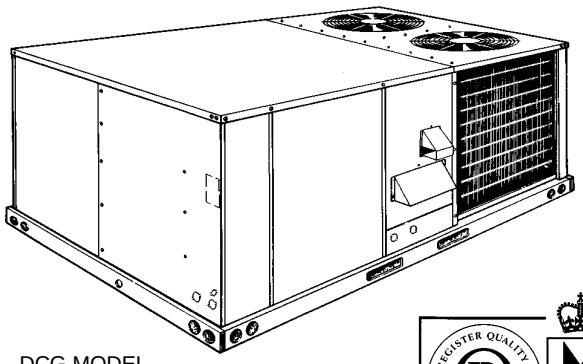


DCG MODEL
SHOWN

YORK®

SINGLE PACKAGE GAS / ELECTRIC UNITS AND SINGLE PACKAGE AIR CONDITIONERS

D3CE/D3CG090, 120 & 150
7-1/2 THRU 12-1/2 NOMINAL TONS
(WORLD 50 HZ)

SUNLINE 2000™

DESCRIPTION

YORK Sunline 2000 units are convertible single packages with a common footprint cabinet and common roof curb for all 7-1/2 10, and 12-1/2 ton sizes. All units have dual compressors and dual independent refrigeration circuits. The units were designed for light commercial applications and can easily be installed on a roof curb, slab, roof jack or frame.

All units are self-contained and assembled on rigid full perimeter base rails allowing for 3-way fork lift access and overhead rigging. Every unit is completely charged, wired, piped and tested at the factory to provide for a quick and easy field installation. These units are manufactured under ISO 9001 Quality System Certification.

The units are available in the following configurations: cooling only and cooling with gas heat. Electric heaters are available as field-installed accessories.

Both down and side discharge airflows are available without having to swap panels. The installer simply removes the duct covers for the desired configuration. Economizers may be used on either side or down discharge applications with no modifications required.

FEATURES

COMMON FOOTPRINT / COMMON CABINET - All model sizes and configurations share the exact same cabinet footprint and therefore the same roof curb. You now have the flexibility of setting one curb and, after the internal load has been determined, placing the proper tonnage unit on that curb. You can even decide between cooling only or gas heat after the curb has been set.

GAS HEATING - Gas / electric units have electronic spark ignition and power vented combustion with a minimum steady state efficiency of 80 %.

CONVERTIBLE AIRFLOW DESIGN - Both the side and bottom duct openings are covered when they leave the factory. If a side supply / side return is desired, remove the two side duct covers from the outside of the unit and discard them. If a bottom supply / return is desired, remove the two bottom duct covers and discard them. No panel cutting or swapping is required! Convertible airflow design allows maximum field flexibility and minimum inventory.

FIELD INSTALLED ACCESSORIES - Accessories were designed for quick and easy installation. The motorized damper and economizers simply slide in, and electrical connections are made by modular plugs. Electric heaters mount easily, and knockouts are provided in the internal partitions to connect the elements to the control box single point kit.

The 356mm (14 in.) high roof curb is shipped knocked down. The roof curb has an insulated deck.

WIDE RANGE OF INDOOR AIRFLOWS - All indoor fan motors are belt-drive type providing maximum flexibility to handle most airflow requirements.

A fixed outdoor air damper with rain hood is standard on all units. It must be field-installed on either the return air duct cover for bottom air applications or on the return air ductwork for side air applications. The damper can be adjusted to allow up to 25% outdoor air to enter the unit's return air section. This same damper assembly can be used for barometric relief on units with economizer.

FULL PERIMETER BASE RAILS - The permanently attached base rails provide a solid foundation for the entire unit and protect the unit during shipment. The rails provide fork lift access from three sides, and rigging holes are also provided so that an overhead crane can be used to place the units on a roof.

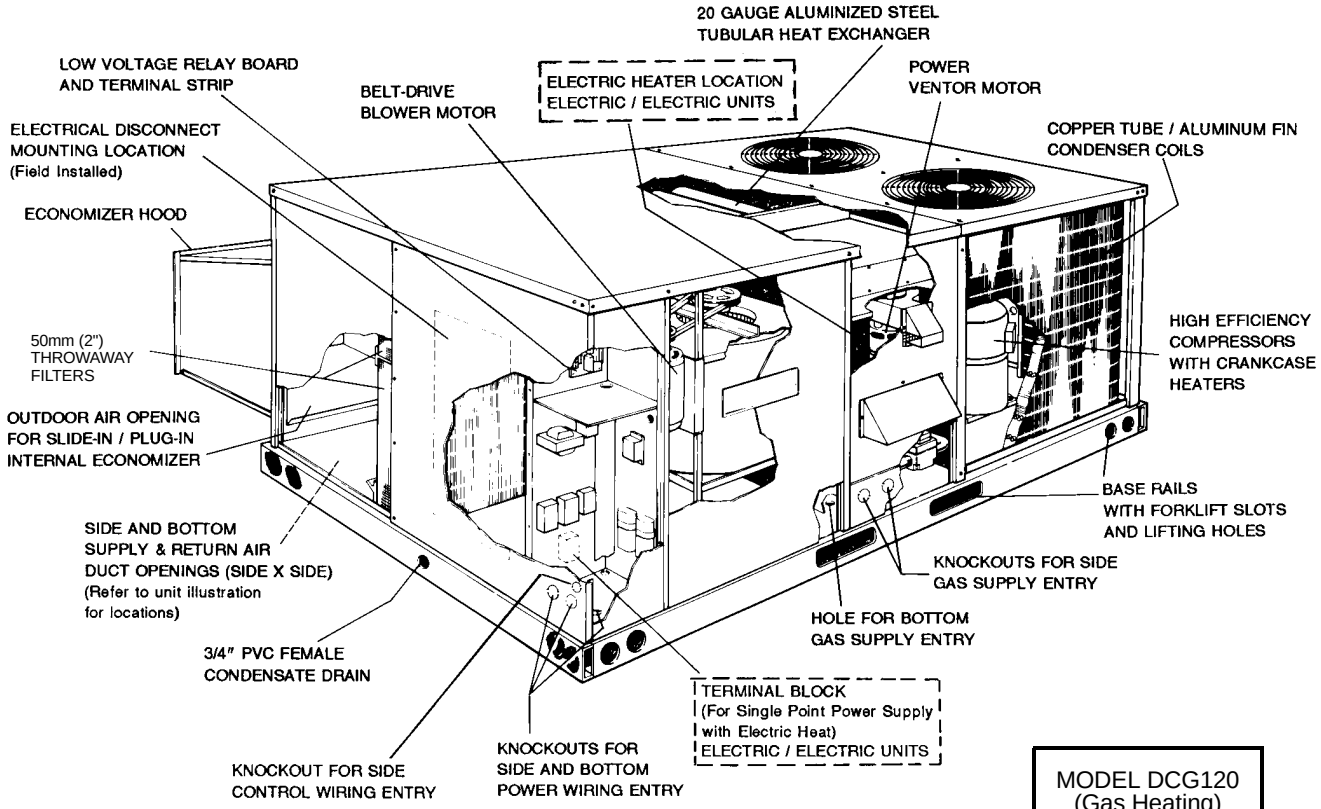
UTILITY CONNECTIONS MADE EASY - Gas and electric utility knockouts are provided in the bottom as well as the side of the unit. A clearly identified location is provided to mount a field supplied electrical disconnect switch. Utility connections can be made quickly and with a minimum amount of field labor.

SIMPLE CONTROL CIRCUIT - A low voltage printed circuit board contains a low voltage terminal strip. An additional set of pin connectors is also provided so that field interface of external controls will be simplified. The electrical control box is not located in the compressor compartment so the access cover can be removed for troubleshooting without affecting the normal system operating pressures.

AIR FILTERS - Units come standard with 50mm (2 in.) throwaway filters. The unit filter racks can accommodate 25mm (1 in.) or 50mm (2 in.) filters without any modifications.

SYSTEM PROTECTION - Crankcase heaters and internal overload protection are standard on all compressors. Each refrigeration circuit has a liquid line filter-drier, a discharge line high pressure switch and a suction line with a freezestat and low pressure switch to protect all system components. The units will operate down to 7°C (45°F) without any additional low ambient controls.

YORK® SUNLINE 2000™



MODEL DCG120
(Gas Heating)

TABLE OF CONTENTS

RATINGS

CAPACITY RATINGS - Cooling / Electric Heating

MODEL	COOLING CAPACITY		NOMINAL ELECTRIC HEAT CAPACITY (kW)
	kW	MBH	
D3CE090	26.4	90	9, 18, 24, 36
D3CE120	35.2	120	18, 24, 36, 54
D3CE150	44.0	150	18, 24, 36, 54

CAPACITY RATINGS - Cooling / Gas Heating

MODEL	COOLING CAPACITY		GAS HEATING CAPACITY					
	kW	MBH	INPUT		OUTPUT		TEMPERATURE RISE	
			kW	MBH	kW	MBH	°C	°F
D3CG090N130	26.4	90	47.7	163	37.7	130	-1 - 16	30 - 60
D3CG120N165	35.2	120	59.7	204	47.4	163	-1 - 16	30 - 60
D3CG150N165	44.0	150	59.7	204	47.4	163	-1 - 16	30 - 60

Note: All gas units are two-stage heating. First stage is 70% of total.

