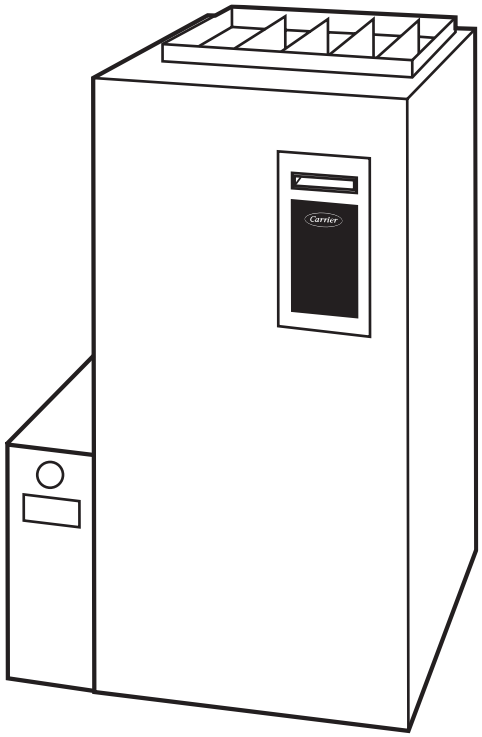
INFINITY™ 96 MODEL 58MVB
DELUXE 4-WAY MULTIPOISE VARIABLE-SPEED CONDENSING GAS FURNACE
Series 100 Input Rates: 40,000 thru 120,000 Btuh

Carrier®
Turn to the Experts℠

Product Data



A05069

ComfortHeat™ IdealHumidity™ SYSTEM

Comfort Heat™ technology, the ultimate in heating comfort . . .

The Carrier Infinity™ 96 with ComfortHeat™ technology achieves the optimum combination of comfort and efficency.

The Infinity™ 96 achieves industry-leading ultra-high efficiency at up to 96.6 percent Annual Fuel Utilization Efficiency (AFUE). Efficient performance is enhanced through the variable-speed design. To maintain ideal comfort, ComfortHeat™ technology automatically adjusts the heating level, maximizing the use of low heating levels that produce near silent furnace operation while meeting the exact heating needs. This unit is designed to keep the indoor temperature within 1 degree of the thermostat setpoint. Because it operates in low heat most of the time, the Infinity™ 96 uses up to 80% less power than single-capacity furnaces.

In addition to providing ultimate comfort, the Infinity™ 96 has a sealed combustion system. This system brings combustion air to the furnace and vents flue gases outside the furnace in a safe manner. Because it is sealed, operational noise is minimal. A sealed combustion system also means fewer cold drafts and less air infiltration.

Quality materials are the key behind the Infinity™ 96's outstanding performance. Carrier stands behind quality. We offer lifetime warranty protection* on the heat exchangers, the heart of the Infinity™ 96. The rest of the unit is backed by a limited 5-year warranty.

The Infinity™ 96 is available in 6 heat/airflow combinations. The unit has a 4-way multipoise design and can be installed in upflow, downflow, or

horizontal positions covering up to 24 different applications. The Infinity™ 96 can be installed as a Non-Direct vent/1-pipe or Direct vent/2-pipe.

The versatile 4-way multipoise design in conjunction with variable speed makes the Infinity™ 96 is ideal for use with split-system cooling, including2-speed units. A Carrier electronic air cleaner, humidifier, Thermidistat™, comfort ventilator, and Comfort Zone™ II will provide year-round comfort and efficiency.

Designed for durability, comfort, and reliability, the Infinity™ 96 is the ultimate in versatile, efficient comfort.

Carrier Infinity® System — When the Infinity™ 96 variable-speed gas furnace is matched with the Infinity Control and an air conditioner or heat pump, you will experience the ultimate in ComfortHeat™ and Ideal Humidity through unparalleled control of temperature, humidity, indoor air quality, and zoning. The Carrier Infinity System also provides unprecedented ease of use through on-screen, text-based service reminders and equipment malfunction alerts.

For even greater comfort and convenience, match the Infinity™ 96 furnace with an Infinity air conditioner or heat pump. This will create a fully communicating system, requiring only 4 thermostat wires between system components, and troubleshooting can even be done from the outdoor unit without entering the home.

Optional remote access through telephone or Internet is also available when combined with a remote connectivity kit.

Infinity™ 96 FEATURES/ BENEFITS

IdealHumidity — The IdealHumidity system actively controls both temperature and humidity in your home to provide the best comfort all year long. Other systems depend on heating or cooling to manage the moisture in the air. But, IdealHumidity gives you the right amount of humidity day and night, even in mild weather. *No other manufacturer can do this!* IdealHumidity saves energy, too. By keeping humidity under control, you can set your thermostat to stay comfortable and save energy—*up to 20% off your cooling costs!*

ComfortHeat™ — On the coldest days of the year, the Infinity™ 96 Furnace has the capacity to heat your home. On moderate days when less heat is required, this furnace will regulate itself to a lower capacity — providing a comfortable home and minimizing operating costs.
The patented algoritum adjusts the low-heat operating time to match the indoor conditions.

Reliable Heat Exchanger Design — The primary heat exchanger is made of aluminized steel for corrosion resistance. The patented Serpentuff™ condensing heat exchanger cells are laminated with polypropylene for greater resistance to corrosion and epoxy coated externally to prevent oxidation. This break-through in heating technology helps extend the life of the furnace for years of dependable performance. The heat exchanger is positioned in the furnace to extract additional heat. Stainless steel 409 heat exchanger assembly has better corrosion resistance in natural gas and propane applications.

Power Heat™ Igniter — Carrier's unique SiN igniter is not only physically robust but it is also electrically robust. It is capable of running at line voltage and does not require complex voltage regulators as do other brands. This unique feature further enhances the reliability of Infinity™ 96 gas furnace and continues Carrier's tradition of technology leadership and innovation in providing a reliable and durable product.

ComfortFan™ — Improves comfort all year long by allowing you to select the continuous fan speed right at the thermostat.

SmartEvap™ — Allows your system to reduce summertime humidity levels by nearly 10% over standard systems.

Media Filter Cabinet — Enhanced indoor air quality in your home is made easier with our media filter cabinet—a standard accessory on all deluxe fur naces. When installed as a part of your system, this cabinet allows for easy and convenient addition of a Carrier high-efficiency air filter.

ComfortHeat™ Control Center — The microprocessor control center features state-of-the-art combustion, temperature, and airflow control to maximize comfort while operating at peak efficiency.

Combustion control is obtained by taking the appropriate inducer motor RPM readings when the low- and high-fire pressure switches are made. Using this information, the microprocessor maintains a consistent air-to-fuel ratio independent of vent sizing and conditions.

The first cycle after power reset provides 16 minutes of low heat before switching to high heat unless the room thermostat has been satisfied. Subsequent thermostat cycles provide anywhere from 0 to 16 minutes of low heat depending on the length of the previous thermostat cycle.

Airflow control is accomplished by using a technique involving the microprocessor and blower motor. The static load on the air delivery system is measured each heating cycle. The microprocessor then uses this information to deliver correct airflow independent of variations in system restrictions. (For example, dirty filter or zone damper changes during a cycle.)

A special dehumidification function allows direct input from a thermidistat or humidistat. This input adjusts system airflow for greater humidity removal and increased cooling comfort during summer months.

Warranty — The Infinity™ 96 heat exchangers come with a Limited Warranty for lifetime of original owner in single family residence; 20 years in other residential and commercial applications. Five-year limited warranty on entire unit. Contact your dealer for details.

Direct or Non-Direct Venting — The Infinity™ 96 can be installed as a 1-pipe (Non-direct) Vent or 2-pipe (Direct Vent) furnace. This provides added flexibility to meet diverse installation needs.

Electronic Variable-Speed Motors — ECM Motors (Electronically Commutated Motor) provide variable-speed operation to optimize comfort levels in the home year round. They are also more economical to operate than standard motors.

Sealed Combustion System — Infinity™ 96 brings in combustion air from outside the furnace, which results in especially quiet operation.

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

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

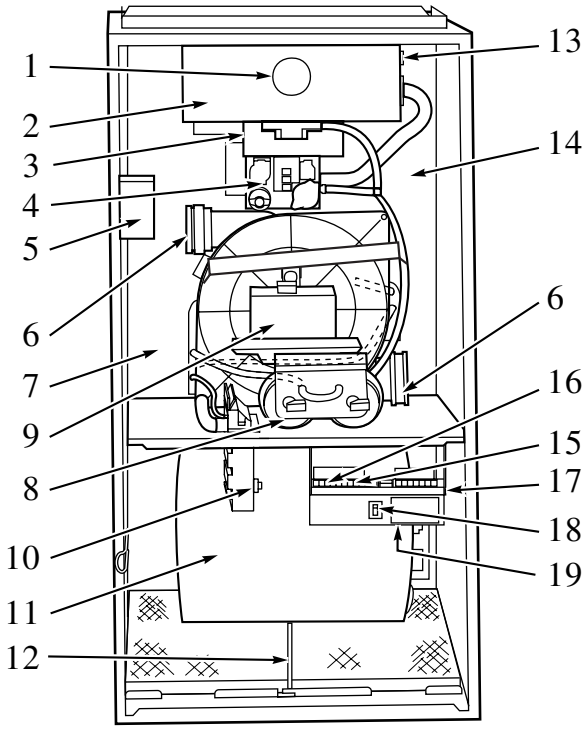
Monoport Burners — The burners are finely tuned for smooth, quiet combustion and economical operation.

Bottom Closure — Factory-installed for side return; easily removable for bottom return.

Blower Access Panel Switch —Automatically shuts off 115-v power to furnace whenever blower access panel is opened.

Quality Registration — The Infinity™ 96 is engineered and manufactured under an ISO 9001 registered quality system.

Certifications — The Infinity™ 96, Model 58MVB units are CSA. (A.G.A. and C.G.A.) design certified for use with natural and propane gases. The furnace is factory-shipped for use with natural gas. An C.S.A. listed gas conversion kit is required to convert furnace for use with propane gas. The efficiency is GAMA efficiency rating certified. The Infinity™ 96 meets California Air Quality Management District emission requirements.

