers, maintaining negative pressure for added safety.

10 Condensate drain connection collects moisture condensed during the combustion process.

11 Heavy-duty blower circulates air across the heat exchangers to transfer heat into the home.

12 Air filter and retainer may be used for side return application.

13 Rollout switch (manual reset) to prevent overtemperature in burner area.

14 Primary serpentine heat exchanger (inside) stretches fuel dollars with the S-shaped heat-flow design. Solid construction of corrosion-resistant aluminized steel means reliability.

15 3-amp fuse provides electrical and component protection.

16 Light emitting diode (LED) on control center. Code lights are for diagnosing furnace operation and service requirements.

17 Control center.

18 Blower access panel safety interlock switch.

19 Transformer (24v) behind control center provides low-voltage power to furnace control center and thermostat.

Physical data

UNIT SIZE		040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
OUTPUT CAPACITY BTUH* (Nonweatherized ICS)	Multipoise	37,000	37,000	56,000	56,000	56,000	74,000	74,000	74,000	93,000	93,000	112,000	127,000
INPUT BTUH†		40,000	40,000	60,000	60,000	60,000	80,000	80,000	80,000	100,000	100,000	120,000	138,000
SHIPPING WEIGHT (Lb)		149	152	156	163	166	172	175	197	193	196	252	252
CERTIFIED TEMP RISE RANGE (°F)		30—60	15—45	45—75	30—60	20—50	40—70	30—60	20—50	45—75	30—60	40—70	50—80
CERTIFIED EXT STATIC PRESSURE	Heating	0.10	0.10	0.12	0.12	0.12	0.15	0.15	0.15	0.20	0.20	0.20	0.20
(In. wc)	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
AIRFLOW CFM‡	Heating	850	1125	885	1065	1320	1190	1285	1785	1315	1690	1720	1970
	Cooling	895	1215	900	1200	1545	1245	1525	1925	1570	1930	2000	1990
LIMIT CONTROL		SPST											
HEATING BLOWER CONTROL (Off Delay)		Factory-set at 135 sec											
BURNERS (Monoport)		2	2	3	3	3	4	4	4	5	5	6	6
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											

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

† Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 2% for each 1000 ft above sea level. In Canada, derate the unit 5% for elevations 2000 to 4500 ft above sea level.

‡ 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

Carrier accessories*

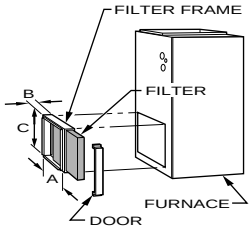
UNIT SIZE	040-08 040-12	060-08 060-12 060-16	080-12 080-16 080-20	100-16 100-20	120-20	140-20
GAS CONVERSION KIT—NATURAL-TO-PROPANE	KGANP2001ALL					
GAS CONVERSION KIT—PROPANE-TO-NATURAL	KGAPN1601ALL					
TWINNING KIT (Upflow Only)†	N/A	KGATW0401HSI				N/A
MANUFACTURED (Mobile) HOME KIT	KGAMH0101KIT					N/A
DOWNFLOW BASE (For Combustible Floors)‡	KGASB0201ALL					
VENT TERMINATION KIT (Bracket Only for 2 Pipes)	2-in.—KGAVT0101BRA 3-in.—KGAVT0201BRA					
CONCENTRIC VENT TERMINATION KIT (Single Exit)	2-in.—KGAVT0501CVT 3-in.—KGAVT0601CVT					
CONDENSATE FREEZE PROTECTION KIT	KGAHT0101CFP					
SIDE FILTER RACK (Without Filter) Upflow Only	KGAFR0206ALL					
ELECTRONIC AIR CLEANER (EAC)	Model AIRA					
MECHANICAL AIR CLEANER	Model 31MF or MACA					
HUMIDIFIER	Models HUM					
HEAT RECOVERY VENTILATOR	Models VA3B, VB5B, VC5B					
ENERGY RECOVERY VENTILATOR	Model VL3A					
THERMOSTAT — NON-PROGRAMMABLE	For Use with 1-Speed Air Conditioner — TSTATCCNAC01-B For Use with 2-Speed Air Conditioner — TSTATCCN2S01-B For Use with 2-Speed Heat Pump — TSTATCCN2S01-B					
THERMOSTAT — PROGRAMMABLE	For Use with 1-Speed Air Conditioner — TSTATCCPAC01-B For Use with 2-Speed Air Conditioner — TSTATCCP2S01-B For Use with 1-Speed Heat Pump — TSTATCCPDF01-B For Use with 2-Speed Heat Pump — TSTATCCP2S01-B or TSTATCCPDF01-B					
THERMIDISTAT — PROGRAMMABLE THERMOSTAT (W/Humidity Control)	TSTATCCPRH01-B					
ZONING — 2 ZONE	ZONECC2KIT01, ZONEKIT2ZCAR					
ZONING — 4 ZONE	ZONECC4KIT01					
ZONING — 8 ZONE	ZONECC8KIT01					

* Factory-authorized and field-installed. Gas conversion kits are A.G.A./C.G.A. recognized.

† For 16 and 20 airflow sizes only (except 140-20 size unit) and in upflow application ONLY. See kit Installation Instructions for details.

‡ Required for installation on combustible floors when no coil box is used, or when any coil box other than a Carrier cased coil is used.

N/A — Not Applicable



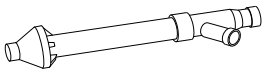
A93068

SIDE FILTER RACK

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

Accepts one 16 x 25 x 1 in. filter. (Not included)

A	23-1/8 in.
B	2-3/8 in.
C	14-1/2 in.

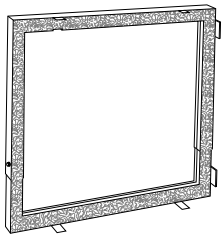


A93086

CONCENTRIC VENT

A concentric vent kit allows vent and combustion-air pipes to terminate through a single exit in a roof or side wall.

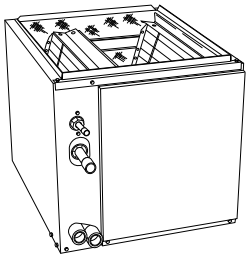
One pipe runs inside the other allowing venting through the inner pipe and combustion air to be drawn in through the outer pipe.



A88202

DOWNFLOW SUBBASE

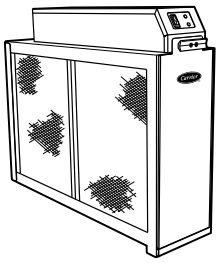
One base fits all furnace sizes. The base is designed to be installed between the furnace and a combustible floor when no coil box is used or when a coil box other than a Carrier cased coil is used. It is A.G.A./C.G.A. design certified for use with Carrier 58MCA furnaces when installed in downflow applications.



