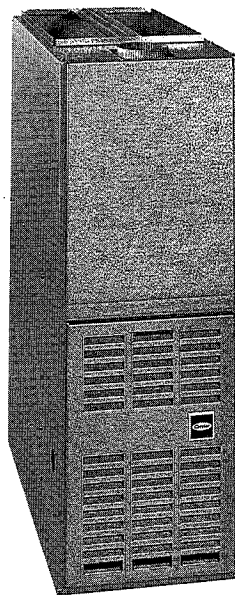




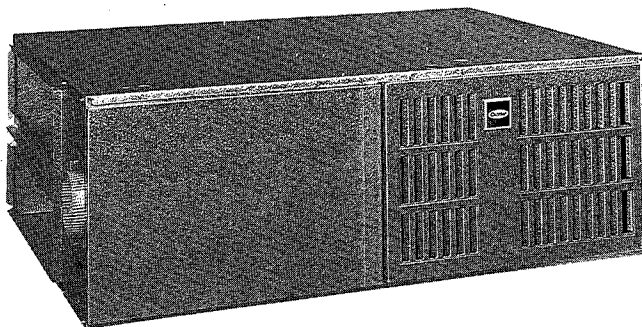
Product Data

58SMA Sidewall Ventable Downflow/Horizontal Gas Furnace

Input Capacities:
65,000 thru 105,000 Btuh



DOWNFLOW



HORIZONTAL

Sidewall Venting Capability for High-Efficiency Gas Furnaces

Maximum installation flexibility and great customer comfort are designed into the 58SMA Sidewall Ventable Downflow/Horizontal Furnace. This furnace can be installed with Category I or Category III vent materials. This 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 58SMA Downflow/Horizontal Furnace is the latest addition to Carrier's list of product leadership in the gas furnace industry.

These sidewall ventable, 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 58SMA Gas Furnace utilizes a hot surface, silicon carbide ignition system to save energy and increase reliability.

Our engineers have incorporated the patented S-shaped 4-pass heat exchanger, a soft mount inducer assembly, and a slow-opening gas valve to minimize sound level. The Super-S heat exchanger provides better heat transfer and enables us to make a compact furnace, providing more room in closet, utility room, and short basement installations. The heat exchanger is constructed of aluminized steel and is backed by a 10-year Limited Warranty.

The superior attention to cabinet detail is obvious. The Carrier 58SMA features 1-piece, seamless, wrap-around construction. There are no

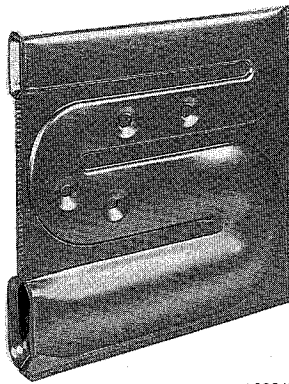
spot welds on the exterior surfaces of the furnace. There is also double protection for the cabinet. First, a galvanized steel substrate provides resistance to rusting. Then the cabinet is constructed of clear coated embossed steel.

Perhaps the most advanced feature of the Carrier 58SMA 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. The control provides blower delay at

start-up and shutdown while monitoring furnace operations and functions. In the unlikely event of a service call and in less than a minute, the technician can use the component test feature to determine if a major component has failed. The control will check itself, then the inducer, silicon carbide ignition, low-, medium- and high-speed blower. Another benefit of the control is the 3-amp fuse that protects the transformer and control. Our control is backed by a 3-year Limited Warranty.

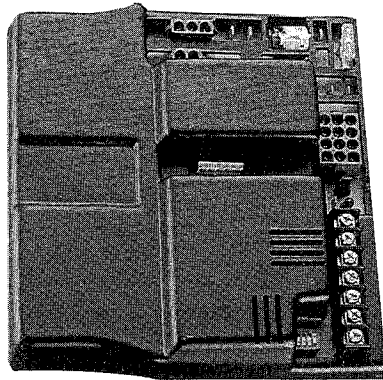
Best of all, the Carrier 58SMA is easily installed. Many features make this furnace the easy choice for

replacement or new construction markets. Left and right connections are provided for gas and electrical supplies. An easy-to-remove bottom, blower speed selector, cased or uncased cooling coils, low-voltage humidifier, and electronic air cleaner terminal connections are among other features. This furnace is designed for multipoise downflow, horizontal right, or horizontal left applications. For added installation flexibility, furnace venting can be Category I (vertical) or, with a minor field modification kit, Category III (horizontal or vertical) using high temperature plastic pipe.



