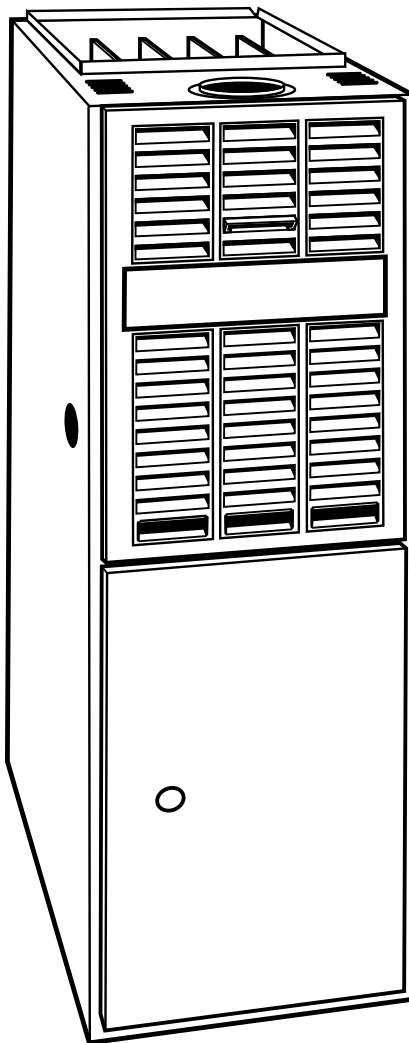




Product Data

58TUA WeatherMaker® 8000 2-Speed High-Efficiency Upflow Furnace

Input Capacities:
40,000 thru 135,000 Btuh



Two-Speed Heating for High-Efficiency Gas Furnaces

Carrier leads the industry with our new WeatherMaker® 8000 Two-Speed Induced-Draft Gas Furnace. This furnace can operate at 2 different speed settings which provide outstanding home comfort. The WeatherMaker 8000 furnace 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 58TUA Upflow Furnace is a great asset to Carrier's list of product leadership in the gas furnace industry.

These 2-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 Carrier WeatherMaker 8000 two-speed utilizes a hot surface, silicon carbide 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 Carrier WeatherMaker 8000 Two-Speed Gas Furnace will meet your

home heating requirements. This furnace family provides the widest range of heating capacities available.

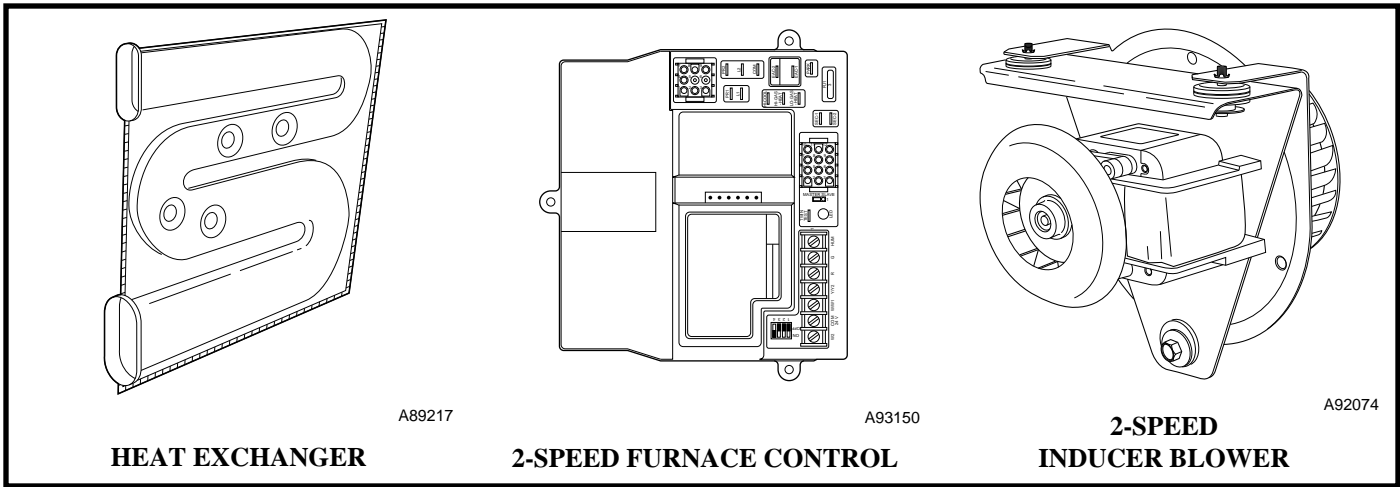
The superior attention to cabinet detail is obvious. The Carrier WeatherMaker 8000 two-speed features 1-piece, seamless, wrap-around construction. There are no spot welds on the exterior surfaces of the WeatherMaker 8000 Two-Speed Furnace. There is also double protection for the cabinet. First, a galvanized 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 two-speed

