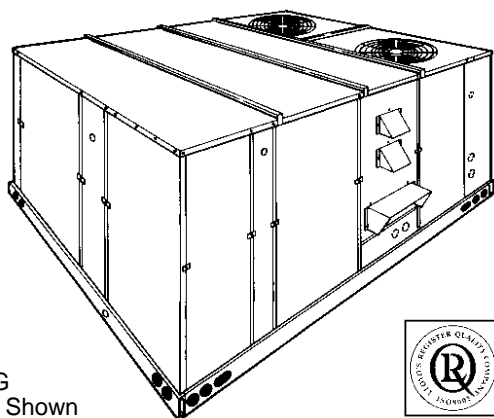




## SINGLE PACKAGE GAS / ELECTRIC UNITS AND SINGLE PACKAGE AIR CONDITIONERS

D2CE / D2CG 300 CONSTANT VOLUME  
25 NOMINAL TONS  
(WORLD 50 HZ)

## SUNLINE 2000™



DCG  
Unit Shown



### DESCRIPTION

These 25 ton models are manufactured under ISO 9002 Quality System Certification and are the latest addition to York's Sunline 2000 series convertible rooftop product line. All models have three refrigerant circuits for efficient part load operation. Although the units are primarily designed for curb mounting on a roof, they can also be slab-mounted at ground level or set on steel beams above a finished roof.

Cooling only, cooling with gas heat and cooling with electric heat models are available with wide variety of factory-mounted options and field-installed accessories to make them suitable for almost every application.

All units are self-contained and assembled on full perimeter base rails with holes in the four corners for overhead rigging.

Every unit is completely piped, wired, charged and tested at the factory to simplify the field installation and to provide years of dependable operation. Powder paint cabinets provide an exceptionally durable finish with the 750 hour salt spray process per ASTM-B117 test standard.

All models (including those with an economizer) are suitable for either bottom or horizontal duct connections. Models with power exhaust are suitable for bottom duct connections only. For bottom duct, you remove the sheet metal panels from the supply and return air openings through the base of the unit. For horizontal duct, you replace the supply and return air panels on the rear of the unit with a side duct flange accessory.

All models are available with five different outdoor air damper options:

- Single enthalpy economizer
- Differential (dual) enthalpy economizer
- Single enthalpy economizer with power exhaust
- Differential (dual) enthalpy economizer with power exhaust
- Motorized outdoor air damper

A fixed outdoor air intake assembly is shipped in the return air compartment of all units ordered without an economizer or motorized outdoor air damper option. The assembly includes a rain hood with a damper that can be set for 10, 15 or 25% outdoor air. With bottom duct connections, the intake damper assembly

should be mounted over the opening in the return air panel. With horizontal ductwork, it should be mounted on the return air duct.

All supply air blowers are equipped with a belt drive that can be adjusted to meet the exact requirements of the job

All compressors include crankcase heat and internal pressure relief. Every refrigerant circuit includes an expansion valve, a liquid line filter-drier, a discharge line high pressure switch and a suction line with a freeze-stat and low pressure/loss of charge switch. The unit control circuit includes two 24-volt circuit breakers and a relay board with three compressor lockout circuits, a terminal strip for thermostat wiring, plus an additional set of pin connectors to simplify the interface of additional field controls.

Compressors and electric heater elements carry an additional 4-year warranty. Aluminized steel tubular heat exchangers carry an additional 9-year warranty.

All gas heat models are built with two heating sections for two equal stages of capacity control. Each section includes a durable heat exchanger with aluminized steel tubes, a redundant gas valve, spark ignition, power venting, an ignition module for 100% shut-off and all of the safety controls required to meet the latest ANSI standards.

The gas supply piping can be routed into the heating compartment through a hole in the base pan of the unit or through a knockout in the piping panel on the front of the unit.

All electric heat models are wired for a single power source and include a bank of nickel chromium elements mounted at the discharge of the supply air blower to provide a high velocity and uniform distribution of air across the heating elements. Every element is fully protected against excessive current and temperature by fuses and two thermal limit switches.

The power supply wiring can be routed into the control box through a threaded pipe connection in the base pan of the unit or through a knockout in the wiring panel on the front of the unit.