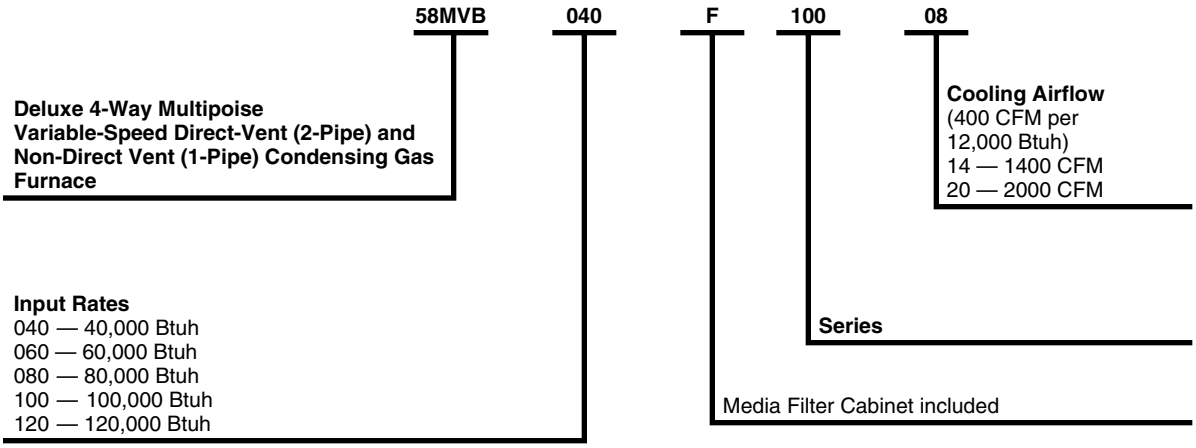


NOTES:

1. The 58MVB Furnace is built for use with natural gas. The furnace can be converted for propane gas with a factory-authorized and listed accessory conversion kit.
2. Control location and actual controls may be different than shown above.

1. Burner sight glass for viewing burner flame.
2. Burner assembly (inside). Operates with energy-saving, inshot burners and hot surface igniter for safe, dependable heating.
3. Combustion-air intake connection to ensure contaminant-free air (right or left side).
4. Redundant 2-stage gas valve. Safe, efficient. Features 1 gas control with 2 internal shutoff valves.
5. Junction box for 115-v electrical power supply.
6. Vent outlet. Uses PVC pipe to carry vent gases from the furnace's combustion system (right or left side).
7. Secondary condensing heat exchanger (inside). Wrings out more heat through condensation. Constructed with patented Polypropylene-laminated steel to ensure durability.
8. Pressure switches ensure adequate flow of flue products through furnace and out vent system.
9. Inducer motor. Pulls hot flue gases through the heat exchangers, maintaining negative pressure for added safety.
10. Condensate drain connection. Collects moisture condensed during combustion process.
11. Heavy-duty blower. Circulates air across the heat exchangers to transfer heat into the home.
12. Air filter and retainer. May be used for side return application.
13. Rollout switch (manual reset) to prevent overtemperature.
14. Primary serpentine heat exchanger (inside). Stretches fuel dollars with the S-shaped heat-flow design. Solid construction of corrosion-resistant aluminized steel means reliability.
15. 3-amp fuse provides electrical and component protection.
16. Light emitting diodes (LEDs) on control center. Code lights are for diagnosing furnace operation and service requirements.
17. ComfortHeat™ Control center.
18. Blower access panel safety interlock switch.
19. Transformer (24v) behind control center provides low-voltage power to furnace control center and thermostat.

Model number nomenclature



Carrier accessories*

UNIT SIZE		040-14	060-14	080-14	080-20	100-20	120-20
VENT TERMINATION KIT (Bracket Only for 2 Pipes)	2-in. — KGAVT0101BRA 3-in. — KGAVT0201BRA	X	X	X	X	X	X
CONCENTRIC TERMINATION KIT (Single Exit)	2-in. — KGAVT0501CVT 3-in. — KGAVT0601CVT	X	X	X	X	X	X
CONDENSATE FREEZE PROTECTION KIT	KGAHT0101CFP	X	X	X	X	X	X
CONDENSATE NEUTRALIZER KIT (obtained thru RCD)	P908-0001	X	X	X	X	X	X
ELECTRONIC AIR CLEANER (EAC)‡	Model EACA	X	X	X	X	X	X
MECHANICAL AIR CLEANER	Model FILCAB OR EZXCAB	X	X	X	X	X	X
HUMIDIFIER	Model HUM	X	X	X	X	X	X
HEAT RECOVERY VENTILATOR	Model HRV	X	X	X	X	X	X
ENERGY RECOVERY VENTILATOR	Model ERV	X	X	X	X	X	X
UV LIGHTS	Model UVL	X	X	X	X	X	X
EZ FLEX MEDIA FILTER WITH END CAPS – 16 IN. (9 pack)	EXPXXLMC0016		X				
EZ FLEX MEDIA FILTER WITH END CAPS – 20 IN. (9 pack)	EXPXXLMC0020			X	X	X	
EZ FLEX MEDIA FILTER WITH END CAPS – 24 IN. (6 pack)	EXPXXLMC0024	X					X
REPLACEMENT EZ FLEX FILTER – 16 IN. (10 pack)	EXPXXFIL0016		X				
REPLACEMENT EZ FLEX FILTER – 20 IN. (10 pack)	EXPXXFIL0020			X	X	X	
REPLACEMENT EZ FLEX FILTER – 24 IN. (10 pack)	EXPXXFIL0024	X					X
EXTERIOR FILTER RACK–UNIVERSAL, ONE INCH (adjustable from 14" to 24") with filter	KGAFR0301ALL KGAFR0306ALL (6-pack)	X	X	X	X	X	
UNFRAMED FILTER, ONE INCH – 16X25	KGAWF1301UFR KGAWF1306UFR (6-pack)	S	X	S	S	S	
UNFRAMED FILTER, ONE INCH – 20X25	KGAWF1401UFR KGAWF1406UFR (6 pack)			X	X	X	
UNFRAMED FILTER, ONE INCH – 24X25	KGAWF1501UFR KGAWF1506UFR (6 pack)	X					X
COMBUSTIBLE FLOOR BASE (not required when evaporator coil case is used)	KGASB0201ALL	X	X	X	X	X	
NATURAL-TO-PROPANE GAS CONVERSION KIT (Single Kit)*	KGANP4001ALL	X	X	X	X	X	X
PROPANE-TO-NATURAL GAS CONVERSION KIT (Single Kit)	KGAPN3301ALL	X	X	X	X	X	X
ECM MOTOR SIMULATOR (replaces the ECM motor to aid trouble shooting)	KGASD0201FMS	X	X	X	X	X	X
DOOR GASKET KIT	KGBAC0110DGK	X	X	X	X	X	X

See notes at end of table.

Carrier accessories* continued

UNIT SIZE		040-14	060-14	080-14	080-20	100-20	120-20
ADVANCED PRODUCT MONITOR (software and hardware to link pc laptop to control board)	KGAFP0201APM	X	X	X	X	X	X
ECM CONTROL REPLACEMENT MODULE - 1/2 HP	HK44EA120	X	X	X			
ECM CONTROL REPLACEMENT MODULE - 1 HP	HK52EA120				X	X	X
GAS ORIFICE KIT (Qty 50) Size 42	KGAHA0150N42	See Installation Instructions for model, altitude, and heat value usages.					
GAS ORIFICE KIT (Qty 50) Size 43	KGAHA0250N43						
GAS ORIFICE KIT (Qty 50) Size 44	KGAHA0350N44						
GAS ORIFICE KIT (Qty 50) Size 45	KGAHA0450N45						
GAS ORIFICE KIT (Qty 50) Size 46	KGAHA0550N46						
GAS ORIFICE KIT (Qty 50) Size 47	KGAHA1550N47						
GAS ORIFICE KIT (Qty 50) Size 48	KGAHA1850N48						
GAS ORIFICE KIT (Qty 50) Size 54	KGAHA0850P54						
GAS ORIFICE KIT (Qty 50) Size 55	KGAHA0750P55						
GAS ORIFICE KIT (Qty 50) Size 56	KGAHA0850P56						
GAS ORIFICE KIT (Qty 50) 1.25 mm	KGAHA5750125						
GAS ORIFICE KIT (Qty 50) 1.30mm	KGAHA5750130						

* Factory-authorized and field-installed. Gas conversion kits are CSA (A.G.A./C.G.A.) recognized.
S 16 X 25 filters suitable for side return on all furnace sizes.

Thermostat and Zoning Control Options

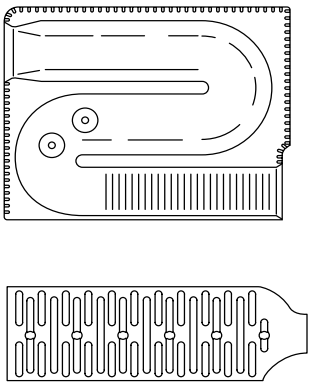
NON-PROGRAMMABLE THERMOSTAT SELECTION	
TSTATCCNAC01-C	For use with 1-spd. Air Conditioner - deg. F//c, Auto Changeover
TSTATCCNHP01-C*	For use with 1-spd. Air Conditioner - deg. F/C, Auto Changeover
TSTATCCN2S01-C*	For use with 2-spd. Air Conditioner - deg. F/C, Auto Changeover
TSTATCCPRH01-B**	For multi-use / stage configurations - deg. F/C, Auto Changeover

* Model HP & 2S thermostat must be field converted to air conditioner operation
** Thermidistat is versatile and can be configured for multiple use & staging, it must be configured for each specific application.

PROGRAMMABLE THERMOSTAT SELECTION	
TSTATCCPAC01-B	For use with 1-spd. Air Conditioner - deg. F/C, Auto Changeover, 7-Day Programmable
TSTATCCPHP01-B*	For use with 1-spd. Air Conditioner - deg. F/C, Auto Changeover, 7-Day Programmable
TSTATCCP2S01-B*	For use with 2-spd. Air Conditioner - deg. F/C, Auto Changeover, 7-Day Programmable
TSTATCCSAC01	For use with 1-spd. Air Conditioner - deg. F/C, Auto Changeover, 5-2 Programmable
TSTATCCPDF01-B**	For use with multi-stage applications - deg. F/C, Auto Changeover, 7-Day Programmable
TSTATCCPRH01-B***	For multi-use / stage configurations - deg. F/C, Auto Changeover, 7-Day Programmable

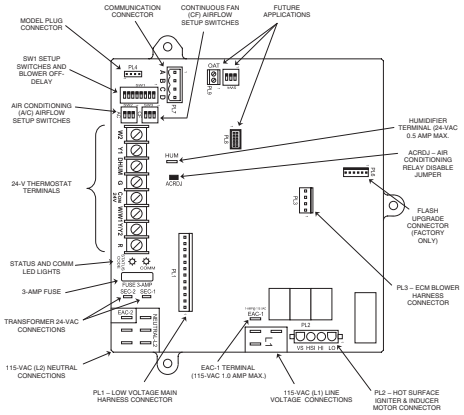
* Model HP & 2S thermostat must be field converted to air conditioner operation
** Dual Fuel thermostat is used with furnace and ehat pump application
*** Thermidistat can be configured for multiple use & staging, it must be configured for each specific application.