PHYSICAL DATA BASIC UNITS

COMPONENT DESCRIPTION			UNIT SIZE		
			090	120	150
EVAPORATOR BLOWER	CENTRIFUGAL BLOWER	DIA. x WD. (mm)	305 x 305	381 x 305	381 x 305
		DIA. x WD. (in.)	12 x 12	15 x 12	15 x 12
	BLOWER MOTOR	kW / hp	1.1 / 1.5	1.5 / 2.0	3 / 4
EVAPORATOR COIL	ROWS DEEP		3	3	3
	FINS PER 25mm (1in.)		13	13	13
	FACE AREA	m^2 / $Ft.^2$	0.73 / 7.8	1.02 / 10.9	1.25 / 13.4
CONDENSER FAN (Two Per Unit)	PROPELLER DIA.	mm / in.	610 / 24 ea.	610 / 24 ea.	610 / 24 ea.
	CONDENSER MOTOR	kW / hp	0.4 / 0.5ea.	0.4 / 0.5ea.	0.4 / 0.5ea..
	NOMINAL AIR FLOW	m^3/s	1.37 ea.	1.70 ea.	2.08 ea.
		cfm	2900 ea.	3600 ea.	4400 ea.
CONDENSER COIL	ROWS DEEP		2	2	2
	FINS PER 25mm (1in.)		13	13	13
	FACE AREA	m^2 / $Ft.^2$	1.55 / 16.7	2.23 / 24.0	2.73 / 29.3
AIR FILTERS (SEE NOTE)	QUANTITY PER UNIT	305 x 610 x 51 (mm) 12 x 24 x 2 (in.)	2	-	-
	QUANTITY PER UNIT	406 x 610 x 51 (mm) 16 x 24 x 2 (in.)	2	2	3
	QUANTITY PER UNIT	457 x 610 x 51 (mm) 18 x 24 x 2 (in.)	-	2	2
	TOTAL FACE AREA	m^2 / $Ft.^2$	0.87 / 9.3	1.05 / 11.3	1.30 / 14.0
CHARGE	REFRIGERANT 22	SYS. #1 (kg. / lbs.)	3.13 / 6.88	4.20 / 9.25	5.22 / 11.50
		SYS. #2 (kg. / lbs.)	3.13 / 6.88	4.28 / 9.44	4.76 / 10.50
UNIT WEIGHTS	BASIC UNIT	kg. / lbs.	499 / 1100	553 / 1220	667 / 1470

BASIC UNIT	SIZE	WEIGHTS kg (lbs)
	090	499 (1100)
	120	553 (1220)
	150	667 (1470)
ACCESSORIES		
Economizer		35 (77)
Roof Mounting Curb		70 (155)

COOLING CAPACITIES (m^3/s Air Flow) - MODEL 090

Air On Evaporator Coil		Total Cap.[1] kW	Power Input[2] kW	Sensible Capacity[1], kW Entering Dry Bulb Temp., °C					
m^3/s	WB °C			32	30	28	26	24	22
@27°C Air Temperature on Condenser Coil									
	23	34.2	7.7	26.2	22.6	19.0	15.5	11.9	-
	21	32.2	7.6	30.1	26.5	22.9	19.3	15.8	12.2
1.77	19	30.2	7.5	30.2	30.2	26.8	23.2	19.6	16.0
	17	29.1	7.5	29.1	29.1	29.1	25.8	22.2	18.6
	15	28.1	7.4	28.1	28.1	28.1	26.3	22.7	19.1
	23	33.2	7.7	23.0	20.0	17.1	14.1	11.2	-
	21	31.3	7.6	26.5	23.5	20.6	17.6	14.7	11.8
1.42	19	29.4	7.5	29.4	27.0	24.1	21.1	18.2	15.3
	17	28.3	7.5	28.3	28.3	26.4	23.5	20.5	17.6
	15	27.3	7.4	27.3	27.3	27.3	25.8	22.8	19.9
	23	29.7	7.7	18.4	16.2	13.9	11.7	9.4	-
	21	28.0	7.5	21.3	19.0	16.8	14.5	12.3	10.1
1.06	19	26.3	7.4	24.1	21.9	19.7	17.4	15.2	12.9
	17	25.3	7.4	25.3	23.8	21.6	19.3	17.1	14.8
	15	24.4	7.3	24.4	24.4	23.5	21.2	19.0	16.7
@35°C Air Temperature on Condenser Coil									
	23	30.9	8.5	25.3	21.8	18.2	14.6	11.0	-
	21	29.1	8.3	29.0	25.4	21.9	18.3	14.7	11.1
1.77	19	27.3	8.2	27.3	27.3	25.5	22.0	18.4	14.8
	17	26.6	8.2	26.6	26.6	26.6	23.9	20.3	16.8
	15	26.0	8.1	26.0	26.0	26.0	24.2	20.7	17.1
	23	30.0	8.5	22.0	19.0	16.1	13.2	10.2	-
	21	28.3	8.3	25.3	22.3	19.4	16.4	13.5	10.6
1.42	19	26.5	8.2	26.5	25.6	22.7	19.7	16.8	13.8
	17	25.9	8.2	25.9	25.9	24.4	21.5	18.5	15.6
	15	25.3	8.1	25.3	25.3	25.3	23.2	20.3	17.3
	23	26.9	8.5	17.6	15.3	13.1	10.9	8.6	-
	21	25.3	8.3	20.3	18.0	15.8	13.5	11.3	9.1
1.06	19	23.7	8.2	23.0	20.7	18.5	16.2	14.0	11.8
	17	23.2	8.2	23.2	22.2	19.9	17.7	15.4	13.2
	15	22.6	8.1	22.6	22.6	21.3	19.1	16.9	14.6
@46°C Air Temperature on Condenser Coil									
	23	26.8	9.6	23.4	19.8	16.2	12.6	9.1	-
	21	25.2	9.4	25.2	23.6	20.0	16.4	12.8	9.2
1.77	19	23.7	9.2	23.7	23.7	23.7	20.1	16.6	13.0
	17	22.7	9.1	22.7	22.7	22.7	20.9	17.3	13.8
	15	21.8	9.0	21.8	21.8	21.8	20.0	16.4	12.8
	23	26.8	9.5	20.4	17.5	14.6	11.6	8.7	-
	21	25.2	9.3	23.8	20.9	18.0	15.0	12.1	9.1
1.42	19	23.7	9.1	23.7	23.7	21.4	18.4	15.5	12.5
	17	22.7	9.0	22.7	22.7	22.3	19.4	16.4	13.5
	15	21.8	8.9	21.8	21.8	21.8	20.3	17.3	14.4
	23	24.3	9.4	16.4	14.1	11.9	9.7	7.4	-
	21	22.8	9.2	19.2	16.9	14.7	12.5	10.2	8.0
1.06	19	21.4	9.0	21.4	19.7	17.5	15.3	13.0	10.8
	17	20.6	8.9	20.6	20.5	18.3	16.0	13.8	11.5
	15	19.7	8.8	19.7	19.7	19.0	16.8	14.6	12.3

[1]These capacities are gross ratings. For net capacity, deduct the heat of the supply air blower motor. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include the condenser fan motors (Total 1 kW) and the compressor motors but not the supply air blower motor.

COOLING CAPACITIES (CFM Air Flow) - MODEL 090

Air On Evaporator Coil		Total Cap.[1] MBH	Power Input[2] kW	Sensible Capacity[1], MBH Entering Dry Bulb Temp., °F					
CFM	WB °F			90	86	82	79	75	72
@80°F Air Temperature on Condenser Coil									
	73	116.7	7.7	89.4	77.2	65.0	52.8	40.6	-
	70	109.9	7.6	102.6	90.4	78.2	66.0	53.8	41.5
3750	66	103.2	7.5	103.2	103.2	91.4	79.2	67.0	54.7
	63	99.4	7.5	99.4	99.4	99.4	88.0	75.7	63.5
	59	95.7	7.4	95.7	95.7	95.7	89.6	77.4	65.2
	73	113.3	7.7	78.3	68.3	58.3	48.2	38.2	-
	70	106.8	7.6	90.3	80.2	70.2	60.2	50.1	40.1
3000	66	100.2	7.5	100.2	92.2	82.1	72.1	62.1	52.1
	63	96.6	7.5	96.6	96.6	90.1	80.0	70.0	60.0
	59	93.0	7.4	93.0	93.0	93.0	88.0	77.9	67.9
	73	101.5	7.7	62.8	55.1	47.5	39.8	32.2	-
	70	95.6	7.5	72.6	64.9	57.3	49.6	42.0	34.3
2250	66	89.7	7.4	82.4	74.7	67.1	59.4	51.8	44.1
	63	86.5	7.4	86.5	81.2	73.6	65.9	58.3	50.6
	59	83.3	7.3	83.3	83.3	80.1	72.4	64.8	57.1
@95°F Air Temperature on Condenser Coil									
	73	105.5	8.5	86.5	74.2	62.0	49.8	37.6	-
	70	99.2	8.3	99.0	86.8	74.6	62.4	50.1	37.9
3750	66	93.0	8.2	93.0	93.0	87.1	74.9	62.7	50.5
	63	90.9	8.2	90.9	90.9	90.9	81.6	69.4	57.2
	59	88.8	8.1	88.8	88.8	88.8	82.7	70.5	58.3
	73	102.5	8.5	75.0	65.0	54.9	44.9	34.9	-
	70	96.5	8.3	86.2	76.2	66.1	56.1	46.1	36.0
3000	66	90.4	8.2	90.4	87.4	77.3	67.3	57.3	47.2
	63	88.3	8.2	88.3	88.3	83.3	73.3	63.2	53.2
	59	86.3	8.1	86.3	86.3	86.3	79.2	69.2	59.2
	73	91.8	8.5	60.0	52.3	44.7	37.0	29.4	-
	70	86.3	8.3	69.2	61.5	53.9	46.2	38.6	30.9
2250	66	80.9	8.2	78.3	70.7	63.1	55.4	47.8	40.1
	63	79.1	8.2	79.1	75.6	67.9	60.3	52.6	45.0
	59	77.3	8.1	77.3	77.3	72.8	65.2	57.5	49.9
@115°F Air Temperature on Condenser Coil									
	73	91.5	9.6	79.8	67.6	55.4	43.1	30.9	-
	70	86.1	9.4	86.1	80.4	68.1	55.9	43.7	31.5
3750	66	80.7	9.2	80.7	80.7	80.7	68.7	56.5	44.3
	63	77.5	9.1	77.5	77.5	77.5	71.4	59.2	47.0
	59	74.3	9.0	74.3	74.3	74.3	68.2	56.0	43.7
	73	91.4	9.5	69.8	59.7	49.7	39.7	29.6	-
	70	86.1	9.3	81.3	71.3	61.3	51.3	41.2	31.2
3000	66	80.7	9.1	80.7	80.7	72.9	62.9	52.8	42.8
	63	77.5	9.0	77.5	77.5	76.1	66.0	56.0	46.0
	59	74.2	8.9	74.2	74.2	74.2	69.2	59.2	49.2
	73	82.8	9.4	55.9	48.2	40.6	33.0	25.3	-
	70	78.0	9.2	65.4	57.8	50.2	42.5	34.9	27.2
2250	66	73.1	9.0	73.1	67.3	59.7	52.1	44.4	36.8
	63	70.2	8.9	70.2	70.0	62.3	54.7	47.0	39.4
	59	67.2	8.8	67.2	67.2	64.9	57.3	49.7	42.0

[1]These capacities are gross ratings. For net capacity, deduct the heat of the supply air blower motor. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include the condenser fan motors (Total 1 kW) and the compressor motors but not the supply air blower motor.