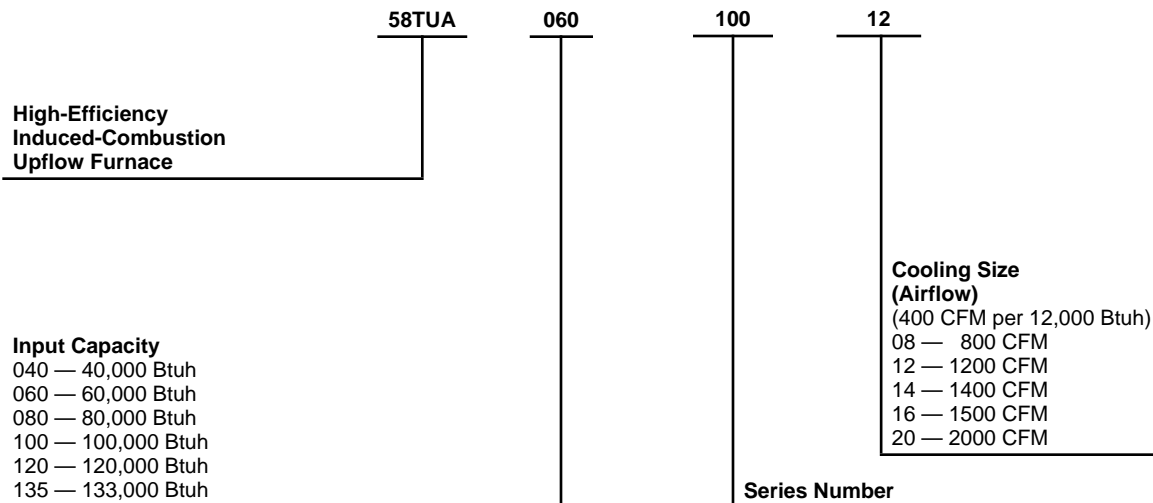
is the state-of-the-art microprocessor control center which shows true leadership in furnace technology. The simplified electronics in this control provide high reliability while performing many of the functions of older, electro-mechanical devices in other furnaces. Advanced features of the control show Carrier's true leadership in furnace technology. The control provides blower delay at start-up and shutdown, while monitoring furnace operations and 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 inducers, silicon