ZONING CONTROL SELECTION	
ZONECC3Z(AC/HP)01	WeatherMaker Two-Zone kit
ZONECC2KIT01-B	Comfort Zone II-B 2-Zone kit
ZONECC4KIT01-B	Comfort Zone II-B 4-Zone kit
ZONECC8KIT01-B	Comfort Zone II-B 8-Zone kit



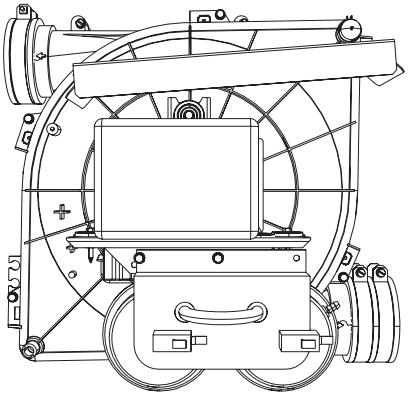
HEAT EXCHANGERS

A92505



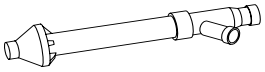
CONTROL CENTER

A02278



INDUCER ASSEMBLY

A02286

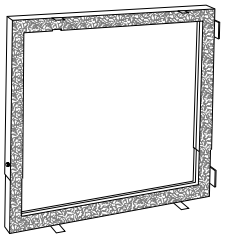


A93086

CONCENTRIC VENT (DIRECT VENT / 2-PIPE ONLY)

A concentric vent kit allows vent and combustion-air pipes to terminate through a single exit in a roof or side wall.

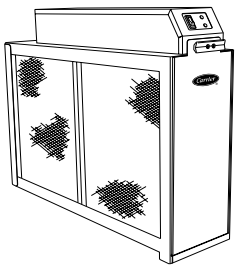
One pipe runs inside the other allowing venting through the inner pipe and combustion air to be drawn in through the outer pipe.



A88202

DOWNFLOW SUBBASE

One base fits all furnace sizes. The base is designed to be installed between the furnace and a combustible floor when no coil box is used or when a coil box other than a Carrier cased coil is used. It is A.G.A. design certified for use with Carrier 58MVB furnaces when installed in downflow applications.

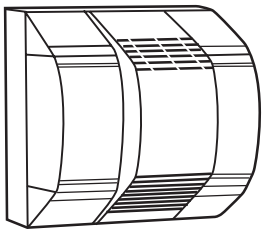


A97152

ELECTRONIC OR MECHANICAL 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.

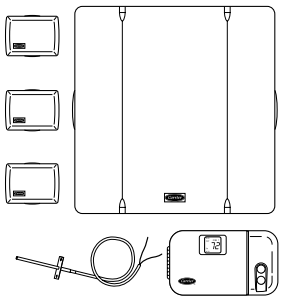
Electronic air cleaner is shown.



A01484

HUMIDIFIER

By adding moisture to winter-dry air, a Carrier humidifier can often improve comfort and keeps woodwork, wallpaper, and paint in better condition. Moisturizing household air also helps to retain normal body heat and provides comfort at lower temperatures.

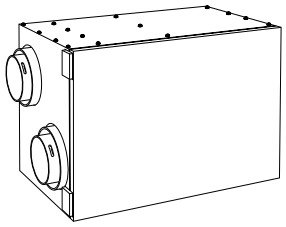


A97432

CONTROLS: THERMOSTATS AND ZONING

Available in programmable and non-programmable models, Carrier thermostats maintain a constant, comfortable temperature level in the home.

For the ultimate in home comfort, Carrier's 2-, 4-, or 8-zone systems allow temperature control of individual "zones" of the home. This is accomplished through a series of electronic dampers and remote room sensors. The 4-zone system is shown.



A94336

ENERGY/HEAT RECOVERY VENTILATOR

Carrier's energy or heat recovery ventilators exhaust stale indoor air and provide fresh outdoor air to the home while minimizing heat loss and humidity level. Especially useful for today's tighter constructed houses.

Energy recovery ventilator is shown.

EFFICIENCY RATING CERTIFIED Gama

MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

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

energy ENERGY STAR

As an ENERGY STAR® Partner, Carrier Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

DESIGN CERTIFIED ®

ISO 9001:2000 QMI REGISTERED

CERTIFIED ®

REGISTERED QUALITY SYSTEM

These products are engineered and manufactured under an ISO 9001 registered quality system.

Physical data

UNIT SIZE	040-14	060-14	080-14	080-20	100-20	120-20
DIRECT-DRIVE MOTOR Hp (ECM)	1/2	1/2	1/2	1	1	1
MOTOR FULL LOAD AMPS	7.7	7.7	7.7	12.8	12.8	12.8
RPM (Nominal) — SPEEDS	Variable 250 — 1300					
BLOWER WHEEL DIAMETER X WIDTH (In.)	11 x 10	10 x 7	11 x 10	11 x 10	11 x 10	11 x 10
FILTER SIZE (In.) NOMINAL A(Washable)	(1)24 x 25 x 1	(1)16 x 25 x 1	(1)20 x 25 x1	(1)20 x 25 x1	(1)20 x 25 x1	(1)24 x 25 x 1
SHIPPING WEIGHT (Lb)	205	170	182	204	203	234
LIMIT CONTROL	SPST					
HEATING BLOWER CONTROL (Off Delay)	Selectable 90, 120, 150, or 180 Sec Intervals					
BURNERS (Monoport)	2	3	4	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					

Performance data

UNIT SIZE				040-14	060-14	080-14	080-20	100-20	120-20
CERTIFIED TEMP RISE RANGE (°F)			Low	25 — 55	50 — 80	50 — 80	50 — 80	50 — 80	50 — 80
			High	30 — 60	35 — 65	35 — 65	35 — 65	45 — 75	45 — 75
CERTIFIED EXT STATIC PRESSURE (ESP)			Heating	0.10	0.12	0.15	0.15	0.20	0.20
(In. wc)			Cooling	0.50	0.50	0.50	0.50	0.50	0.50
AIRFLOW CFM‡			Heating Low	585(690**)	500 (590**)	720 (850**)	705 (830**)	920 (1085**)	1160 (1370**)
			Heating High	800	1065	1500	1500	1525	1880
			Cooling (Max)	1400	1500	1395	1990	2000	2100
OUTPUT CAPACITY BTUH* (ICS) (Shaded capacities are specified on rating plate)	Direct Vent (2-Pipe)	Low	Upflow	25,000	37,000	49,000	49,000	61,000	73,000
			Downflow	25,000	36,000	49,000	49,000	61,000	73,000
			Horizontal	25,000	36,000	49,000	49,000	61,000	73,000
		High	Upflow	38,000	57,000	75,000	75,000	94,000	113,000
			Downflow	38,000	56,000	75,000	75,000	94,000	113,000
			Horizontal	37,000	56,000	75,000	75,000	93,000	112,000
	Non-Direct Vent (1-Pipe)	Low	Upflow	25,000	37,000	49,000	49,000	61,000	73,000
			Downflow	25,000	36,000	49,000	49,000	61,000	73,000
			Horizontal	25,000	36,000	49,000	49,000	61,000	73,000
		High	Upflow	38,000	57,000	75,000	75,000	94,000	113,000
			Downflow	37,000	56,000	75,000	75,000	94,000	113,000
			Horizontal	37,000	56,000	75,000	75,000	93,000	112,000
AFUE%* Nonweatherized ICS	Direct Vent (2-Pipe)		Upflow	96.6	94.1	94.1	94.1	94.1	94.1
			Downflow	95	92.7	92.7	92.7	92.7	92.7
			Horizontal	96.1	93.7	93.7	93.7	93.7	93.7
	Non-Direct Vent (1-Pipe)		Upflow	96.6	94.1	94.1	94.1	94.1	94.1
			Downflow	95.0	92.7	92.7	92.7	92.7	92.7
			Horizontal	96.1	93.7	93.7	93.7	93.7	93.7
INPUT BTUH†			Low	26,000	39,000	52,000	52,000	65,000	78,000
			High	40,000	60,000	80,000	80,000	100,000	120,000

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

† Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 2% for each 1000 ft above sea level. In Canada, derate the unit 5% for elevations from 2000 to 4500 ft above sea level.

‡ Airflow shown is for bottom only return-air supply with factory-supplied 1-in. washable filter(s). For air delivery above 1800 CFM, see Air Delivery table for other options.

