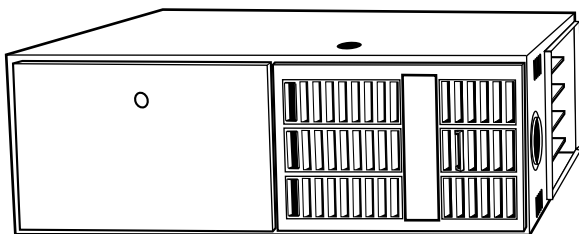
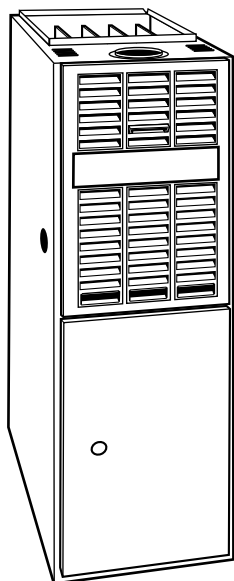




Product Data

58UHV, 58UXV WeatherMaker® 8000 Variable- Speed High-Efficiency Upflow/Horizontal Furnace

Input Capacities:
60,000 thru 120,000 Btuh



Variable-Speed Heating for High-Efficiency Gas Furnaces

Carrier leads the industry with our new WeatherMaker® 8000 Variable-Speed Upflow/Horizontal Induced-Combustion Gas Furnace. This furnace can operate at a wide range of speed settings which provide outstanding home comfort. The WeatherMaker 8000 Variable-Speed is built with the most advanced manufacturing equipment, processes, and technology available in order to ensure top quality. Packed into the cabinet are the industry's foremost dealer and homeowner features. The WeatherMaker 8000 Variable-Speed is the latest addition to Carrier's list of product leadership in the gas furnace industry.

These variable-speed induced-combustion, gas-fired furnaces offer not only low installation costs, but fuel economy as well—delivering an Annual Fuel Utilization Efficiency (AFUE) rating of 80.0%. The WeatherMaker 8000 Variable-Speed offers outstanding efficiency year round. The efficiency provided by the variable-speed blower motor can add up to 2 points in seasonal energy efficiency ratio (SEER) to an air conditioner or heat pump system. The WeatherMaker 8000 Variable-Speed utilizes a hot surface ignition system to save energy and increase reliability.

Our design uses the patented S-shaped 4-pass heat exchanger, a soft mount 2-speed inducer assembly, and a 2-stage slow-opening gas valve to

minimize sound level. The Super-S heat exchanger provides better heat transfer while enabling us to make a compact furnace. This provides more room in closet, utility room, and short basement installations. The heat exchanger is constructed of aluminized steel and is backed by a 20-year Limited Warranty.

The WeatherMaker 8000 Variable-Speed will meet your home heating requirements. This furnace family provides a wide range of heating capacities. All models are GAMA efficiency rating certified and certified for use in California Air Quality Management Districts.

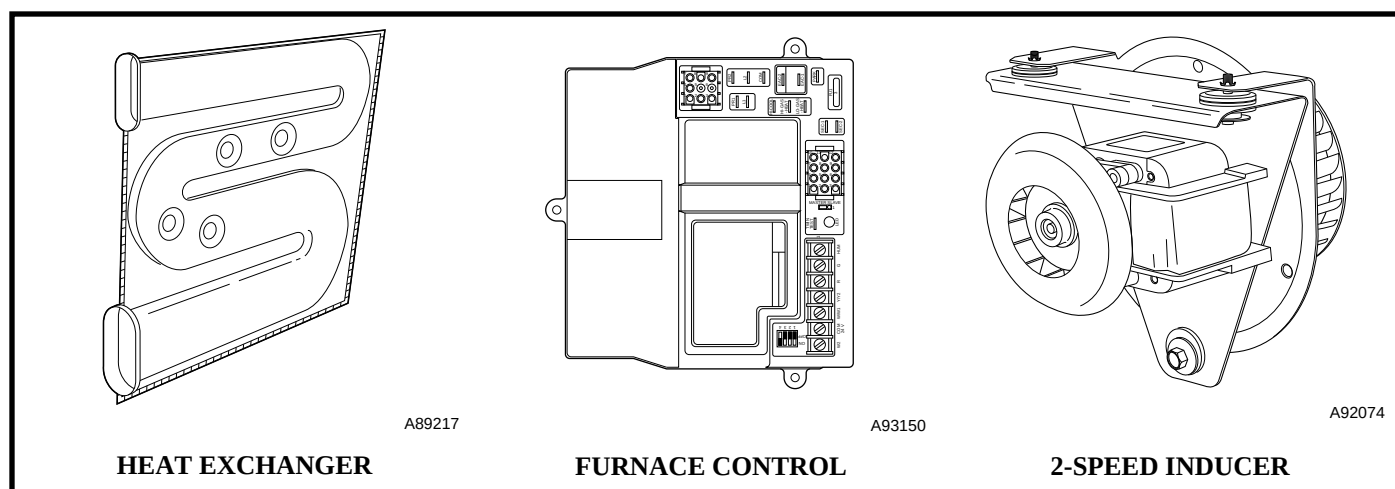
The superior attention to cabinet detail is obvious. The WeatherMaker 8000 Variable-Speed features 1-piece, seamless, wrap-around construction. There are no spot welds on the exterior