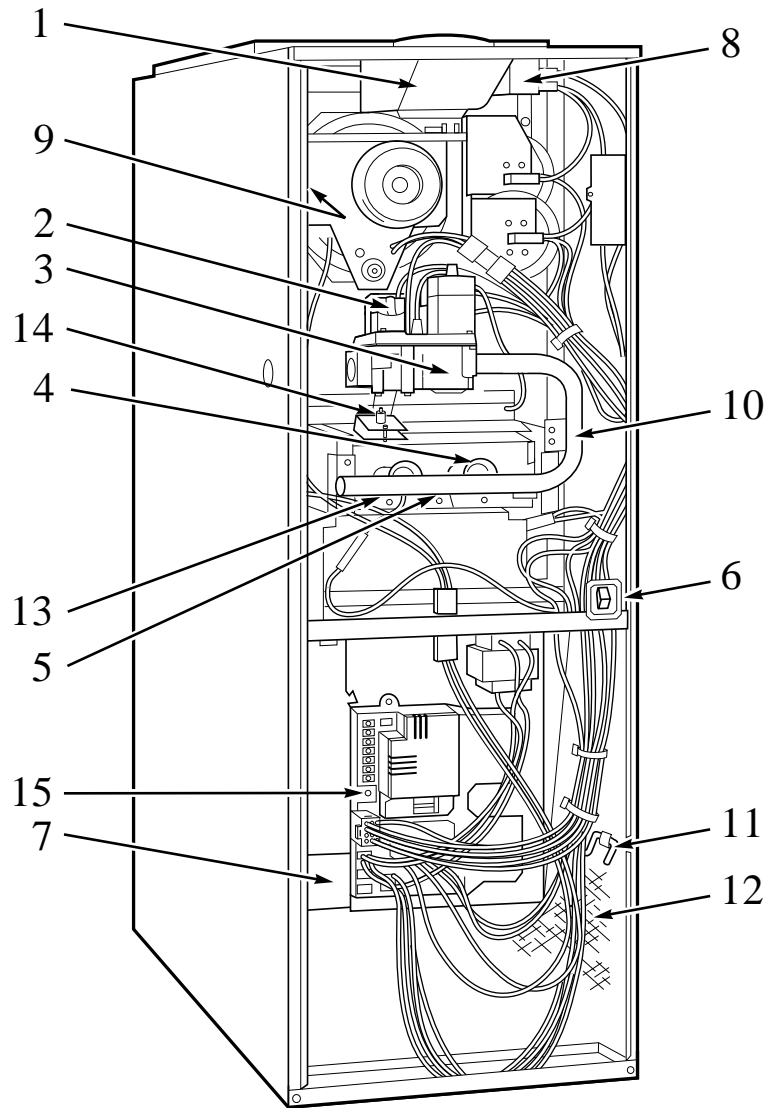
carbide ignition, and low-, medium-, and high-speed blower. The control also features a 3-amp fuse that protects the transformer and control.

Best of all, the Carrier WeatherMaker 8000 two-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 selector, cased or uncased cooling coils, low-voltage humidifier, and electronic air cleaner terminal connections are among other features.



Model number nomenclature





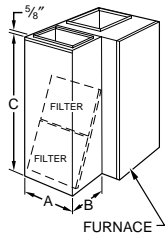
A93147

NOTE: The 58TUA 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.

- | | |
|-----------------------------------|-------------------------------------|
| ① Relief Box | ⑨ Rating Plate |
| ② Gas Valve Control Knob (On/Off) | ⑩ Gas Manifold |
| ③ 2-Stage Gas Valve | ⑪ Filter Retainer |
| ④ Gas Burner | ⑫ Air Filter |
| ⑤ Hot Surface Ignitor. | ⑬ Flame Sensor |
| ⑥ Blower Door Safety Switch. | ⑭ Manual Reset Flame Rollout Switch |
| ⑦ Blower and Blower Motor | ⑮ Status LED Light and Control |
| ⑧ Draft Safeguard Tube and Switch | |

Carrier accessories*

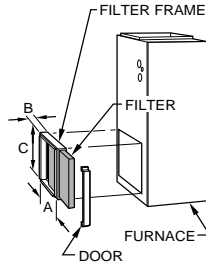


A93067

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.

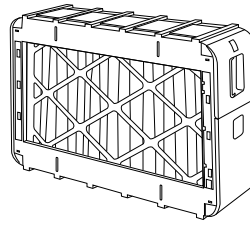


A93068

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.

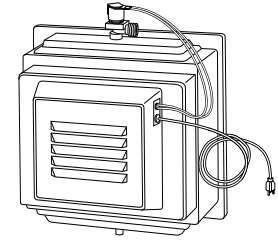


A95432

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.

Mechanical air cleaner is shown.



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	040-12	060-08 and 12	080-14, 16, and 20	100-12 and 16	120-16 and 20	135-20
AIR CLEANER	Model ARIA, KEACA, 31MF, or MECH					
HUMIDIFIER	Model 49BF, 49BG, 49FH, 49FP, or 49WS					
THERMOSTAT	See Master Price Pages					
RETURN-AIR PLENUM (With Washable Filters)	KGARP0201ALL					
SIDE FILTER RACK (Accepts one 16 x 25 x 1 Filter)	KGAFR0201ALL					
TWINNING KIT†	KGATW0401HSI					
HIGH-ALTITUDE PRESSURE SWITCH KIT‡	KGAHA5501PSW					
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.