A96214

CK5 CASED COIL (as shown)

The CD5 or CK5 Cased Coil is an upflow/downflow furnace coil which can also replace the downflow subbase when installing the 58MCA on combustible flooring in the downflow orientation.

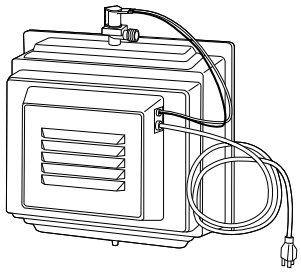


A97380

ELECTRONIC OR MECHANICAL 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.

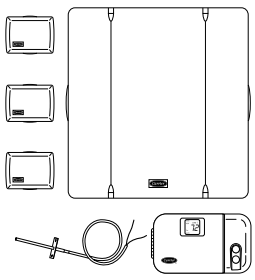
Electronic air cleaner is shown.



A95248

HUMIDIFIER

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

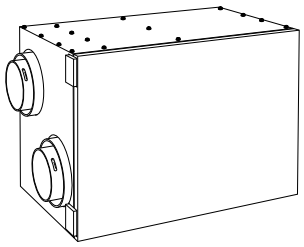


A97432

CONTROLS: THERMOSTATS AND ZONING

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

For the ultimate in home comfort, Carrier's 2-zone, 4-zone 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.



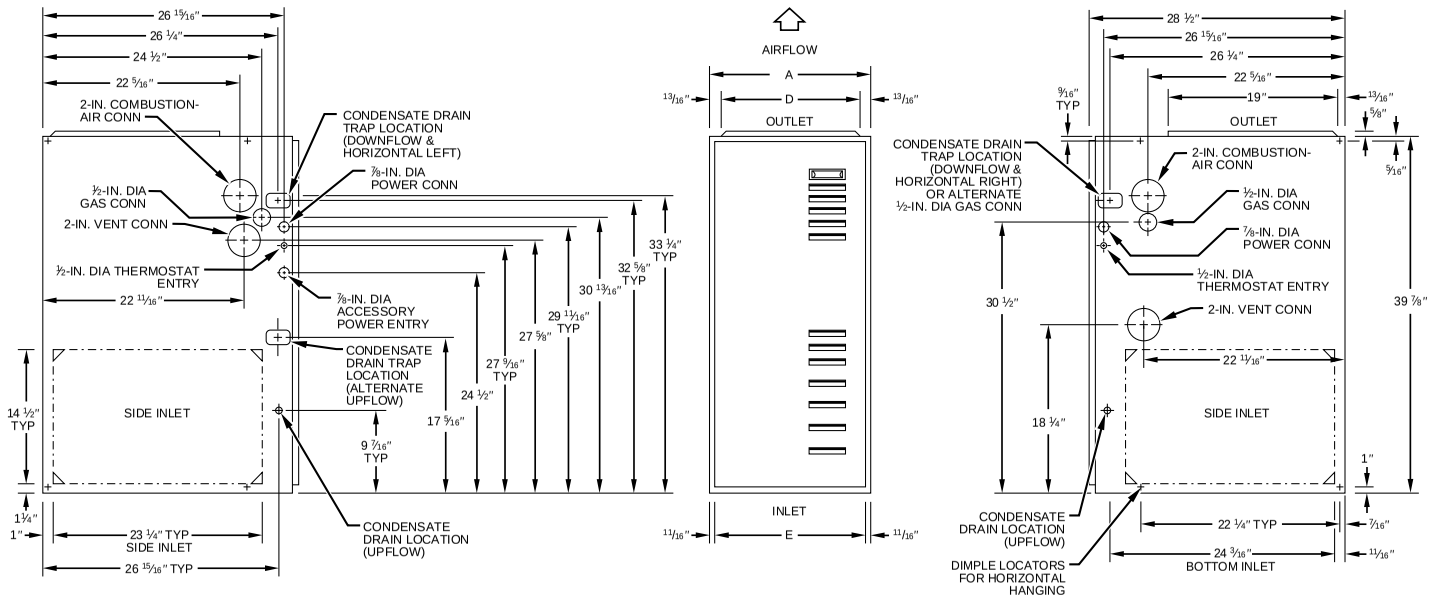
A94336

ENERGY/HEAT RECOVERY VENTILATOR

Carrier's energy or heat recovery ventilators exhaust stale indoor air and provide fresh outdoor air to the home while minimizing heat loss and humidity level. Especially useful for today's tighter constructed houses.

Energy recovery ventilator is shown.

Dimensions



NOTES: Minimum return-air opening at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendation for equivalent diameters:

1. For 800 CFM—16-in. round or 14-1/2 X 12-in. rectangle.
2. For 1200 CFM—20-in. round or 14-1/2 X 19-1/2 in. rectangle.
3. For 1600 CFM—22-in. round or 14-1/2 X 23-1/4 in. rectangle.
4. 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.

A98570

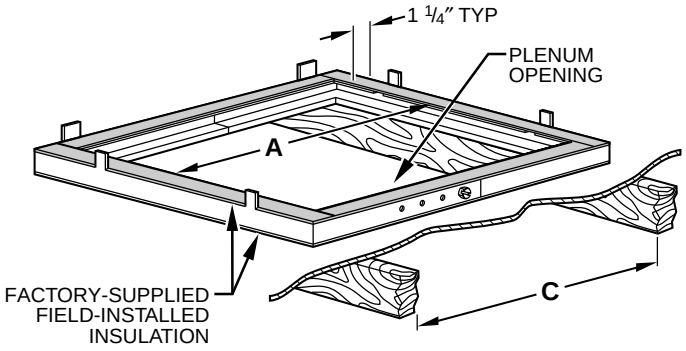
DIMENSIONS (In.)