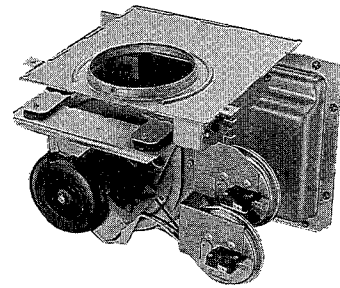
A89217

HEAT EXCHANGER



A93150

FURNACE CONTROL



A93149

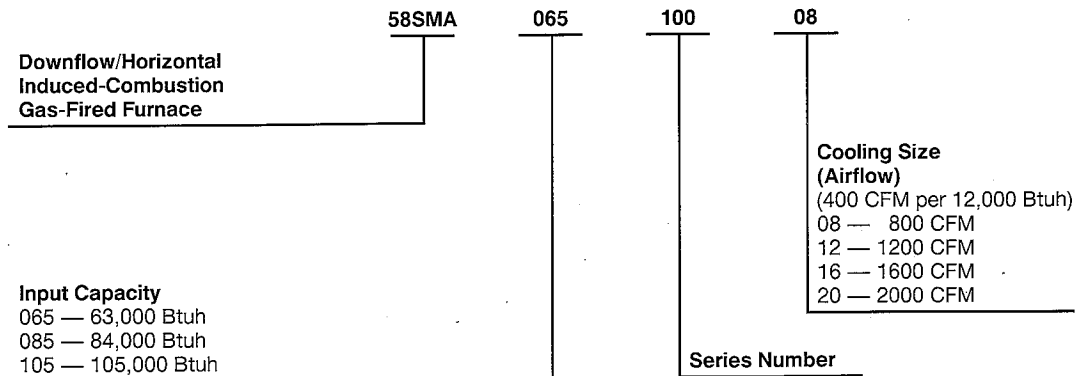
INDUCER BLOWER



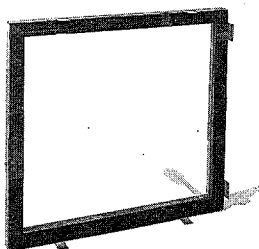
MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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

Model number nomenclature



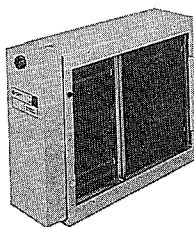
Carrier accessories*



A88202

DOWNFLOW SUBBASE

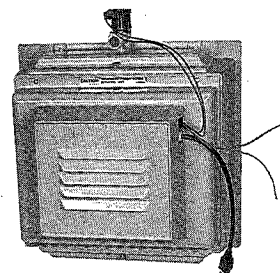
One base fits all furnace sizes. The base is designed to be installed between the furnace or coil box and a combustible floor. It is A.G.A. design certified for use with Carrier 58SMA furnaces.



A89239

MODEL 31KAX ELECTRONIC AIR CLEANER

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



A89459

MODEL 49FH HUMIDIFIER

By adding moisture to winter-dry air, a Carrier humidifier can often improve the 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	065-08	065-12	085-12 and 16	105-20
CATEGORY III VENT CONVERSION KIT	KGASW01012SP			
ELECTRONIC AIR CLEANER	Model 31KAX			
HUMIDIFIER	Model 49FH			
THERMOSTAT (1 or 2 Stage)	See Master Price Pages			
DOWNFLOW SUBBASE	KGASB0201ALL			
DUCT FLANGE KIT	KGARF0110ALL			
HIGH-ALTITUDE PRESSURE SWITCH KIT†	KGAHA5601PSW			
GAS CONVERSION KIT	Natural-To-Propane	KGANP24012SP		
	Propane-To-Natural	KGAPN20012SP		

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

†5500 ft and above for Category I vents or 4000 ft and above for Category III vents.

