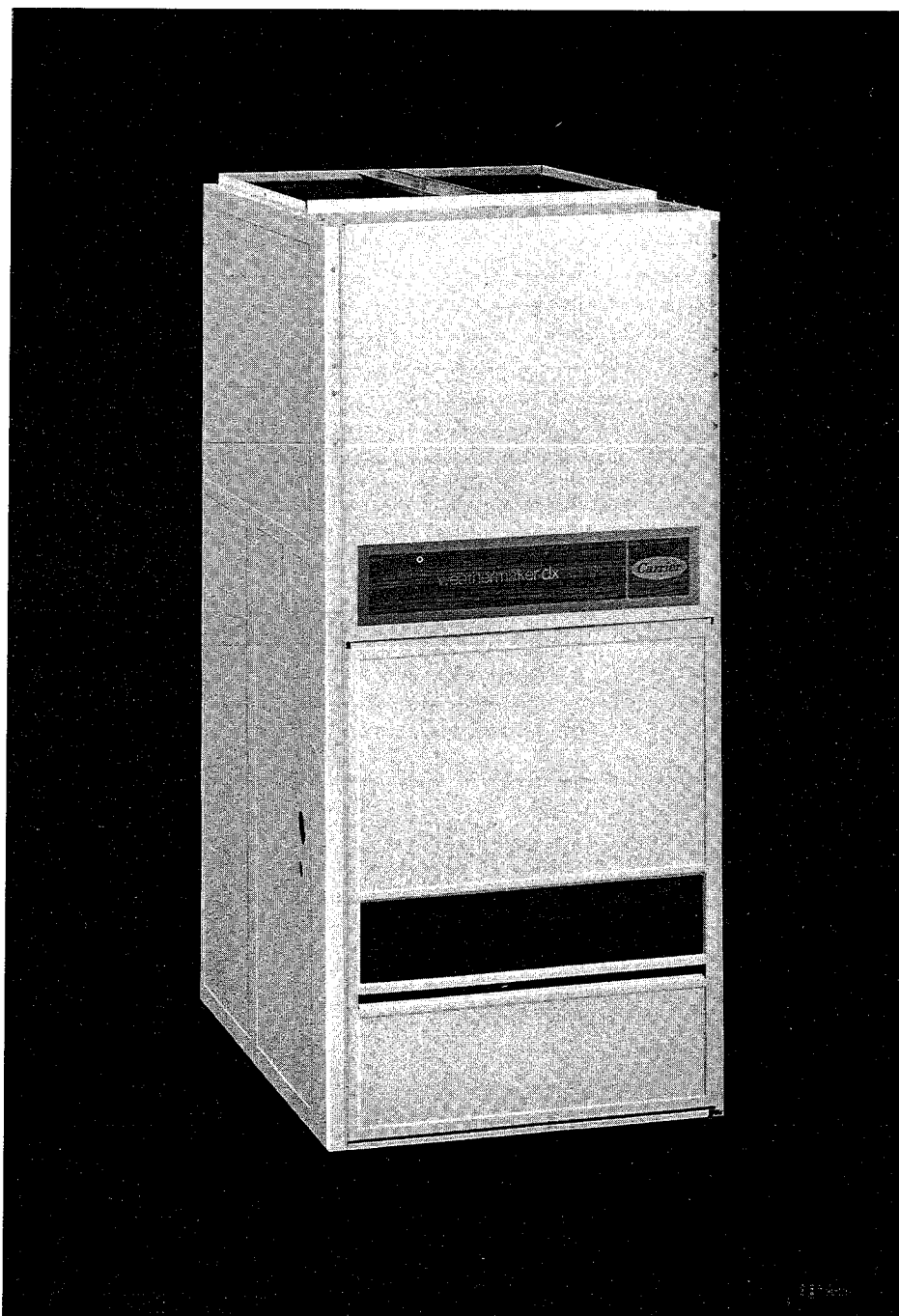




Product Data

58DX Deluxe Downflow Gas Furnace

40,000 — 101,000 Btuh Output



A milestone in heating efficiency and economy

Carrier presents the 58DX — This downflow condensing furnace is superb for low operating cost and maximum energy savings. The 58DX is a technically advanced furnace that has been designed and engineered to provide the owner with highly dependable, efficient, and economical heating.