COOLING CAPACITIES (m^3/s Air Flow) - MODEL 120

Air On Evaporator Coil		Total Cap.[1] kW	Power Input[2] kW	Sensible Capacity[1], kW Entering Dry Bulb Temp., °C					
m^3/s	WB °C			32	30	28	26	24	22
@27°C Air Temperature on Condenser Coil									
	23	43.4	9.3	35.0	30.6	26.2	21.8	17.4	-
	21	41.0	9.2	39.4	35.0	30.6	26.3	21.9	17.5
2.36	19	38.6	9.1	38.6	38.6	35.1	30.7	26.3	21.9
	17	37.3	8.9	37.3	37.3	37.3	33.7	29.3	24.9
	15	36.0	8.8	36.0	36.0	36.0	33.8	29.4	25.0
	23	42.1	9.2	30.1	26.4	22.7	19.0	15.3	-
	21	39.8	9.1	34.0	30.3	26.6	22.9	19.2	15.4
1.89	19	37.4	9.0	37.4	34.2	30.5	26.8	23.0	19.3
	17	36.2	8.9	36.2	36.2	33.0	29.3	25.6	21.9
	15	35.0	8.8	35.0	35.0	35.0	31.9	28.2	24.5
	23	38.7	9.0	25.4	22.5	19.6	16.7	13.8	-
	21	36.5	8.9	28.7	25.9	23.0	20.1	17.2	14.3
1.42	19	34.4	8.8	32.1	29.2	26.4	23.5	20.6	17.7
	17	33.2	8.7	33.2	31.5	28.6	25.7	22.8	20.0
	15	32.1	8.6	32.1	32.1	30.9	28.0	25.1	22.2
@35°C Air Temperature on Condenser Coil									
	23	40.4	10.3	31.7	27.3	22.9	18.5	14.1	-
	21	38.1	10.1	36.7	32.3	27.9	23.5	19.1	14.7
2.36	19	35.9	9.9	35.9	35.9	32.9	28.5	24.1	19.7
	17	34.7	9.8	34.7	34.7	34.7	30.4	26.0	21.6
	15	33.6	9.7	33.6	33.6	33.6	31.4	27.0	22.6
	23	39.1	10.2	28.0	24.3	20.5	16.8	13.1	-
	21	36.9	10.0	32.5	28.8	25.1	21.3	17.6	13.9
1.89	19	34.7	9.8	34.7	33.3	29.6	25.9	22.2	18.4
	17	33.6	9.7	33.6	33.6	31.3	27.6	23.9	20.2
	15	32.5	9.6	32.5	32.5	32.5	29.3	25.6	21.9
	23	35.5	10.1	22.6	19.7	16.9	14.0	11.1	-
	21	33.5	9.9	26.4	23.5	20.6	17.7	14.8	11.9
1.42	19	31.5	9.7	30.1	27.2	24.3	21.4	18.6	15.7
	17	30.5	9.6	30.5	28.6	25.7	22.9	20.0	17.1
	15	29.5	9.5	29.5	29.5	27.2	24.3	21.4	18.5
@46°C Air Temperature on Condenser Coil									
	23	35.8	11.6	30.4	26.0	21.6	17.2	12.9	-
	21	33.8	11.3	33.8	30.5	26.1	21.7	17.3	12.9
2.36	19	31.7	11.1	31.7	31.7	30.5	26.1	21.7	17.3
	17	31.0	11.0	31.0	31.0	31.0	27.5	23.1	18.7
	15	30.2	10.9	30.2	30.2	30.2	28.0	23.6	19.2
	23	34.3	11.5	26.6	22.9	19.2	15.5	11.8	-
	21	32.4	11.2	30.6	26.9	23.2	19.4	15.7	12.0
1.89	19	30.4	10.9	30.4	30.4	27.1	23.4	19.7	16.0
	17	29.7	10.9	29.7	29.7	28.3	24.6	20.9	17.2
	15	28.9	10.8	28.9	28.9	28.9	25.8	22.1	18.4
	23	32.0	11.2	21.8	18.9	16.0	13.1	10.3	-
	21	30.2	10.9	25.1	22.2	19.3	16.5	13.6	10.7
1.42	19	28.3	10.6	28.3	25.6	22.7	19.8	16.9	14.0
	17	27.7	10.6	27.7	26.6	23.7	20.8	17.9	15.1
	15	27.0	10.5	27.0	27.0	24.7	21.8	19.0	16.1

[1]These capacities are gross ratings. For net capacity, deduct the heat of the supply air blower motor. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include the condenser fan motors (Total 1 kW) and the compressor motors but not the supply air blower motor.

COOLING CAPACITIES (CFM Air Flow) - MODEL 120

Air On Evaporator Coil		Total Cap.[1] MBH	Power Input[2] kW	Sensible Capacity[1], MBH Entering Dry Bulb Temp., °F					
CFM	WB °F			90	86	82	79	75	72
@80°F Air Temperature on Condenser Coil									
	73	148.2	9.3	119.4	104.3	89.3	74.3	59.3	-
	70	139.9	9.2	134.6	119.6	104.6	89.6	74.6	59.6
5000	66	131.6	9.1	131.6	131.6	119.8	104.8	89.8	74.8
	63	127.3	8.9	127.3	127.3	127.3	114.9	99.9	84.9
	59	123.0	8.8	123.0	123.0	123.0	115.5	100.5	85.5
	73	143.7	9.2	102.8	90.2	77.5	64.8	52.1	-
	70	135.7	9.1	116.1	103.4	90.7	78.0	65.4	52.7
4000	66	127.6	9.0	127.6	116.6	104.0	91.3	78.6	65.9
	63	123.5	8.9	123.5	123.5	112.8	100.1	87.4	74.7
	59	119.3	8.8	119.3	119.3	119.3	108.9	96.2	83.5
	73	132.0	9.0	86.6	76.7	66.9	57.1	47.2	-
	70	124.7	8.9	98.1	88.3	78.4	68.6	58.8	48.9
3000	66	117.3	8.8	109.6	99.8	90.0	80.1	70.3	60.5
	63	113.4	8.7	113.4	107.5	97.6	87.8	78.0	68.1
	59	109.6	8.6	109.6	109.6	105.3	95.5	85.6	75.8
@95°F Air Temperature on Condenser Coil									
	73	137.9	10.3	108.1	93.1	78.1	63.1	48.1	-
	70	130.1	10.1	125.2	110.2	95.2	80.2	65.2	50.2
5000	66	122.3	9.9	122.3	122.3	112.3	97.3	82.3	67.3
	63	118.5	9.8	118.5	118.5	118.5	103.8	88.8	73.8
	59	114.7	9.7	114.7	114.7	114.7	107.2	92.1	77.1
	73	133.3	10.2	95.4	82.7	70.1	57.4	44.7	-
	70	125.8	10.0	110.9	98.2	85.5	72.8	60.2	47.5
4000	66	118.2	9.8	118.2	113.6	100.9	88.3	75.6	62.9
	63	114.5	9.7	114.5	114.5	106.8	94.1	81.5	68.8
	59	110.8	9.6	110.8	110.8	110.8	100.0	87.3	74.7
	73	121.2	10.1	77.2	67.3	57.5	47.7	37.9	-
	70	114.4	9.9	89.9	80.1	70.3	60.4	50.6	40.8
3000	66	107.5	9.7	102.7	92.8	83.0	73.2	63.3	53.5
	63	104.2	9.6	104.2	97.7	87.8	78.0	68.2	58.3
	59	100.8	9.5	100.8	100.8	92.7	82.9	73.0	63.2
@115°F Air Temperature on Condenser Coil									
	73	122.3	11.6	103.9	88.9	73.9	58.9	43.8	-
	70	115.3	11.3	115.3	104.0	89.0	74.0	59.0	44.0
5000	66	108.3	11.1	108.3	108.3	104.1	89.1	74.1	59.1
	63	105.7	11.0	105.7	105.7	105.7	93.8	78.8	63.7
	59	103.1	10.9	103.1	103.1	103.1	95.6	80.6	65.6
	73	117.1	11.5	90.9	78.2	65.5	52.8	40.2	-
	70	110.4	11.2	104.3	91.7	79.0	66.3	53.6	41.0
4000	66	103.7	10.9	103.7	103.7	92.5	79.8	67.1	54.4
	63	101.2	10.9	101.2	101.2	96.6	84.0	71.3	58.6
	59	98.8	10.8	98.8	98.8	98.8	88.1	75.4	62.8
	73	109.3	11.2	74.3	64.5	54.7	44.8	35.0	-
	70	103.0	10.9	85.7	75.8	66.0	56.2	46.4	36.5
3000	66	96.7	10.6	96.7	87.2	77.4	67.5	57.7	47.9
	63	94.4	10.6	94.4	90.7	80.9	71.0	61.2	51.4
	59	92.1	10.5	92.1	92.1	84.3	74.5	64.7	54.8

[1]These capacities are gross ratings. For net capacity, deduct the heat of the supply air blower motor. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include the condenser fan motors (Total 1 kW) and the compressor motors but not the supply air blower motor.

COOLING CAPACITIES (CFM Air Flow) - MODEL 150

Air On Evaporator Coil		Total Cap.[1] kW	Power Input[2] kW	Sensible Capacity[1], kW					
				Entering Dry Bulb Temp., °C					
m^3/s	WB °C			32	30	28	26	24	22
@ 27°C Air Temperature on Condenser Coil									
	23	53.0	12.9	45	39	33	27	21	-
	21	50.6	12.7	50	44	38	33	27	21
3.00	19	48.1	12.4	48	48	44	38	32	26
	17	46.0	12.2	46	46	46	42	36	30
	15	43.9	12.0	44	44	44	41	35	29
	23	51.7	12.4	39	34	29	24	20	-
	21	49.3	12.2	44	39	34	29	24	19
2.40	19	46.9	12.0	47	43	39	34	29	24
	17	44.9	11.8	45	45	42	37	32	27
	15	42.8	11.6	43	43	43	40	36	31
	23	47.9	12.4	33	29	26	22	18	-
	21	45.7	12.2	37	33	30	26	22	18
1.80	19	43.4	11.9	41	37	34	30	26	22
	17	41.6	11.8	42	40	37	33	29	25
	15	39.7	11.6	40	40	40	36	32	28
@ 35°C Air Temperature on Condenser Coil									
	23	50.7	14.2	42	36	30	24	18	-
	21	47.5	13.8	47	42	36	30	24	18
3.00	19	44.3	13.5	44	44	42	36	30	24
	17	42.8	13.4	43	43	43	39	33	27
	15	41.3	13.2	41	41	41	38	32	27
	23	49.4	14.0	36	31	26	22	17	-
	21	46.3	13.6	41	37	32	27	22	17
2.40	19	43.2	13.2	43	42	37	32	27	23
	17	41.7	13.1	42	42	40	35	30	25
	15	40.3	13.0	40	40	40	38	33	28
	23	46.2	13.9	31	27	23	19	15	-
	21	43.2	13.5	35	31	28	24	20	16
1.80	19	40.3	13.2	40	36	32	29	25	21
	17	39.0	13.0	39	39	35	31	27	23
	15	37.6	12.9	38	38	37	33	30	26
@ 46°C Air Temperature on Condenser Coil									
	23	44.2	15.7	39	33	27	21	15	-
	21	41.4	15.3	41	39	33	27	21	15
3.00	19	38.6	14.9	39	39	39	33	27	21
	17	37.6	14.8	38	38	38	35	29	23
	15	36.6	14.7	37	37	37	34	28	22
	23	43.1	15.5	34	29	24	19	14	-
	21	40.4	15.1	39	34	29	24	20	15
2.40	19	37.6	14.7	38	38	35	30	25	20
	17	36.6	14.6	37	37	36	31	27	22
	15	35.7	14.5	36	36	36	33	28	24
	23	40.5	15.3	28	25	21	17	13	-
	21	37.9	14.9	33	29	25	22	18	14
1.80	19	35.4	14.5	35	34	30	26	22	19
	17	34.4	14.4	34	34	32	28	24	20
	15	33.5	14.3	34	34	33	29	26	22