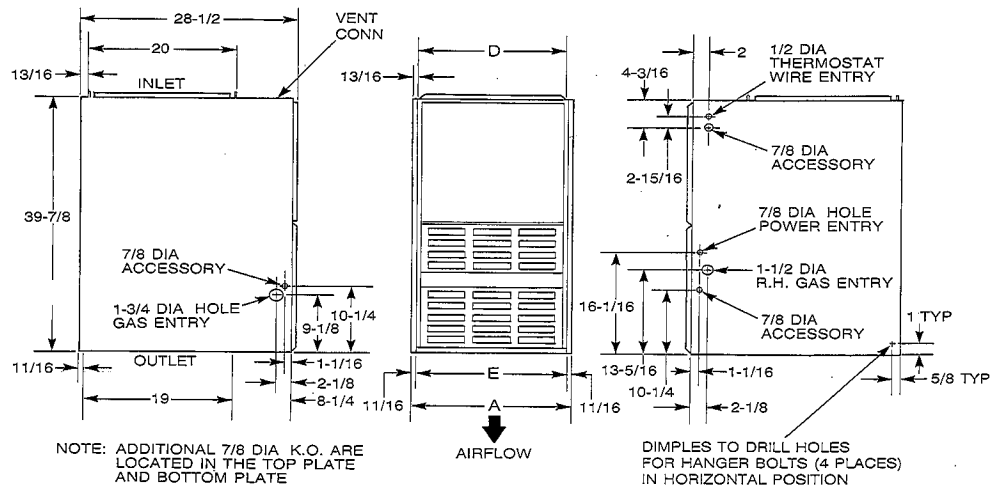
Physical data

UNIT SIZE	065-08	065-12	085-12	085-16	105-20
OUTPUT CAPACITY (BTUH)†	51,000	51,000	68,000	68,000	85,000
INPUT BTUH*	63,000	63,000	84,000	84,000	105,000
SHIPPING WEIGHT (Lb)	141	145	154	154	181
CERTIFIED TEMP RISE RANGE (°F)	55 — 85	30 — 60	40 — 70	30 — 60	35 — 65
CERTIFIED EXT STATIC PRESSURE	Heating	0.10	0.10	0.15	0.20
	Cooling	0.50	0.50	0.50	0.50
AIRFLOW CFM	Heating	815	1200	1165	1735
	Cooling	930	1300	1395	1950
SECONDARY LIMIT CONTROL	Manual Reset				
LIMIT CONTROL	SPST (Auto-Reset)				
HEATING BLOWER CONTROL	Solid-State Time Operation				
BURNERS (Monoport)	3		4		5
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)				
MAIN BURNER IGNITER	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 in accordance with U.S. Government DOE test procedures.

ICS — Isolated Combustion System



DIMENSIONS (In.)

A88324

UNIT SIZE	A	D	E	VENT CONN
065-08	14-3/16	12-9/16	12-11/16	4
065-12	14-3/16	12-9/16	12-11/16	4
085-12	17-1/2	15-7/8	16	4
085-16	17-1/2	15-7/8	16	4
105-20	21	19-3/8	19-1/2	4

SPECIAL GAS VENTING*

MAXIMUM HORIZONTAL VENT LENGTH†	NO. OF 90° LONG RADIUS (SWEEP) ELBOWS
40 ft	4

*Listed for Category III appliances per UL 1738 (high temperature plastic).