All internal factory wiring is color coded and numbered for ease in servicing and troubleshooting.

## FACTORY-INSTALLED OPTIONS

**ECONOMIZERS** - Interlocked outdoor and return air dampers are positioned by a fully modulating, spring return damper actuator capable of introducing up to 100% outdoor air with nominal 1% leakage type dampers. As the outdoor air intake dampers open, the return air dampers close. The changeover from compressor to economizer cooling is determined by one or two solid state enthalpy controls.

On single enthalpy, an outdoor air sensor determines when the outdoor air is cool and dry enough to provide “free” cooling. On differential enthalpy, one sensor monitors the outdoor air while a second sensor monitors the return air. Whenever the outdoor air is cooler and drier than the return air, the unit will switch to economizer operation. For either option, the first compressor stage can provide additional cooling during economizer operation if the room thermostat calls for second stage.

The dampers and controls are installed and wired at the factory. Only the accessory rain hood needs to be assembled and installed in the field.

These economizer options can be used on all duct configurations.

**POWER EXHAUST** - Both the single and differential economizer options are available with power exhaust. Whenever the outdoor air intake dampers are opened for free cooling, the exhaust fan will be energized to prevent the conditioned space from being over-pressurized during economizer operation.

The exhaust fan, motor and controls are installed and wired at the factory. Only the back-draft damper assembly needs to be field installed and the accessory rain hoods need to be assembled and installed in the field.

The power exhaust option can only be used on bottom duct configurations.

**MOTORIZED OUTDOOR AIR INTAKE DAMPER** - Interlocked outdoor and return air dampers are controlled by a 2-position, spring return damper actuator. The outdoor damper will open to some pre-set position whenever the supply air blower is operating and will drive fully closed when the blower shuts down.

The damper and controls are installed and wired at the factory. Only the accessory rain hood needs to be assembled in the field. This damper option can be used on all duct configurations.

## FIELD-INSTALLED ACCESSORIES

**SINGLE INPUT ELECTRONIC ENTHALPY ECONOMIZERS** - Includes a slide-in / plug-in damper assembly with fully modulating spring-return monitor actuator capable of introducing up to 100% outdoor air with nominal 1% leakage type dampers.

The enthalpy system contains one sensor that monitors the outdoor air and determines when the air is cool enough and dry enough to provide “free” cooling.

The rainhood is painted to match the basic unit and must be field-assembled before installing.

On units built prior to January 1995, an accessory field harness must be installed.

Power exhaust is not available as a field installed option.

**DUAL INPUT ELECTRONIC ENTHALPY ECONOMIZERS** - Includes a slide-in / plug-in damper assembly with fully modulating spring-return monitor actuator capable of introducing up to 100% outdoor air with nominal 1% leakage type dampers.

This enthalpy system contain one sensor that monitors the outdoor air and one sensor that monitors the return air. The logic module compares these two values and modulates the dampers providing the maximum efficiency of economizer system.

The rainhood is painted to match the basic unit and must be field-assembled before installing.

On units built prior to January 1995, an accessory field harness must be installed.

Power exhaust is not available as a field installed option.

**MOTORIZED OUTDOOR AIR INTAKE DAMPER** - Includes a slide-in / plug-in damper assembly with a 2-position, spring return motor actuator which opens to some pre-set position whenever the supply air blower is operating and will drive fully closed when the blower unit shuts down.

The rain hood is painted to match the basic unit and must be field assembled before installing.

On units built prior to January 1995 an accessory field harness must be installed.

Power exhaust is not available as a field installed option.

**ROOF CURBS** - 343mm (14") high roof curbs provide a water-tight seal between the unit and the finished roof. These full perimeter curbs meet the requirements of the National Roofing Contractors Association (NRCA) and are shipped knocked-down for field assembly. They're designed to fit inside the base rails of the unit and include both a wood nailing strip and duct hanger supports.

**ANTI-RECYCLE TIMERS** - Three solid state timers prevent the compressors from short-cycling. Once a compressor is de-energized, it will remain de-energized for approximately five minutes.