[1]These capacities are gross ratings. For net capacity, deduct the heat of the supply air blower motor. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include the condenser fan motors (Total 1 kW) and the compressor motors but not the supply air blower motor.

COOLING CAPACITIES (CFM Air Flow) - MODEL 150

Air on Evaporator Coil		Total Cap.[1] MBH	Power Input[2] kW	Sensible Capacity[1], MBH Entering Dry Bulb Temp., °F					
CFM	WB °F			90	86	82	79	75	72
@80°F Air Temperature on Condenser Coil									
	73	181	12.9	154	134	113	93	73	-
	70	173	12.7	171	151	131	111	91	71
6360	66	164	12.4	164	164	149	129	109	89
	63	157	12.2	157	157	157	142	122	102
	59	150	12.0	150	150	150	140	120	100
	73	176	12.4	133	116	100	83	67	-
	70	168	12.2	149	132	116	99	83	66
5090	66	160	12.0	160	148	131	115	98	82
	63	153	11.8	153	153	143	126	110	93
	59	146	11.6	146	146	146	138	121	105
	73	163	12.4	113	100	87	74	61	-
	70	156	12.2	127	114	101	88	75	62
3810	66	148	11.9	141	128	115	102	89	76
	63	142	11.8	142	138	125	112	99	86
	59	135	11.6	135	135	135	122	109	96
@95°F Air Temperature on Condenser Coil									
	73	173	14.2	142	122	102	82	61	-
	70	162	13.8	162	142	122	102	82	62
6360	66	151	13.5	151	151	142	122	102	82
	63	146	13.4	146	146	146	133	113	93
	59	141	13.2	141	141	141	131	111	91
	73	169	14.0	123	107	90	74	57	-
	70	158	13.6	141	125	108	92	75	59
5090	66	147	13.2	147	143	126	110	93	77
	63	142	13.1	142	142	136	120	103	86
	59	137	13.0	137	137	137	129	113	96
	73	157	13.9	104	91	78	66	53	-
	70	148	13.5	120	107	94	81	68	56
3810	66	138	13.2	136	123	110	97	84	71
	63	133	13.0	133	132	119	106	93	80
	59	128	12.9	128	128	127	114	101	88
@115°F Air Temperature on Condenser Coil									
	73	151	15.7	132	112	92	72	52	-
	70	141	15.3	141	132	112	92	72	52
6360	66	132	14.9	132	132	132	112	92	72
	63	128	14.8	128	128	128	118	98	78
	59	125	14.7	125	125	125	115	95	75
	73	147	15.5	115	98	82	65	49	-
	70	138	15.1	133	116	100	83	67	50
5090	66	128	14.7	128	128	118	101	85	68
	63	125	14.6	125	125	124	107	91	74
	59	122	14.5	122	122	122	113	97	80
	73	138	15.3	97	84	71	58	45	-
	70	129	14.9	113	100	87	74	61	48
3810	66	121	14.5	121	116	103	90	77	64
	63	118	14.4	118	118	108	95	82	69
	59	114	14.3	114	114	113	100	87	74

[1]These capacities are gross ratings. For net capacity, deduct the heat of the supply air blower motor. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include the condenser fan motors (Total 1 kW) and the compressor motors but not the supply air blower motor.

BLOWER PERFORMANCE - (MODEL 090 UNIT SUPPLY AIR)

SIDEFLOW DUCT APPLICATIONS (m^3/s)

BLOWER SPEED, RPM	AIRFLOW														
	1.06 m^3/s			1.24 m^3/s			1.42 m^3/s			1.59 m^3/s			1.77 m^3/s		
	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)
950	191	0.8	1.0	138	0.9	1.1	78	1.1	1.2	-	-	-	-	-	-
1005	228	0.9	1.1	176	1.0	1.2	116	1.1	1.3	43	1.3	1.5	-	-	-
1060	271	1.0	1.1	218	1.1	1.3	159	1.2	1.4	86	1.4	1.6	-	-	-
1120	322	1.0	1.2	270	1.2	1.4	210	1.3	1.6	138	1.5	1.8	60	1.7	2.0
1175	375	1.1	1.4	323	1.3	1.5	263	1.4	1.7	190	1.6	1.9	-	-	-
1230	432	1.2	1.5	380	1.4	1.7	320	1.6	1.9	-	-	-	-	-	-

DOWNFLOW DUCT APPLICATIONS (m^3/s)

BLOWER SPEED, RPM	AIRFLOW														
	1.06 m^3/s			1.24 m^3/s			1.42 m^3/s			1.59 m^3/s			1.77 m^3/s		
	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)
950	173	0.8	1.0	116	0.9	1.1	46	1.1	1.2	-	-	-	-	-	-
1005	211	0.9	1.1	154	1.0	1.2	84	1.1	1.3	-	-	-	-	-	-
1060	253	1.0	1.1	196	1.1	1.3	126	1.2	1.4	43	1.4	1.6	-	-	-
1120	305	1.0	1.2	248	1.2	1.4	178	1.3	1.6	95	1.5	1.8	-	-	-
1175	357	1.1	1.4	300	1.3	1.5	230	1.4	1.7	148	1.6	1.9	-	-	-
1230	415	1.2	1.5	358	1.4	1.7	288	1.6	1.9	-	-	-	-	-	-

SIDEFLOW DUCT APPLICATIONS (CFM)

BLOWER SPEED, RPM	AIRFLOW														
	2250 CFM			2625 CFM			3000 CFM			3375 CFM			3750 CFM		
	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)
950	0.8	1.1	1.0	0.6	1.3	1.1	0.3	1.4	1.2	-	-	-	-	-	-
1005	0.9	1.2	1.1	0.7	1.3	1.2	0.5	1.5	1.3	0.2	1.7	1.5	-	-	-
1060	1.1	1.3	1.1	0.9	1.5	1.3	0.6	1.6	1.4	0.3	1.8	1.6	-	-	-
1120	1.3	1.4	1.2	1.1	1.6	1.4	0.8	1.8	1.6	0.6	2.0	1.8	0.2	2.3	2.0
1175	1.5	1.5	1.4	1.3	1.7	1.5	1.1	1.9	1.7	0.8	2.2	1.9	-	-	-
1230	1.7	1.7	1.5	1.5	1.9	1.7	1.3	2.1	1.9	-	-	-	-	-	-

DOWNFLOW DUCT APPLICATIONS (CFM)

BLOWER SPEED, RPM	AIRFLOW														
	2250 CFM			2625 CFM			3000 CFM			3375 CFM			3750 CFM		
	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)
950	0.7	1.1	1.0	0.5	1.3	1.1	0.2	1.4	1.2	-	-	-	-	-	-
1005	0.8	1.2	1.1	0.6	1.3	1.2	0.3	1.5	1.3	-	-	-	-	-	-
1060	1.0	1.3	1.1	0.8	1.5	1.3	0.5	1.6	1.4	0.2	1.8	1.6	-	-	-
1120	1.2	1.4	1.2	1.0	1.6	1.4	0.7	1.8	1.6	0.4	2.0	1.8	-	-	-
1175	1.4	1.5	1.4	1.2	1.7	1.5	0.9	1.9	1.7	0.6	2.2	1.9	-	-	-
1230	1.7	1.7	1.5	1.4	1.9	1.7	1.2	2.1	1.9	-	-	-	-	-	-

NOTES: 1. Blower performance includes a wet evaporator coil, the standard unit filters and the heat exchangers.
2. Refer to the "ACCESSORY STATIC RESISTANCES table.
ESP = External Static Pressure available for the supply and return air duct sytem. All internal unit resistances have been deducted from the total static pressure of the blower.