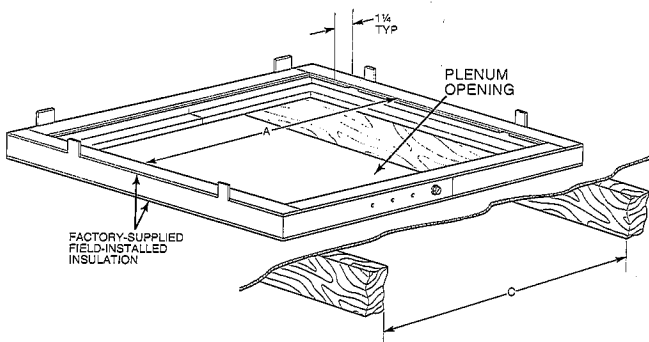
†For 3-in. vents (65,000 through 85,000 heating sizes), reduce the vent length 5 ft for each additional 90° elbow. Add 5 ft to the allowable vent length for each 90° elbow less than 4. Length adjustment for 4-in. vents (105 heating size) is 6 ft per sweep elbow.

Accessory downflow subbase

DIMENSIONAL DATA (In.)

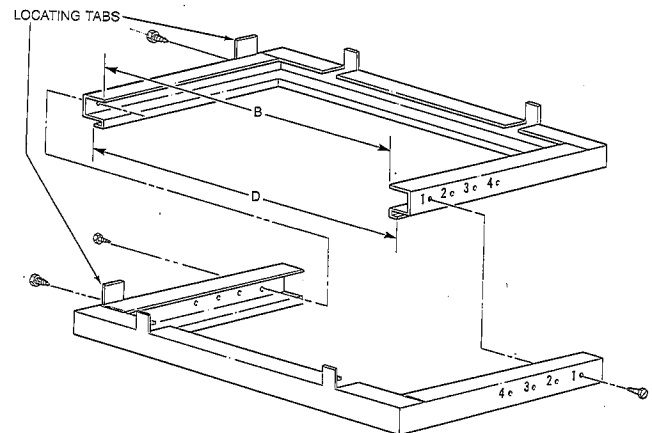
FURNACE WIDTH	PLENUM OPENING*		FRAMED FLOOR HOLE		HOLE NO. FOR WIDTH ADJUSTMENT
	A	B	C	D	
14-3/16	11-13/16	19	13-7/16	20-3/8	4
11-1/2	15-1/8	19	16-3/4	20-3/8	3
21	18-5/8	19	20-1/4	20-3/8	2

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



Assembled

A88206



Disassembled

A88207

Dimensions

CLEARANCES (In.)

DOWNFLOW (Alcove or Closet)	065 AND 085	105
Sides — Single-Wall Vent (Category I)	1*	0
Type B-1 Double-Wall Vent (Category I)	0	0
Special Gas Vents** — Diameter	3	4
Clearance	0	3
Back	0	0
Top	1	1
Front† — Single-Wall Vent (Category I)	6	6
Type B-1 Double-Wall Vent (Category I)	3	3
Special Gas Vents** — Diameter	3	4
Clearance	5	9
Vent — Single-Wall Vent (Category I)	6	6
Type B-1 Double-Wall Vent (Category I)	1	1
Special Gas Vents** — Diameter	3	4
Clearance	5	9

* For casing widths larger than 14-1/4 in., 0 clearance may be used.

† 18-in. clearance is required for alcove.

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

** Listed for Category III appliances per UL 1738 (high temperature plastic pipe).

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

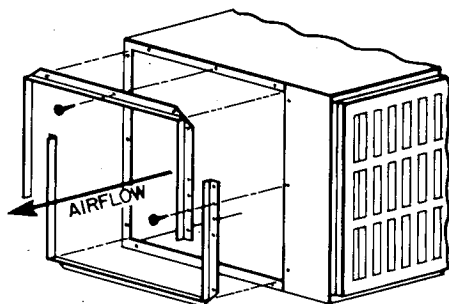
NOTES:

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 (In Alcove, Attic, or Crawlspace)	065 AND 085	105
Sides†††	1	1
Back	0	0
Top — Single-Wall Vent (Category I)	1	1
Type B-1 Double-Wall Vent (Category I)	1	1
Special Gas Vents** — Diameter	3	4
Clearance	1	3
Front† — Single-Wall Vent (Category I)	6	6
Type B-1 Double-Wall Vent (Category I)	3	3
Special Gas Vents** — Diameter	3	4
Clearance	5	9
Vent — Single-Wall Vent (Category I)	6	6
Type B-1 Double-Wall Vent (Category I)	1	1
Special Gas Vents** — Diameter	3	4
Clearance	5	9

