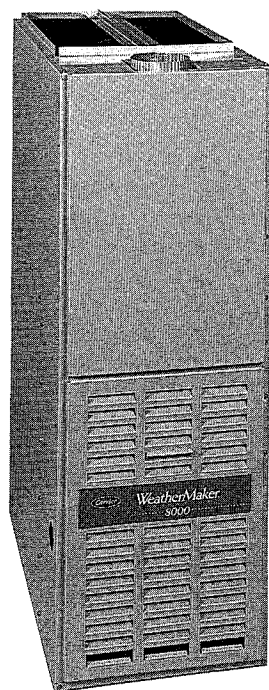




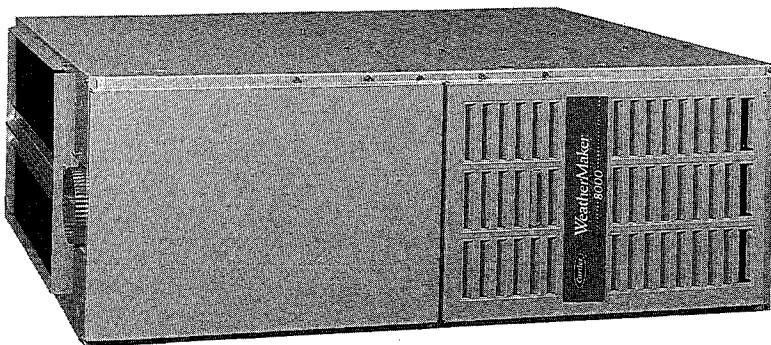
Product Data

58ZAV Weathermaker® 8000 Deluxe Mid-Efficiency Downflow/Horizontal Gas Furnace

Heating Capacities:
50,000 — 135,000 Btuh



DOWNFLOW



HORIZONTAL

Advanced Technology for Mid-Efficiency Gas Furnaces

Carrier leads the industry with our new Weathermaker® 8000 Induced-Draft Gas Furnace. 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 58ZAV Downflow/Horizontal Furnace is the newest addition to Carrier's list of product leadership in the gas furnace industry.

These 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 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 new soft mount inducer assembly, and a slow opening gas valve to improve 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 Gas Furnace will meet your home heating requirements. This furnace family provides the widest range of heating capacities available.

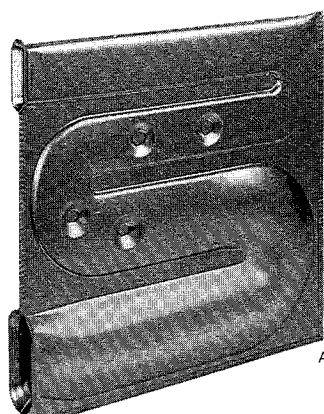
The superior attention to cabinet detail is obvious. The Carrier

Weathermaker 8000 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 prepainted steel — the same high-quality finish found on refrigerators and dishwashers.

Perhaps the most advanced feature of the Carrier Weathermaker 8000 is the microprocessor control center which shows true leadership in furnace technology. The simplified electronics in this control board provide high reliability while

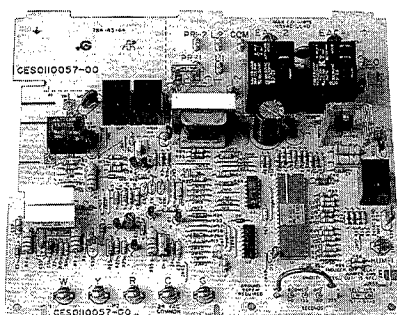
performing many of the functions of older, electro-mechanical devices in other furnaces. The control board provides blower delay at start-up and shutdown, while monitoring furnace operations and functions. In the unlikely event of a service call, in less than a minute, the technician can use the self-test feature to determine if a major component has failed. The control board will check itself, then the inducer, silicon carbide ignition, low- and high-speed blower, and the humidifier connections. Another benefit of the control board is the 3-amp fuse that protects the transformer and control board.

Best of all, the Carrier Weathermaker 8000 is made to be 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 multipositioned downflow, right horizontal, or left horizontal applications.