**HIGH ALTITUDE NATURAL GAS** - Burner orifices and pilot orifices are provided for proper furnace operation at altitudes up to 1824m (6,000 ft).

**PROPANE** - Burner orifices, pilot orifices and gas valve parts are provided to convert a natural gas furnace to propane.

**HIGH ALTITUDE PROPANE** - Burner orifices and pilot orifices are provided for proper furnace operation at altitudes up to 1824m (6,000 ft). This accessory supplements the basic propane conversion kit.

**SIDE DUCT FLANGES** - 25mm (1") flanges replace the supply and return air panels on the rear of the unit to accommodate horizontal duct connections. These flanges can also be used individually for bottom supply/horizontal return or horizontal supply/bottom return. They cannot be used on units with power exhaust.

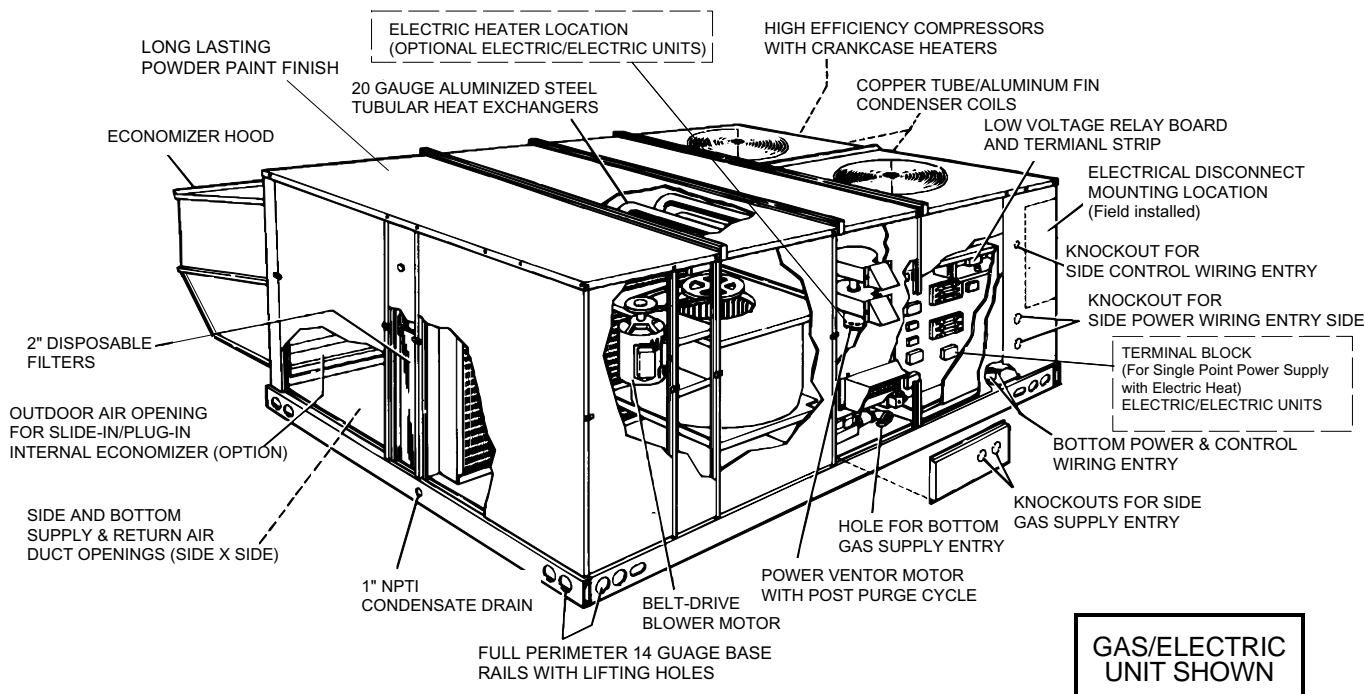
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**BAROMETRIC RELIEF DAMPER** - This damper accessory can be used to relieve internal air pressure on units with an economizer but no power exhaust. This accessory includes a rain hood, a bird screen and a fully assembled damper. With bottom duct connections, the damper should be mounted over the opening in the return air panel. With horizontal ductwork, the accessory should be mounted on the return air duct.