UNIT SIZE	A	D	E
040-08	17-1/2	15-7/8	16
040-12	17-1/2	15-7/8	16
060-08	17-1/2	15-7/8	16
060-12	17-1/2	15-7/8	16
060-16	17-1/2	15-7/8	16
080-12	17-1/2	15-7/8	16
080-16	17-1/2	15-7/8	16
080-20	21	19-3/8	19-1/2
100-16	21	19-3/8	19-1/2
100-20	21	19-3/8	19-1/2
120-20	24-1/2	22-7/8	23
140-20	24-1/2	22-7/8	23

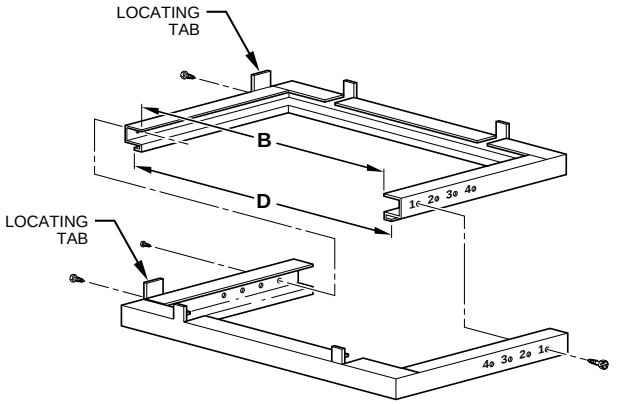
DOWNFLOW SUBBASE — DIMENSIONS (In.)

FURNACE CASING WIDTH	FURNACE IN DOWNFLOW APPLICATION	PLENUM OPENING*		FLOOR OPENING		HOLE NO. FOR WIDTH ADJUSTMENT
		A	B	C	D	
17-1/2	Furnace with or without CD5 or CK5 Coil Assembly or KCAKC Coil Box	15-1/8	19	16-3/4	20-3/8	3
21	Furnace with or without CD5 or CK5 Coil Assembly or KCAKC Coil Box	18-5/8	19	20-1/4	20-3/8	2
24-1/2	Furnace with or without CD5 or CK5 Coil Assembly or KCAKC Coil Box	22-1/8	19	23-3/4	20-3/8	1

* The plenum should be constructed 1/4 in. smaller in width and depth than the plenum dimensions shown above.

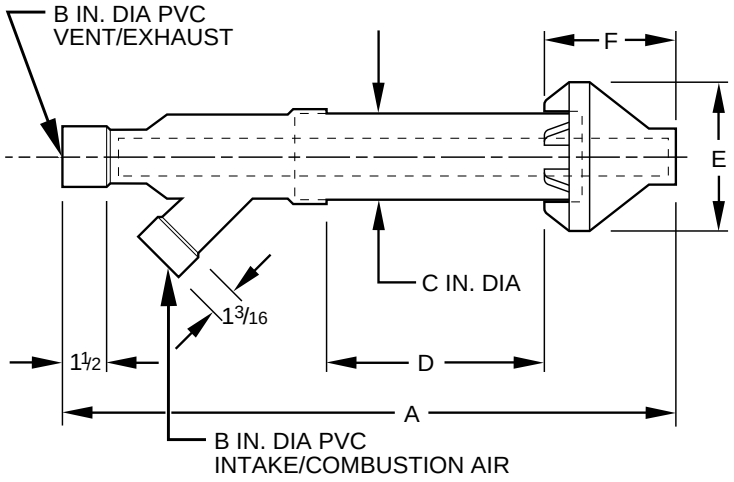


Assembled



Disassembled

CONCENTRIC VENT

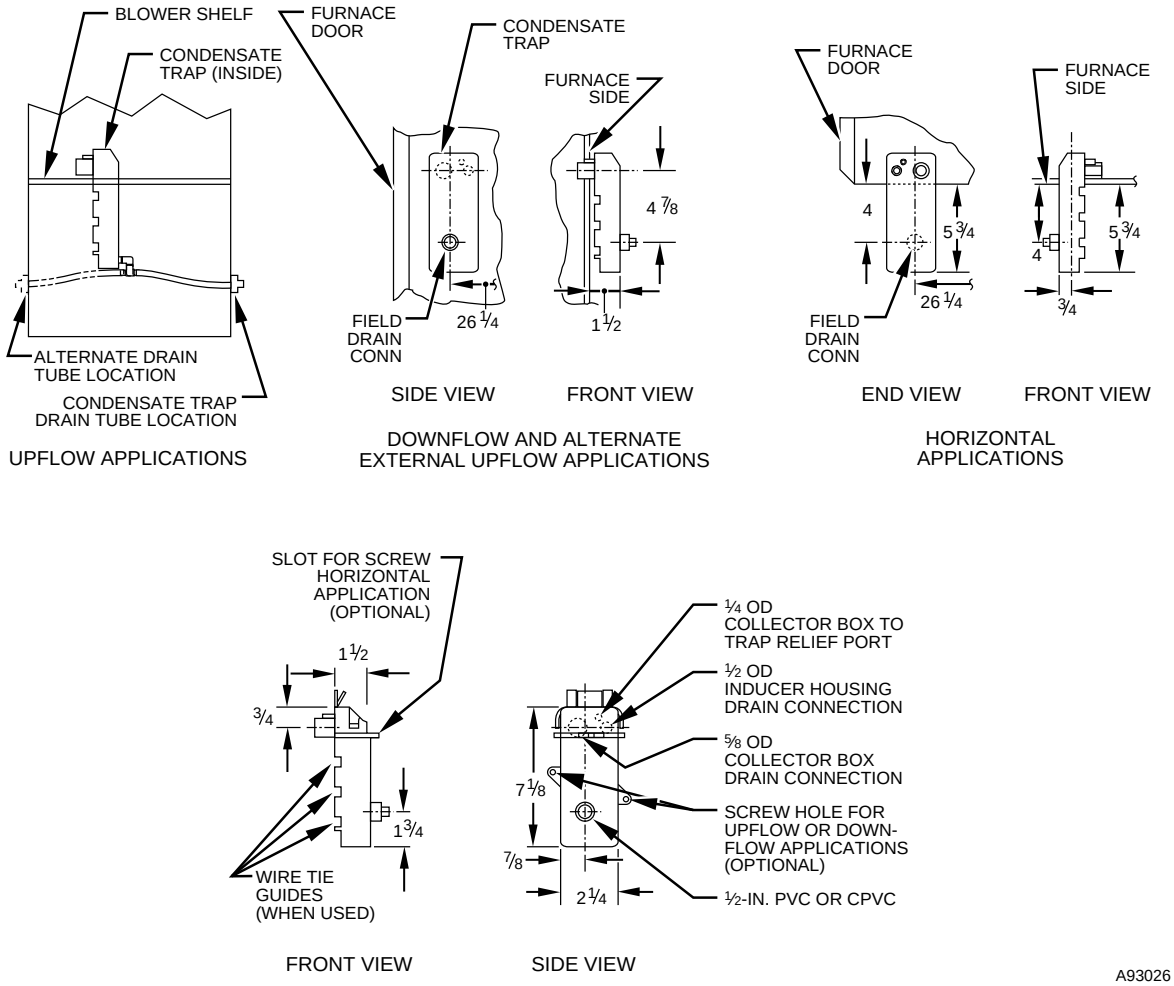


DIMENSIONS (In.)