surfaces. There is also double protection for the cabinet. First, a galvanized steel substrate provides resistance to rusting. Then the cabinet is constructed of prepainted steel—the same high-quality finish found on refrigerators and dishwashers.

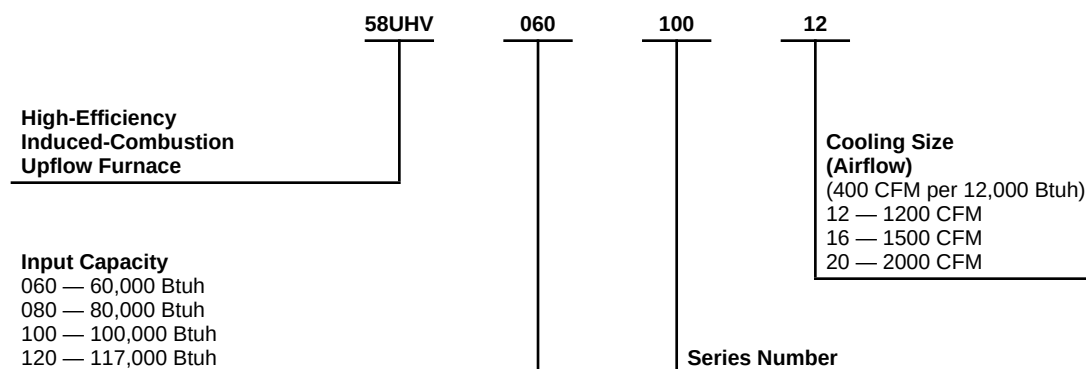
Perhaps the most advanced feature of the WeatherMaker 8000 Variable-Speed is the state-of-the-art microprocessor control center which shows true leadership in furnace technology. The simplified electronics in this control provide high reliability while performing many of the functions of older, electro-mechanical devices in other furnaces. Advanced features of the control show Carrier's true leadership in furnace technology. The control provides blower speed selection, low-voltage humidifier, and electronic air cleaner terminal connections are among other features.

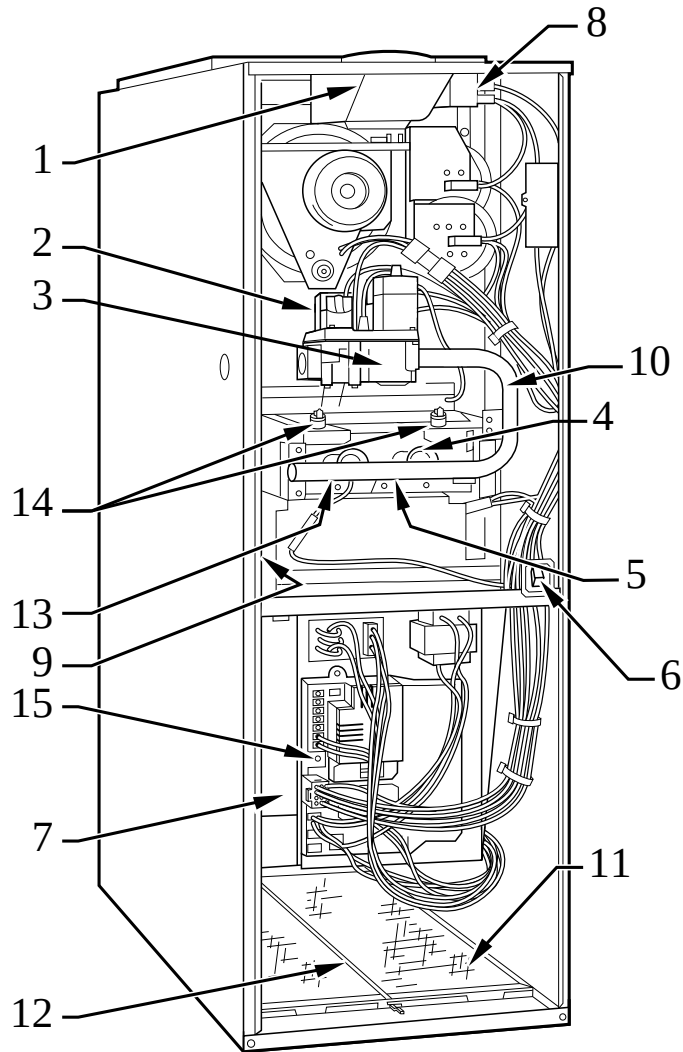
functions. In the unlikely event of a service call, in less than a minute, the technician can use the self-test feature to determine if a major component has failed. The control will check itself, then the low and high inducer speeds, hot surface ignition, and blower operation. The control also features a 3-amp fuse that protects the transformer and control.