**ECONOMIZER / POWER EXHAUST RAIN HOODS** - A rain hood accessory must be used on units with an economizer, a motorized damper, or a combined economizer with power exhaust option. These accessories include all the hood panels, the necessary components and hardware for field assembly.

**YORK<sup>®</sup> SUNLINE 2000<sup>™</sup>**



**RATINGS**

**CAPACITY RATINGS – COOLING**

MODEL	RATING POINT	TOTAL OUTPUT, kW/MBH	TOTAL INPUT, kW	COP	EER	ELECTRIC HEAT Nominal Capacity, kW
300	T1	85.2 / 293	35.4	2.4	8.3	18, 36, 54, 72
	T2	74.4 / 254	38.7	1.9	6.6	18, 36, 54, 72
	T3	79.9 / 273	31.7	2.5	8.6	18, 36, 54, 72

**CAPACITY RATINGS – GAS HEAT**

MODEL	RATING POINT	TOTAL OUTPUT, kW/MBH	TOTAL INPUT, kW	COP	EER	GAS HEAT RATINGS	
						MBH INPUT	MBH OUTPUT
300	T1	85.2 / 293	35.4	2.4	8.3	300	240
	T2	74.4 / 254	38.7	1.9	6.6		
	T3	79.9 / 273	31.7	2.5	8.6		

### COOLING CAPACITIES - 25 TON (DCE / DCG300) m<sup>3</sup>/s

Air On Evaporator Coil		Temperature of Air on Condenser Coil																	
		OD Dry Bulb - 27°C						OD Dry Bulb - 35°C						OD Dry Bulb - 46°C					
		Total Cap. KW	Power Input KW	Sensible Capacity				Total Cap. KW	Power Input KW	Sensible Capacity				Total Cap. KW	Power Input KW	Sensible Capacity			
				Entering Dry Bulb, °C						Entering Dry Bulb, °C						Entering Dry Bulb, °C			
m <sup>3</sup> /s	WB °C			31	28	25	22			31	28	25	22			31	28	25	22
5.75	23	110.3	27.7	77	55	35	0	103.7	30.5	76	54	34	0	94.4	34.4	74	52	32	0
	20	104.7	27.2	105	80	57	37	99.3	30.0	99	78	56	36	91.6	33.9	92	76	54	33
	17	104.5	27.2	105	99	82	60	99.1	30.0	99	93	80	58	91.4	33.9	91	86	78	55
	14	104.4	27.1	104	98	92	87	98.9	30.0	99	93	87	82	91.3	33.8	91	85	80	74
4.75	23	107.8	27.5	68	51	33	0	101.4	30.3	67	49	32	0	92.4	34.0	66	47	30	0
	20	100.0	26.7	90	71	53	35	94.0	29.4	89	69	51	34	87.2	33.2	87	68	49	31
	17	99.3	26.7	99	94	74	55	94.2	29.4	94	89	72	53	87.0	33.1	87	81	69	50
	14	99.1	26.7	99	94	88	76	94.1	29.3	94	89	83	74	86.8	33.1	87	81	76	71
3.75	23	104.4	27.2	60	45	31	0	98.3	29.9	58	44	30	0	89.6	33.6	57	42	27	0
	20	95.9	26.4	78	62	48	33	90.2	28.9	76	61	46	31	82.1	32.2	74	59	44	29
	17	92.4	26.0	92	80	65	50	87.7	28.5	88	79	63	48	81.0	32.0	81	76	61	45
	14	92.3	26.0	92	87	82	66	87.6	28.5	88	83	78	65	80.9	32.0	81	76	71	62