** Low heat CFM when low-heat rise adjustment switch (SW1-3) on furnace control is used.

AIR DELIVERY - CFM (Bottom Return With Filter)*

Unit Size	Operating Mode	CFM Airflow Setting	External Static Pressure Range*	External Static Pressure (ESP)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
				AIRFLOW (CFM)									
040-14 ††	Low Heat	585†	0-0.60	585	580	585	585	585	580				
	High Heat	800	0-1.0	800	800	800	800	800	790	780	760	750	735
††	1-1/2-Ton Cooling	525	0-0.50‡	525	525	505	505	505					
††	2-Ton A/C Cooling	700	0-0.90‡	675	685	695	695	700	700	700	700	700	700
	2-1/2-Ton A/C Cooling	875	0-1.0	875	875	875	875	865	855	835	820	795	720
	3-Ton A/C Cooling	1050	0-1.0	1050	1050	1050	1050	1045	1020	1010	995	980	965
	3-1/2-Ton A/C Cooling	1225	0-1.0	1225	1225	1225	1225	1225	1225	1220	1210	1195	1175
	Maximum	1400	0-1.0	1390	1400	1400	1400	1400	1375	1330	1285	1235	1185
060-14 ††	Low Heat	500†	0-0.50	500	495	485	460	430					
	High Heat	1065	0-1.0	1055	1065	1065	1065	1065	1065	1065	1065	1060	1050
††	1-1/2-Ton A/C Cooling	525	0-0.50‡	525	525	510	495	465					
††	2-Ton A/C Cooling	700	0-0.50‡	700	700	695	680	680					
	2-1/2-Ton A/C Cooling	875	0-1.0‡	850	870	875	875	870	860	845	825	810	805
	3-Ton A/C Cooling	1050	0-1.0	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
	3-1/2-Ton A/C Cooling	1225	0-1.0	1210	1220	1225	1225	1225	1225	1225	1225	1215	1195
	Maximum	1400	0-1.0	1400	1400	1400	1400	1400	1400	1400	1400	1385	1345
080-14*** ††	Low Heat	720†	0-0.50	720	715	715	720	720					
	High Heat	1500	0-1.0	1500	1500	1470	1420	1375	1330	1290	1250	1210	1170
††	1-1/2-Ton A/C Cooling	525	0-0.50‡	525	525	515	505	485					
††	2-Ton A/C Cooling	700	0-0.50‡	700	700	695	695	700					
	2-1/2-Ton A/C Cooling	875	0-1.0‡	840	855	875	875	875	875	870	855	850	850
	3-Ton A/C Cooling	1050	0-1.0‡	1050	1050	1050	1050	1050	1050	1045	1045	1040	1030
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	1225	1225	1225	1225	1225	1225	1225	1225	1225	1195
	Maximum	1400	0-1.0‡	1400	1400	1400	1400	1395	1355	1315	1275	1230	1190
080-20*** ††	Low Heat	705†	0-0.50	705	680	680	675	675					
	High Heat	1500	0-1.0	1500	1500	1500	1500	1500	1500	1500	1495	1485	1480
††	2-Ton A/C Cooling	700	0-0.50‡	700	670	665	665	655					
††	2-1/2-Ton A/C Cooling	875	0-0.50‡	875	875	875	875	875					
	3-Ton A/C Cooling	1050	0-1.0‡	1050	1050	1050	1045	1050	1050	1045	1045	1045	1035
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	1215	1220	1220	1220	1225	1225	1225	1225	1225	1220
	4-Ton A/C Cooling	1400	0-1.0‡	1370	1385	1385	1395	1395	1395	1395	1400	1395	1390
	5-Ton A/C Cooling	1750	0-1.0	1750	1750	1750	1750	1750	1750	1745	1740	1735	1725
	Maximum	2000	0-1.0	2000	2000	2000	2000	1990	1975	1950	1925	1900	1865
100-20***	Low Heat	920†	0-1.0	920	915	915	920	920	920	915	900	895	890
	High Heat	1525	0-1.0	1525	1525	1525	1525	1520	1515	1515	1515	1515	1515
††	2-Ton A/C Cooling	700	0-0.50‡	700	700	700	690	685					
††	2-1/2-Ton A/C Cooling	875	0-0.50‡	865	875	870	870	875					
	3-Ton A/C Cooling	1050	0-1.0‡	1035	1045	1050	1045	1050	1050	1050	1050	1050	1045
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	1180	1195	1215	1225	1225	1225	1225	1225	1225	1225
	4-Ton A/C Cooling	1400	0-1.0‡	1400	1400	1400	1400	1400	1400	1400	1395	1375	1365
	5-Ton A/C Cooling	1750	0-1.0	1740	1745	1750	1750	1750	1750	1750	1750	1750	1740
	Maximum	2000	0-1.0	2000	2000	2000	2000	2000	2000	1985	1965	1940	1910
120-20	Low Heat	1180†	0-1.0	1160	1175	1180	1180	1180	1180	1180	1180	1180	1180
	High Heat	1885	0-1.0	1875	1880	1885	1885	1885	1885	1885	1885	1880	1870
††	2-Ton A/C Cooling	700	0-0.50‡	700	700	700	700	695					
††	2-1/2-Ton A/C Cooling	875	0-0.50‡	875	875	875	870	870					
	3-Ton A/C Cooling	1050	0-1.0‡	1035	1040	1050	1050	1050	1050	1050	1025	1005	1000
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	1205	1210	1225	1225	1225	1225	1225	1225	1220	1215
	4-Ton A/C Cooling	1400	0-1.0‡	1390	1400	1400	1400	1400	1400	1395	1385	1370	1360
	5-Ton A/C Cooling	1750	0-1.0‡	1745	1740	1745	1745	1745	1745	1745	1740	1730	1715
	6-Ton A/C Cooling	2100	0-1.0	2100	2100	2100	2100	2100	2095	2075	2040	1975	1910
	Maximum	2100	0-1.0	2100	2100	2100	2100	2100	2095	2075	2040	1975	1910

* Actual external static pressure (ESP) can be determined by using the fan laws (CFM ^{2} proportional to ESP); such as, a system with 1750 CFM at 0.5 ESP would operate at high-heating airflow of 1500 CFM at 0.37 ESP and low-heating airflow of 705 CFM at 0.08 ESP.

† Low heat CFM when low-heat rise adjustment switch (SW1-3) and comfort/efficiency adjustment switch (SW1-4) on control center are OFF.

‡ Ductwork must be sized for high-heating CFM within the operational range of ESP.

** Wattage data provided is for the circulating blower with bottom return and does not include draft inducer, accessories, or gas controls.

†† Operation within the blank areas of the chart is not recommended because high-heat operation will be above 1.0 ESP.

*** All airflows on 21" casing size furnaces are 5% less on side return only installations.

AIR DELIVERY - POWER DRAW (WATTS)**

Unit Size	Operating Mode	CFM Airflow Setting	External Static Pressure Range*	External Static Pressure (ESP)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
				POWER DRAW (WATTS)**									
040-14 ††	Low Heat	585†	0-0.60	55	71	91	108	129	147				
	High Heat	800	0-1.0	97	119	141	165	187	209	230	252	274	292
††	1-1/2-Ton Cooling	525	0-0.50‡	49	63	75	94	107					
††	2-Ton A/C Cooling	700	0-0.90‡	67	92	117	134	159	186	216	239	267	296
	2-1/2-Ton A/C Cooling	875	0-1.0	112	138	164	188	210	236	256	275	295	317
	3-Ton A/C Cooling	1050	0-1.0	167	202	233	263	288	307	334	364	388	417
	3-1/2-Ton A/C Cooling	1225	0-1.0	232	266	308	341	380	413	448	491	524	561
	Maximum	1400	0-1.0	317	379	425	475	527	535	542	546	551	563
060-14 ††	Low Heat	500†	0-0.50	43	55	70	83	97					
	High Heat	1065	0-1.0	150	175	200	234	264	292	321	352	378	408
††	1-1/2-Ton A/C Cooling	525	0-0.50‡	46	62	74	91	104					
††	2-Ton A/C Cooling	700	0-0.50‡	69	86	105	124	138					
	2-1/2-Ton A/C Cooling	875	0-1.0‡	101	126	154	179	202	226	248	267	287	313
	3-Ton A/C Cooling	1050	0-1.0	149	174	199	233	263	291	320	351	377	407
	3-1/2-Ton A/C Cooling	1225	0-1.0	210	248	278	312	344	384	418	449	476	503
	Maximum	1400	0-1.0	311	341	384	420	455	495	529	568	602	612
080-14*** ††	Low Heat	720†	0-0.50	80	95	118	142	168					
	High Heat	1500	0-1.0	442	507	519	527	535	543	550	557	564	572
††	1-1/2-Ton A/C Cooling	525	0-0.50‡	50	63	80	96	111					
††	2-Ton A/C Cooling	700	0-0.50‡	73	94	113	133	156					
	2-1/2-Ton A/C Cooling	875	0-1.0‡	102	133	161	191	218	241	268	291	320	348
	3-Ton A/C Cooling	1050	0-1.0‡	168	206	240	273	299	324	356	385	418	460
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	245	277	317	355	394	431	481	522	558	568
	Maximum	1400	0-1.0‡	376	422	478	520	527	537	544	553	560	568
080-20*** ††	Low Heat	705†	0-0.50	76	90	112	129	149					
	High Heat	1500	0-1.0	381	432	478	511	564	610	650	688	732	761
††	2-Ton A/C Cooling	700	0-0.50‡	76	89	109	127	148					
††	2-1/2-Ton A/C Cooling	875	0-0.50‡	113	136	157	178	208					
	3-Ton A/C Cooling	1050	0-1.0‡	158	191	213	239	266	300	326	351	392	425
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	227	262	294	322	360	390	432	459	501	538
	4-Ton A/C Cooling	1400	0-1.0‡	298	340	384	417	458	493	534	574	607	647
	5-Ton A/C Cooling	1750	0-1.0	587	631	664	724	772	815	861	907	943	988
	Maximum	2000	0-1.0	839	911	973	1029	1066	1104	1134	1149	1170	1182
100-20***	Low Heat	920†	0-1.0	113	136	159	186	221	243	263	285	316	340
	High Heat	1525	0-1.0	378	419	448	486	518	561	606	650	696	730
††	2-Ton A/C Cooling	700	0-0.50‡	74	89	109	126	146					
††	2-1/2-Ton A/C Cooling	875	0-0.50‡	99	124	147	168	200					
	3-Ton A/C Cooling	1050	0-1.0‡	144	177	207	229	258	288	319	350	385	415
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	189	223	268	306	346	377	399	447	488	517
	4-Ton A/C Cooling	1400	0-1.0‡	283	328	360	400	439	474	510	541	575	598
	5-Ton A/C Cooling	1750	0-1.0	502	558	602	657	715	754	797	847	889	930
	Maximum	2000	0-1.0	766	819	887	947	991	1030	1065	1101	1129	1152
120-20	Low Heat	1180†	0-1.0	162	194	228	265	297	325	363	392	432	459
	High Heat	1885	0-1.0	547	607	652	715	756	816	870	912	958	1000
††	2-Ton A/C Cooling	700	0-0.50‡	72	89	113	128	146					
††	2-1/2-Ton A/C Cooling	875	0-0.50‡	98	119	140	163	187					
	3-Ton A/C Cooling	1050	0-1.0‡	126	156	194	221	249	279	307	327	351	381
	3-1/2-Ton A/C Cooling	1225	0-1.0‡	178	211	253	284	314	352	382	424	455	494
	4-Ton A/C Cooling	1400	0-1.0‡	257	310	348	388	421	458	488	528	557	591
	5-Ton A/C Cooling	1750	0-1.0‡	461	498	552	618	665	711	760	800	847	888
	6-Ton A/C Cooling	2100	0-1.0	794	867	931	996	1042	1092	1135	1152	1124	1098
	Maximum	2100	0-1.0	592	673	746	811	885	935	994	1026	1102	1129

* Actual external static pressure (ESP) can be determined by using the fan laws (CFM ^{2} proportional to ESP); such as, a system with 1750 CFM at 0.5 ESP would operate at high-heating airflow of 1500 CFM at 0.37 ESP and low-heating airflow of 705 CFM at 0.08 ESP.