KIT PART NO.	A*	B	C	D†	E	F
KGAVT0501CVT	33-3/8	2	3-1/2	16-5/8	6-1/4	5-3/4
KGAVT0601CVT	38-7/8	3	4-1/2	21-1/8	7-3/8	6-1/2

* Dimension A will change accordingly as dimension D is lengthened or shortened.
† Dimension D may be lengthened to 60 in. maximum. Dimension D may also be shortened by cutting the pipes provided in the kit to 12 in. minimum.

CONDENSATE TRAP



MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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

As an ENERGY STAR[SM] Partner, Carrier Corporation has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

These products are engineered and manufactured under an ISO 9001 registered quality system.

REGISTERED QUALITY SYSTEM

Clearance to combustibles

This forced air furnace is equipped for use with natural gas at altitudes 0 - 10,000 ft (0 - 3,050m), except 140 size Furnaces are only approved for altitudes 0 - 7,000 ft. (0 - 2,135m).

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 in a manufactured (mobile) home when stated on rating plate and using factory authorized kit.

This furnace may be installed on combustible flooring in alcove or closet at minimum clearance from combustible material.

This appliance requires a special venting system. Refer to the installation instructions for parts list and method of installation. This furnace is for use with schedule-40 PVC, PVC-DWV, or ABS-DWV pipe, and must not be vented in common with other gas-fired appliances. Construction through which vent/air intake pipes may be installed is maximum 24 inches (600 mm), minimum 3/4 inches (19 mm) thickness (including roofing materials).

MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION

ALL POSITIONS:

* Mimimum front clearance for service 30 inches (762mm).

†† 140 size furnaces require 1 inch back clearance to combustible materials.

DOWNFLOW POSITIONS:

† For installation on combustible floors only when installed on special base No. KGASB0201ALL, Coil Assembly, Part No. CD5 or CK5, or Coil Casing, Part No. KCAKC.

HORIZONTAL POSITIONS:

§ Clearance shown is for air inlet and air outlet end.

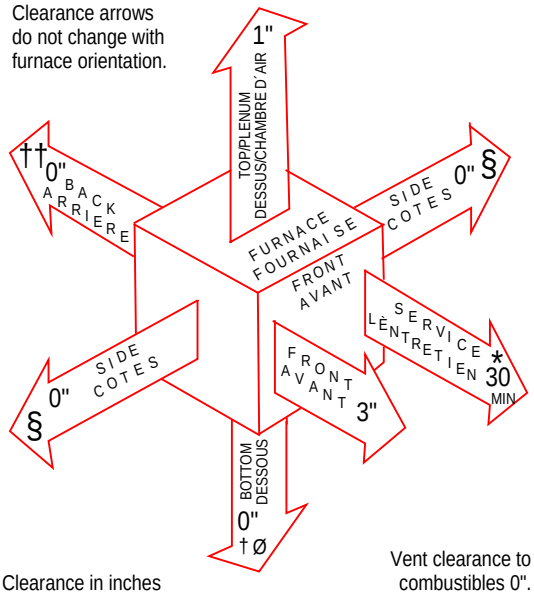
Line contact is permissible only between lines formed by intersections of top and two sides of furnace jacket, and building joists, studs, or framing.

Ø 120 and 140 size Furnaces require 1 inch bottom clearance to combustible materials.

323857-101 REV. C (LIT)

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

Clearance arrows do not change with furnace orientation.



Clearance in inches

Vent clearance to combustibles 0".

A97609

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
040-08	1 side or bottom	High	1075	1040	995	945	895	840	760	670
		Med-Low	850	825	780	740	685	635	560	480
		Low	740	700	650	620	565	515	455	385
040-12	1 side or bottom	High	1470	1415	1400	1285	1215	1120	995	890
		Med-High	1315	1280	1235	1180	1115	1035	930	825
		Med-Low	1125	1110	1085	1045	990	915	830	740
		Low	930	925	910	850	830	770	705	635
060-08	1 side or bottom	High	1100	1065	1005	945	900	805	730	610
		Med-Low	890	865	810	765	705	620	540	475
		Low	745	710	670	625	565	505	425	360
060-12	1 side or bottom	High	1430	1375	1325	1275	1200	1135	1040	935
		Med-High	1270	1260	1215	1160	1105	1035	950	850
		Med-Low	1070	1055	1045	1015	975	920	850	750
		Low	915	895	885	865	840	800	720	650
060-16	1 side or bottom	High	1700	1695	1640	1580	1545	1450	1380	1310
		Med-High	1500	1465	1435	1385	1355	1300	1250	1185
		Med-Low	1325	1295	1265	1230	1190	1150	1105	1050
		Low	1205	1170	1145	1110	1080	1035	990	950
080-12	1 side or bottom	High	1535	1470	1405	1330	1245	1160	1065	935
		Med-High	1395	1350	1300	1225	1155	1080	985	880
		Med-Low	1200	1175	1125	1065	1030	970	890	780
		Low	1040	1020	990	960	910	860	785	680
080-16	1 side or bottom	High	1750	1685	1635	1575	1525	1445	1380	1310
		Med-High	1495	1455	1405	1355	1305	1250	1185	1120
		Med-Low	1310	1260	1225	1170	1125	1095	1040	980
		Low	1135	1105	1075	1040	995	995	910	860
080-20	1 side or bottom	High	2200	2175	2085	2025	1925	1820	1735	1635
		Med-High	2100	2025	1945	1865	1785	1700	1620	1540
		Med-Low	1815	1760	1720	1670	1620	1550	1480	1405
		Low	1560	1555	1515	1460	1435	1390	1340	1270
	both sides or 1 side and bottom	High	2360	2280	2210	2130	2035	1960	1875	1790
		Med-High	1965	1925	1870	1830	1760	1710	1670	1575
100-16	1 side or bottom	High	1740	1705	1660	1615	1570	1500	1425	1355
		Med-High	1500	1470	1445	1410	1375	1330	1280	1210
		Med-Low	1340	1315	1300	1270	1235	1200	1140	1095
		Low	1195	1175	1165	1130	1100	1070	1030	975
100-20	1 side or bottom	High	2250	2175	2090	2020	1930	1855	1760	1670
		Med-High	2020	1950	1900	1840	1790	1710	1640	1545
		Med-Low	1725	1690	1660	1630	1575	1520	1460	1370
		Low	1490	1480	1460	1440	1380	1340	1295	1230
	both sides or 1 side and bottom	High	2360	2315	2265	2200	2130	2055	1965	1890
		Med-High	1960	1940	1930	1900	1850	1800	1740	1660
120-20	bottom only	High	2350	2250	2160	2070	2000	1885	1790	1635
		Med-High	2100	2015	1955	1875	1810	1710	1650	1540
		Med-Low	1770	1720	1675	1620	1575	1515	1450	1365
		Low	1545	1520	1465	1415	1365	1325	1265	1185
	both sides or 1 side and bottom	High	2435	2360	2285	2220	2130	2050	1965	1875
		Med-High	2040	2000	1950	1905	1835	1790	1725	1650
	1 side only	High	2255	2190	2115	2045	1965	1890	1800	1710
		Med-High	1985	1930	1890	1840	1780	1720	1645	1560
140-20	bottom only	High	2285	2210	2140	2065	1990	1910	1830	1745
		Med-High	2020	1970	1920	1870	1805	1730	1660	1590
		Med-Low	1675	1650	1620	1590	1560	1510	1450	1390
		Low	1460	1445	1430	1400	1370	1320	1275	1230
	both sides or 1 side and bottom	High	2310	2255	2185	2120	2045	1965	1880	1800
		Med-High	1975	1945	1900	1860	1835	1775	1720	1640
	1 side only	High	2140	2080	2025	1945	1875	1795	1725	1625
		Med-High	1930	1850	1800	1740	1725	1660	1580	1495