Best of all, the WeatherMaker 8000 Variable-Speed is easily installed. Many features make this furnace the easy choice for replacement or new construction markets. Left and right connections are provided for gas and electrical supplies. An easy-to-remove bottom, heating and cooling blower speed selection, low-voltage humidifier, and electronic air cleaner terminal connections are among other features.



Model number nomenclature





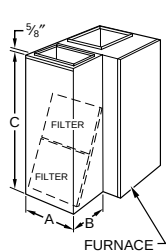
A95312

NOTE: The Furnaces are for use with natural gas, but can be field-converted for propane gas with a factory-authorized and listed accessory conversion kit.

NOTE: Control location and actual control may be different than shown above.

- | | |
|-----------------------------------|---|
| ❶ Relief Box | ❹ Rating Plate |
| ❷ Gas Valve Control Knob (On/Off) | ❺ Gas Manifold |
| ❸ 2-Stage Gas Valve | ❻ Air Filter |
| ❹ Gas Burner | ❼ Filter Retainer |
| ❺ Hot Surface Ignitor | ❽ Flame Sensor |
| ❻ Blower Door Safety Switch | ❾ Manual Reset Flame Rollout Switches (2) |
| ❼ Blower and Blower Motor | ❿ Status LED Light |
| ❽ Draft Safeguard Tube and Switch | |

Carrier accessories*

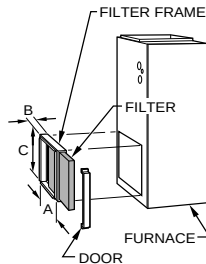


A93067

RETURN-AIR PLENUM

Custom-made return-air plenum can be mounted on either side of the furnace. Includes washable filters.

A	25 in.
B	16 in.
C	39-7/8 in.

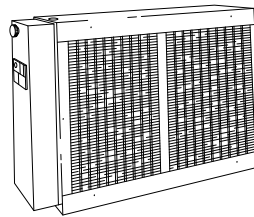


A93068

SIDE FILTER RACK

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

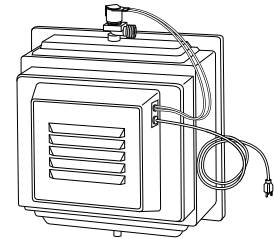
A	23-1/8 in.
B	2-3/8 in.
C	14-1/2 in.



A91465

MODEL 31KAX ELECTRONIC AIR CLEANER

Cleans the air of smoke, dirt, and many pollens commonly found. Saves on decorating and cleaning expenses.



A91365

MODEL 49FH 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.

UNIT SIZE	060-12**	080-16	100-20	120-20
ELECTRONIC AIR CLEANER	Model 31KAX			
HUMIDIFIER	Model 49FH			
THERMOSTAT	See Thermostat Master Price Pages			
RETURN-AIR PLENUM (With Washable Filters)	KGARP0201ALL			
SIDE FILTER RACK (Accepts (one) 16 x 25 x 1 Filter)**	KGAFR0201ALL			
HIGH-ALTITUDE PRESSURE SWITCH KIT‡	KGAHA5701PSW			
GAS CONVERSION KIT*—NATURAL-TO-PROPANE	KGANP24012SP			
PROPANE-TO-NATURAL	KGAPN20012SP			

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

† 16 and 20 models only.