† Low heat CFM when low-heat rise adjustment switch (SW1-3) and comfort/efficiency adjustment switch (SW1-4) on control center are OFF.

‡ Ductwork must be sized for high-heating CFM within the operational range of ESP.

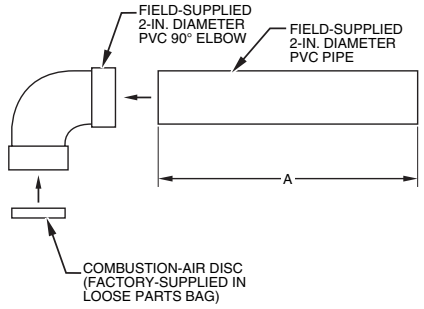
** Wattage data provided is for the circulating blower with bottom return and does not include draft inducer, accessories, or gas controls.

†† Operation within the blank areas of the chart is not recommended because high-heat operation will be above 1.0 ESP.

*** All airflows on 21" casing size furnaces are 5% less on side return only installations.

Dimensions

COMBUSTION-AIR PIPE FOR NON-DIRECT (1-PIPE) VENT APPLICATION (SIZES 040 THROUGH 120 ONLY)



LENGTH OF STRAIGHT PIPE PORTION OF COMBUSTION AIR INLET PIPE ASSEMBLY (IN.)

CASING WIDTH	A
17-1/2	8-1/2 ± 1/2
21	10-1/2 ± 1/2
24-1/2	12 ± 1/2

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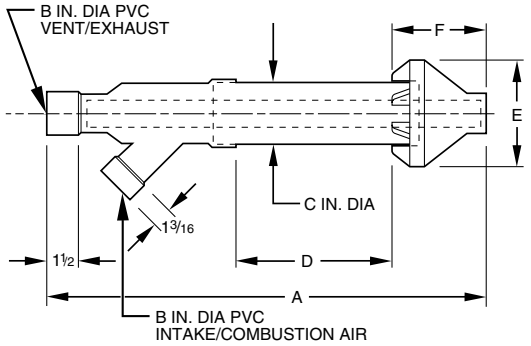
CONCENTRIC VENT (DIRECT VENT/2-PIPE ONLY) (ALL MODEL SIZES)



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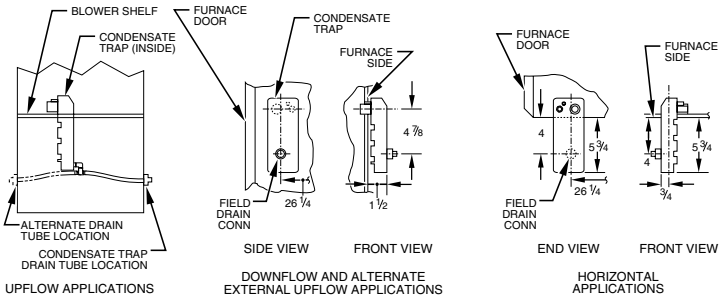
DIMENSIONS (in.)

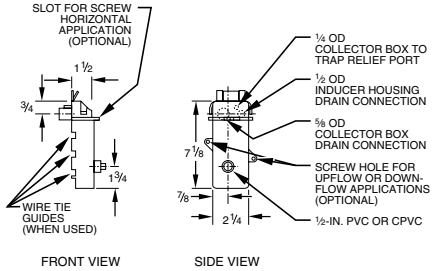
KIT PART NO.	A*	B	C	D†	E	F
KGAVT0501CVT	33-3/8	2	3-1/2	16-5/8	6-1/4	5-3/4
KGAVT0601CVT	38-7/8	3	4-1/2	21-1/8	7-3/8	6-1/2

* Dimension A will change accordingly as dimension D is lengthened or shortened.

† Dimension D may be lengthened to 60 in. maximum. Dimension D may also be shortened by cutting the pipes provided in the kit to 12 in. minimum.

CONDENSATE TRAP





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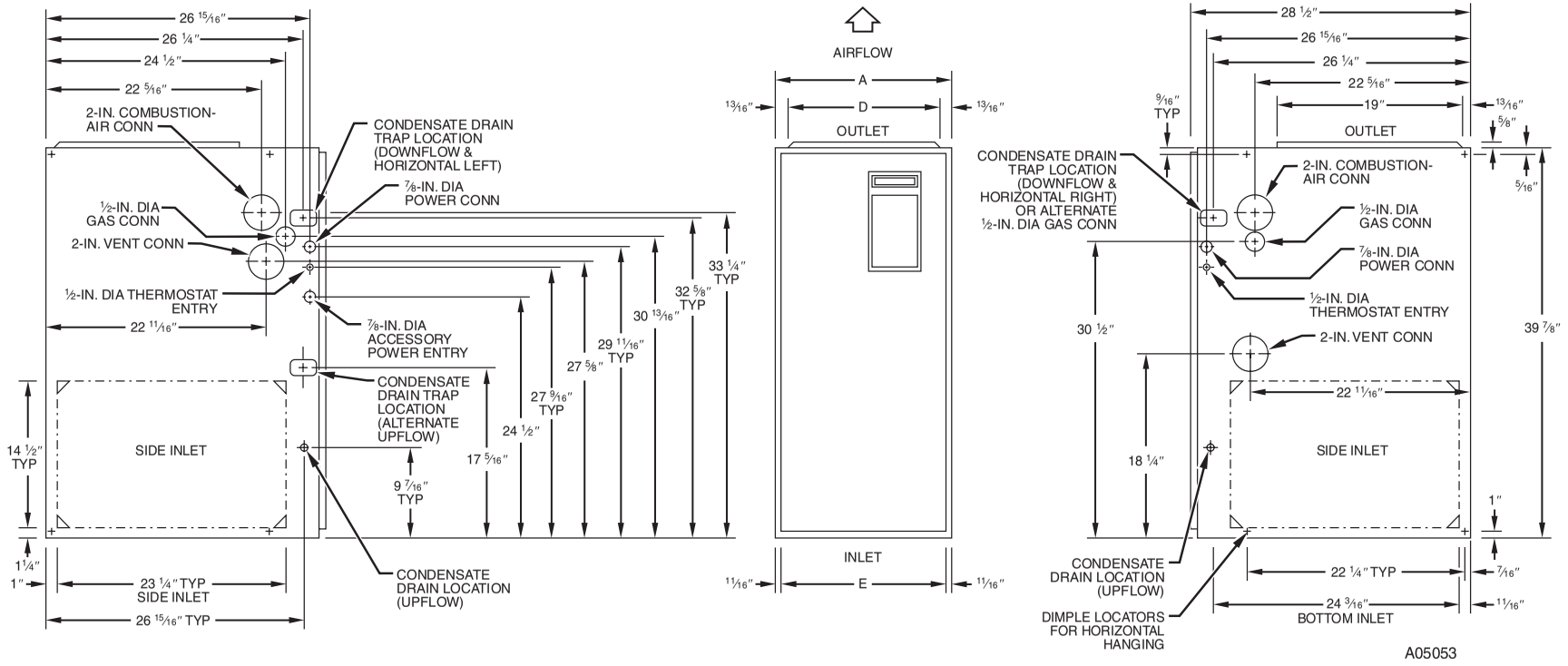


NOTES: 1. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer s recommendations for equivalent diameters.

2. Minimum return-air opening at furnace:
   a. For 800 CFM–16-in. round or 14 1/2 x 12-in. rectangle.
   b. For 1200 CFM–20-in. round or 14 1/2 x 19 1/2-in. rectangle.
   c. For 1600 CFM–22-in. round or 14 1/2 x 23 1/4-in. rectangle.
   d. For airflow requirements above 1800 CFM, see Air Delivery table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM at 0.5" W.C. ESP.

DIMENSIONS (In.)

UNIT SIZE	A	D	E
040-14*	24-1/2*	22-7/8*	23*
060-14	17-1/2	15-7/8	16
080-14	21	19-3/8	19-1/2
080-20	21	19-3/8	19-1/2
100-20	21	19-3/8	19-1/2
120-20	24-1/2	22-7/8	23

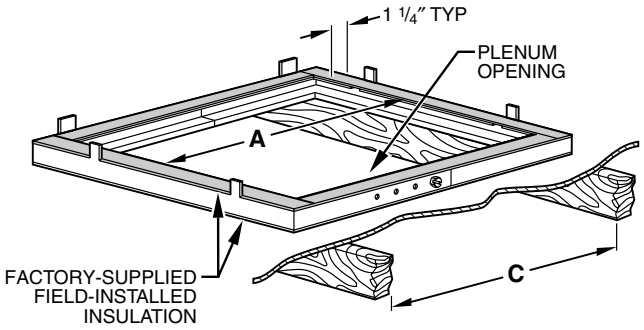
* These dimensions reflect the wider casing for the 96.6% AFUE furnace.

DOWNFLOW SUBBASE

DIMENSIONS (In.)

FURNACE CASING WIDTH	FURNACE IN DOWNFLOW APPLICATION	PLENUM OPENING*		FLOOR OPENING		HOLE NO. FOR WIDTH ADJUSTMENT
		A	B	C	D	
17-1/2	Furnace with or without Cased Coil Assembly or Coil Box	15-1/8	19	16-3/4	20-3/8	3
21	Furnace with or without Cased Coil Assembly or Coil Box	18-5/8	19	20-1/4	20-3/8	2
24-1/2	Furnace with or without Cased Coil Assembly or Coil Box	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.