BLOWER PERFORMANCE - (MODEL 120 UNIT SUPPLY AIR)

SIDEFLOW DUCT APPLICATIONS (m^3/s)

BLOWER SPEED, RPM	AIRFLOW														
	1.42 m^3/s			1.65 m^3/s			1.89 m^3/s			2.12 m^3/s			2.36 m^3/s		
	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)
880	283	1.1	1.3	231	1.2	1.5	176	1.4	1.7	102	1.6	2.0	20	1.8	2.2
930	332	1.2	1.5	282	1.4	1.7	228	1.5	1.9	156	1.7	2.1	76	1.9	2.4
975	377	1.3	1.6	329	1.5	1.8	276	1.7	2.1	206	1.9	2.3	127	2.1	2.6
1025	429	1.4	1.8	381	1.6	2.0	330	1.8	2.2	261	2.0	2.5	184	2.3	2.8
1070	475	1.5	1.9	429	1.7	2.1	380	2.0	2.4	312	2.2	2.7	236	2.4	3.0
1120	528	1.7	2.0	484	1.9	2.3	436	2.1	2.6	370	2.4	2.9	-	-	-

DOWNFLOW DUCT APPLICATIONS (m^3/s)

BLOWER SPEED, RPM	AIRFLOW														
	1.42 m^3/s			1.65 m^3/s			1.89 m^3/s			2.12 m^3/s			2.36 m^3/s		
	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)
880	250	1.1	1.3	186	1.2	1.5	118	1.4	1.7	27	1.6	2.0	-	-	-
930	300	1.2	1.5	237	1.4	1.7	171	1.5	1.9	82	1.7	2.1	-	-	-
975	345	1.3	1.6	284	1.5	1.8	219	1.7	2.1	131	1.9	2.3	37	2.1	2.6
1025	396	1.4	1.8	336	1.6	2.0	273	1.8	2.2	187	2.0	2.5	94	2.3	2.8
1070	443	1.5	1.9	385	1.7	2.1	323	2.0	2.4	238	2.2	2.7	147	2.4	3.0
1120	496	1.7	2.0	439	1.9	2.3	379	2.1	2.6	295	2.4	2.9	-	-	-

SIDEFLOW DUCT APPLICATIONS (CFM)

BLOWER SPEED, RPM	AIRFLOW														
	3000 CFM			3500 CFM			4000 CFM			4500 CFM			5000 CFM		
	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)
880	1.1	1.5	1.3	0.9	1.7	1.5	0.7	1.9	1.7	0.4	2.1	2.0	0.1	2.4	2.2
930	1.3	1.6	1.5	1.1	1.8	1.7	0.9	2.1	1.9	0.6	2.3	2.1	0.3	2.6	2.4
975	1.5	1.7	1.6	1.3	2.0	1.8	1.1	2.2	2.1	0.8	2.5	2.3	0.5	2.8	2.6
1025	1.7	1.9	1.8	1.5	2.2	2.0	1.3	2.4	2.2	1.0	2.7	2.5	0.7	3.1	2.8
1070	1.9	2.1	1.9	1.7	2.3	2.1	1.5	2.6	2.4	1.3	2.9	2.7	0.9	3.3	3.0
1120	2.1	2.2	2.0	1.9	2.5	2.3	1.7	2.8	2.6	1.5	3.2	2.9	-	-	-

DOWNFLOW DUCT APPLICATIONS (CFM)

BLOWER SPEED, RPM	AIRFLOW														
	3000 CFM			3500 CFM			4000 CFM			4500 CFM			5000 CFM		
	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)
880	1.0	1.5	1.3	0.7	1.7	1.5	0.5	1.9	1.7	0.1	2.1	2.0	-	-	-
930	1.2	1.6	1.5	1.0	1.8	1.7	0.7	2.1	1.9	0.3	2.3	2.1	-	-	-
975	1.4	1.7	1.6	1.1	2.0	1.8	0.9	2.2	2.1	0.5	2.5	2.3	0.1	2.8	2.6
1025	1.6	1.9	1.8	1.4	2.2	2.0	1.1	2.4	2.2	0.7	2.7	2.5	0.4	3.1	2.8
1070	1.8	2.1	1.9	1.5	2.3	2.1	1.3	2.6	2.4	1.0	2.9	2.7	0.6	3.3	3.0
1120	2.0	2.2	2.0	1.8	2.5	2.3	1.5	2.8	2.6	1.2	3.2	2.9	-	-	-

NOTES: 1. Blower performance includes a wet evaporator coil, the standard unit filters and the heat exchangers.
2. Refer to the "ACCESSORY STATIC RESISTANCES table.
ESP = External Static Pressure available for the supply and return air duct sytem. All internal unit resistances have been deducted from the total static pressure of the blower.

BLOWER PERFORMANCE - (150 UNIT SUPPLY AIR)

SIDEFLOW DUCT APPLICATIONS (M^3/S)

BLOWER SPEED, RPM	AIRFLOW														
	1.80 m^3/s			2.10 m^3/s			2.40 m^3/s			2.70 m^3/s			3.00 m^3/s		
	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (k)W	ESP (Pa)	Output (k)W	Input (k)W
960	270	1.5	1.8	179	1.7	2.1	91	2.1	2.5	22	2.6	3.1	-	-	-
1000	321	1.6	2.0	229	1.9	2.3	140	2.3	2.7	70	2.8	3.3	-	-	-
1040	372	1.8	2.2	280	2.1	2.5	190	2.5	3.0	119	3.0	3.6	44	3.7	4.4
1080	424	2.0	2.4	331	2.3	2.8	240	2.7	3.3	169	3.3	3.9	93	3.9	4.7
1120	476	2.3	2.7	382	2.5	3.0	291	3.0	3.6	219	3.5	4.2	142	4.2	5.0
1160	529	2.5	3.0	434	2.8	3.3	342	3.2	3.9	269	3.8	4.5	-	-	-

DOWNFLOW DUCT APPLICATIONS (M^3/S)

BLOWER SPEED, RPM	AIRFLOW														
	1.80 m^3/s			2.10 m^3/s			2.40 m^3/s			2.70 m^3/s			3.00 m^3/s		
	ESP (Pa)	Output (k)W	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)	ESP (Pa)	Output (kW)	Input (kW)
960	213	1.5	1.8	104	1.7	2.1	-	-	-	-	-	-	-	-	-
1000	264	1.6	2.0	154	1.9	2.3	51	2.3	2.7	-	-	-	-	-	-
1040	315	1.8	2.2	205	2.1	2.5	100	2.5	3.0	30	3.0	3.6	-	-	-
1080	367	2.0	2.4	256	2.3	2.8	151	2.7	3.3	79	3.3	3.9	-	-	-
1120	419	2.3	2.7	307	2.5	3.0	201	3.0	3.6	129	3.5	4.2	42	4.2	5.0
1160	472	2.5	3.0	360	2.8	3.3	253	3.2	3.9	179	3.8	4.5	-	-	-

SIDEFLOW DUCT APPLICATIONS (CFM)

BLOWER SPEED, RPM	AIRFLOW														
	3810 CFM			4450 CFM			5090 CFM			5725 CFM			6360 CFM		
	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp	Input (kW)	ESP (iwg)	Output (bhp)	Input 9kW)	ESP (iwg)	Output (bhp)	Input (kW)
960	1.1	2.0	1.8	0.7	2.3	2.1	0.4	2.8	2.5	0.1	3.5	3.1	-	-	-
1000	1.3	2.2	2.0	0.9	2.5	2.3	0.6	3.1	2.7	0.3	3.7	3.3	-	-	-
1040	1.5	2.4	2.2	1.1	2.8	2.5	0.8	3.3	3.0	0.5	4.0	3.6	0.2	4.9	4.4
1080	1.7	2.7	2.4	1.3	3.1	2.8	1.0	3.7	3.3	0.7	4.4	3.9	0.4	5.2	4.7
1120	1.9	3.0	2.7	1.5	3.4	3.0	1.2	4.0	3.6	0.9	4.7	4.2	0.6	5.6	5.0
1160	2.1	3.3	3.0	1.7	3.7	3.3	1.4	4.3	3.9	1.1	5.1	4.5	-	—	-

DOWNFLOW DUCT APPLICATIONS (CFM)

BLOWER SPEED, RPM	AIRFLOW														
	3810 CFM			4450 CFM			5090 CFM			5725 CFM			6360 CFM		
	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)	ESP (iwg)	Output (bhp)	Input (kW)
960	0.9	2.0	1.8	0.4	2.3	2.1	-	-	-	-	-	-	-	-	-
1000	1.1	2.2	2.0	0.6	2.5	2.3	0.2	3.1	2.7	-	-	-	-	-	-
1040	1.3	2.4	2.2	0.8	2.8	2.5	0.4	3.3	3.0	0.1	4.0	3.6	-	-	-
1080	1.5	2.7	2.4	1.0	3.1	2.8	0.6	3.7	3.3	0.3	4.4	3.9	-	-	-
1120	1.7	3.0	2.7	1.2	3.4	3.0	0.8	4.0	3.6	0.5	4.7	4.2	0.2	5.6	5.0
1160	1.9	3.3	3.0	1.4	3.7	3.3	1.0	4.3	3.9	0.7	5.1	4.5	-	-	-

NOTES: 1. Blower performance includes a wet evaporator coil, the standard unit filters and the heat exchangers.
2. Refer to the "ACCESSORY STATIC RESISTANCES table.
ESP = External Static Pressure available for the supply and return air duct sytem. All internal unit resistances have been deducted from the total static pressure of the blower.

BLOWER MOTOR AND DRIVE DATA

UNIT SIZE (MBH)	BLOWER RANGE (RPM)	MOTOR*			ADJUSTABLE MOTOR PULLEY			FIXED BLOWER PULLEY		BELTS		
		HP	kW	FRAME SIZE	PITCH DIA. (mm / in.)	BORE (mm / in.)	TURNS OPEN	PITCH DIA. (mm / in.)	BORE (mm / in.)	PITCH LENGTH (mm / in.)	DESIG-NATION	QTY
090	950-1230	1.5	1.1	56	86 - 112 / 3.4 - 4.4	22.2 / 0.875	5 - 0	132 / 5.2	25 / 1	1227 / 48.3	A47	1
120	880-1120	2	1.5	56	94 - 119 / 3.7 - 4.7	28.6 / 0.125	6 - 1	155 / 6.1	25 / 1	1417 / 55.8	BX54	1
150	960-1160	4	3	184T	124-150 / 4.9-5.9	28.6 / 0.125	6 - 1	188 / 7.4	25 / 1	1519 / 59.8	BX58	1

* All motors are 1750 RPM, have solid bases and are inherently protected. These motors can be selectedto operate into their service factor because they are located in the moving air, upstream of any heating device.

ACCESSORY STATIC RESISTANCES*

EXTERNAL STATIC PRESSURE DROP

MODELS	DESCRIPTION		RESISTANCE, Pa/IWG m^3/s (CFM)				
			0.94 (2000)	1.41 (3000)	1.89 (4000)	2.36 (5000)	2.83 (6000)
DCE DCG	Economizer/Motorized Damper		5.0 / 0.02	5.0 / 0.02	7.5 / 0.03	12.5 / 0.05	17.4 / 0.07
DCE	Electric Heaters	9 KW**	15 / 0.06	27 / 0.11	50 / 0.20	77 / 0.31	111 / 0.45
		18 KW					
		24 KW		30 / 0.12	52 / 0.21	82 / 0.33	119 / 0.48
		36 KW	17 / 0.07	32 / 0.13	57 / 0.23	87 / 0.35	129 / 0.52
		54 KW***	-	37 / 0.15	64 / 0.26	99 / 0.40	144 / 0.58

*Deduct these resistance values from the available unit external static pressure shown in the respective Blower Performance Table.