* A filter is required for each return-air supply.

Combustion-air and vent piping

MAXIMUM ALLOWABLE PIPE (2 PIPE SYSTEM) LENGTH (FT)

ALTITUDE ABOVE SEA LEVEL (FT)	UNIT SIZE	TERMINATION TYPE	PIPE DIA (IN.)*	NUMBER OF 90° ELBOWS					
				1	2	3	4	5	6
0 to 2000	040-08 040-12	2 Pipe or 2-In. Concentric	1	5	NA	NA	NA	NA	NA
			1-1/2	70	70	65	60	60	55
			2	70	70	70	70	70	70
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	20	15	10	5	NA	NA
			2	70	70	70	70	70	70
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	1-1/2	10	NA	NA	NA	NA	NA
			2	55	50	35	30	30	20
			2-1/2	70	70	70	70	70	70
	100-16 100-20	2 Pipe or 3-In. Concentric	2	5	NA	NA	NA	NA	NA
			2-1/2	40	30	20	20	10	NA
			3	70	70	70	70	70	70
	120-20	2 Pipe or 3-In. Concentric	2-1/2 one disk	10	NA	NA	NA	NA	NA
			3†	45	40	35	30	25	20
			3† no disk	70	70	70	70	70	70
			4† no disk	70	70	70	70	70	70
	140-20	2-Pipe or 3-In. Concentric	2-1/2 one disk	5	NA	NA	NA	NA	NA
			3† one disk	40	35	30	25	20	15
			3† no disk	60	56	52	48	44	40
			4† no disk	70	70	70	70	70	70
2001 to 3000	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	67	62	57	52	52	47
			2	70	70	70	70	70	70
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	17	12	7	NA	NA	NA
			2	70	67	66	61	61	61
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	49	44	30	25	25	15
			2-1/2	70	70	70	70	70	70
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	35	26	16	16	6	NA
			3	70	70	70	70	66	61
	120-20	2 Pipe or 3-In. Concentric	3	14	9	NA	NA	NA	NA
			3† no disk	70	70	63	56	50	43
			4† no disk	70	70	70	70	70	70
	140-20	2 Pipe or 3-In. Concentric	3† one disk	20	15	10	5	NA	NA
			3† no disk	39	35	31	27	23	19
			4† no disk	70	70	70	70	70	70
3001 to 4000	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	64	59	54	49	48	43
			2	70	70	70	70	70	70
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	16	11	6	NA	NA	NA
			2	68	63	62	57	57	56
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	46	41	28	23	22	13
			2-/12	70	70	70	70	70	70
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	33	24	15	14	5	NA
			3	70	70	70	66	61	56
	120-20	2 Pipe or 3-In. Concentric	3† no disk	65	58	51	44	38	31
			4† no disk	70	70	70	70	70	70
	140-20	2 Pipe or 3-In. Concentric	3† one disk	11	6	NA	NA	NA	NA
			3† no disk	30	26	22	18	14	10
			4† no disk	70	70	70	70	70	70
4001 to 5000‡	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	60	55	50	45	44	39
			2	70	70	70	70	70	70
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	15	10	5	NA	NA	NA
			2	64	59	58	53	52	52
	080-12 080-16 080-20	2 Pipe or 2-in Concentric	2	44	39	26	21	20	11
			2-1/2	70	70	70	70	70	70
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	31	22	13	12	NA	NA
			3	70	70	67	62	57	52
	120-20	2 Pipe or 3-In. Concentric	3† no disk	53	46	40	33	26	20
			4† no disk	70	70	70	70	70	70
	140-20	2 Pipe or 3-In. Concentric	3† no disk	21	17	13	9	5	NA
			4† no disk	69	64	59	54	49	44

See notes on pg. 12.