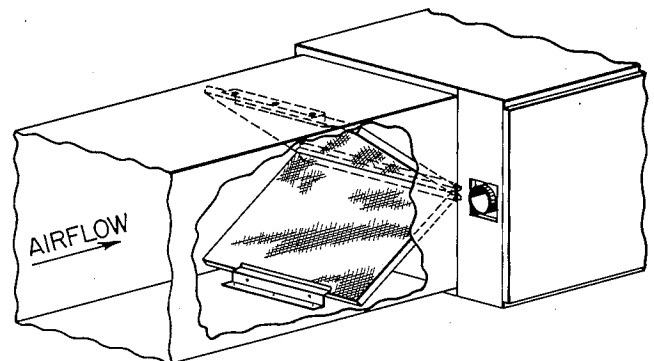
HORIZONTAL (In Closet)		
Sides†††	1	1
Back	3	3
Top — Single-Wall Vent (Category I)	2	2
Type B-1 Double-Wall Vent (Category I)	2	2
Special Gas Vents** — Diameter	3	4
Clearance	2	3
Front — Single-Wall Vent (Category I)	6	6
Type B-1 Double-Wall Vent (Category I)	3	3
Special Gas Vents** — Diameter	3	4
Clearance	5	9
Vent — Single-Wall Vent (Category I)	6	6
Type B-1 Double-Wall Vent (Category I)	1	1
Special Gas Vents** — Diameter	3	4
Clearance	5	9

Duct Flanges and Filter Arrangement



Duct Flanges
(Accessory)

A82172



Field Supplied
Filters and Retainers

A82173

Performance data

UNIT SIZE	065-08	065-12	085-12	085-16	105-20
DIRECT-DRIVE MOTOR HP (PSC)	1/5	1/3	1/3	1/2	3/4
MOTOR FULL LOAD AMPS	3.7	5.8	5.8	7.9	11.1
RPM (Nominal)—SPEEDS	1075—4	1075—4	1075—4	1075—4	1075—4
BLOWER WHEEL DIAMETER x WIDTH (in.)	10 x 6	10 x 6	10 x 7	10 x 8	11 x 10
RECOMMENDED FILTER SIZE (in.) — FIELD SUPPLIED	(2) 14 x 20 x 1				(2) 16 x 20 x 1

PSC — Permanent Split Capacitor

ENERGY EFFICIENCY

UNIT SIZE		065-08	065-12	085-12	085-16	105-20
CAPACITY BTUH*	Nonweatherized ICS	51,000	51,000	68,000	68,000	85,000
AFUE %*	Nonweatherized ICS	80.0	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

AIR DELIVERY (CFM)

UNIT SIZE	SPEED	EXTERNAL STATIC PRESSURE (in. wc)							
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
065-08	High	—	—	1010	975	930	885	825	745
	Med-High	—	815	800	765	725	685	620	550
	Med-Low	—	660	645	620	590	545	480	415
	Low	590	570	545	510	470	405	360	295
065-12	High	—	1490	1425	1365	1300	1240	1175	1100
	Med-High	—	1345	1300	1255	1200	1140	1075	1000
	Med-Low	1200	1180	1140	1100	1060	1015	960	895
	Low	1020	1000	985	950	915	880	835	780
085-12	High	—	1575	1515	1455	1395	1325	1230	1120
	Med-High	—	1380	1340	1285	1230	1165	1095	1005
	Med-Low	1165	1145	1130	1090	1055	1005	940	870
	Low	965	955	940	910	885	840	785	705
085-16	High	1855	1765	1710	1665	1580	1570	1410	1310
	Med-High	1595	1570	1530	1485	1410	1355	1280	1200
	Med-Low	1355	1345	1305	1270	1220	1170	1110	1025
	Low	1170	1170	1140	1110	1075	1025	965	890
105-20	High	2235	2185	2110	2030	1950	1835	1700	1540
	Med-High	1995	1970	1915	1845	1765	1680	1545	1415
	Med-Low	1735	1735	1675	1625	1565	1480	1370	1265
	Low	1510	1500	1485	1455	1400	1320	1230	1130

— Indicates unstable operating conditions.