‡ 5500 ft and higher above sea level.

** Side filter rack must be used for upflow right-side return with 060-12 size.

Physical data

UNIT SIZE		060-12	080-16	100-20	120-20
OUTPUT CAPACITY (BTUH)†	High Stage	48,000	64,000	81,000	94,000
	Nonweatherized ICS	31,000	42,000	52,000	63,000
GAS INPUT (BTUH)*	High Stage	60,000	80,000	100,000	117,000
	Low Stage	39,000	52,000	65,000	78,000
SHIPPING WEIGHT (LB)		134	154	184	194
CERTIFIED TEMP RISE RANGE (°F)	High Stage	25-55	30-60	25-55	40-70
	Low Stage	15-45	15-45	15-45	25-55
CERTIFIED EXT STATIC PRESSURE (In. wc)	Heating	0.12	0.15	0.20	0.20
	Cooling	0.5	0.5	0.5	0.5
AIRFLOW CFM‡	Heating High/Low	1175/1025	1445/1260	1720/1515	1730/1525
	Cooling	1300	1740	2210	1980
LIMIT CONTROL	SPST (Auto-Reset)				
HEATING BLOWER CONTROL	Solid-State Time Operation				
INDUCER	2-Speed				
BURNERS (Monoport)		3	4	5	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				

* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4% for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4. In Canada, derate the unit 10% for elevations 2000 ft to 4500 ft above sea level.

† Tentative capacity and AFUE in accordance with U.S. Government DOE test procedures.

‡ Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air. A filter is required for each return-air supply.

ICS — Isolated Combustion System

Dimensions

CLEARANCES (In.)

UNIT SIZE		060	080-120
UPFLOW			
Furnace Sides	Single-Wall Vent	1	0
	Type B-1 Double-Wall Vent	0	0
Furnace Back		0	0
Plenum Top		1	1
Furnace Front (See Notes)	Single-Wall Vent	6	6
	Type B-1 Double-Wall Vent	3	3
Vent	Single-Wall Vent	6	6
	Type B-1 Double-Wall Vent	1	1

* Clearance shown is for the outlet end. The inlet end must maintain 6 in. clearance from flue to combustible materials when using single-wall vent.

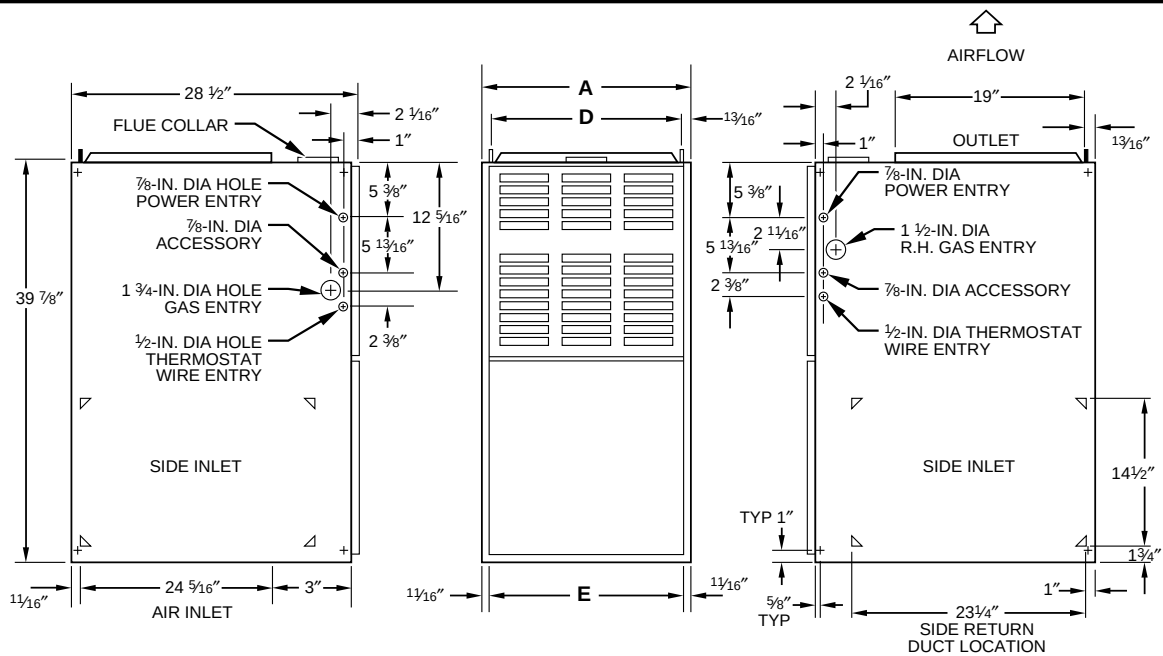
† 18 in. front clearance required for alcove.