MAXIMUM ALLOWABLE PIPE (2 PIPE SYSTEM) LENGTH (FT) Continued

ALTITUDE ABOVE SEA LEVEL (FT)	UNIT SIZE	TERMINATION TYPE	PIPE DIA (IN.)*	NUMBER OF 90° ELBOWS					
				1	2	3	4	5	6
5001 to 6000‡	040-08 040-12	2 Pipe 2-In. Concentric	1-1/2	57	52	47	42	40	35
			2	70	70	70	70	70	70
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	14	9	NA	NA	NA	NA
			2	60	55	54	49	48	47
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	41	36	23	18	17	8
			2-1/2	70	70	70	70	70	70
	100-16 100-20	2 Pipe or 3-in Concentric	2-1/2	29	21	12	11	NA	NA
			3	70	67	62	57	52	47
	120-20	2 Pipe or 3-In. Concentric	3† no disk	42	35	29	22	15	9
			4† no disk	70	70	70	70	70	70
	140-20	2 Pipe or 3-In. Concentric	3† no disk	12	8	NA	NA	NA	NA
			4† no disk	42	37	32	27	22	17
6001 to 7000‡	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	53	48	43	38	37	32
			2	70	70	68	67	66	64
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	13	8	NA	NA	NA	NA
			2	57	52	50	45	44	43
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	38	33	21	16	15	6
			2-1/2	70	70	68	67	66	64
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	27	19	10	9	NA	NA
			3	68	63	58	53	48	43
	120-20	2 Pipe or 3-In. Concentric	3† no disk	31	24	18	11	NA	NA
			4† no disk	70	70	70	70	67	62
	140-20	2 Pipe or 3-In. Concentric	4† no disk	17	12	7	NA	NA	NA
7001 to 8000‡	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	49	44	39	34	33	28
			2	66	65	63	62	60	59
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	12	7	NA	NA	NA	NA
			2	53	48	46	41	40	38
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	36	31	19	14	12	NA
			2-1/2	66	65	63	62	60	59
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	25	17	8	7	NA	NA
			3	63	58	53	48	43	38
	120-20	2 Pipe or 3-In. Concentric	3† no disk	20	13	7	NA	NA	NA
			4† no disk	61	56	51	46	41	36
	140-20	NA							
8001 to 9000‡	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	46	41	36	31	29	24
			2	62	60	58	56	55	53
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	11	6	NA	NA	NA	NA
			2	49	44	42	37	35	34
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	33	28	17	12	10	NA
			2-1/2	62	60	58	56	55	53
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	23	15	7	5	NA	NA
			3	59	54	49	44	39	34
	120-20	2 Pipe or 3-In. Concentric	3† no disk	10	NA	NA	NA	NA	NA
			4† no disk	35	30	25	20	15	10
	140-20	NA							
9001 to 10,000‡	040-08 040-12	2 Pipe or 2-In. Concentric	1-1/2	42	37	32	27	25	20
			2	57	55	53	51	49	47
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	2	45	40	38	33	31	29
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	2	30	25	14	9	7	NA
			2-1/2	57	55	53	51	49	47
	100-16 100-20	2 Pipe or 3-In. Concentric	2-1/2	21	13	5	NA	NA	NA
			3	54	49	44	39	34	29
	120-20	2 Pipe or 3-In. Concentric	4† no disk	10	5	NA	NA	NA	NA
	140-20	NA							

* Disk usage—Unless otherwise specified, use perforated disk assembly (factory-supplied in loose parts bag). If 1 disk is stated, separate 2 halves of perforated disk assembly and use shouldered disk half. When using shouldered disk half, install screen side toward inlet box.

† Wide radius elbow.

‡ Vent sizing for Canadian installations above 4500 ft (1370m) above sea level are subject to acceptance by the local authorities having jurisdiction.

NA — Not allowed; pressure switch will not make.

NOTES:

1. Do not use pipe size greater than those specified in table or incomplete combustion, flame disturbance, or flame sense lockout may occur.
2. Size both the combustion-air and vent pipe independently, then use the larger diameter for both pipes.
3. Assume two 45° elbows equal one 90° elbow. Long radius elbows are desirable and may be required in some cases.
4. Elbows and pipe sections within the furnace casing and at the vent termination should not be included in vent length or elbow count.
5. The minimum pipe length is 5 ft for all applications.
6. Use 3-in. diameter vent termination kit for installations requiring 4-in. diameter pipe.

MAXIMUM ALLOWABLE EXPOSED VENT PIPE LENGTH (FT) WITH AND WITHOUT INSULATION IN WINTER DESIGN TEMPERATURE AMBIENT*

UNIT SIZE	WINTER DESIGN TEMPERATURE (°F)	MAX PIPE DIAMETER (IN.)	WITHOUT INSULATION	WITH 3/8-IN. OR THICKER INSULATION†
040-08 040-12	20	1-1/2	51	70
	0	1-1/2	28	70
	–20	1-1/2	16	70
060-08 060-12 060-16	20	2	65	70
	0	2	35	70
	–20	2	20	70
080-12 080-16 080-20	20	2-1/2	70	70
	0	2-1/2	47	70
	–20	2-1/2	28	70
100-16 100-20	20	3	70	70
	0	3	50	70
	–20	3	28	70
120-20	20	4	70	70
	0	4	48	70
	–20	4	23	70
140-20	20	4	70	70
	0	4	57	70
	–20	4	30	70

* Pipe length (ft) specified for maximum vent pipe lengths located in unconditioned spaces. Vent pipes located in unconditioned space cannot exceed the total allowable pipe length as specified in Maximum Allowable Pipe Length table.
† Insulation thickness based on R value of 3.5 per in.

Performance data

UNIT SIZE	040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
DIRECT-DRIVE MOTOR Hp (PSC)	1/5	1/3	1/5	1/3	1/2	1/3	1/2	3/4	1/2	3/4	3/4	3/4
MOTOR FULL LOAD AMPS	4.9	5.8	4.9	5.8	7.9	5.8	7.9	11.1	7.9	11.1	11.1	11.1
RPM (Nominal) — SPEEDS	1075—3	1075—4	1075—3	1075—4								
BLOWER WHEEL DIAMETER X WIDTH (In.)	10 x 6	10 x 7	10 x 6	10 x 7	11 x 8	10 x 7	11 x 8	11 x 10	11 x 8	11 x 10	11 x 10	11 x 10
FILTER SIZE (In.) — (Washable)	(1) 16 x 25 x 1							(1) 20 x 25 x 1			(2) 16 x 25 x 1	

PSC—Permanent Split Capacitor

EFFICIENCY

UNIT SIZE		040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
CAPACITY* Nonweatherized ICS		37,000	37,000	56,000	56,000	56,000	74,000	74,000	74,000	93,000	93,000	112,000	127,000
AFUE%*	Multipoise	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0