The design goal was accomplished in several ways. First, the 58DX Furnace uses a pilot relite system to eliminate wasteful gas usage — a common characteristic of older furnaces with continuous pilot. The pilot burns only during the heating cycle to ignite the burners that heat the serpentine heat exchanger.

Then the 58DX uses induced combustion to increase the heat transfer that occurs inside the furnace. The induced combustion system is a sealed system which uses 100% outdoor air for combustion. Since the combustion air is piped directly into the furnace, infiltration of outside air into home to support combustion is eliminated. This precludes cold drafts in the house and improves living comfort. Additionally, this isolates the noise of operation to make the 58DX Furnace one of the quietest in the industry.

→ The final touch is the special Serpentuff™ secondary heat exchanger that extracts most of the remaining heat that is available in the furnace to heat the house. The result is economical and comfortable heating with an AFUE exceeding 90%. The Serpentuff™ secondary heat exchanger is a special design of the serpentine clam-shell heat exchanger. This design reduces

pressure drop in the furnace and minimizes the risk of airflow blockage from a dirty coil as experienced by competitive products.

The 58DX Furnace is easy to install. At only 46-3/16 inches tall, it can be conveniently applied in a new or replacement application. The furnace has left- or right-hand gas, vent pipe, combustion-air pipe connections, and adjustable blower speeds to fit most applications. Carrier makes it easy to adjust the blower speed with a speed-tap selector located on the blower housing. No need to remove the blower or perform other complex procedures.

When using a Carrier gas furnace, you have the option of expanding your comfort system to include air conditioning, humidifier, and electronic air cleaner. A factory-installed 40-VA transformer, air conditioner relay, and multispeed blower motor simplifies installation of add-on options.

The 58DX Downflow Condensing Furnace heat exchangers are backed by Carrier's lifetime Warranty. See Warranty Card for more details.

58DX FEATURES/BENEFITS

Insulated Blower Compartment — The acoustical insulation reduces air and motor noise to promote quiet operation.

→ **Certifications** — The 58DX units are A.G.A. design certified for use with natural or propane gas. Field conversion to propane is required. The efficiency is GAMA efficiency rating certified. The 58DX surpasses California minimum seasonal efficiency requirements, and meets the oxides of nitrogen (NO_x) emission levels set by South Coast and Bay Area Air Quality Management Districts in California.

Side Wall 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.

Blower Door Switch — Shuts off all power and fuel to furnace whenever blower door is opened.

Redundant Gas Valve — Shuts off gas to burners if one of the valves (pilot or main gas) fails to close completely for any reason.

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

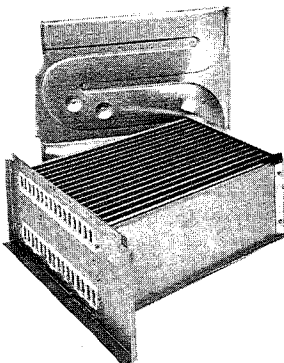
Printed-Circuit Board — Controls sequencing and furnace operation. Solid-state blower control actuates blower after main burners ignite, to eliminate cold air blowing into rooms.

Adjustable Blower Speed — For precise airflow selection.

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

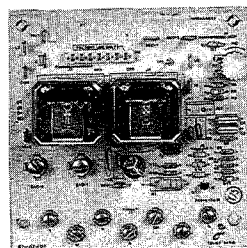
Monoport Burners — The burners are finely tuned for smooth, quiet combustion plus economical gas usage.

→ **Serpentuff™** — Exclusive Serpentuff™ coating, a patented (No. 4,738,307) microthin polypropylene laminate used on the secondary heat exchanger.