‡ Indicates supply or return sides when furnace is in the horizontal position.

NOTES:

1. Provide 30-in. front clearance for servicing. An open door in front of the furnace can meet this requirement.
2. A minimum clearance of 3 in. must be provided in front of the furnace for combustion air and proper operation.

HORIZONTAL POSITION (IN ALCOVE, ATTIC, AND CRAWLSPACE)			
Sides*‡		1	1
Back		0	0
Top	Single-Wall Vent	1	1
	Type B-1 Double-Wall Vent	1	1
Furnace Front† (See Notes)	Single-Wall Vent	6	6
	Type B-1 Double-Wall Vent	3	3
Vent	Single-Wall Vent	6	6
	Type B-1 Double-Wall Vent	1	1
HORIZONTAL POSITION (IN CLOSET)			
Sides*‡		1	1
Back		3	3
Top	Single-Wall Vent	2	2
	Type B-1 Double-Wall Vent	2	2
Furnace Front (See Notes)	Single-Wall vent	6	6
	Type B-1 Double-Wall Vent	3	3
Vent	Single-Wall Vent	6	6
	Type B-1 Double-Wall Vent	1	1



NOTE: 2 additional 7/8 In. Dia knockouts are located in the top plate.

NOTES:

1. Minimum return-air opening at furnace:
2. For 800 CFM—16-in. round or 14 1/2 x 12-in. rectangle.
3. For 1200 CFM—20-in. round or 14 1/2 x 19 1/2-in. rectangle.
4. For 1600 CFM—22-in. round or 14 1/2 x 23 1/4-in. rectangle.
5. For airflow requirements above 1800 CFM, use both side inlets, a combination of 1 side inlet and the bottom, or the bottom only.

A8367

NOTES:

1. A factory-supplied panel covers the back side of the accessory return-air plenum that extends above the furnace.
2. Refer to the furnace Installation Instructions for proper venting procedures.

DIMENSIONS (In.)

UNIT SIZE	A	D	E	VENT CONNECTION
060-12	14-3/16	12-9/16	12-11/16	4
080-16	21	19-3/8	19-1/2	4
100-20	24-1/2	22-7/8	23	4
120-20	24-1/2	22-7/8	23	5

Performance data

UNIT SIZE	060-12	080-16	100-20	120-20
DIRECT-DRIVE MOTOR Hp (PSC)	1/3	1/2	3/4	3/4
MOTOR FULL LOAD AMPS	5.8	7.9	11.1	11.1
RPM (Nominal) — SPEEDS	1075-4	1075-4	1075-4	1075-4
BLOWER WHEEL DIAMETER X WIDTHS (In.)	10 x 6	10 x 8	11 x 10	11 x 10
WASHABLE 16 x 25 x 1-in. FILTER — QTY	1	—	2	2
WASHABLE 20 x 25 x 1-in. FILTER — QTY	—	1	—	—

PSC — Permanent Split Capacitor

EFFICIENCY

UNIT SIZE		060-12	080-16	100-20	120-20
CAPACITY BTUH*	High Stage	48,000	64,000	81,000	94,000
	Low Stage	31,000	42,000	52,000	63,000
AFUE %* Nonweatherized ICS		80.0	80.0	80.0	80.0

*Tentative capacity and AFUE in accordance with U.S. Government DOE test procedures.

ICS — Isolated Combustion System

MEETS DOE RESIDENTIAL CONSERVATION SERVICES
PROGRAM STANDARDS.