**9 KW Heater is only available on 7-1/2 Units.

***54 KW Heater is only available on 10 and 12-1/2 Ton Units.

COMPONENT WEIGHTS, kg (lbs)

COMPONENT			MODELS DCE & DCG		
			090	120	150
Basic Unit	DCE (Cooling only)		463 (1020)	508 (1120)	567 (1250)
	DCG (Gas / Electric)	130 Mbh Output	499 (1100)	-	-
		165 Mbh Output	-	553 (1220)	658 (1450)
Options and Accessories	Economizer		35 (77)	35 (77)	35 (77)
	Motorized Outdoor Air Damper		34 (75)	34 (75)	34 (75)
	Electric Heat (Nominal KW) (DCE only)	9 KW	9 (19)	-	-
		18 KW	11 (24)	11 (24)	11 (24)
		24 KW	12 (27)	12 (27)	12 (27)
		36 KW	14 (30)	14 (30)	14 (30)
		54 KW	-	17 (37)	17 (37)
	Roof Mounting Curb		70 (155)	70 (155)	70 (155)

ELECTRICAL DATA - Basic Units

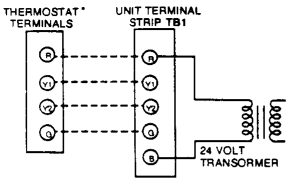
MODEL	POWER SUPPLY	COMPRESSOR (#1 and #2)		OUTDOOR FAN MOTOR, 0.5 HP / 0.4 kW (#1 & #2) FLA, EACH	SUPPLY AIR BLOWER MOTOR			TOTAL UNIT AMPACITY, (AMPS)	MAX. FUSE SIZE (gl.)[1]
		RLA EACH	LRA EACH		kW	HP	FLA		
090	380-415/3/50	8.3	69	2.4	1.1	1½	3.9	27.5	35
120	380-415/3/50	9.6	73	2.4	1.5	2	4.9	31.3	40
150	380-415/3/50	14.1	108 / 128	2.4	3	4	7.5	44.0	50

NOTES: 1. Slow blow type fuse. 2. Field wire sizes based on coppper conductors,105°C insulation, 3-phase in conduit.

FIELD WIRING - DCE/DCG Electric/Electric and Gas/Electric Units

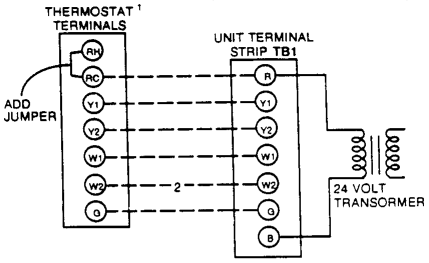
CONTROL WIRING

COOLING ONLY (24 VOLT THERMOSTAT)



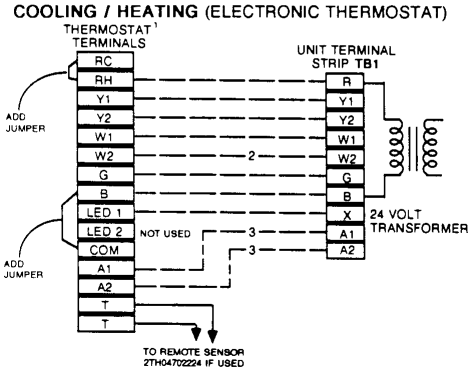
*24 Volt Thermostat 2TH04701224.

COOLING / HEATING (24 VOLT THERMOSTAT)



1 24 Volt Thermostat 2TH04701024.
2 Second stage heating is not required on units with a single stage electric heater.

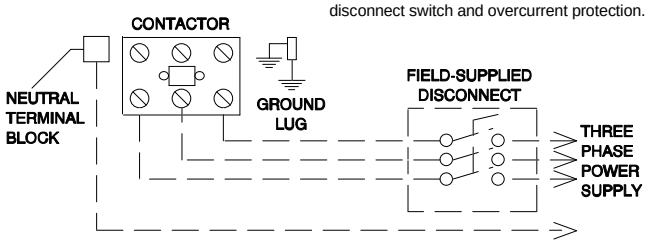
COOLING / HEATING (ELECTRONIC THERMOSTAT)



1 Electronic programmable Thermostat 2ET04700224(includes subbase).
2 Second stage heating is not required on units with a single stage electric heater.
3 Terminals A1 and A2 provide a relay output to close the outdoor economizer dampers when the thermostat switches to the set-back position.

POWER WIRING

NOTE: Refer to electrical data tables to size the wire, disconnect switch and overcurrent protection.



ELECTRICAL DATA - Cooling / Electric Heating (090 - 150)

MODEL DCE	POWER SUPPLY	HEATER ACCESSORY MODEL NO.	SUPPLY AIR BLOWER MOTOR (FLA)	ELECTRIC HEATERS			TOTAL UNIT AMPACITY (AMPS)	MAX. FUSE SIZE (AMPS)
				kW	STAGES	AMPS		
090	380-3-50	2HE04510946	3.9	5.6	1	8.6	27.5	35
		2HE04511846		11.3	2	17.1	27.5	35
		2HE04512446		15.0	2	22.9	33.4	35
		2HE04513646		22.6	2	34.3	47.7	50
	415-3-50	2HE04510946		6.7	1	9.4	27.5	35
		2HE04511846		13.5	2	18.7	28.3	35
		2HE04512446		17.9	2	25.0	36.1	40
		2HE04513646		26.9	2	37.4	51.7	60
120	380-3-50	2HE04511846	4.9	11.3	2	17.1	31.3	40
		2HE04512446		15.0	2	22.9	34.7	40
		2HE04513646		22.6	2	34.3	49.0	50
		2HE04515446		33.8	2	51.4	70.4	80
	415-3-50	2HE04511846		13.5	2	18.7	31.3	40
		2HE04512446		17.9	2	25.0	37.3	40
		2HE04513646		26.9	2	37.4	52.9	60
		2HE04515446		40.4	2	56.2	76.3	80
150	380-3-50	2HE04511946	7.5	11.3	2	17.1	44.0	50
		2HE04512446		15.0	2	22.9	44.0	50
		2HE04513646		22.6	2	34.3	52.3	60
		2HE04515446		33.8	2	51.4	73.6	80
	415-3-50	2HE04511846		13.5	2	18.7	44.0	50
		2HE04512446		17.9	2	25.0	44.0	50
		2HE04513646		26.9	2	37.4	56.1	60
		2HE04515446		40.4	2	56.2	79.6	80

FIELD-INSTALLED ACCESSORIES

SINGLE INPUT ELECTRONIC ENTHALPY ECONOMIZER - Includes a slide-in / plug-in damper assembly with fully modulating spring return motor actuator capable of introducing up to 100% outdoor air, one outdoor air electronic enthalpy sensor and a rainhood with filters. The rainhood is painted to match the basic unit and must be field-assembled before installation. Economizer dampers are 2% low leakage type. The fixed outdoor air damper (shipped as standard equipment with every unit) can be used for barometric relief on units with an economizer.

DUAL INPUT ELECTRONIC ENTHALPY ECONOMIZER - Includes the same damper system and rainhood with filters as described for a single enthalpy economizer above except this accessory contains two enthalpy sensors. It uses a differential enthalpy control that compares the outdoor air versus the return air. The logic module then optimizes the economizer operation for additional savings over the single input economizer. The fixed outdoor air damper (shipped as standard equipment with every unit) can be used for barometric relief on units with an economizer.

MOTORIZED AIR DAMPER - Includes slide-in / plug-in damper assembly with 2-position spring-return motor actuator and a rainhood with permanent-type filters. The outdoor air dampers open when the indoor fan motor is energized. The rainhood is shipped knocked down and must be field assembled.

ELECTRIC HEATERS - Include nickel chromium elements, a terminal block, fuses (where required by UL), all the necessary connectors and hardware. All heaters utilize single point power supply hookup. Capacities of 9, 18, 24, 36 and 54 KW heating are available.

FUSE BLOCK KIT - This kit contains a fuse block including the fuses and is available for the 9 and 18 KW 460-volt heater kits.

ROOF CURB - This 356mm (14 in.) high full perimeter roof curb is shipped knocked down for field assembly. Its duct supports and insulated condensing section deck can be reversed to connect the ductwork on the opposite end.

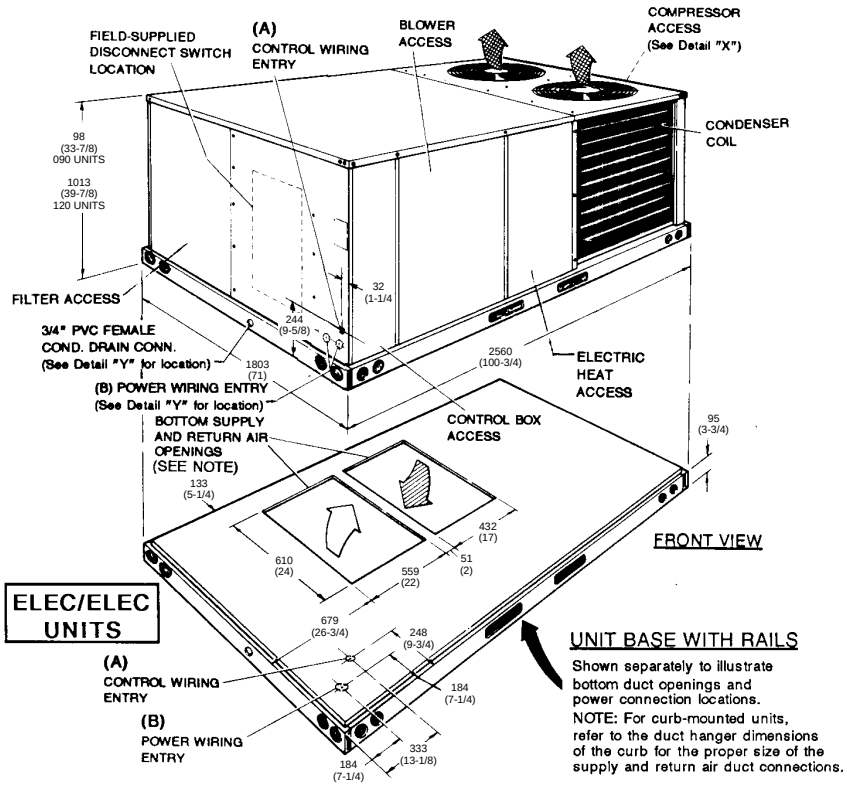
ANTI-RECYCLE TIMER - A timer to prevent unit compressors from short cycling. It assures a 5-minute “off-time” between compressor cycles.

GAS PIPING - This kit contains 3/4" pipe nipples, fittings and gas cock (including panel access gaskets) required for bottom gas supply connection with external shut-off.