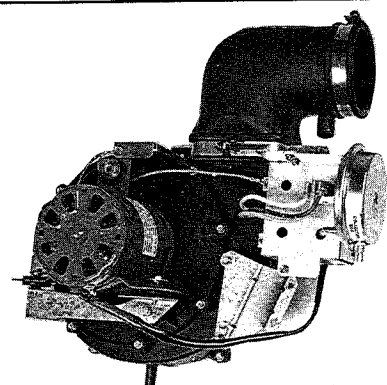
HEAT EXCHANGERS

A88199



A88200

PRINTED-CIRCUIT BOARD



INDUCER BLOWER

A88201

→ Model number nomenclature

58DX	040	111	G	G
Deluxe Downflow Gas-Fired Condensing Furnace		Series	Cooling Airflow G — 36,000 Btuh J — 48,000 Btuh L — 60,000 Btuh	Heat Exchanger G — Aluminized Steel Primary Heat Exchanger With Polypropylene Laminated Steel Condensing Heat Exchanger
Output Capacity 040 — 40,000 Btuh 060 — 60,000 Btuh 080 — 81,000 Btuh 100 — 101,000 Btuh				

→ Physical data

FURNACE MODEL 58DX		040-111GG	060-111GG	080-111JG	100-111LG
OUTPUT CAPACITY BTUH† (Indoor)		40,000	60,000	81,000	101,000
INPUT BTUH*		44,000	66,000	88,000	110,000
SHIPPING WEIGHT (lb)		179	187	202	241
CERTIFIED TEMP RISE RANGE (F)		20—50	40—70	40—70	40—70
CERTIFIED EXT STATIC PRESSURE	Heating	0.10	0.12	0.15	0.20
(in. wc)	Cooling	0.50	0.50	0.50	0.50
AIRFLOW CFM	Heating	1335	1275	1590	2000
	Cooling	1265	1170	1565	2035
SECONDARY LIMIT CONTROL		Manual Reset			
LIMIT CONTROL		SPST			
HEATING BLOWER CONTROL		Solid-State Time Operation			
BURNERS (Monoport)		2	3	4	5
GAS CONNECTION SIZE		1/2-inch NPT			
GAS VALVE (Redundant) Manufacturer		White-Rodgers			
Minimum Inlet Pressure (in. wc)		4.5			
Maximum Inlet Pressure (in. wc)		13.6			
PILOT SAFETY Model		740			

* Gas input ratings are certified for elevations to 2000 feet. For elevations above 2000 feet, reduce ratings 4% for each 1000 feet above sea level.

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

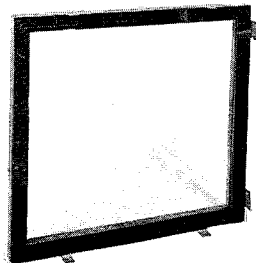
→ Accessories

ITEM	ACCESSORY*
Downflow Furnace Subbase	✓
Electronic Air Cleaner	✓
Humidifier	✓

* Factory-authorized and listed, field-installed.

ITEM	ACCESSORY*
Cooling Coils	✓
Gas Conversion Kits†	✓
Thermostat	✓

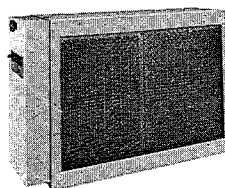
† Natural-to-propane and propane-to-natural.



A88202

DOWNFLOW FURNACE SUBBASE

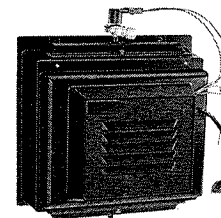
One base fits all furnace sizes. The base is designed to be installed between the furnace or coil box and a combustible floor. It is A.G.A. design certified for use with Carrier 58DX furnaces.