Physical data

UNIT SIZE		040-12	060-08	060-12	080-14	080-16	100-12	100-16	100-20	120-16	120-20	135-20
OUTPUT CAPACITY (BTUH)†	High Stage	32,000	49,000	49,000	65,000	65,000	81,000	81,000	81,000	98,000	98,000	108,000
	Nonweatherized ICS	21,000	31,000	31,000	42,000	42,000	52,000	52,000	52,000	63,000	63,000	73,000
GAS INPUT (BTUH)*	High Stage	40,000	60,000	60,000	80,000	80,000	100,000	100,000	100,000	120,000	120,000	133,000
	Low Stage	26,000	39,000	39,000	52,000	52,000	65,000	65,000	65,000	78,000	78,000	91,000
SHIPPING WEIGHT (LB)		124	132	134	150	154	160	166	184	178	194	204
CERTIFIED TEMP RISE RANGE (°F)	High Stage	15-45	45-75	25-55	35-65	30-60	50-80	40-70	25-55	45-75	40-70	45-75
	Low Stage	5-35	30-60	15-45	20-50	15-45	30-60	20-50	15-45	30-60	25-55	30-60
CERTIFIED EXT STATIC PRESSURE (In. wc)	Heating	0.10	0.12	0.12	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20
	Cooling	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
AIRFLOW CFM‡	Heating High/Low	1140/980	740/600	1140/990	1170/1010	1445/1260	1185/1015	1410/1265	1720/1515	1415/1260	1730/1525	1695/1500
	Cooling	1250	880	1195	1360	1740	1205	1575	2210	1620	1980	1905
LIMIT CONTROL		SPST (Auto-Reset)										
HEATING BLOWER CONTROL		Solid-State Time Operation										
INDUCER		2-Speed										
BURNERS (Monoport)		2	3		4		5			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. 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.

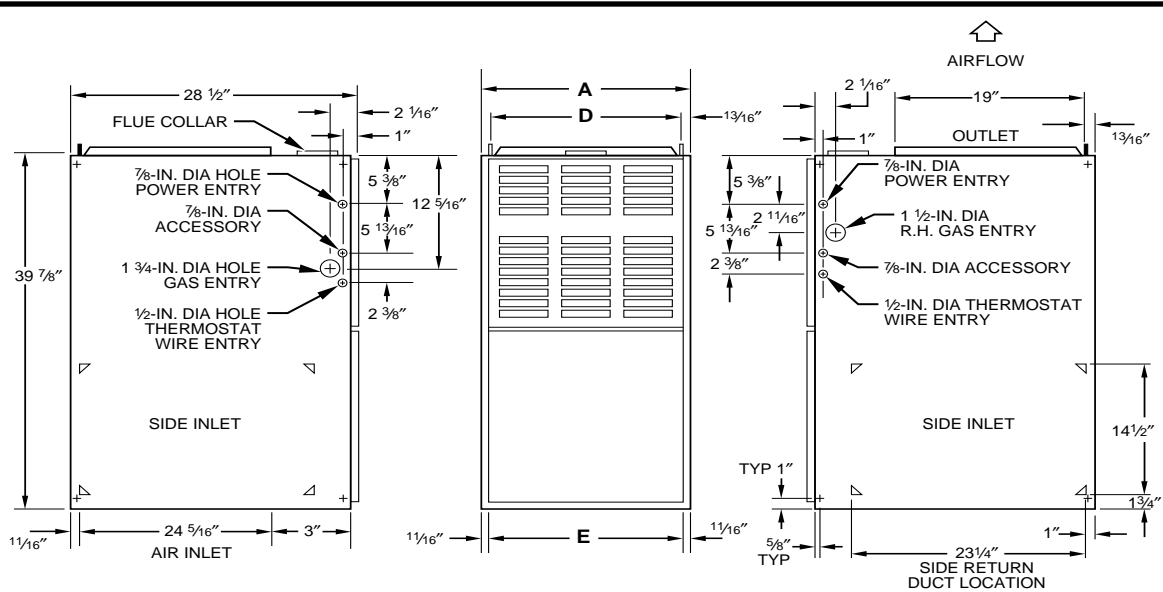
ICS — Isolated Combustion System

Dimensions

CLEARANCES (In.)