HIGH ALTITUDE CONVERSION (NATURAL AND PROPANE) - Provides orifices for proper furnace operation at altitudes up to 1824 meters (6,000 ft.). For propane applications, the propane conversion kit is also required.

WALL THERMOSTAT - The units are designed to operate with 24-volt electronic and electro-mechanical thermostats. All electric / electric and gas / electric units operate with two stage heat / two stage cool thermostats (with or without an economizer).

UNIT DIMENSIONS (DCE AND DCG - 090 - 150)



All dimensions are in millimeters and inches. They are subject to change without notice. Certified dimensions will be provided upon request.

RETURN AIR

SUPPLY AIR

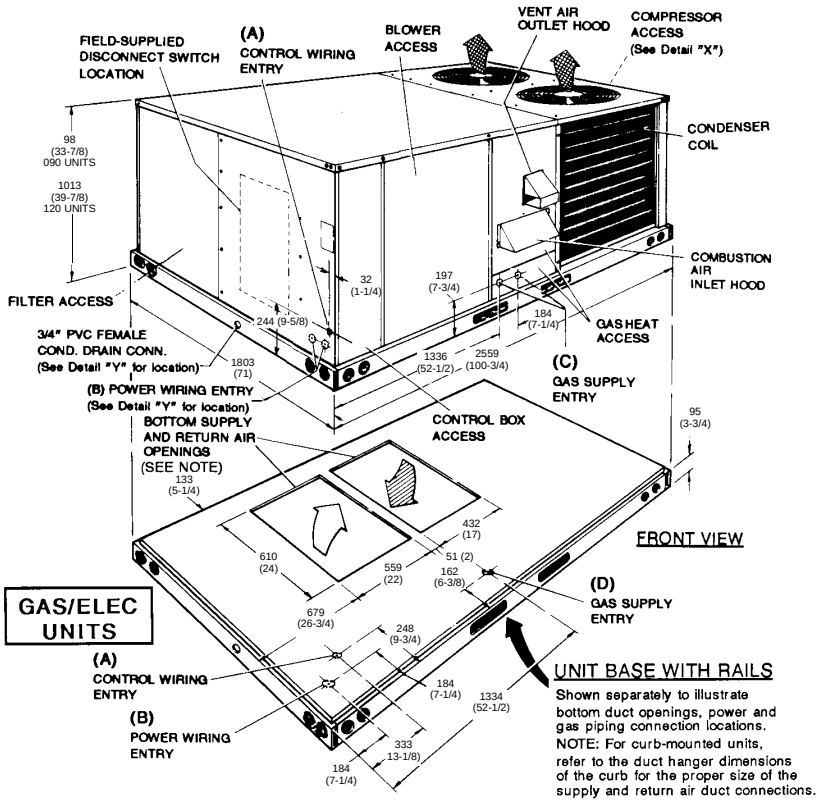
CONDENSER AIR

OUTDOOR AIR (Economizer)

UTILITIES ENTRY DATA, mm/inches

HOLE	OPENING SIZE (DIA.)	USED FOR	
A	19 / 3/4 KO	Control Wiring	Side
	22 / 7/8KO		Bottom*
B	50 / 2KO	Power Wiring (Side or Bottom)*	
C	50 / 2KO	Gas Piping (Front)	
D	43 / 1 11/16 Hole	Gas Piping (Bottom)*	

*Openings in the bottom of the unit can be located by the slice



CLEARANCES, mm/inches

Front	610 / 24
Back	305 / 12 (Less Economizer) 914 / 36 (With Economizer)
Left Side (Filter Access)	610 / 24 (Less Economizer) 1371 / 54 (With Economizer)
Right Side (Cond. Coil)	610 / 24
Below Unit[1]	0 / 0
Above Unit[2]	1829 / 72 With 914 (36in.) Maximum Horizontal Overhang (For Condenser Air Discharge)

[1]Units may be installed on combustible floors made from wood or class A, B or C roof covering material.
[2]Units must be installed oudoors. Overhanging structures or shrubs should not obstruct condenser air discharge outlet.

NOTE:
DCE Models: Units and ductwork are approved for zero clearance to combustible materials when equipped with electric heaters.

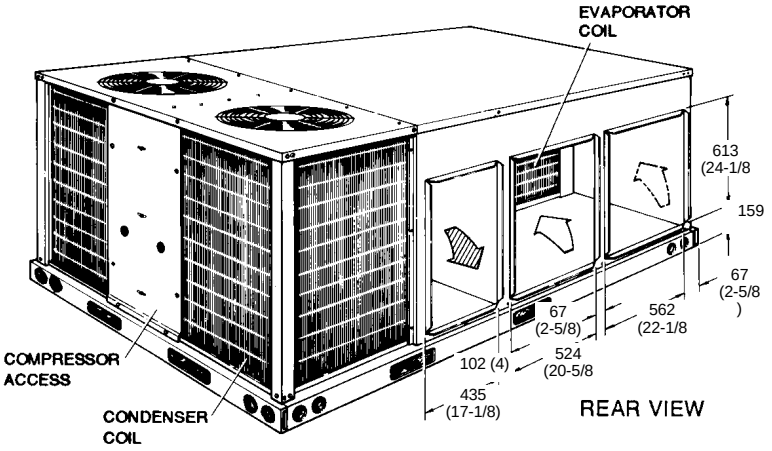
DCG Models: A 1" clearance must be provided between any combustible material and the supply air ductwork for a distance of 3 feet from the unit.

The products of combustion must not be allowed to accumulate within a confined space and recirculate.

Locate unit so that the vent air outlet hood is at least:

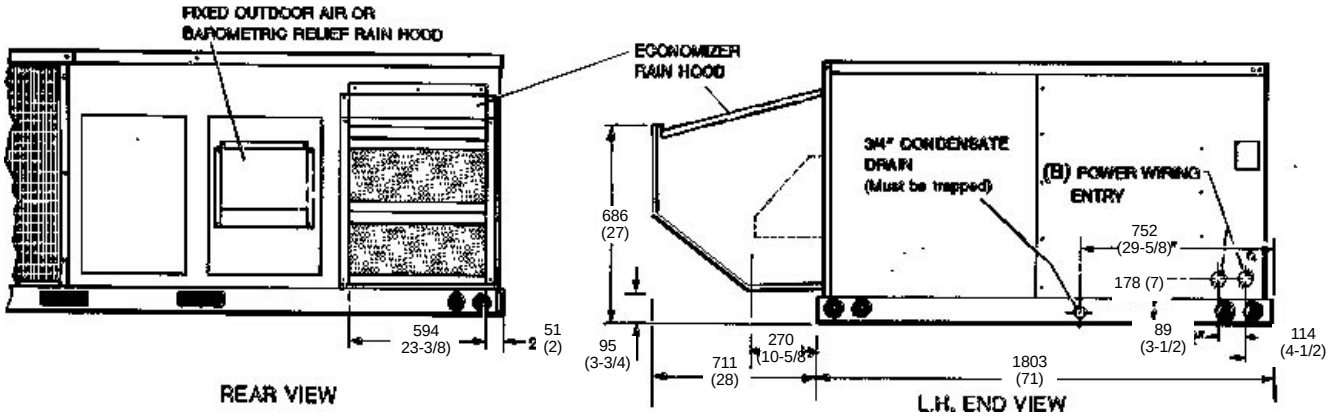
- 914mm (3ft) above any forced air inlet located within three meters horizontal (10ft) (excluding those integral to the unit).
- 1219mm (4ft) below, 1219mm horizontal (4ft) from, or 305mm (1ft) above any door or gravity air inlet into the building.
- 1219mm (4ft) from electric meters, gas meters, regulators and relief equipment.

UNIT DIMENSIONS - Cont'd. -(DCE and DCG - 090 - 150)

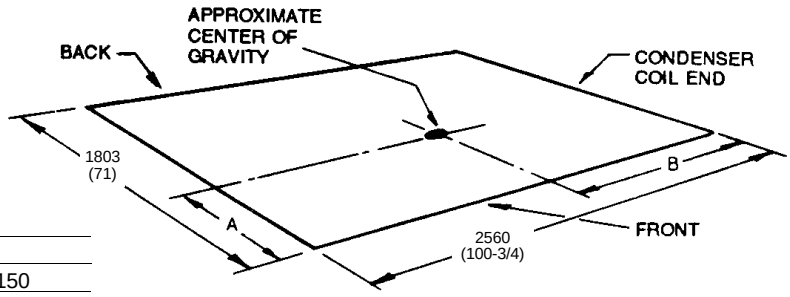


DUCT COVERS - Units are shipped with all air duct openings covered.
For side duct applications;
1.Remove and discard the supply and return air duct covers.
2.Connect ductwork to duct flanges on the rear of the unit.
For bottom duct applications;
1. Remove the side supply and return air duct covers to gain access to the bottom supply and return air duct covers.
2. Remove and discard the bottom duct covers.
3. Replace the side duct covers.

DETAIL "X"
SIDE SUPPLY AND RETURN AIR DUCT OPENINGS



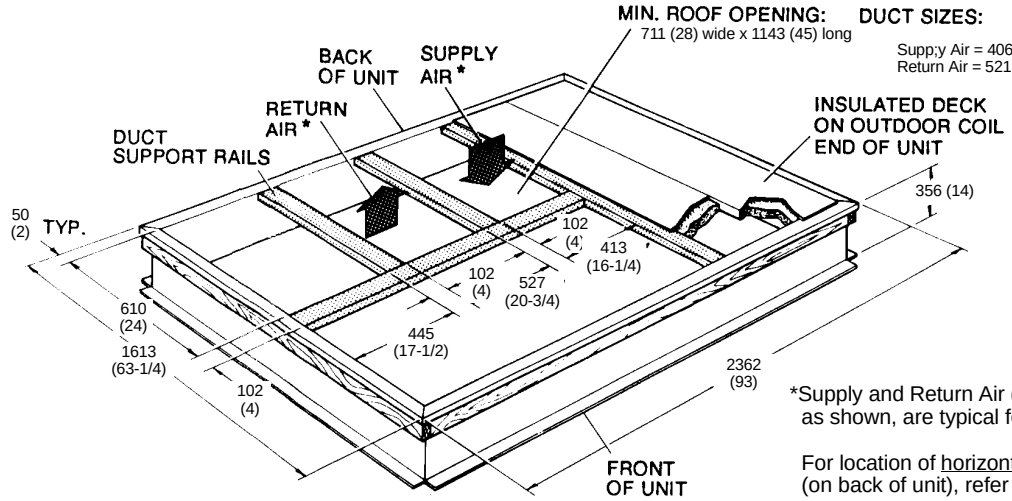
DETAIL "Y"
UNIT WITH ECONOMIZER AND FIXED OUTDOOR AIR HOODS



DIM.	UNIT SIZE		
	090	120	150
A	845 (33-1/4)	826 (32-1/2)	826 (32-1/2)
B	1199 (47-1/2)	1187 (46-3/4)	1143 (45)