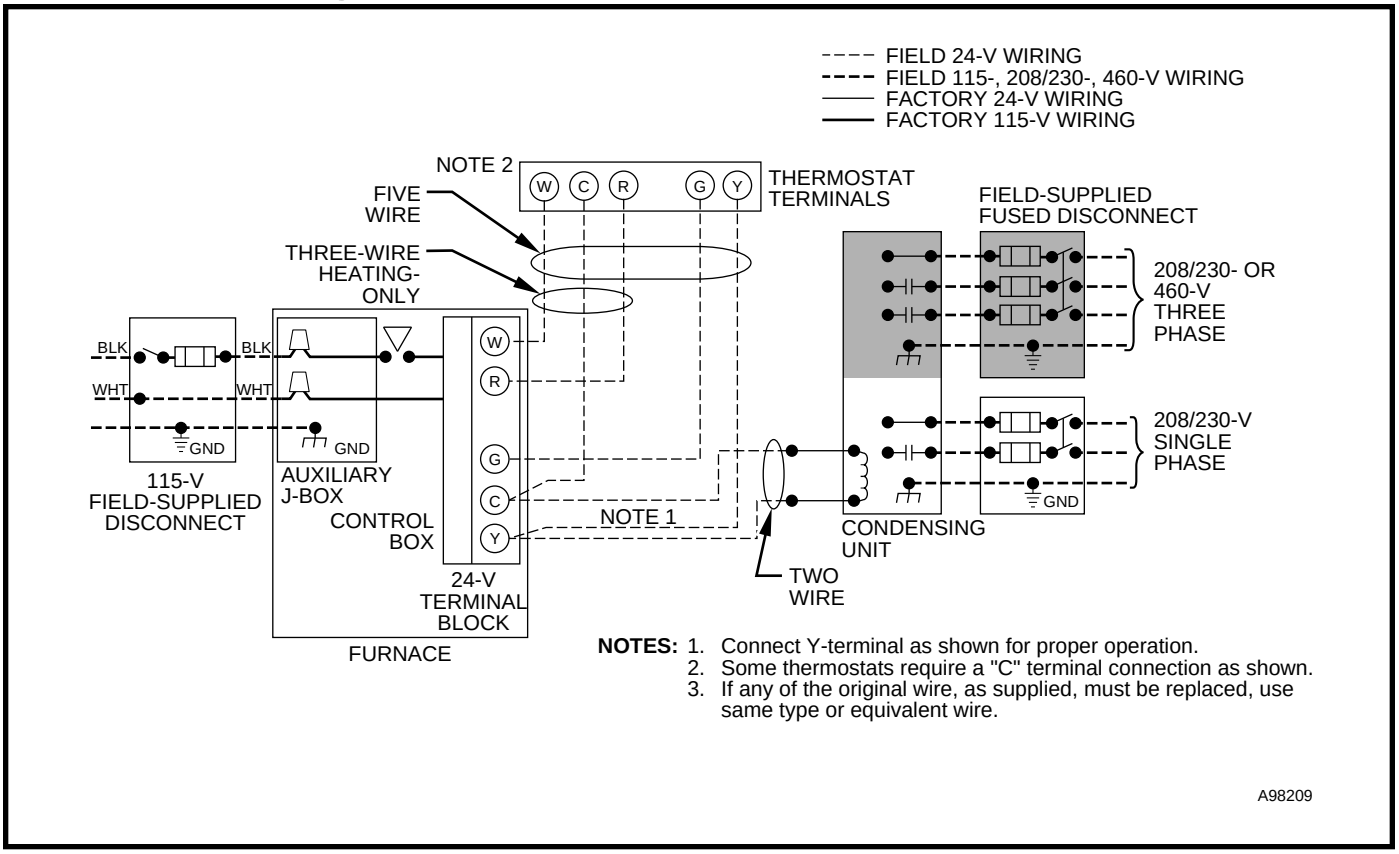
* Capacity and AFUE in accordance with U.S. Government DOE test procedures.
ICS—Isolated Combustion System

Electrical data

UNIT SIZE	040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
UNIT VOLTS—HERTZ—PHASE	115—60—1											
OPERATING VOLTAGE RANGE (Min—Max)*	104—127											
MAXIMUM UNIT AMPS	6.1	7.3	6.1	7.1	9.5	7.6	10.0	14.1	10.2	14.8	14.6	14.3
UNIT AMPACITY†	8.4	10.0	8.4	9.8	12.8	10.4	13.4	18.4	13.5	19.3	19.1	18.8
MINIMUM WIRE SIZE	14	14	14	14	14	14	14	12	14	12	12	12
MAXIMUM WIRE LENGTH (Ft)‡	44	37	44	38	29	36	28	31	27	30	30	30
MAXIMUM FUSE SIZE OR CKT BKR (Amps)**	15	15	15	15	15	15	15	20	15	20	20	20
TRANSFORMER (24v)	40va											
EXTERNAL CONTROL POWER AVAILABLE Heating	12va											
Cooling	21va											
AIR CONDITIONING BLOWER RELAY	Standard											

* Permissible limits of the voltage range at which the unit will operate satisfactorily.
† Unit ampacity = 125% of largest operating component's full load amps plus 100% of all other potential operating components' (EAC, humidifier, etc.) full load amps.
‡ Length is as measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.
** Time-delay type is recommended.