A86132

ELECTRONIC AIR CLEANER

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



A86131

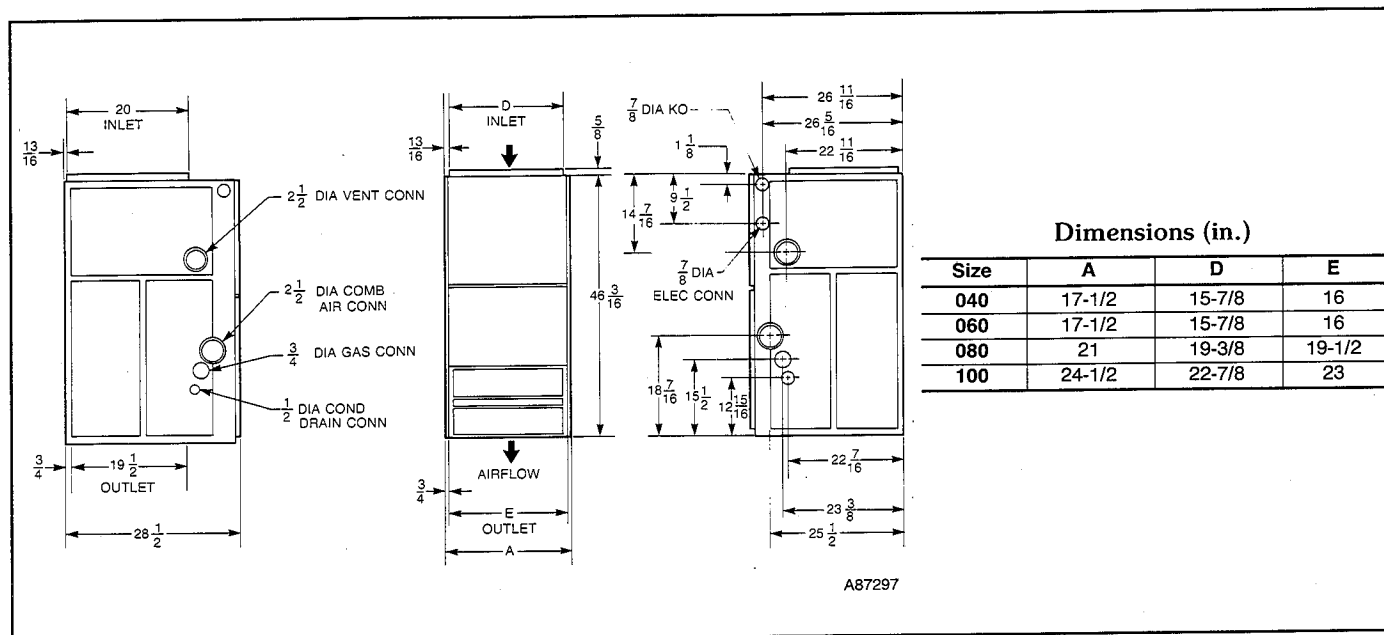
HUMIDIFIER

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.

Dimensions

CLEARANCES (in.)

SIZE	040, 060, 080, & 100
SIDES	0
BACK	0
TOP OF PLENUM	1
VENT CONNECTOR	0
FRONT — Casing Ventilation	3
SERVICE	30



Performance data

FURNACE SIZE	040	060	080	100
DIRECT-DRIVE MOTOR Hp (PSC)	1/3	1/3	1/2	3/4
→ MOTOR FULL LOAD AMPS	5.8	5.8	7.9	11.1
RPM (Nominal) — SPEEDS	1075—4			
BLOWER WHEEL DIAMETER — WIDTHS (in.)	10 x 7	10 x 7	10 x 8	11 x 10
FILTER SIZE (in.) — (WASHABLE)	(2) 16 x 20 x 1			

PSC—Permanent Split Capacitor

→ EFFICIENCY

FURNACE SIZE	040	060	080	100
CAPACITY*				
Indoor	40,000	60,000	81,000	101,000
Nonweatherized (ICS)†	40,000	60,000	80,000	100,000
AFUE %*				
Indoor	91.1	91.1	91.1	91.1
Nonweatherized (ICS)†	90.3	90.3	90.3	90.3
CALIFORNIA SEASONAL EFFICIENCIES (CSE)	84.9	86.5	86.6	85.8

*Capacity and AFUE in accordance with U.S. Government DOE test procedures. California Seasonal Efficiencies based on California-specified procedures.