Electrical data

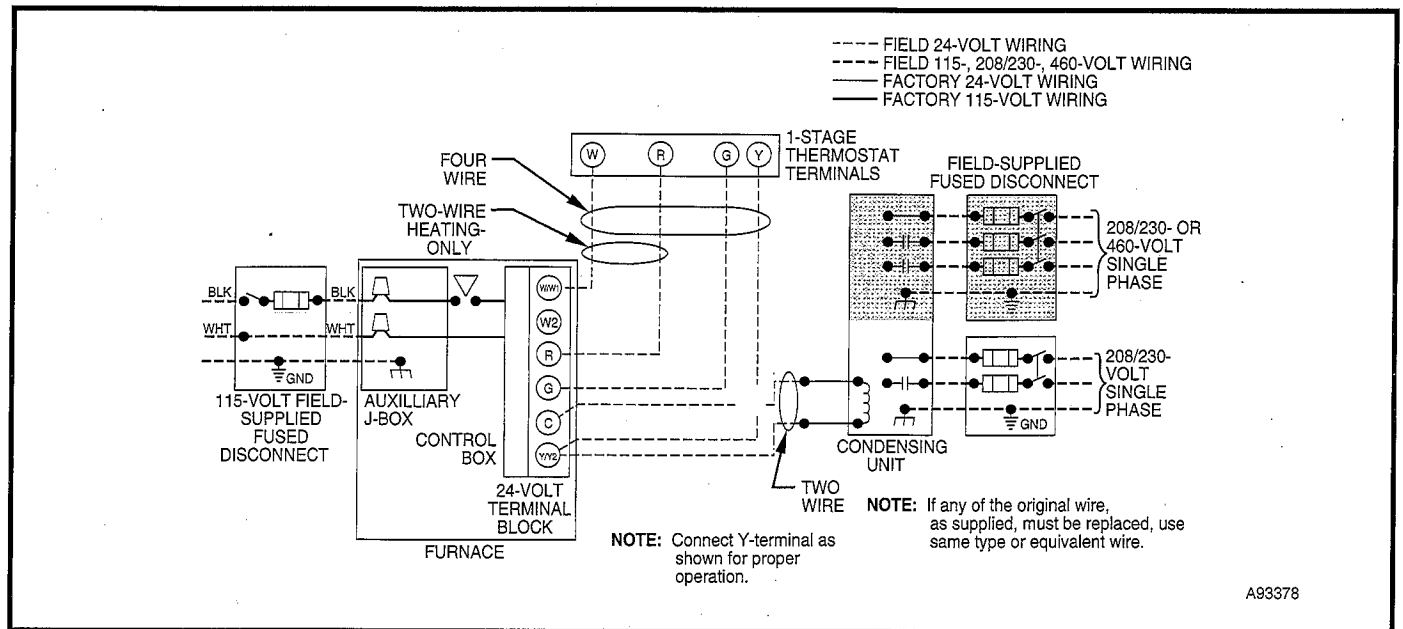
UNIT SIZE		065-08	065-12	085-12	085-16	105-20
UNIT VOLTS—HERTZ—PHASE		115—60—1				
MINIMUM WIRE SIZE		14	14	14	14	12
MAXIMUM WIRE LENGTH (Ft)*		46	33	30	28	33
MAXIMUM UNIT AMPS		8.0	11.0	12.0	13.2	17.2
OPERATING VOLTAGE RANGE (Min—Max)†		104—127				
MAXIMUM FUSE SIZE OR HACR-TYPE CKT BRK (Amps)‡		15	15	15	15	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.