UNIT SIZE	040 and 060	080—135
Furnace Sides—Single-Wall Vent	1	0
Type B-1, Double-Wall Vent	0	0
Furnace Back	0	0
Top of Plenum	1	1
Vent Connector—Single-Wall	6	6
Type B-1, Double-Wall	1	1
Furnace Front*—Single-Wall	6	6
Type B-1, Double-Wall Vent	3	3
Service	30	30

* A minimum 3-in. front clearance is needed for combustion-air and ventilation-air entry.



- NOTES:**
- Two additional $\frac{7}{8}$ -in. dia holes are located in the top plate.
 - Minimum return-air opening at furnace:
 - For 800 CFM—16-in. round or $14\frac{1}{2}$ x 12-in. rectangle.
 - For 1200 CFM—20-in. round or $14\frac{1}{2}$ x $19\frac{1}{2}$ -in. rectangle.
 - For 1600 CFM—22-in. round or $14\frac{1}{2}$ x $23\frac{1}{4}$ -in. rectangle.
 - For airflow requirements above 1800 CFM, use both side inlets, a combination of 1 side inlet and the bottom, or the bottom only.

A88367

NOTES:

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

DIMENSIONS (In.)

UNIT SIZE	A	D	E	VENT CONNECTION
040-12	14-3/16	12-9/16	12-11/16	4
060-08	14-3/16	12-9/16	12-11/16	4
060-12	14-3/16	12-9/16	12-11/16	4
080-14	17-1/2	15-7/8	16	4
080-16	21	19-3/8	19-1/2	4
100-12	17-1/2	15-7/8	16	4
100-16	21	19-3/8	19-1/2	4
100-20	24-1/2	22-7/8	23	4
120-16	21	19-3/8	19-1/2	5
120-20	24-1/2	22-7/8	23	5
135-20	24-1/2	22-7/8	23	5

Performance data

UNIT SIZE	040-12	060-08	060-12	080-14	080-16	100-12	100-16	100-20	120-16	120-20	135-20
DIRECT-DRIVE MOTOR Hp (PSC)	1/3	1/5	1/3	1/3	1/2	1/3	1/2	3/4	1/2	3/4	3/4
MOTOR FULL LOAD AMPS	5.8	2.9	5.8	5.8	7.9	5.8	7.9	11.1	7.9	11.1	11.1
RPM (Nominal) — SPEEDS	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4	1075-4
BLOWER WHEEL DIAMETER X WIDTHS (In.)	10 x 6	10 x 6	10 x 6	10 x 7	10 x 8	10 x 7	10 x 8	11 x 10	10 x 8	11 x 10	11 x 10
WASHABLE 16 x 25 x 1-in. FILTER — QTY	1	1	1	1	—	1	—	2	—	2	2
WASHABLE 20 x 25 x 1-in. FILTER — QTY	—	—	—	—	1	—	1	—	1	—	—

PSC — Permanent Split Capacitor

EFFICIENCY

UNIT SIZE		040-12	060-08	060-12	080-14	080-16	100-12	100-16	100-20	120-16	120-20	135-20
CAPACITY*	High Stage	32,000	49,000	49,000	65,000	65,000	81,000	81,000	81,000	98,000	98,000	108,000
	Low Stage	21,000	31,000	31,000	42,000	42,000	52,000	52,000	52,000	63,000	63,000	73,000
AFUE %* Nonweatherized ICS		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80,000

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

ICS — Isolated Combustion System

AIR DELIVERY — CFM* (With Filter)