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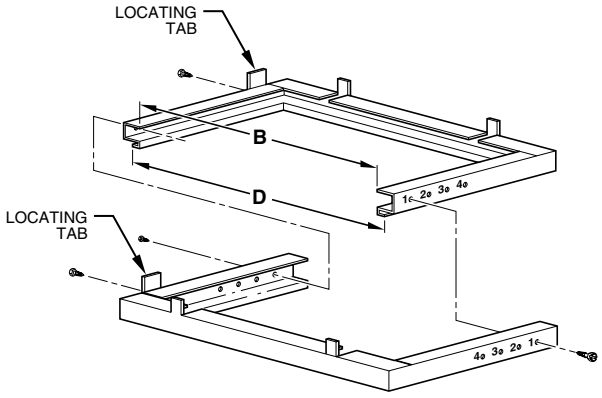
Assembled



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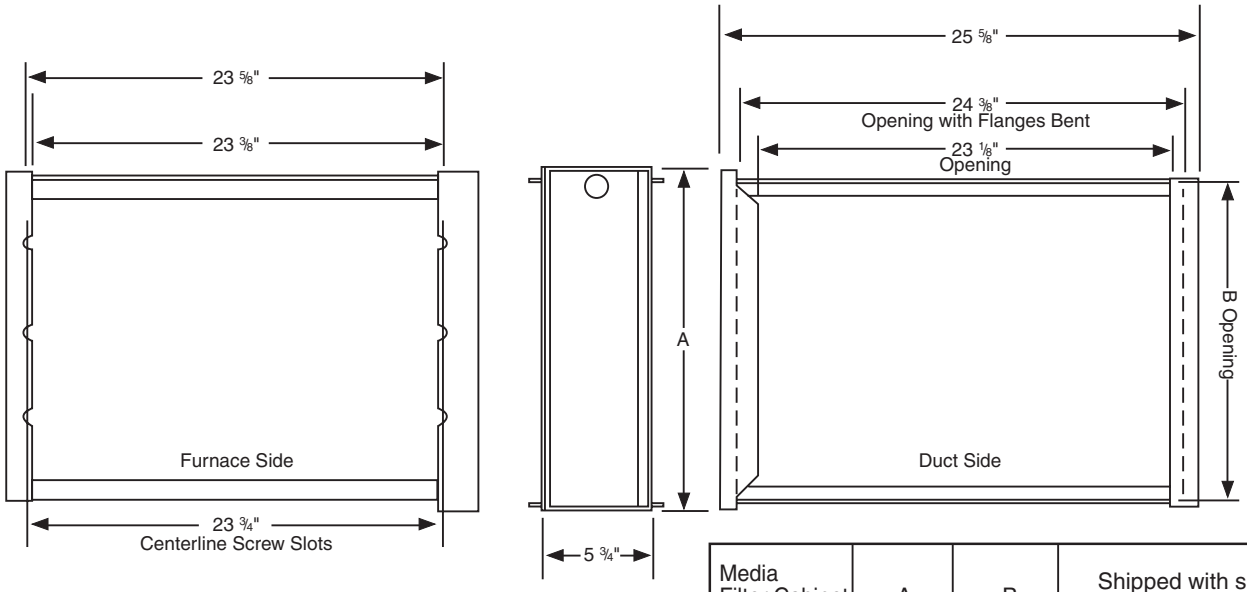
Disassembled

MEDIA FILTER CABINET



Media Filter Cabinet	A	B	Shipped with sizes
16"	17"	16"	060-12, 080-12, 080-16
20"	21"	20"	100-16, 100-20
24"	25"	24"	120-20

A05186

Electrical data

UNIT SIZE		040-14	060-14	080-14	080-20	100-20	120-20
UNIT VOLTS — HERTZ — PHASE		115 — 60 — 1					
OPERATING VOLTAGE RANGE (Min — Max)*		104 — 127					
MAXIMUM UNIT AMPS		8.9	8.9	8.9	13.8	13.8	13.8
MINIMUM WIRE SIZE		14	14	14	12	12	12
MAXIMUM WIRE LENGTH (Ft)‡		31	31	31	32	32	32
MAXIMUM FUSE OR CKT BKR (Amps)**		15	15	15	20	20	20
TRANSFORMER (24v)		40va					
EXTERNAL CONTROL POWER AVAILABLE	Heating	25va					
	Cooling	34va					

* Permissible limits of the voltage range at which the unit will operate satisfactorily.
‡ Length shown is as measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.
** Time-delay type is recommended.

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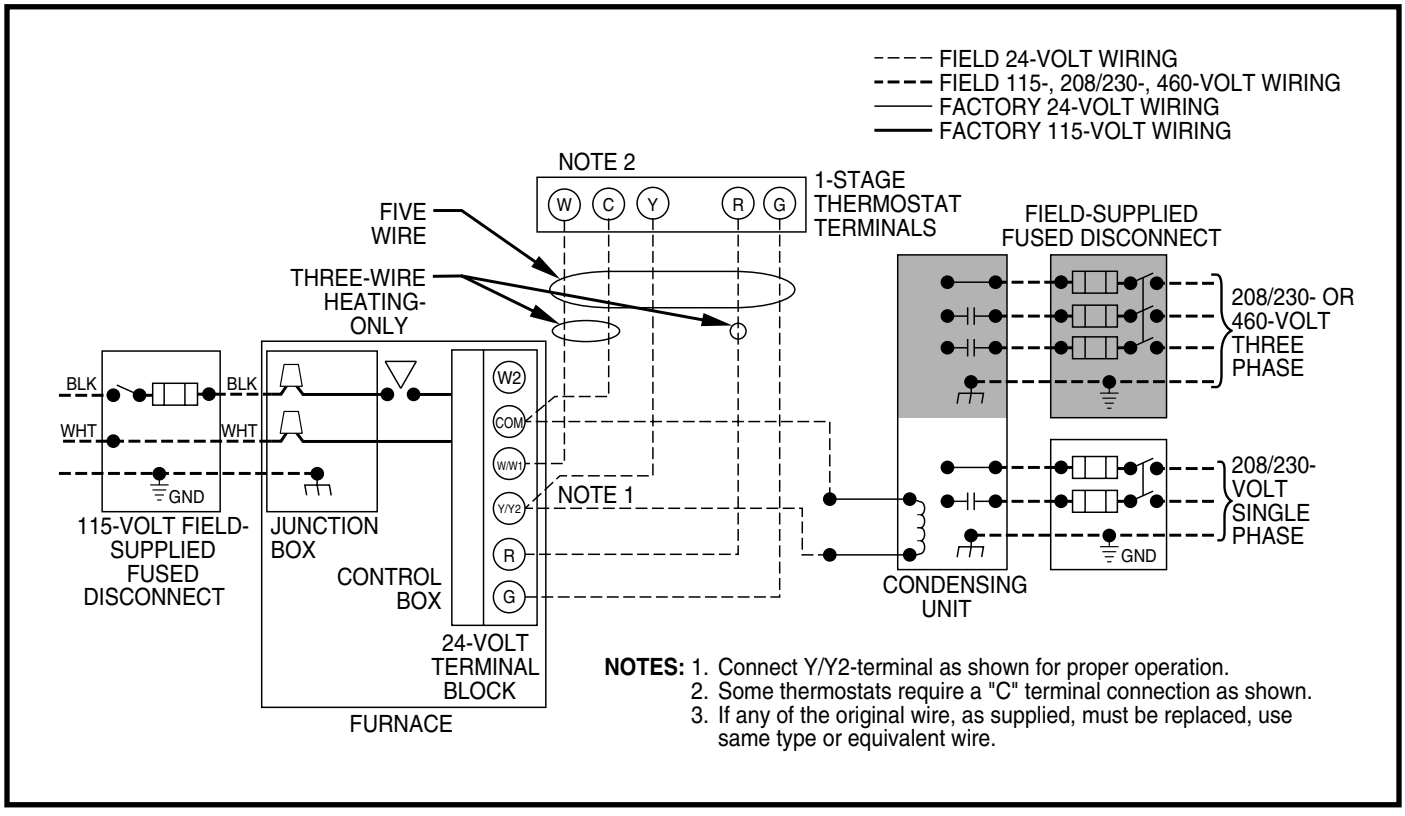
Typical wiring schematic



A95236

Combustion-air and vent piping for Direct Vent/2-Pipe (All Sizes) and Non-Direct Vent/1-Pipe (Sizes 040 through 120 Only) Applications

Maximum Allowable Pipe Length (Ft)

ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
0 to 2000	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	50	45	40	35	30	25
			2	2	70	70	70	70	70	70
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	50	45	40	35	30	25
			2	2	70	70	70	70	70	70
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	30	25	20	15	10	5
			2	2	70	70	70	70	70	70
	100,000	2 Pipe or 2-In. Concentric	2	2	45	40	35	30	25	20
			2-1/2	2-1/2	70	70	70	70	70	70
	120,000	2 Pipe or 3-In. Concentric	2-1/2	2-1/2	10	NA	NA	NA	NA	NA
			3	3	35	30	15	NA	NA	NA
			3†	3	70	70	70	70	70	70
ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
2001 to 3000	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	45	40	35	30	25	20
			2	2	70	70	70	70	70	70
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	45	40	35	30	25	20
			2	2	70	70	70	70	70	70
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	26	21	16	11	6	NA
			2	2	70	70	70	70	70	70
	100,000	2 Pipe or 2-In. Concentric	2	2	40	35	30	25	20	15
			2-1/2	2-1/2	70	70	70	70	70	70
	120,000	2 Pipe or 3-In. Concentric	3	3	31	26	12	NA	NA	NA
			3†	3	63	62	62	61	61	61
ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
3001 to 4000	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	42	37	32	27	22	17
			2	70	70	70	70	70	70	
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	42	37	32	27	22	17
			2	2	70	70	70	70	70	70
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	25	20	15	10	5	NA
			2	2	70	70	70	70	70	70
	100,000	2 Pipe or 2-In. Concentric	2	2	38	33	28	23	18	13
			2-1/2	2-1/2	70	70	70	70	70	70
	120,000	2 Pipe or 3-In. Concentric	3	3	29	24	10	NA	NA	NA
			3†	3	59	59	58	57	57	56
ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
4001 to 5000‡	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	40	35	30	25	20	15
			2	2	70	70	70	70	70	70
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	40	35	30	25	20	15
			2	2	70	70	70	70	70	70
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	23	18	13	8	NA	NA
			2	2	70	70	70	70	70	68
	100,000	2 Pipe or 2-In. Concentric	2	2	36	31	26	21	16	11
			2-1/2	2-1/2	70	70	70	70	70	70
	120,000	2 Pipe or 3-In. Concentric	3†	3	56	55	54	53	52	52

See notes on page 17.