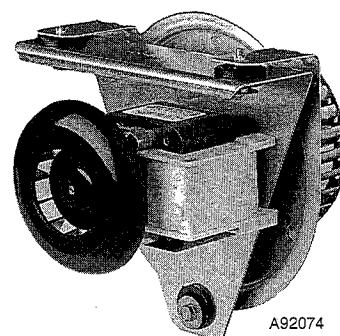
A89217

HEAT EXCHANGER



A92073

PRINTED-CIRCUIT BOARD



A92074

INDUCER BLOWER



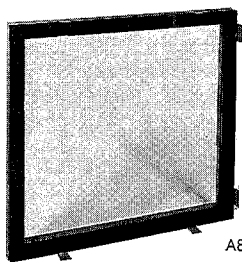
MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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

Model number nomenclature



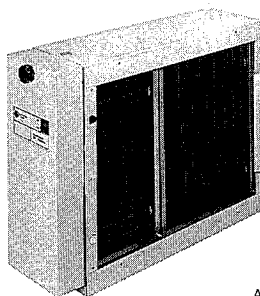
Carrier accessories*



A88202

DOWNFLOW SUBBASE

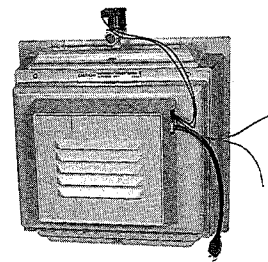
One base fits all furnace sizes. The base is designed to be installed between the furnace or coil box and a combustible floor. It is A.G.A. design certified for use with Carrier 58ZAV furnaces.



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	050-08 & 12	070-08 & 12	096-08 & 16	115-16 & 20	135-20
ELECTRONIC AIR CLEANER			Model 31KAX		
HUMIDIFIER			Model 49FH		
THERMOSTAT			See Master Price Pages		
DOWNFLOW SUBBASE			KGASB010ALL		
DUCT-FLANGE KIT			KGARF0110ALL		
GAS CONVERSION KIT — NATURAL-TO-PROPANE			KGANP2001ALL		
PROPANE-TO-NATURAL			KGAPN1601ALL		

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

Physical data

UNIT SIZE		050		070		096		115		135
		08	12	08	12	12	16	16	20	20
OUTPUT CAPACITY†	Nonweatherized ICS‡	37,000	37,000	56,000	56,000	75,000	75,000	94,000	94,000	110,000
INPUT BTUH*		46,000	46,000	69,000	69,000	92,000	92,000	115,000	115,000	135,000
SHIPPING WEIGHT (lb)		124	127	141	145	154	154	171	181	192
CERTIFIED TEMP RISE RANGE (°F)		30 — 60	20 — 50	50 — 80	30 — 60	45 — 75	30 — 60	50 — 80	35 — 65	45 — 75
CERTIFIED EXT STATIC PRESSURE	Heating	0.10	0.10	0.12	0.12	0.15	0.15	0.20	0.20	0.20
	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
AIRFLOW CFM	Heating	720	1170	660	1200	1155	1350	1400	1735	1690
	Cooling	895	1215	930	1300	1395	1580	1595	1950	2055
SECONDARY LIMIT CONTROL		Manual Reset								
LIMIT CONTROL		SPST								
HEATING BLOWER CONTROL		Solid-State Time Operation								
BURNERS (Monoport)		2		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								
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.

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

‡ ICS — Isolated Combustion System

Dimensions

CLEARANCES (In.)

UNIT SIZE	050 AND 070	096-135
DOWNFLOW (In Alcove or Closet)		
Sides — Single-Wall Vent	1	0
Type B-1 Double-Wall Vent	0	0
Back	0	0
Top	1	1
Front — 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

NOTES:

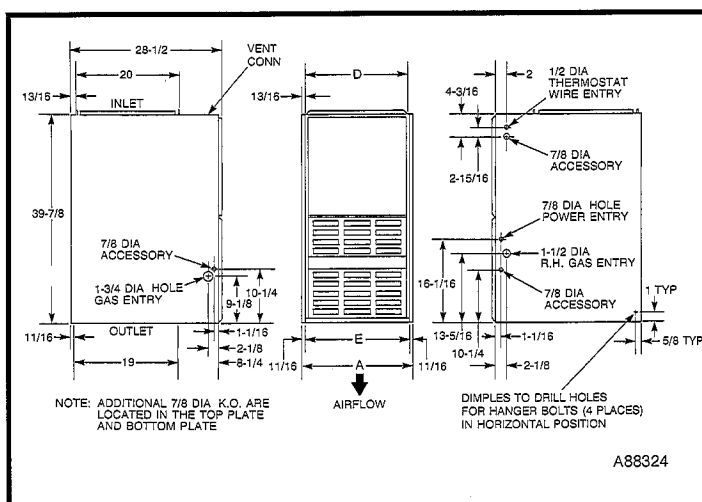
1. Provide 30-in. front clearance for servicing. An open door in front of the furnace can meet this requirement.
2. A minimum clearance of 3 in. must be provided in front of the furnace for combustion air and proper operation.

UNIT SIZE	050 AND 070	096-135
HORIZONTAL (In Attic, Alcove, or Crawl Space)		
Sides*	1	0
Back	0	0
Top — Single-Wall Vent	1	1
Type B-1 Double-Wall Vent	1	1
Front‡ — 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 (In Closet)		
Sides*	1	1
Back	3	3
Top — Single-Wall Vent	2	2
Type B-1 Double-Wall Vent	2	2
Front — 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

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

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

‡ Minimum 18-in. front clearance required for alcove.



DIMENSIONS (In.)

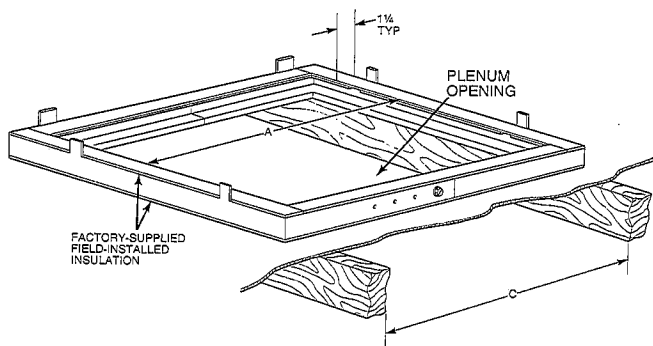
UNIT SIZE	A	D	E	VENT CONN
050-08	14-3/16	12-9/16	12-11/16	4
050-12	14-3/16	12-9/16	12-11/16	4
070-08	14-3/16	12-9/16	12-11/16	4
070-12	14-3/16	12-9/16	12-11/16	4
096-12	17-1/2	15-7/8	16	4
096-16	17-1/2	15-7/8	16	4
115-16	17-1/2	15-7/8	16	4
115-20	21	19-3/8	19-1/2	4
135-20	24-1/2	22-7/8	23	5

Accessory downflow subbase

DIMENSIONAL DATA (In.)

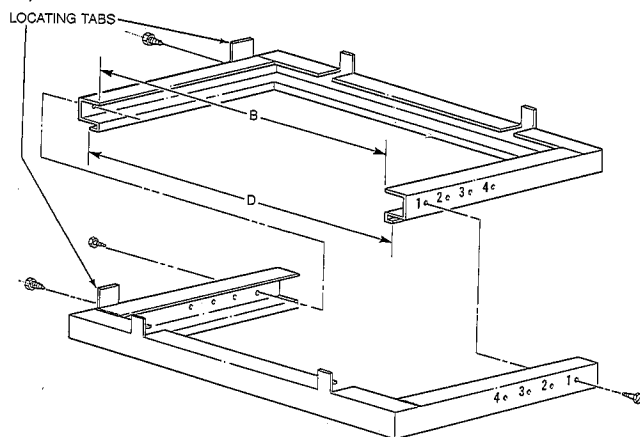
FURNACE WIDTH	PLENUM OPENING*		FRAMED FLOOR HOLE		HOLE NO. FOR WIDTH ADJUSTMENT
	A	B	C	D	
14-3/16	11-13/16	19	13-7/16	20-3/8	4
11-1/2	15-1/8	19	16-3/4	20-3/8	3
21	18-5/8	19	20-1/4	20-3/8	2
24-1/2	22-1/8	19	23-3/4	20-3/8	1