### COOLING CAPACITIES - 25 TON (DCE / DCG300) CFM

Air On Evaporator Coil		Temperature of Air on Condenser Coil																	
		OD Dry Bulb - 80°F						OD Dry Bulb - 95°F						OD Dry Bulb - 115°F					
		Total Cap. MBH	Power Input KW	Sensible Capacity				Total Cap. MBH	Power Input KW	Sensible Capacity				Total Cap. MBH	Power Input KW	Sensible Capacity			
				Entering Dry Bulb, °F						Entering Dry Bulb, °F						Entering Dry Bulb, °F			
CFM	WB °F			88	82	77	72			88	82	77	72			88	82	77	72
12000	73	377	27.7	262	189	121	-	354	30.5	258	183	116	-	322	34.4	253	178	109	-
	68	357	27.2	357	272	196	128	339	30.0	339	266	191	122	313	33.9	313	259	184	114
	63	357	27.2	357	337	281	204	338	30.0	338	318	273	197	312	33.9	312	292	266	188
	57	356	27.1	356	336	316	296	338	30.0	338	318	298	278	312	33.8	312	292	272	253
10000	73	368	27.5	233	173	113	-	346	30.3	229	168	108	-	316	34.0	224	161	101	-
	68	341	26.7	309	243	180	120	321	29.3	304	237	175	114	298	33.2	298	232	167	106
	63	339	26.7	339	320	252	187	321	29.4	321	303	245	181	297	33.1	297	278	236	171
	57	339	26.7	339	320	301	258	321	29.3	321	302	284	251	297	33.1	297	278	259	241
8000	73	357	27.2	204	155	106	-	336	29.9	200	150	101	-	306	33.6	193	143	94	-
	68	328	26.4	266	213	162	113	308	28.9	260	208	157	107	280	32.2	253	201	149	98
	63	316	26.0	316	274	221	169	300	28.5	300	268	214	163	277	32.0	277	260	207	154
	57	315	26.0	315	298	281	227	299	28.5	299	282	265	221	276	32.0	276	259	242	212

# BLOWER PERFORMANCE

## DCE300 - BOTTOM DUCT CONNECTIONS (COOLING APPLICATIONS)

### STANDARD DRIVE (m<sup>3</sup> / s)

BLOWER SPEED, (RPM)	MOTOR PULLEY (TURNS OPEN)*	AIRFLOW														
		3.78			4.25			4.72			5.19			5.66		
		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)
1010	6.0**	399	5.7	6.4	249	6.6	7.5	125	7.6	8.7	-	-	-	-	-	-
1064	5.0	473	6.1	6.9	349	7.2	8.0	224	8.3	9.3	75	9.5	10.6	-	-	-
1118	4.0	573	6.6	7.4	448	7.7	8.6	324	8.9	10.0	249	10.1	11.4	50	11.5	12.9
1172	3.0	673	7.0	7.9	548	8.2	9.2	424	9.5	10.6	274	10.8	12.2	125	12.2	13.7

### STANDARD DRIVE (CFM)

BLOWER SPEED, (RPM)	MOTOR PULLEY (TURNS OPEN)*	AIRFLOW														
		8,000			9,000			10,000			11,000			12,000		
		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)
1010	6.0**	1.6	7.6	6.4	1.0	8.9	7.5	0.5	10.4	8.7	-	-	-	-	-	-
1064	5.0	1.9	8.2	6.9	1.4	9.6	8.0	0.9	11.1	9.3	0.3	12.7	10.6	-	-	-
1118	4.0	2.3	8.8	7.4	1.8	10.3	8.6	1.3	11.9	10.0	0.7	13.6	11.4	0.2	15.4	12.9
1172	3.0	2.7	9.4	7.9	2.2	11.0	9.2	1.7	12.7	10.6	1.1	14.5	12.2	0.5	16.4	13.7

NOTES: 1. Blower performance is based on cooling only unit, with fixed outdoor air, 2" T/A filters and a dry evaporator coil.

2. Refer to Page 14 for additional static resistances.

ESP = External Static Pressure available for the supply and return air duct system. All internal unit resistances have been deducted from the total static pressure of the blower.

\* Do NOT close the pulley below 1 turn open.

\*\* Factory setting.