CENTER OF GRAVITY

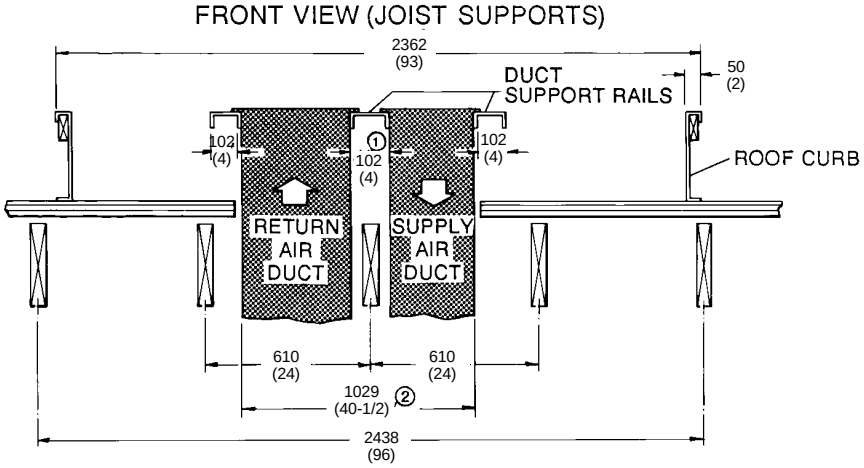
ROOF CURB DIMENSIONS - (DCE and DCG - 090, 120 & 150)



*Supply and Return Air (including duct support rails) as shown, are typical for bottom duct applications.

For location of horizontal duct applications (on back of unit), refer to Unit Dimension details.

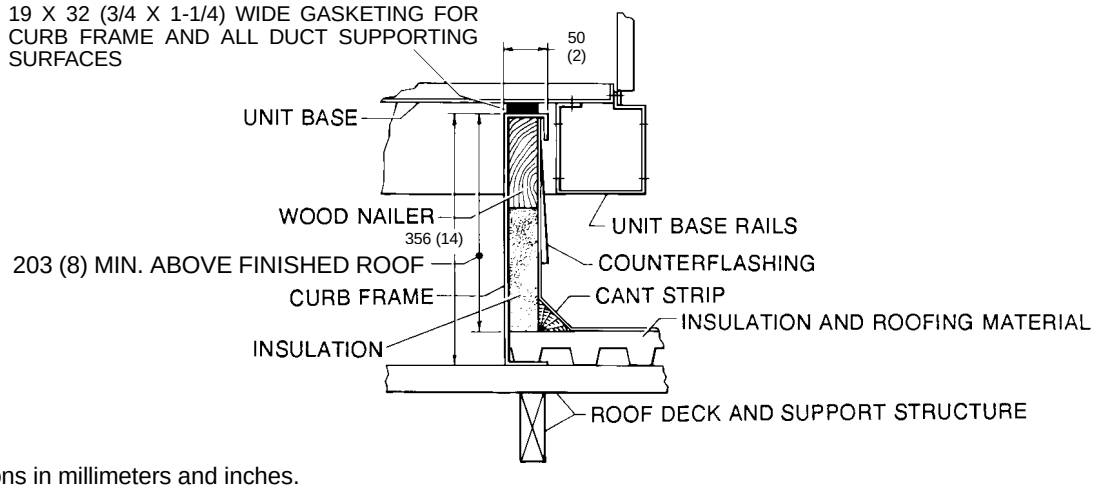
ROOF CURB BENEFITS



① The 102mm (4") space between the ducts allows for "jumping" an existing roof joist.
② The 1041mm (41") overall dimension of the ducts allows ductwork penetration between roof joists that are spaced on 1219mm (48") centers.

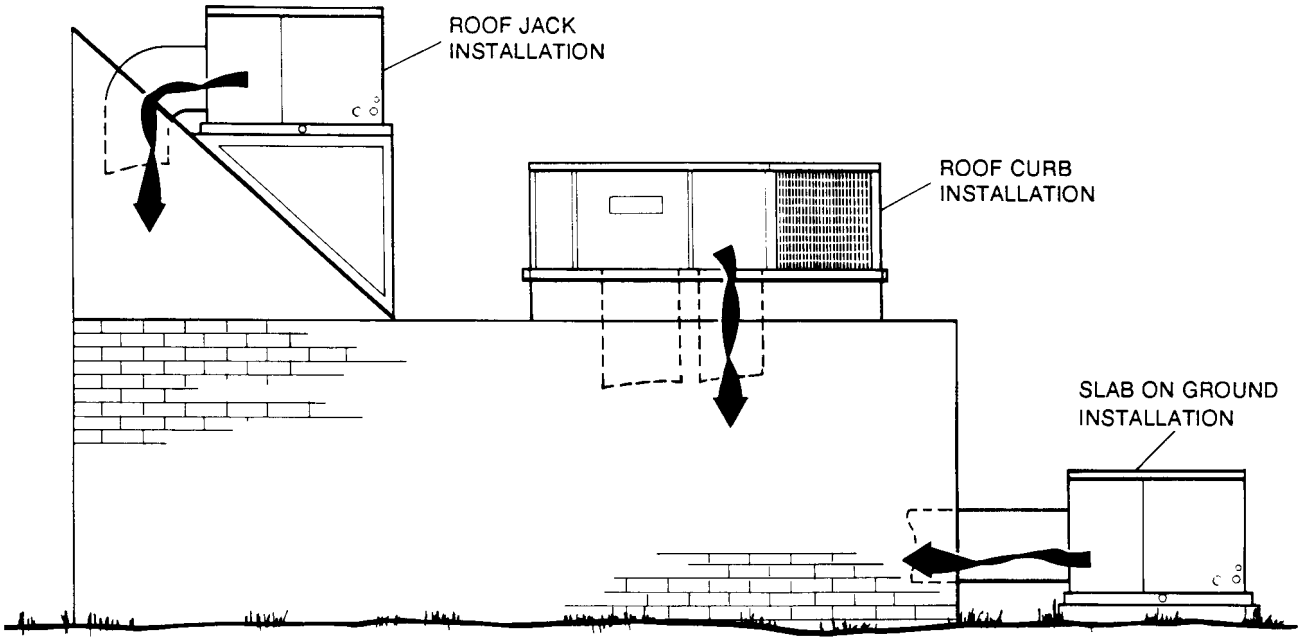
NOTE: Ducts can be installed onto the curb from the roof. All electrical and gas line connections can be made inside the curb.

UNIT AND CURB APPLICATION

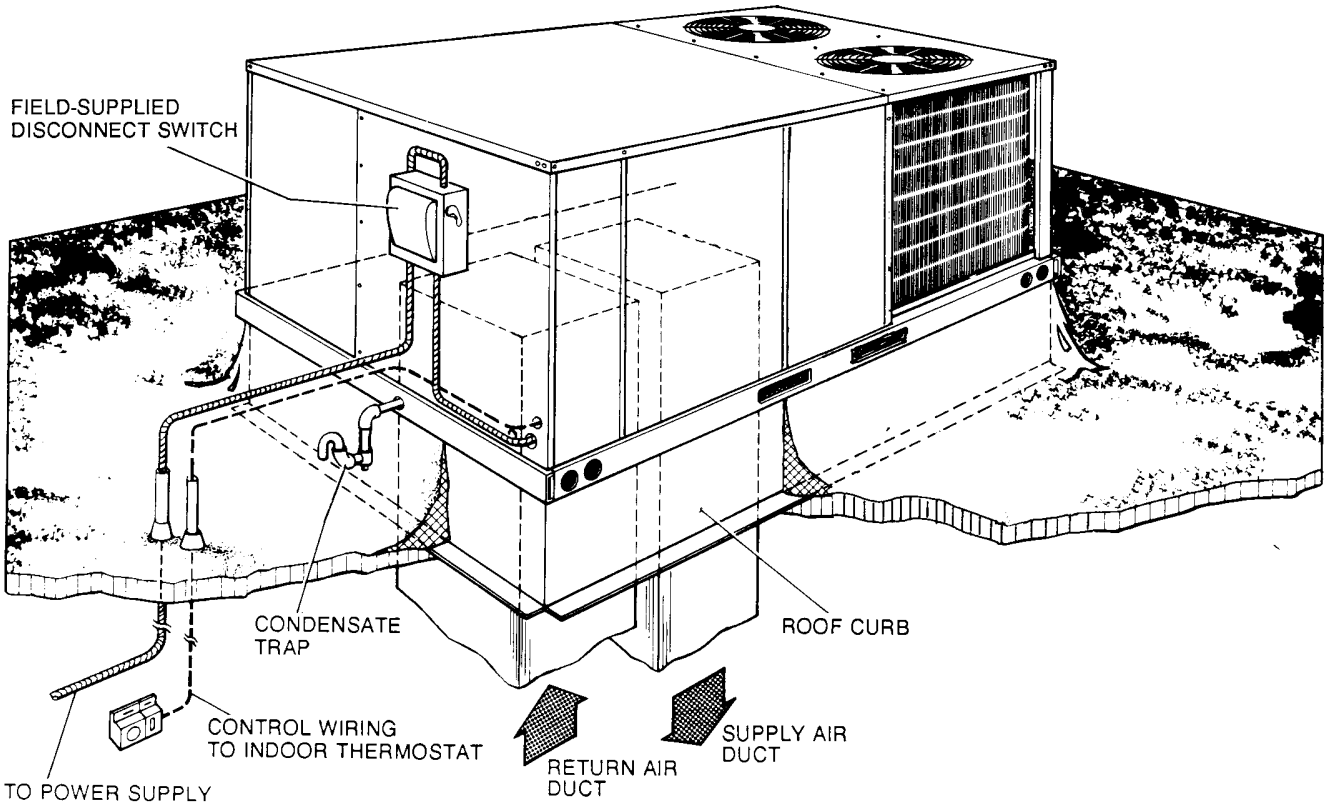


Dimensions in millimeters and inches.

TYPICAL APPLICATIONS



TYPICAL ROOF-TOP INSTALLATION
(ELECTRIC/ELECTRIC UNIT SHOWN)



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