Combustion-air and vent piping for Direct Vent/2-Pipe (All Sizes) and Non-Direct Vent/1-Pipe (Sizes 040 through 120 Only) Applications

Maximum Allowable Pipe Length (Ft) Continued

ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
5001 to 6000‡	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	37	32	27	22	17	12
			2	2	70	70	70	70	70	70
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	37	32	27	22	17	12
			2	2	70	70	70	70	70	70
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	22	17	12	7	NA	NA
			2	2	70	70	70	70	68	63
	100,000	2 Pipe or 2-In. Concentric	2	2	33	28	23	18	13	8
			2-1/2	2-1/2	70	70	70	70	70	70
	120,000	2 Pipe or 3-In. Concentric	3†	3	53	52	50	49	48	47
ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
6001 to 7000‡	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	35	30	25	20	15	10
			2	2	70	70	68	67	66	64
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	35	30	25	20	15	10
			2	2	70	70	68	67	66	64
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	20	15	10	5	NA	NA
			2	2	70	70	68	67	62	57
	100,000	2 Pipe or 2-In. Concentric	2	2	31	26	21	16	11	6
			2-1/2	2-1/2	70	70	68	67	66	64
	120,000	2 Pipe or 3-In. Concentric	3†	3	49	48	47	45	44	43
ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
7001 to 8000‡	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	32	27	22	17	12	7
			2	2	66	65	63	62	60	59
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	32	27	22	17	12	7
			2	2	66	65	63	62	60	59
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	18	13	8	NA	NA	NA
			2	2	66	65	63	62	57	52
	100,000	2 Pipe or 2-In. Concentric	2	2	29	24	19	14	9	NA
			2-1/2	2-1/2	66	65	63	62	60	59
	120,000	2 Pipe or 3-In. Concentric	3†	3	46	44	43	41	40	38

See notes on page 17.

Combustion-air and vent piping for Direct Vent/2-Pipe (All Sizes) and Non-Direct Vent/1-Pipe (Sizes 040 through 120 Only) Applications

Maximum Allowable Pipe Length (Ft) **Continued**

ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
8001 to 9000‡	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	30	25	20	15	10	5
			2	2	62	60	58	56	55	53
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	30	25	20	15	10	5
			2	2	62	60	58	56	55	53
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	17	12	7	NA	NA	NA
			2	2	62	60	58	56	51	46
	100,000	2 Pipe or 2-In. Concentric	2	2	27	22	17	12	7	NA
			2-1/2	2-1/2	62	60	58	56	55	53
	120,000	2 Pipe or 3-In. Concentric	3†	3	43	41	39	37	35	34

ALTITUDE	UNIT SIZE (BTUH)	DIRECT VENT (2-PIPE) ONLY		NON-DIRECT VENT (1-PIPE) ONLY	NUMBER OF 90° ELBOWS					
		Termination Type	Pipe Dia (IN.)*	Pipe Dia (IN.)*	1	2	3	4	5	6
9001 to 10000‡	40,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	27	22	17	12	7	NA
			2	2	57	55	53	51	49	47
	60,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	27	22	17	12	7	NA
			2	2	57	55	53	51	49	47
	80,000	2 Pipe or 2-In. Concentric	1-1/2	1-1/2	15	10	5	NA	NA	NA
			2	2	57	55	53	51	46	41
	100,000	2 Pipe or 2-In. Concentric	2	2	24	19	14	9	NA	NA
			2-1/2	2-1/2	57	55	53	51	49	47
	120,000	2 Pipe or 3-In. Concentric	3†	3	39	37	35	33	31	29

* Disk usage—Unless otherwise stated, use perforated disk assembly (factory-supplied in loose parts bag).
† Wide radius elbow.
‡ Vent sizing for Canadian installations over 4500 ft (1370m) above sea level are subject to acceptance by the local authorities having jurisdiction.
NA—Not Allowed; pressure switch will not make.

NOTES:
1. Do not use pipe size greater than those specified in table or incomplete combustion, flame disturbance, or flame sense lockout may occur.
2. Size both the combustion-air and vent pipe independently, determine the smallest diameter allowed by the table for each pipe, then use the larger diameter for both pipes.
3. Assume two 45° elbows equal one 90° elbow. Long radius elbows are desirable and may be required in some cases.
4. Elbows and pipe sections within the furnace casing and at the vent termination should not be included in vent length or elbow count.
5. The minimum pipe length is 5 ft for all applications.

MAXIMUM ALLOWABLE EXPOSED VENT PIPE LENGTH (FT) WITH INSULATION IN WINTER DESIGN TEMPERATURE AMBIENT*

UNIT SIZE	WINTER DESIGN TEMP °F	MAX PIPE DIA (IN.)	INSULATION THICKNESS (IN.)†				
			0	3/8	1/2	3/4	1
040-14	20	2	21	37	42	50	57
	0	2	10	22	25	30	35
	- 20	2	5	14	17	21	25
060-14	20	2	30	55	61	70	70
	0	2	16	33	38	46	53
	- 20	2	9	23	26	33	38
080-14 080-20	20	2	37	65	70	70	70
	0	2	20	39	45	55	63
	- 20	2	11	27	31	39	45
100-20	20	2-1/2	41	70	70	70	70
	0	2-1/2	21	42	48	59	68
	- 20	2-1/2	11	28	33	41	49
120-20	20	3	49	70	70	70	70
	0	3	26	51	58	70	70
	- 20	3	15	35	40	50	59

* Pipe length (ft) specified for maximum vent pipe lengths located in unconditioned spaces. Vent pipes located in unconditioned space cannot exceed the total allowable pipe length as specified in the Maximum Allowable Pipe Length table.

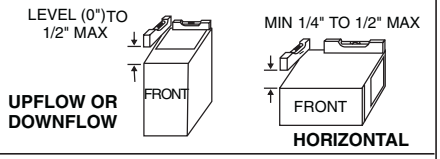
† Insulation thickness based on R value of 3.5 per in.

Clearance to combustibles

INSTALLATION

- This forced air furnace is equipped for use with natural gas at altitudes 0 - 10,000 ft (0 - 3,050m), except 140 size furnaces are only approved for altitudes 0 - 7,000 ft. (0 - 2,135m).
- An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.
- This furnace is for indoor installation in a building constructed on site. This furnace may be installed in a manufactured (mobile) home when stated on rating plate and using factory authorized kit.
- This furnace may be installed on combustible flooring in alcove or closet at **Minimum Inches Clearance To Combustible Construction** as described below.
- This furnace requires a special venting system. Refer to the installation instructions for parts list and method of installation. This furnace is for use with schedule-40 PVC, PVC-DWV, CPVC, or ABS-DWV pipe, and must not be vented in common with other gas-fired appliances. Construction through which vent/air intake pipes may be installed is maximum 24 inches (600 mm), minimum 3/4 inches (19 mm) thickness (including roofing materials).

For upflow and downflow applications, furnace must be installed level, or pitched within 1/2" of level. For a horizontal application, the furnace must be pitched minimum 1/4" to maximum of 1/2" forward for proper drainage. See Installation Manual for IMPORTANT unit support details on horizontal applications.



MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION

ALL POSITIONS:

* Mimimum front clearance for service 30 inches (762mm).

DOWNFLOW POSITIONS:

† For installation on combustible floors only when installed on special base No. KGASB0201ALL, Coil Assembly, Part No. CD5 or CK5, or Coil Casing, Part No. KCAKC.

HORIZONTAL POSITIONS:

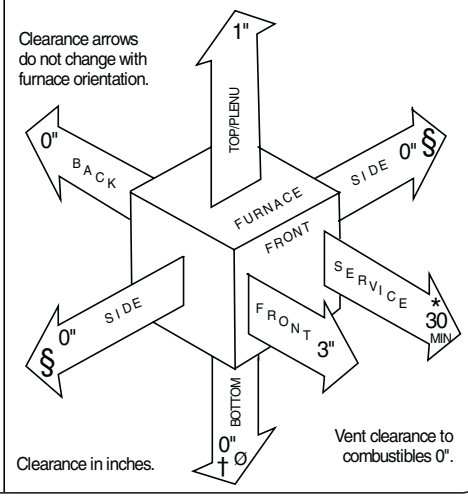
Line contact is permissible only between lines formed by intersections of top and two sides of furnace jacket, and building joists, studs, or framing.

§ Clearance shown is for air inlet and air outlet ends.

Ø 120 size furnace requires 1 inch bottom clearance to combustible materials.

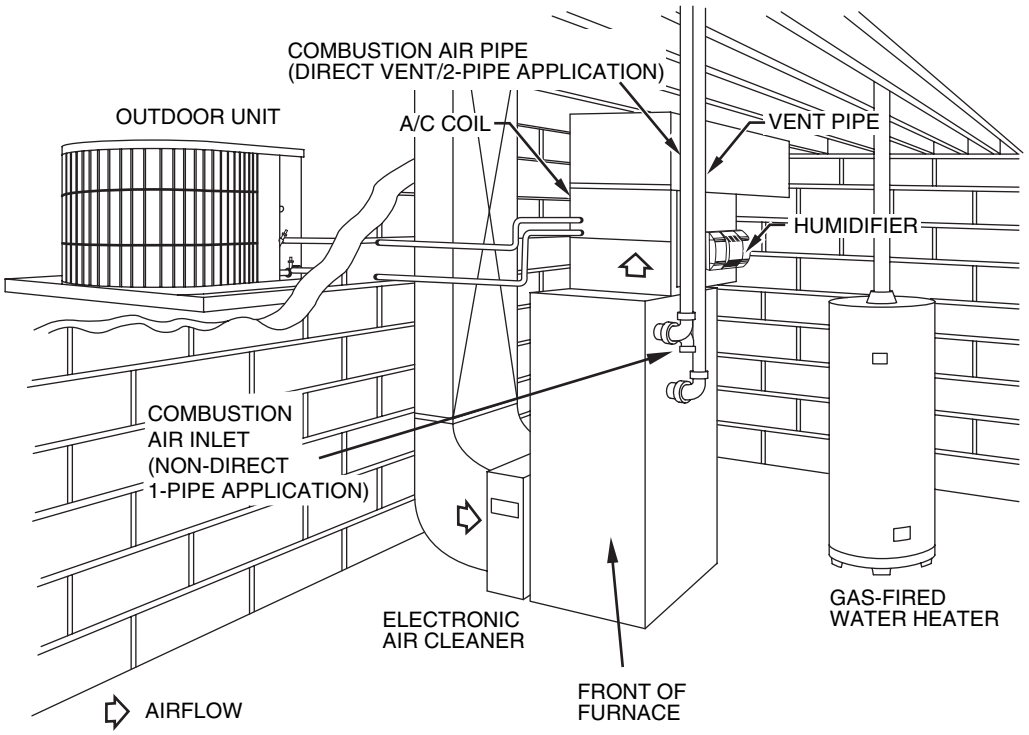
328068-201 REV. A
LIT - TOP

This furnace is approved for UPFLOW, DOWNFLOW and HORIZONTAL installations.