## STATIC RESISTANCES\*

### EXTERNAL STATIC PRESSURE DROP

DESCRIPTION	RESISTANCE, Pa / iwg		
	m <sup>3</sup> /s / CFM		
	4.25 / 9,000	4.72 / 10,000	5.19 / 11,000
WET COIL	25 / 0.1	25 / 0.1	25 / 0.1
GAS HEAT	25 / 0.1	25 / 0.1	25 / 0.1
ELECTRIC HEAT OPTIONS	18 KW	25 / 0.1	25 / 0.1
	36 KW	25 / 0.1	50 / 0.2
	54 KW	50 / 0.2	75 / 0.3
	72 KW	50 / 0.2	100 / 0.4
ECONOMIZER OPTION	25 / 0.1	25 / 0.1	25 / 0.1
<b>HORIZONTAL DUCT CONNECTIONS</b>	<b>50 / 0.2</b>	<b>75 / 0.3</b>	<b>125 / 0.5</b>

\* Deduct these resistance values from the available unit ESP values listed in the respective blower performance table except for Horizontal Duct Connections (Shaded yellow). Add these values due to less airflow resistance.

## BLOWER MOTOR AND DRIVE DATA

MODEL SIZE	BLOWER RANGE (RPM)	MOTOR <sup>1</sup>			ADJUSTABLE MOTOR PULLEY <sup>2</sup>			FIXED BLOWER PULLEY			BELT (NOTCHED)		
		kw / HP	FRAME	EFF. (%)	DESIG-NATION	PITCH DIA. mm (IN.)	BORE (IN.)	DESIG-NATION	PITCH DIA. mm (IN.)	BORE mm (IN.)	DESIG-NATION	PITCH LENGTH mm (IN.)	QTY.
300	980 / 1170	7.5 / 10	254T	89	2MVP70	178 - 213 (7.0-8.4)	P2 BUSH-ING	2BK110H	264 (10.4)	27 (1-7/16)	BX84	2179 (85.8)	2

<sup>1</sup>All motors have a nominal speed of 1450 RPM, a 1.15 service factor and a solid base. They can operate to the limit of their service factor because they are located in the moving air, upstream of any heating device.

<sup>2</sup> Do NOT close this pulley below 1 turn open.

**PHYSICAL DATA**

COMPONENT DESCRIPTION			UNIT MODEL	WEIGHTS (kg. / lbs.)					
SUPPLY AIR BLOWER	CENTRIFUGAL BLOWER	DIA. x WD. (mm)	457 x 381	BASIC UNIT	DCE300 (Cooling only)	1238 / 2730			
		DIA. x WD. (in.)	18 x 15		DCG300 (Gas / Electric)	N240	1085 / 2930		
	FAN MOTOR	kW / HP	7.5 / 10	OPTIONS / ACCESSORIES					
INDOOR COIL	ROWS DEEP		4	Electric Heater (Elec/Elec only)	18 KW	11.4 / 25			
	FINS PER 25mm (1 in.)		13.5		36 KW	13.6 / 30			
	FACE AREA	m <sup>2</sup> / Ft. <sup>2</sup>	2.1 / 23.0		54 KW	15.9 / 35			
PROPPELLER DIA.		mm / in.	762 / 30 ea.		72 KW	18.2 / 40			
OUTDOOR FANS (Two Per Unit)	FAN MOTOR	kW / HP	0.7 / 1 ea.	Economizer			73 / 160		
	NOMINAL AIRFLOW	m <sup>3</sup> / s	3.40 ea.	Motorized Damper			68 / 150		
		CFM	7200 ea.	Roof Curb			84 / 185		
OUTDOOR COIL	ROWS DEEP		3	Barometric Damper			20 / 45		
	FINS PER 25mm (1 in.)		15	Wood Skid*			100 / 220		
	FACE AREA	m <sup>2</sup> / Ft. <sup>2</sup>	4.02 / 43.3	*Allows handling of unit using 90" (2300mm) long forks.					
COMPRESSOR (Qty. Per Unit)	TANDEM (8-TON NOMINAL CAPACITY)		3						
AIR FILTERS	QUANTITY PER UNIT	406 x 508 x 51 (mm)	2	VOLTAGE LIMITATIONS**	POWER SUPPLY	VOLTAGE			
		16 x 20 x 2 (in.)				MIN.	MAX.		
	QUANTITY PER UNIT	406 x 635 x 51 (mm)	4	380/415-3+N-50	342	457			
		16 x 25 x 2 (in.)							
	QUANTITY PER UNIT	457 x 610 x 51 (mm)	3				**Utilization range "A" in accordance with ARI		
	14 x 20 x 2 (in.)								
TOTAL FACE AREA	m <sup>2</sup> / Ft. <sup>2</sup>	.91 / 21.4							
CHARGE	REFRIGERANT 22	SYS. #1 (kg. / lbs.)	7.0 / 15.5						
		SYS. #2 (kg. / lbs.)	6.6 / 14.5						
		SYS. #3 (kg. / lbs.)	7.0 / 15.5						