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



AIR DELIVERY — CFM* (With Filter)

AIR CONDITIONING OR HEAT PUMP—EFFICIENCY

UNIT SIZE	COOLING AIRFLOW SELECTED	AC COOLING HEAT PUMP—EFFICIENCY			2-SPEED-AC COOLING 2-SPEED HEAT PUMP—EFFICIENCY		
		Maximum	Nominal	Minimum	Maximum High / Low	Nominal High / Low	Minimum High / Low
060	LO	600	525	500*	630 / 500*	550 / 500*	500* / 500*
	M-LO	800	700	630	840 / 520	735 / 500*	660 / 500*
	M-HI	1000	875	790	1050 / 650	920 / 570	825 / 510
080	HI	1200	1050	945	1260 / 780	1100 / 680	990 / 615
	LO	1000	875	790	1050 / 650	920 / 570	825 / 510
	M-LO	1200	1050	945	1260 / 780	1100 / 750	990 / 750
100	M-HI	1400	1225	1100	1470 / 910	1285 / 795	1155 / 750
	HI	1600	1400	1260	1680 / 1040	1470 / 910	1325 / 820
	LO	2000	1750	1575	2100 / 1300	1840 / 1140	1655 / 1025
120	LO	1200	1050	945	1260 / 780	1100 / 750*	990 / 750*
	M-LO	1400	1225	1100	1470 / 910	1285 / 795	1155 / 750*
	M-HI	1600	1400	1260	1680 / 1040	1470 / 910	1325 / 820
	HI	2000	1750	1575	2100 / 1300	1840 / 1140	1655 / 1025

HEAT PUMP—COMFORT

UNIT SIZE	AIRFLOW SELECTED	HEAT PUMP—COMFORT			2-SPEED HP—COMFORT		
		Maximum	Nominal	Minimum	Maximum High / Low	Nominal High / Low	Minimum High / Low
060	LO	540	500*	500*	567 / 500*	500* / 500*	500* / 500*
	M-LO	720	630	565	755 / 500*	660 / 500*	595 / 500*
	M-HI	900	790	710	945 / 585	830 / 515	740 / 500*
080	HI	1080	945	850	1135 / 702	990 / 610	890 / 555
	LO	900	790	710	945 / 585	830 / 515	745 / 500*
	M-LO	1080	945	850	1135 / 700	990 / 675	890 / 675
100	M-HI	1260	1105	990	1325 / 715	1155 / 715	1040 / 675
	HI	1440	1260	1135	1510 / 935	1325 / 820	1195 / 740
	LO	1800	1575	1420	1890 / 1170	1655 / 1025	1490 / 925
120	LO	1080	945	850	1134 / 750*	990 / 750*	890 / 750*
	M-LO	1260	1105	990	1325 / 820	1155 / 750*	1040 / 750*
	M-HI	1440	1260	1135	1510 / 935	1325 / 820	1195 / 750*
	HI	1800	1575	1420	1890 / 1170	1655 / 1025	1490 / 925