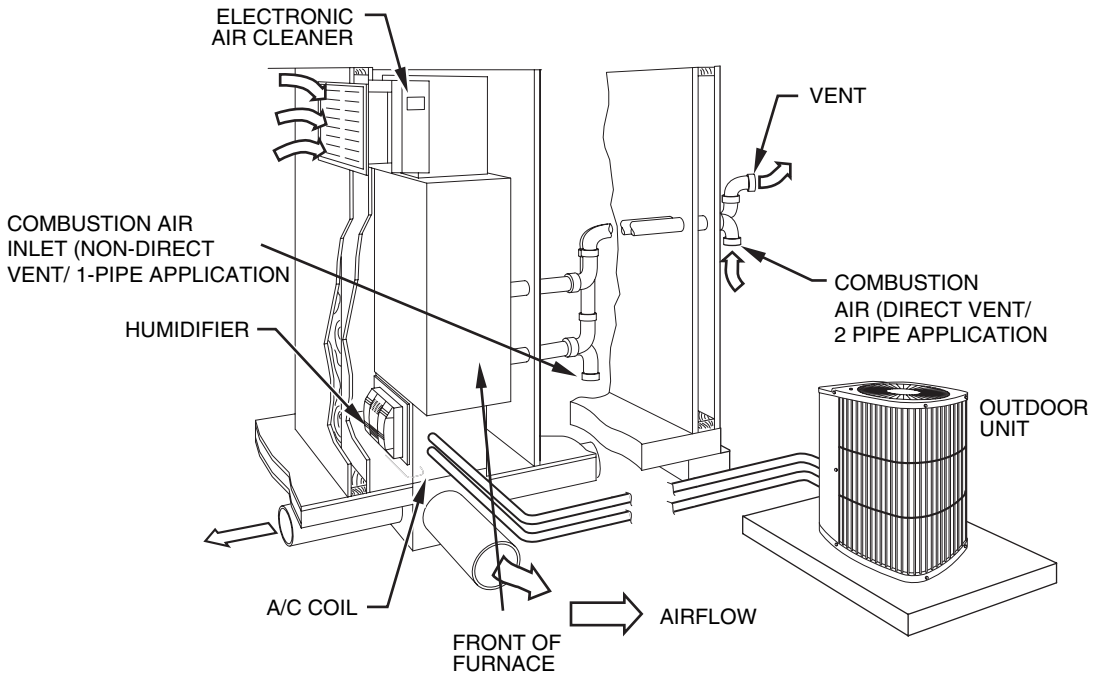
A02250

Typical installations



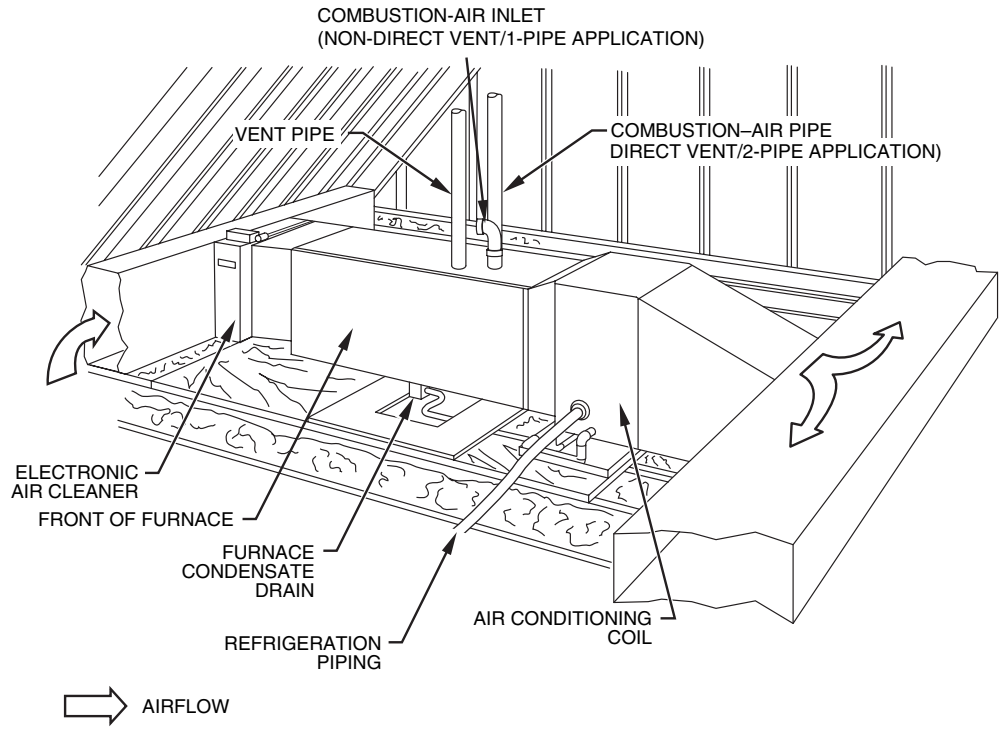
Basement — Upflow Application

A05064

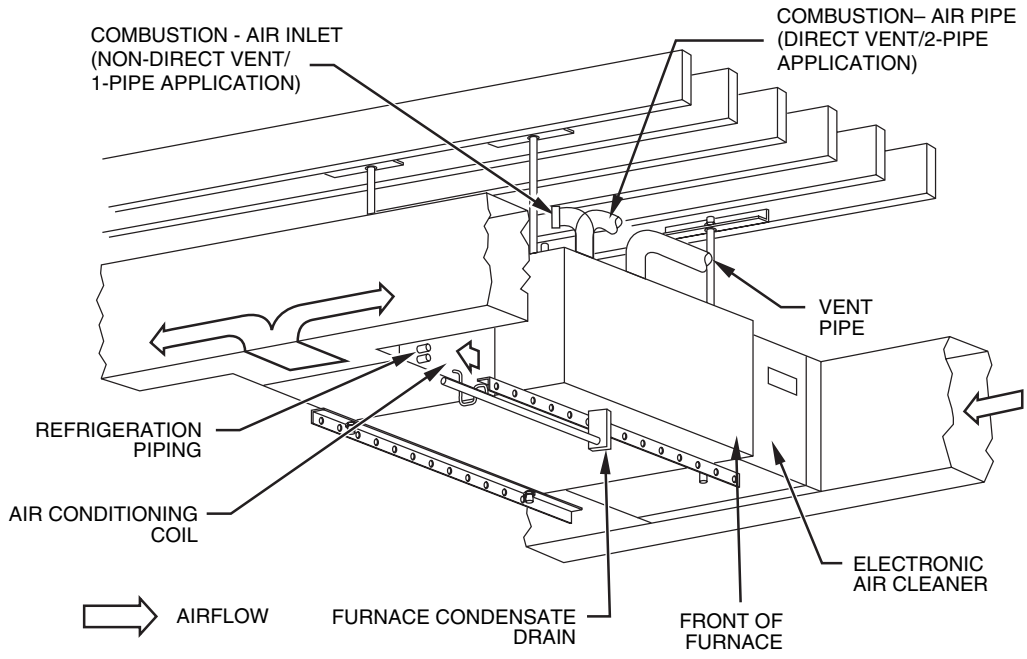


Closet — Downflow Application

A05065



Attic — Horizontal Application A05066



Crawlspace — Horizontal Application A05067

Guide specifications

Infinity 96
Two-Stage/Variable Speed Gas Furnace
58MVB

GENERAL

System Description

Furnish a _____ (4-way multipoise) gas-fired condensing furnace for use with natural gas or propane (factory authorized conversion kit required for propane); furnish cold air return plenum; furnish external medial cabinet for use with accessory media filter or standard filter.

Quality Assurance

Unit will be designed, tested and constructed to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces.

Unit will be 3rd party certified by CSA to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces.

Unit will carry the CSA Blue Star® and Blue Flame® labels.

Unit efficiency testing will be performed per the current DOE test procedure as listed in the Federal Register.

Unit will be certified for capacity and efficiency and listed in the latest GAMA Consumer's Directory of Certified Efficiency Ratings.

Unit will carry the current Federal Trade Commission Energy Guide efficiency label.

Delivery, Storage, and Handling

Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

Warranty (for inclusion by specifying engineer)

U.S. and Canada only. Warranty certificate available upon request.

PRODUCTS

Equipment

Blower Wheel and ECM Blower Motor

Galvanized blower wheel shall be centrifugal type, statically and dynamically balanced. Blower motor of ECM type shall be permanently lubricated with sealed ball bearings, of _____ hp, and have infinitely variable speed from 300–1300 RPM operating only when 24 VAC motor inputs are provided. Blower motor shall be direct drive and soft mounted to the blower scroll to reduce vibration transmission.

Filters

Furnace shall have reusable-type filters. Filter shall be _____ in (x) _____in. An accessory high efficient Media Filter is available as an option. _____ Media Filter.

Casing

Casing shall be of .030 in. thickness minimum, pre-painted galvanized steel.

ECM Inducer Motor

ECM Inducer motor shall be variable speed design being soft mounted to assembly to reduce vibration transmission.

Primary Heat Exchangers

Primary Heat exchangers shall be 3-Pass 20 gauge corrosion resistant aluminized steel of fold-and-crimp sectional design when applied operating under negative pressure.

Secondary Heat Exchangers

Secondary Heat exchangers shall be of a flow-through design having a patented interior laminate coating of polypropylene for greater corrosion resistance with fold-and-crimp design when applied operating under negative pressure.

Controls

Controls shall include a micro-processor based integrated electronic control board with at least 16 service troubleshooting codes displayed via diagnostic flashing LED light on the control, a self-test feature that checks all major functions of the furnace, and a replaceable automotive-type circuit protection fuse. Multiple operational settings available, including separate blower speeds for low heat, high heat, low cooling, high cooling and continuous fan. Continuous fan speed may be adjusted from the thermostat. Cooling airflow will be selectable between 350 or 400 CFM per ton of air conditioning. Features will also include temporary reduced airflow in the cooling mode for improved dehumidification when an Infinity Control or Thermidistat® is selected as the thermostat.

Operating Characteristics

Heating Capacity shall be _____ Btuh input; _____ Btuh output capacity.

Fuel Gas Efficiency shall be 92–96.6 % AFUE.

Air delivery shall be _____ cfm minimum at 0.50 in. wg. external static pressure.

Dimensions shall be: depth _____ in.; width _____ in.; height _____ in. (casing only). Height shall be _____ in. with A/C coil and _____ in. overall with plenum.

Electrical Requirements

Electrical supply shall be 115 volts, 60 Hz, single-phase (nominal). Minimum wire size shall be _____ AWG; maximum fuse size or HACR-type designated circuit breaker shall be _____ Amps.

Special Features

Refer to section of the product data sheet identifying accessories and descriptions for specific features and available enhancements.

Catalog No: 58MVB-1PDRev.A Replaces: 58MVB-1PD