†ICS — Isolated Combustion System

→ AIR DELIVERY — CFM (With Filter)

Furnace Size	Blower Motor HP	Speed	External Static Pressure (in. wc)						
			0.1	0.2	0.3	0.4	0.5	0.6	0.7
040-111GG	1/3 PSC	High	1500	1455	1395	1335	1265	1190	1110
		Med-High	1335	1305	1265	1210	1155	1090	1010
		Med-Low	1140	1115	1090	1060	1020	955	875
		Low	965	955	935	900	865	810	700
060-111GG	1/3-PSC	High	1395	1340	1290	1230	1170	1100	1025
		Med-High	1285	1235	1185	1140	1080	1015	935
		Med-Low	1130	1105	1065	1025	970	920	840
		Low	940	930	920	885	835	785	715
080-111JG	1/2 PSC	High	1860	1785	1720	1645	1565	1470	1370
		Med-High	1605	1575	1535	1475	1400	1330	1240
		Med-Low	1380	1360	1335	1290	1240	1190	1110
		Low	1230	1225	1210	1190	1145	1110	1020
080-111LG	3/4 PSC	High	2265	2255	2180	2090	2035	1945	1855
		Med-High	2050	2000	1970	1910	1845	1775	1695
		Med-Low	1720	1705	1655	1630	1605	1550	1475
		Low	1480	1470	1455	1450	1420	1395	1335

MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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