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



Assembled

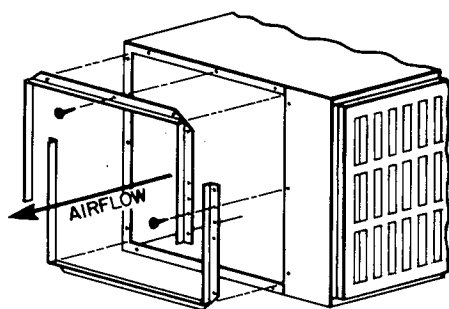
A88206



Disassembled

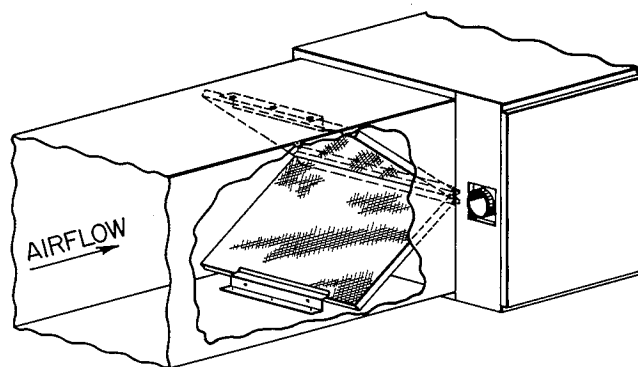
A88207

DUCT FLANGES AND FILTER POSITION



Duct Flanges
(Accessory)

A82172



Filter Retainers
(Field Supplied)

A82173

Performance data

UNIT SIZE	050-08	050-12	070-08	070-12	096-12	096-16	115-16	115-20	135-20
DIRECT-DRIVE MOTOR Hp (PSC)	1/5	1/3	1/5	1/3	1/3	1/2	1/2	3/4	3/4
MOTOR FULL LOAD AMPS	2.9	5.8	2.9	5.8	5.8	7.9	7.9	11.1	11.1
RPM (Nominal) — SPEEDS	1075 — 3	1075 — 4	1075 — 3	1075 — 4	1075 — 4	1075 — 4	1075 — 4	1075 — 4	1075 — 4
BLOWER WHEEL DIAMETER x WIDTH (in.)	10 x 6	10 x 6	10 x 6	10 x 6	10 x 7	10 x 8	10 x 8	11 x 10	11 x 10
FILTER SIZE (in.) — (WASHABLE)	(2) 14 x 20 x 1							(2) 16 x 20 x 1	

PSC — Permanent Split Capacitor

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
050-08	High	1100	1050	1000	950	895	840	760	650
	Med-High	860	820	790	760	710	655	580	480
	Med-Low	720	685	650	615	560	505	440	360
050-12	High	—	1400	1355	1300	1215	1130	1050	960
	Med-High	—	1295	1255	1190	1115	1045	975	890
	Med-Low	1170	1150	1115	1060	1005	950	880	800
070-08	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
070-12	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
096-12	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
096-16	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
115-16	High	1930	1850	1770	1685	1595	1505	1405	1305
	Med-High	1685	1630	1580	1525	1445	1370	1285	1195
	Med-Low	1425	1400	1370	1325	1280	1225	1155	1070
	Low	1250	1240	1210	1170	1150	1095	1035	950
115-20	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
135-20	High	—	2250	2190	2130	2055	1960	1875	1760
	Med-High	—	2000	1960	1910	1850	1785	1710	1615
	Med-Low	1700	1690	1670	1650	1610	1560	1490	1435
	Low	1480	1480	1480	1460	1430	1380	1320	1255

— Indicates unstable operating conditions.