UNIT SIZE	SPEED	EXTERNAL STATIC PRESSURE (In. wc)							
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
040-12	High	1490	1430	1385	1325	1250	1175	1085	975
	Med-High	1335	1305	1270	1230	1160	1090	1005	915
	Med-Low	1140	1130	1105	1075	1030	975	900	830
	Low	980	975	965	915	875	840	785	715
060-08	High	1040	1010	975	935	880	810	735	640
	Med-High	855	830	800	765	715	660	600	490
	Med-Low	745	715	690	650	605	550	475	385
	Low	610	590	565	535	485	425	375	310
060-12	High	1430	1380	1325	1265	1195	1125	1045	945
	Med-High	1310	1275	1235	1190	1135	1065	990	900
	Med-Low	1140	1130	1100	1065	1000	965	910	815
	Low	990	965	960	935	905	855	800	710
080-14	High	1570	1535	1480	1415	1360	1280	1185	1070
	Med-High	1370	1355	1330	1290	1240	1170	1080	955
	Med-Low	1170	1165	1150	1115	1085	1035	970	880
	Low	1010	1005	990	965	905	905	845	745
080-16	High	2010	1950	1875	1810	1740	1660	1550	1455
	Med-High	1675	1660	1625	1600	1545	1490	1395	1295
	Med-Low	1445	1430	1415	1400	1370	1325	1265	1170
	Low	1260	1260	1260	1250	1210	1180	1115	1030
100-12	High	1470	1415	1340	1270	1205	1115	985	845
	Med-High	1340	1305	1245	1185	1130	1045	915	780
	Med-Low	1185	1175	1140	1075	1030	950	835	705
	Low	1015	1010	980	955	910	840	725	600
100-16	High	1880	1815	1745	1690	1575	1500	1400	1265
	Med-High	1660	1615	1570	1505	1435	1355	1260	1170
	Med-Low	1455	1410	1375	1350	1290	1235	1145	985
	Low	1265	1265	1240	1210	1180	1110	995	855
100-20	High	2475	2405	2330	2265	2210	2130	2040	1945
	Med-High	2055	2025	2000	1965	1930	1865	1795	1720
	Med-Low	1725	1720	1705	1685	1665	1630	1585	1525
	Low	1500	1515	1510	1500	1480	1460	1415	1370
120-16	High	1900	1845	1780	1705	1620	1530	1445	1320
	Med-High	1695	1645	1580	1520	1460	1385	1280	1155
	Med-Low	1460	1415	1375	1340	1290	1205	1110	—
	Low	1275	1260	1245	1230	1180	1135	—	—
120-20	High	—	2210	2130	2055	1980	1895	1795	1680
	Med-High	2015	1975	1925	1880	1805	1735	1655	1555
	Med-Low	1730	1710	1670	1635	1590	1535	1470	1385
	Low	1525	1520	1495	1450	1410	1375	1315	1245
135-20	High	—	2145	2060	1975	1905	1800	1680	1565
	Med-High	—	1950	1885	1815	1710	1645	1545	1435
	Med-Low	1730	1695	1660	1600	1540	1465	1400	1305
	Low	1520	1500	1460	1410	1360	1310	1245	1155

* 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 opening.