GAS HEAT

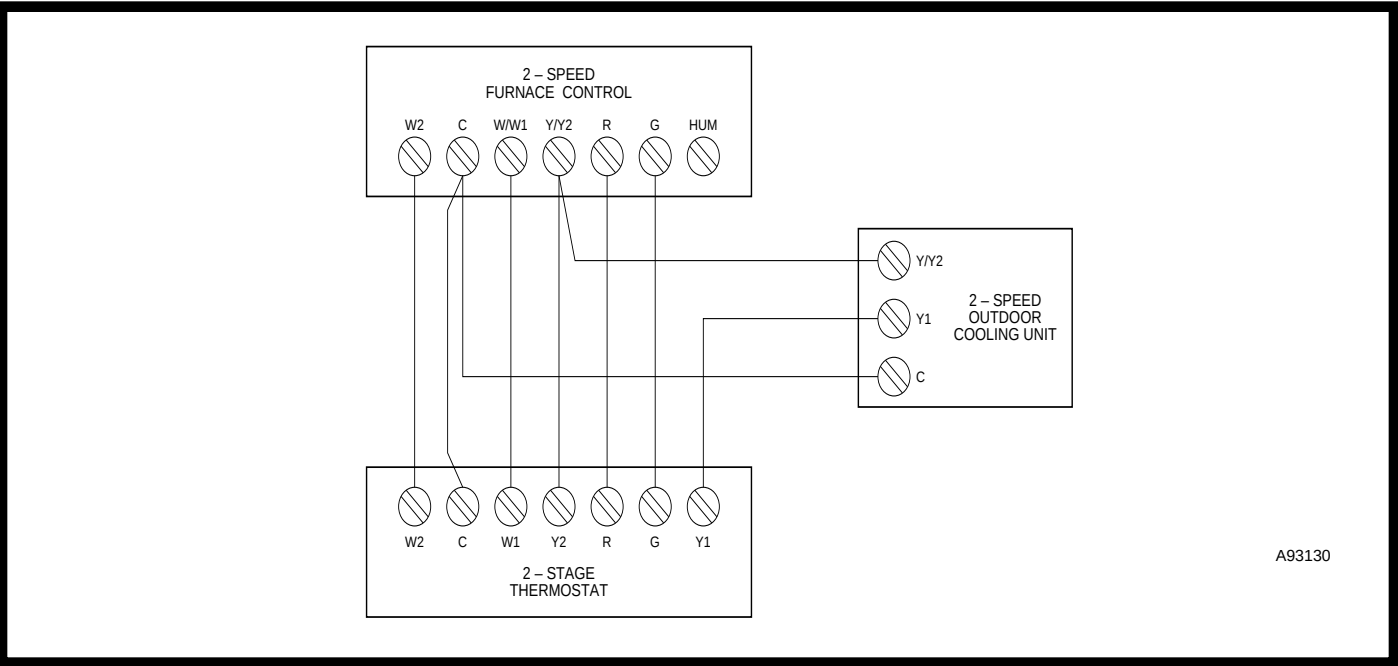
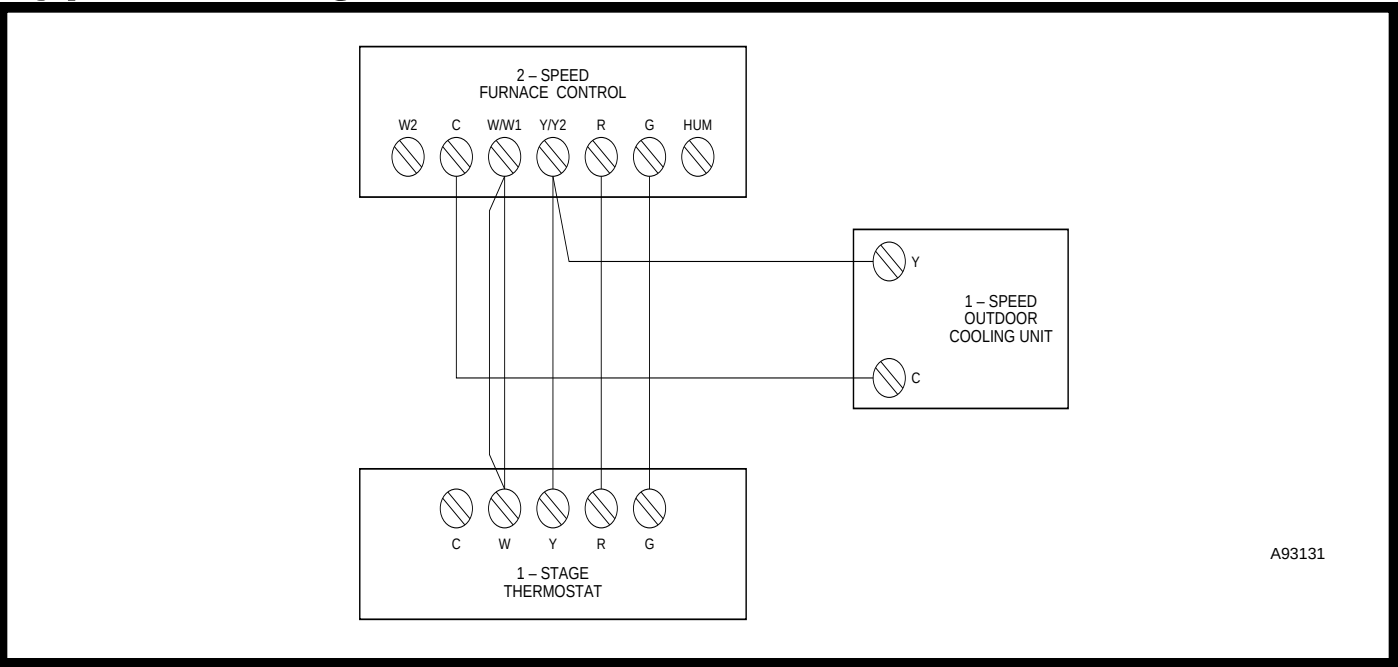
UNIT SIZE	GAS HEAT TEMPERATURE RISE SELECTED	GAS HEAT AIRFLOW (HIGH / LOW)
060	HI	875 / 790
	M-HI	1010 / 915
080	MID	1110 / 1010
	HI	1010 / 865
100	M-HI	1190 / 1180
	MID	1350 / 1300
120	HI	1380 / 1085
	M-HI	1685 / 1435
140	MID	1900 / 1625
	HI	1270 / 1065
160	M-HI	1480 / 1330
	MID	1615 / 1465