ENERGY EFFICIENCY

UNIT SIZE		050		070		096		115		135
		08	12	08	12	12	16	16	20	20
CAPACITY BTUH*	Nonweatherized ICS†	37,000	37,000	56,000	56,000	75,000	75,000	94,000	94,000	110,000
AFUE %*	Nonweatherized ICS†	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0

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

† Isolated Combustion System

Electrical data

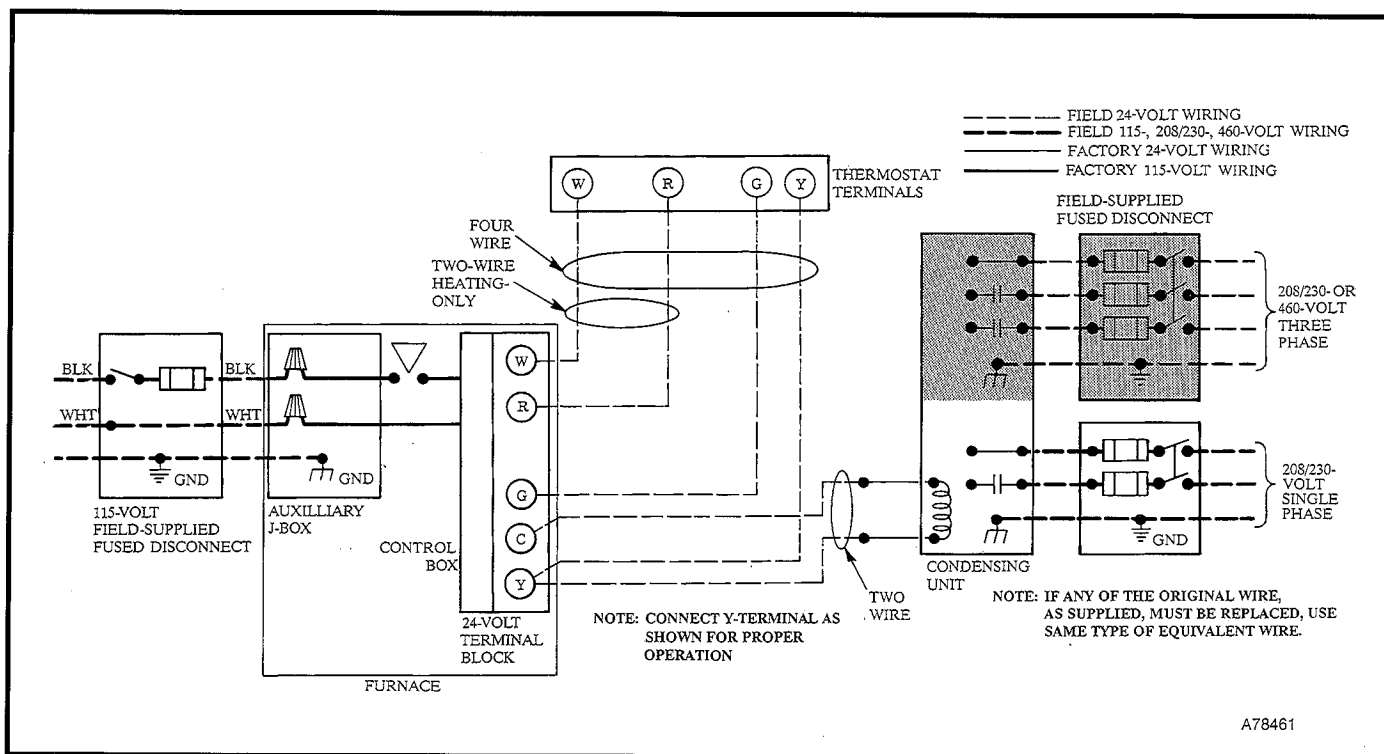
UNIT SIZE		050-08	050-12	070-08	070-12	096-12	096-16	115-16	115-20	135-20
UNIT VOLTS — HERTZ — PHASE		115 — 60 — 1								
MINIMUM WIRE SIZE		14	14	14	14	14	14	14	12	12
MAXIMUM WIRE LENGTH* (Ft)		42	34	42	33	30	28	28	33	31
MAXIMUM UNIT AMPS		6.6	8.1	6.7	8.4	9.2	10.2	10.1	13.3	14.3
OPERATING VOLTAGE RANGE† (Min — Max)		104 — 127								
MAXIMUM FUSE SIZE OR HACR-TYPE CKT BRK‡ (Amps)		15	15	15	15	15	15	15	20	20
TRANSFORMER (24v)		40VA								
EXTERNAL CONTROL POWER AVAILABLE —	Heating	12VA								
	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