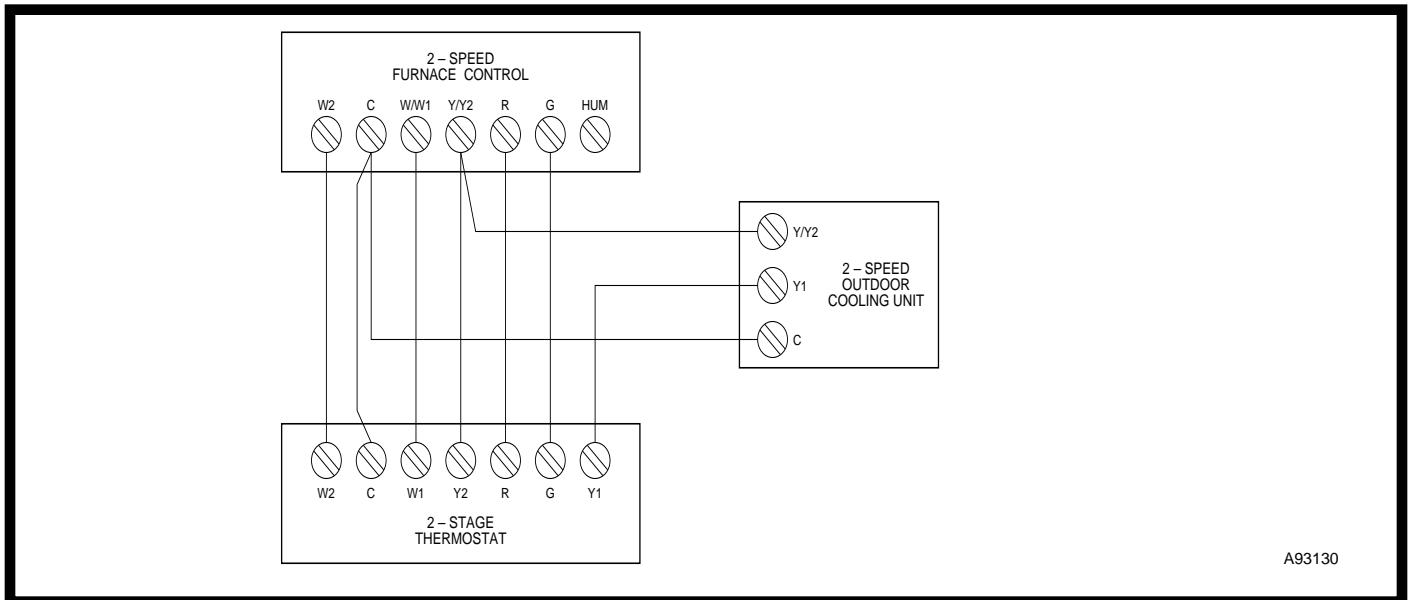
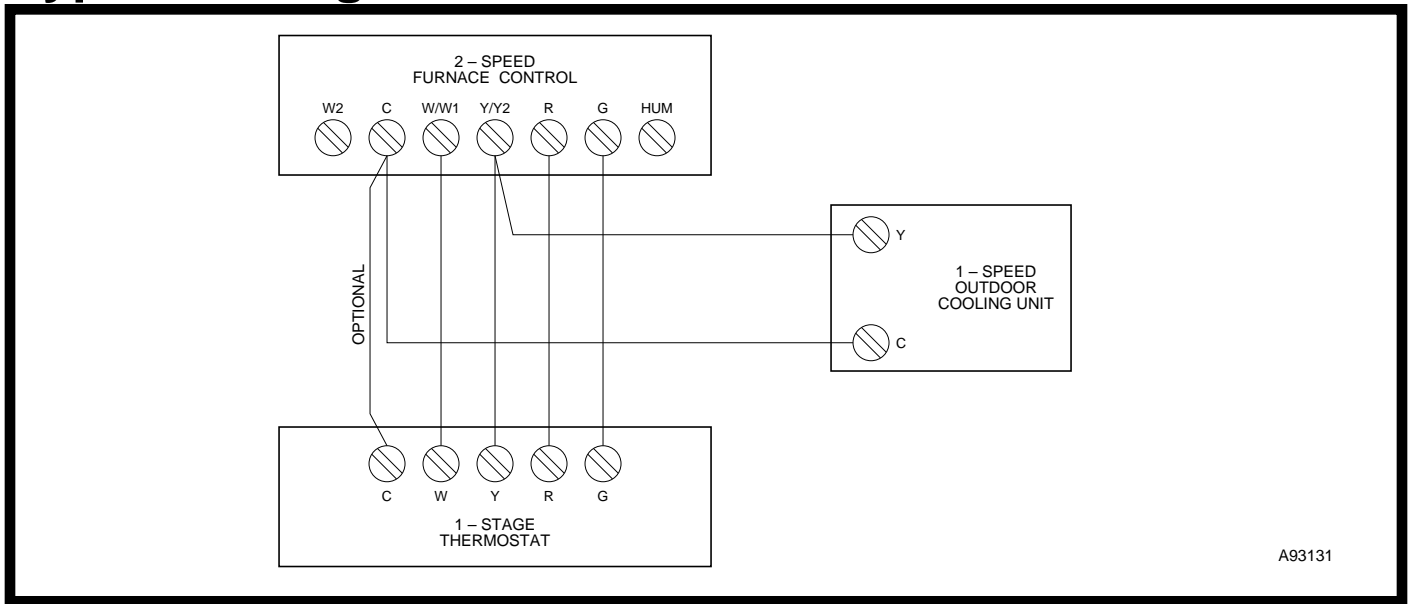
—Indicates unstable operating conditions.

MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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



Typical wiring schematic



Electrical data

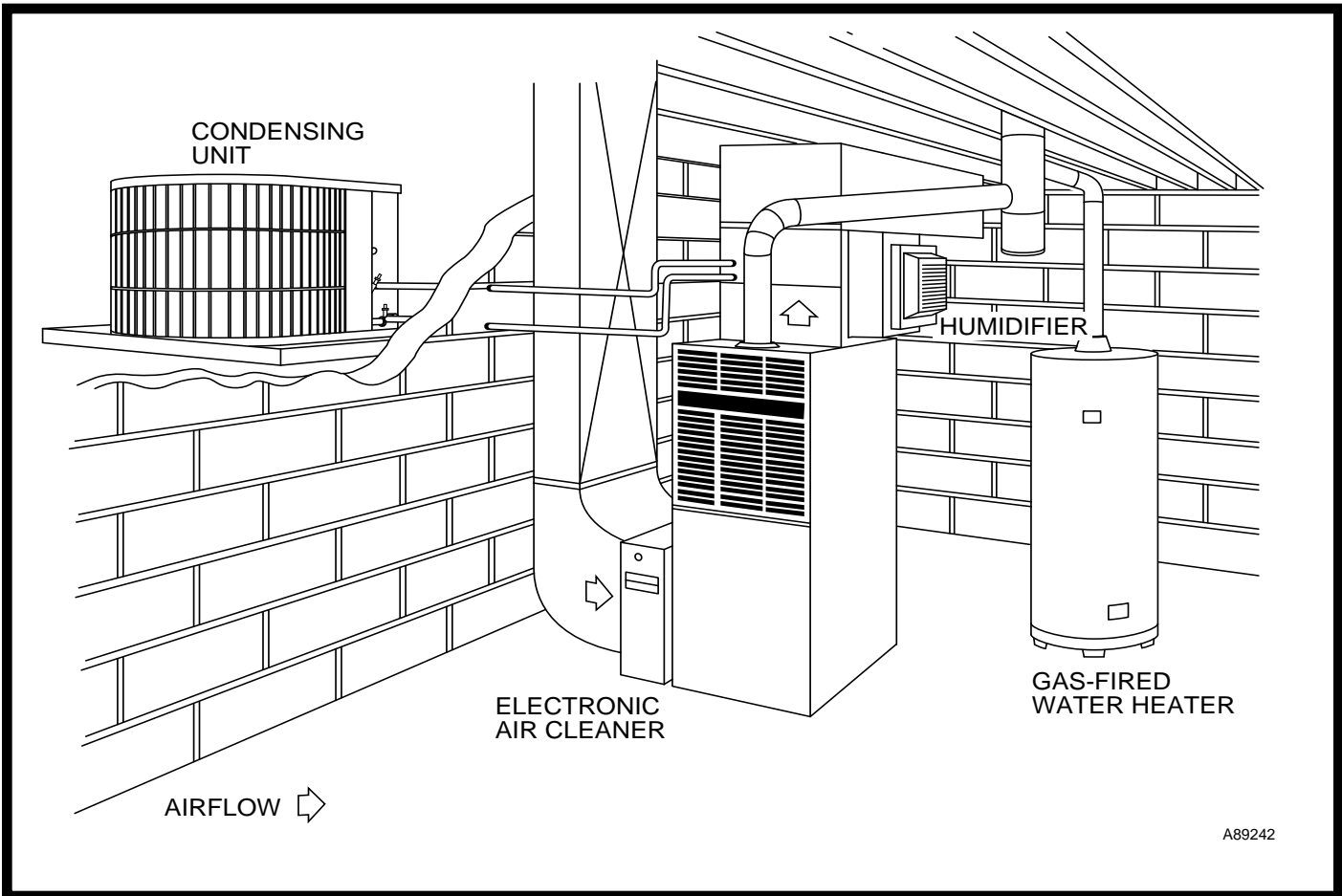
UNIT SIZE	040-12	060-08	060-12	080-14	080-16	100-12	100-16	100-20	120-16	120-20	135-20
UNIT VOLTS—HERTZ—PHASE	115—60—1										
MINIMUM WIRE SIZE	14	14	14	14	14	14	14	12	14	12	12
MAXIMUM WIRE LENGTH (Ft)*	34	45	32	31	27	35	28	30	28	31	33
MAXIMUM UNIT AMPS	10.9	8.2	11.4	11.7	13.5	10.5	13.2	19.0	13.2	18.2	17.4
OPERATING VOLTAGE RANGE (Min—Max)†	104—127										
MAX FUSE SIZE OR HACR-TYPE CKT BKR (Amps)‡	15	15	15	15	15	15	15	20	15	20	20
TRANSFORMER (24v)	40va										
EXTERNAL CONTROL POWER AVAILABLE	Heating										
	Cooling										
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



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

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

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