* Minimum airflow set for electronic air cleaners

NOTES:

1. A humidistat can be added to further reduce airflow when increased humidity is sensed. This feature reduces the selected cooling airflow by 20% or a minimum of 280 CFM per ton.
2. Continuous fan selections are 50%, 65%, or 100% of selected cooling speeds. 100% is not recommended for 2-speed AC or heat pumps.
3. This data is preliminary and subject to change.

Typical wiring schematic



Electrical data

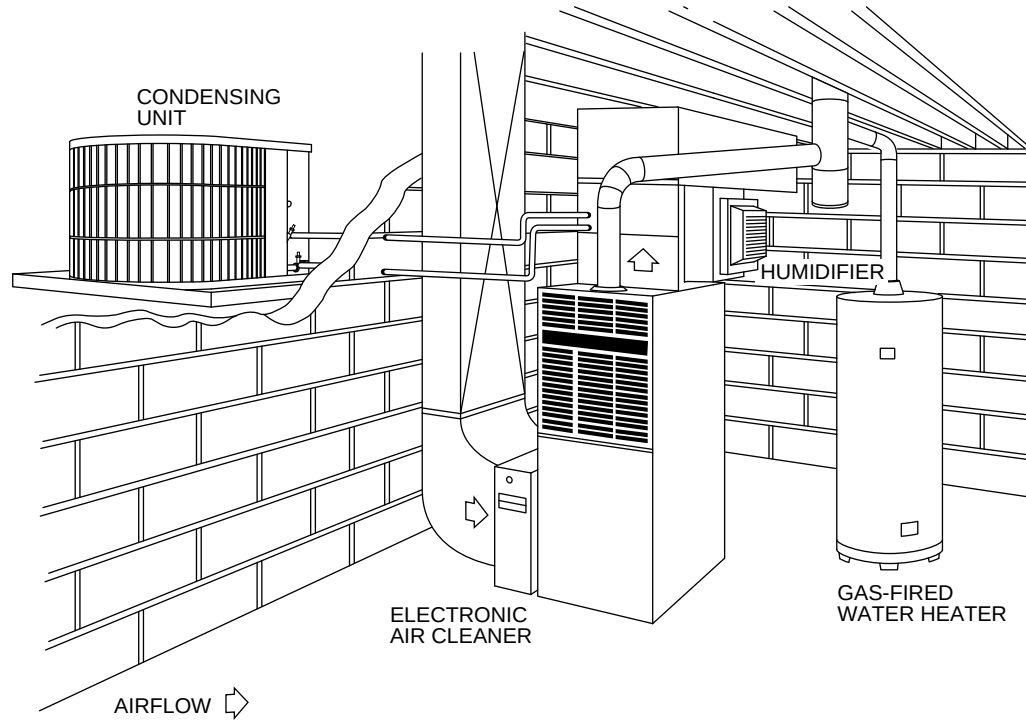
UNIT SIZE		060-12	080-16	100-16	100-20	120-20
UNIT VOLTS—HERTZ—PHASE		115—60—1				
MINIMUM WIRE SIZE		14	14	14	12	12
MAXIMUM WIRE LENGTH (Ft)*		32	27	28	30	31
MAXIMUM UNIT AMPS		11.4	13.5	13.2	19.0	18.2
OPERATING VOLTAGE RANGE (Min—Max)†		104—127				
MAX FUSE SIZE OR HACR-TYPE CKT BKR (Amps)‡		15	15	15	20	20
TRANSFORMER (24v)		40va				
EXTERNAL CONTROL POWER AVAILABLE	Heating	19va				
	Cooling	35va				
AIR CONDITIONING BLOWER RELAY		Standard				

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

† Permissible limits of the voltage range at which the unit will operate satisfactorily.

‡ Time-delay fuse is recommended.

Typical installations



A89242

SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

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