**ELECTRICAL DATA - Cooling Only Units and Units With Gas Heat**

MODEL	POWER SUPPLY	COMPRESSORS		COND. FAN MOTORS #1 & #2		SUPPLY AIR BLOWER MOTOR		MINIMUM CIRCUIT AMPACITY (AMPS)	MAXIMUM OVERCURRENT DEVICE <sup>1</sup> (AMPS)	MIN. WIRE SIZE <sup>2</sup> (AWG)
		(QTY. 3)		HP (Each)	FLA (Each)	HP	FLA			
		RLA (Each)	LRA (Each)							
D2CE300 D2CG300	380/415-3+N-50	9.6	73	1.0	2.4	10	19.0	86.2	100	3

NOTES: 1. Dual element, time delay type.  
2. Based on 75°C copper conductors.

**ELECTRICAL DATA - Units with Electric Heat**

MODEL D2CE	POWER SUPPLY	HEATER OPTION				MINIMUM CIRCUIT AMPACITY (AMPS)	MAXIMUM OVERCURRENT DEVICE <sup>2</sup> (AMPS)	MINIMUM WIRE SIZE <sup>3</sup>
		MODEL	KW <sup>1</sup>	STAGES	AMPS			
300	380-3+N-50	E018	11.3	1	17.1	86.2	100	3
		E036	22.6	2	34.3	86.2	100	3
		E054	33.8	2	51.4	88.0	100	3
		E072	45.1	2	68.6	109.5	110	2
	415-3+N-50	E018	13.5	1	18.7	86.2	100	3
		E036	26.9	2	37.4	86.2	100	3
		E054	40.4	2	56.2	93.9	100	3
		E072	53.8	2	74.9	98.6	110	3

<sup>1</sup>Electric Heat CORRECTION FACTORS:

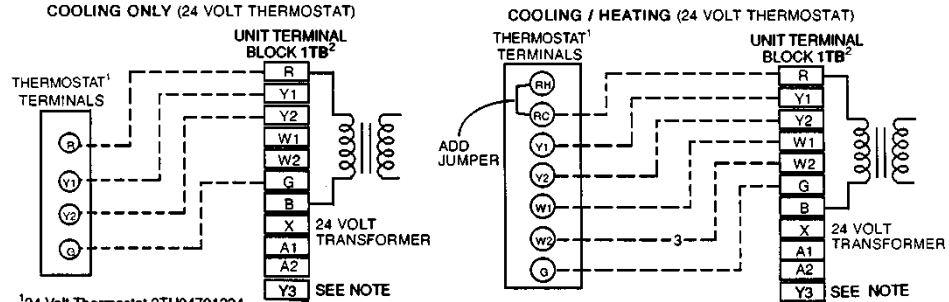
NOMINAL VOLTAGE	VOLTAGE	KW CAP. MULTIPLIER
415	400	0.93

<sup>2</sup>Dual element time delay fuse or HACR breaker.

<sup>3</sup>Wire sizes are AWG unless otherwise specified. Although these sizes are based on 75°C copper conductors, aluminum wire can be used. Refer to the National Electric code (in U.S.A.) or the current Canadian Electrical Code (in Canada) to determine the proper size.

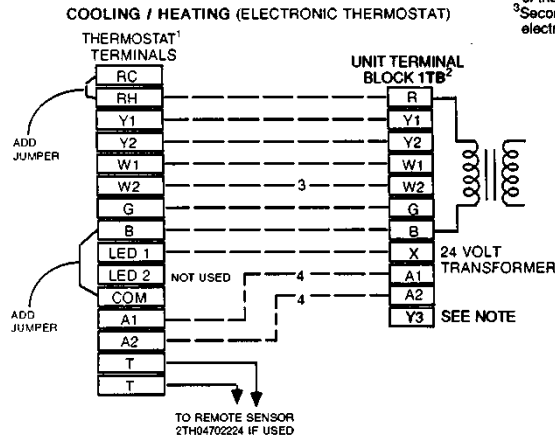
# FIELD WIRING - DCE/DCG Electric/Electric and Gas/Electric Units

## CONTROL WIRING



<sup>1</sup>24 Volt Thermostat 2TH04701224.  
<sup>2</sup>Terminal block 1TB - located on relay board in 24-volt section of the unit control box.