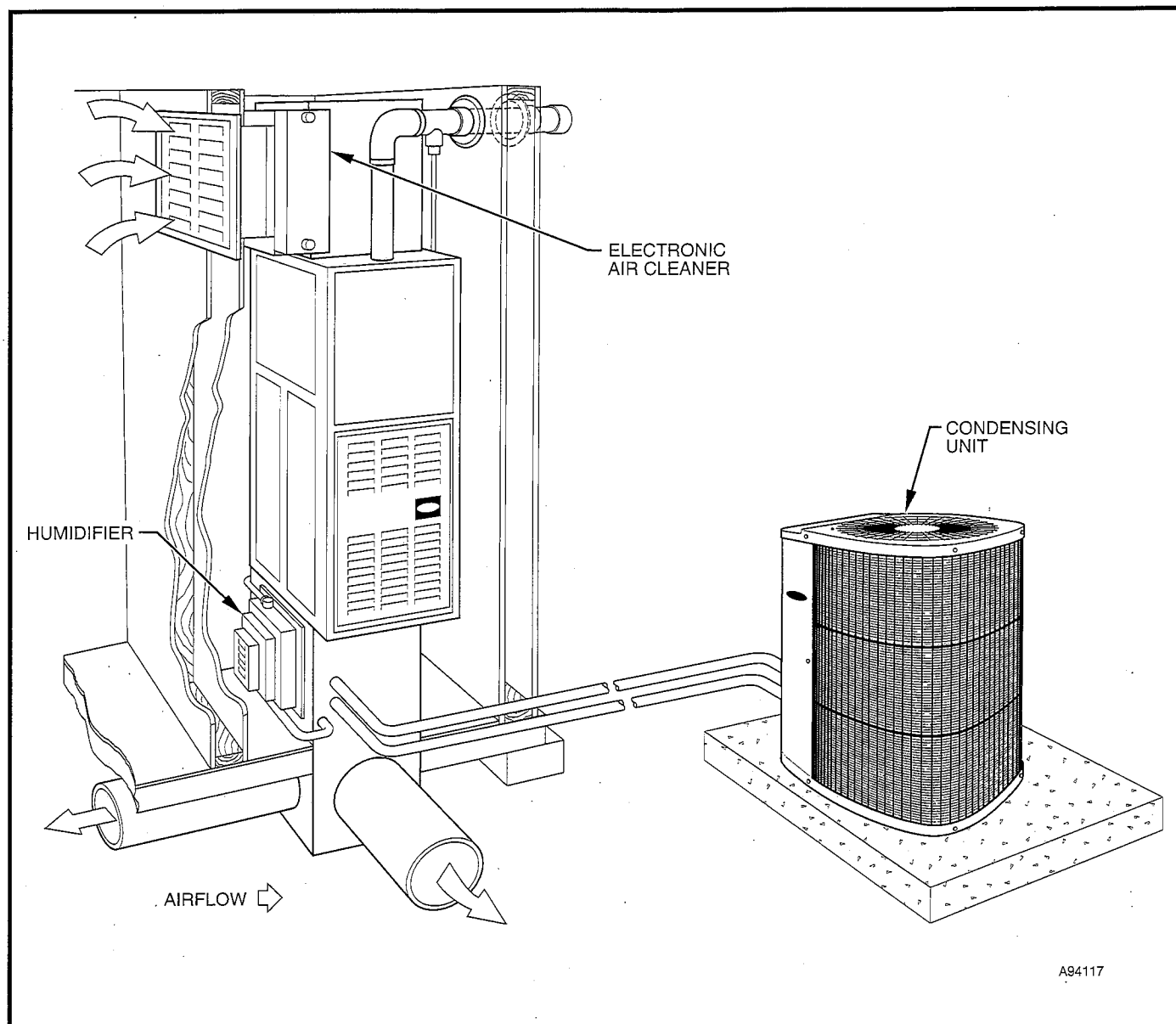
† Permissible limits of the voltage range at which the unit will operate satisfactorily.

‡ Time-delay fuse is recommended.

Typical wiring schematic



Typical installation



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Book 1 4
Tab 6a 8a

Page 8

Catalog No. 525-880

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PC 101

Form 58SMA-1PD
Replaces: New