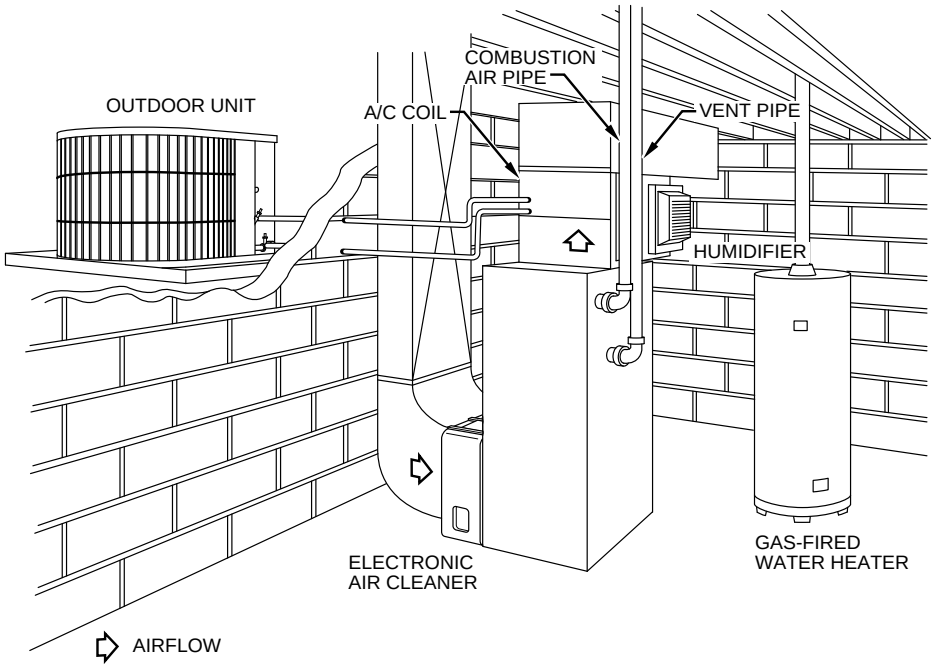
Typical wiring schematic



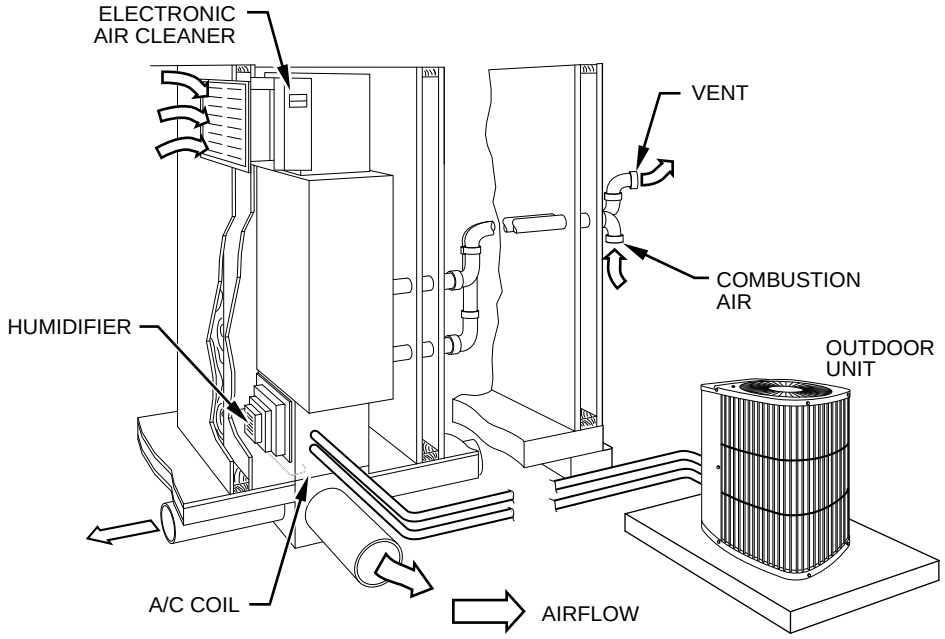
NOTES: 1. Connect Y-terminal as shown for proper operation.
2. Some thermostats require a "C" terminal connection as shown.
3. If any of the original wire, as supplied, must be replaced, use same type or equivalent wire.

A98209

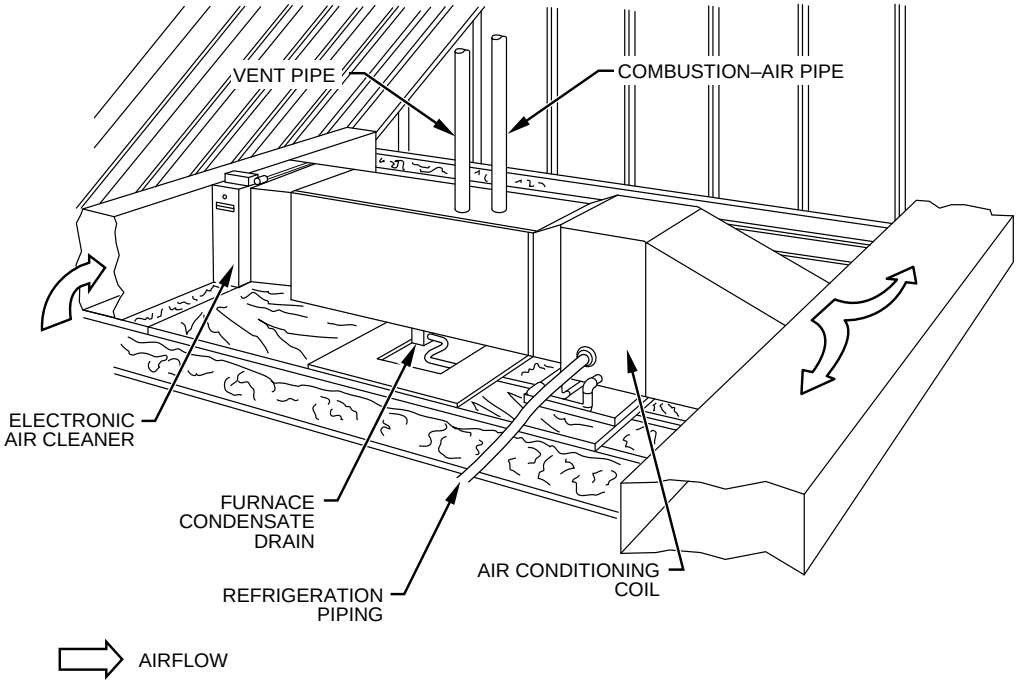
Typical installations



Basement — Upflow Application A93063

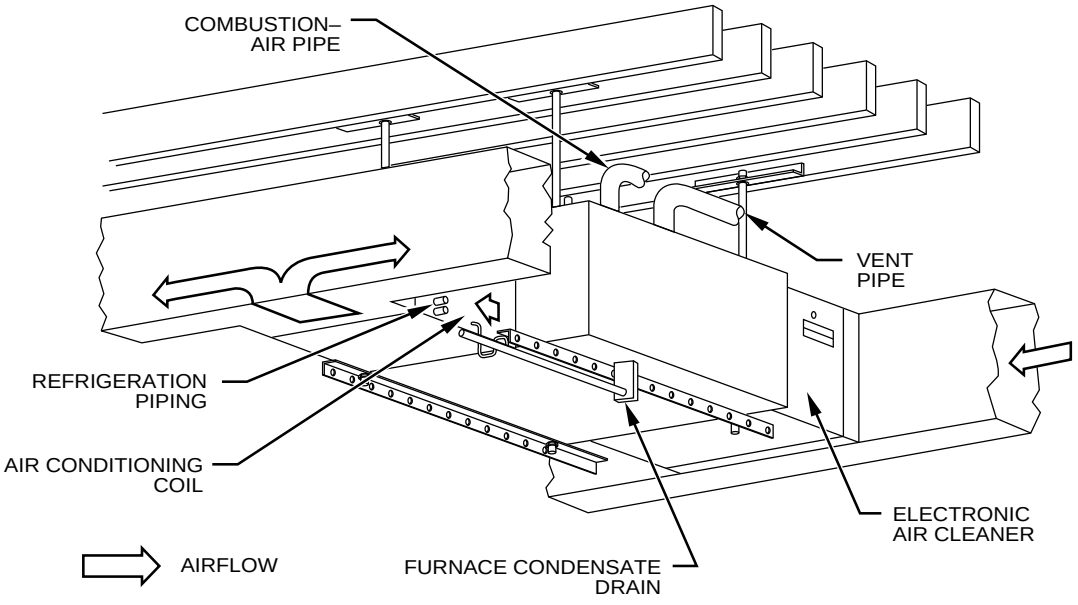


Closet — Downflow Application A93064



Attic — Horizontal Application

A93065



A93066

Crawlspace — Horizontal Application

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