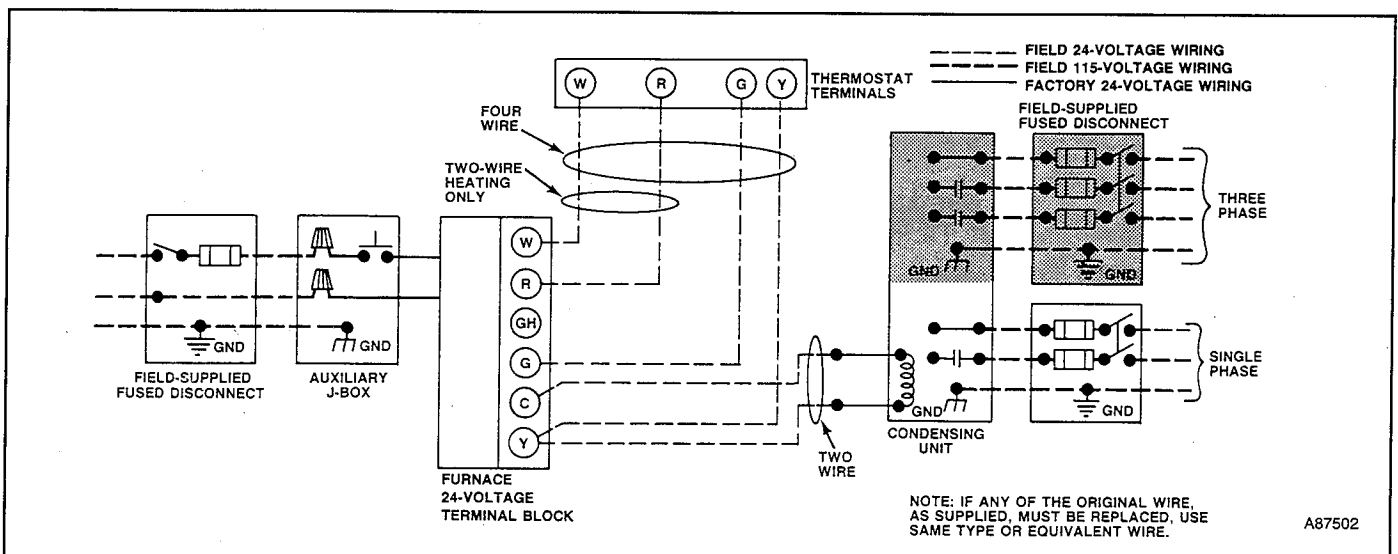
→ **Electrical data**

FURNACE SIZE	040	060	080	100
UNIT VOLTS — HERTZ — PHASE	115—60—1	115—60—1	115—60—1	115—60—1
MINIMUM WIRE SIZE (AWG)	14	14	14	12
MAXIMUM WIRE LENGTH* (Feet)	41	42	36	42
MAXIMUM UNIT AMPS	8.7	8.2	10.1	13.6
OPERATING VOLTAGE RANGE (Min—Max)	104—127			
MAXIMUM FUSE SIZE OR HACR-TYPE CKT BKR† (Amps)	15	15	15	20
TRANSFORMER (24v)	40 VA	40 VA	40 VA	40 VA
EXTERNAL CONTROL POWER AVAILABLE —	Heating	21 VA	21 VA	21 VA
	Cooling	36 VA	36 VA	36 VA
AIR CONDITIONING BLOWER RELAY	Standard	Standard	Standard	Standard

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

†Time delay fuse is recommended.

Typical wiring schematic



→ Combustion-Air and Vent Pipe

MAXIMUM ALLOWABLE PIPE LENGTH (In Ft)

Altitude (feet above sea level)	Furnace Size	Pipe Dia	Number of 90-Degree Elbows				
			1	2	3	4	5
0 to 2000	040-GG	1-1/2	20	15	10	10	5
		2	35	35	35	35	35
	060-GG	1-1/2	10	5	5	—	—
		2	35	30	20	15	10
2001 to 3000	040-GG	1-1/2	17	12	7	6	—
		2	31	30	30	29	29
	060-GG	1-1/2	8	—	—	—	—
		2	31	25	16	11	6
3001 to 4000	040-GG	1-1/2	15	10	—	—	—
		2	28	27	26	25	24
	060-GG	1-1/2	6	—	—	—	—
		2	28	22	13	8	—
4001 to 5000	040-GG	1-1/2	13	9	—	—	—
		2	26	25	24	23	22
	060-GG	1-1/2	5	—	—	—	—
		2	26	20	11	7	—
5001 to 6000	040-GG	1-1/2	11	7	—	—	—
		2	24	22	21	19	18
	060-GG	1-1/2	24	17	8	—	—
		2	—	22	21	19	18
6001 to 7000	040-GG	1-1/2	10	6	—	—	—
		2	22	20	19	17	16
	060-GG	1-1/2	22	15	7	—	—
		2	—	20	19	17	16
7001 to 8000	040-GG	1-1/2	8	—	—	—	—
		2	19	17	15	13	11
	060-GG	1-1/2	19	12	—	—	—
		2	—	17	15	13	11
8001 to 9000	040-GG	1-1/2	19	17	15	13	6
		2	—	—	—	—	11
	060-GG	1-1/2	6	—	—	—	—
		2	19	17	15	13	11
9001 to 10,000	040-GG	1-1/2	6	—	—	—	—
		2	17	15	13	11	9
	060-GG	1-1/2	17	10	—	—	—
		2	—	15	13	11	9
	040-GG	1-1/2	15	12	10	7	5
		2	—	7	—	—	—
	060-GG	1-1/2	15	12	10	7	5
		2	—	—	—	—	—
	040-GG	1-1/2	15	12	10	7	5
		2	—	—	—	—	—
	060-GG	1-1/2	15	12	10	7	5
		2	—	—	—	—	—

NOTES:

1. Size both the combustion-air and vent pipe independently, then use the larger diameter for both pipes.
2. Assume two 45-degree elbows equal one 90-degree elbow. Long radius elbows are desirable.
3. Elbows and pipe sections within the furnace casing and supplied in the vent terminal kit should not be included in count.
4. The installer may use one larger pipe size than what is specified above (up to 3-in. diameter maximum).
5. The minimum pipe length is 5 ft. for all applications.

Typical installation