<sup>1</sup>24 Volt Thermostat 2TH04701024 or 2TH04701524 (with Subbase 2TB04700224 or 2TB04700324).  
<sup>2</sup>Terminal block 1TB - located on relay board in 24-volt section of the unit control box.  
<sup>3</sup>Second stage heating is not required on units with a single stage electric heater.

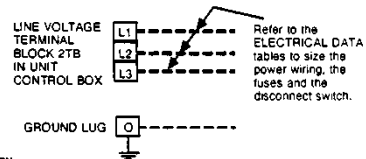


<sup>1</sup>Electronic programmable Thermostat 2ET04700224 (includes subbase).  
<sup>2</sup>Terminal block 1TB - located on relay board in 24-volt section of the unit control box.  
<sup>3</sup>Second stage heating is not required on units with a single stage electric heater.  
<sup>4</sup>Terminals A1 and A2 provide a relay output to close the outdoor economizer dampers when the thermostat switches to the set-back position.

Fan switch must be in "ON" position for minimum ventilation during heater operation.

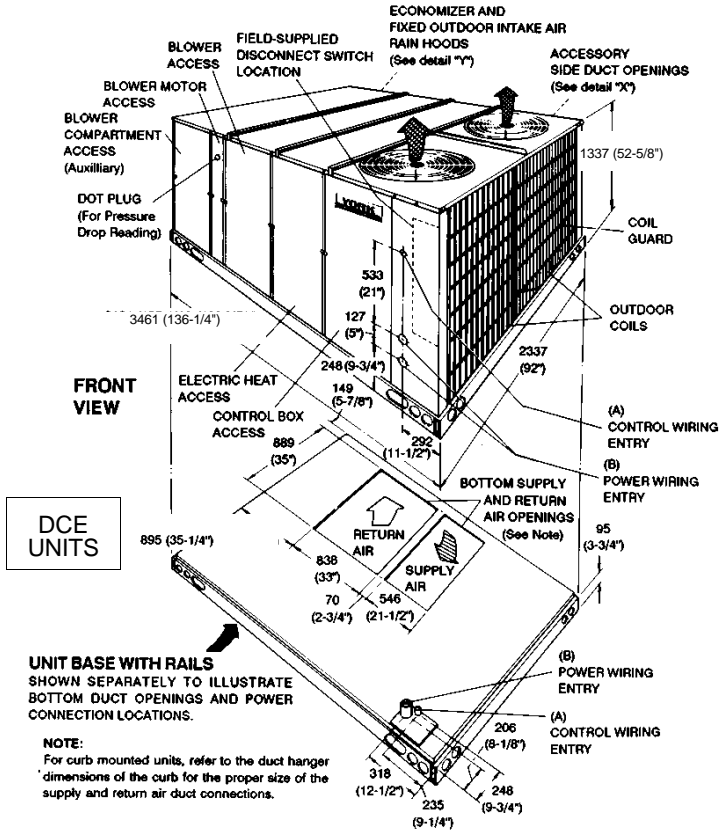
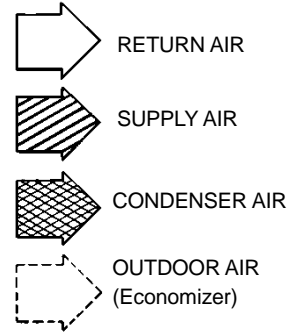
**NOTE:** For 3-stage cooling, remove the jumper between terminals Y1 and Y3 on terminal block 5TB (located in the unit control box) and connect the 3rd stage of the thermostat to terminal Y3 on block 1TB of the relay board.

### POWER WIRING



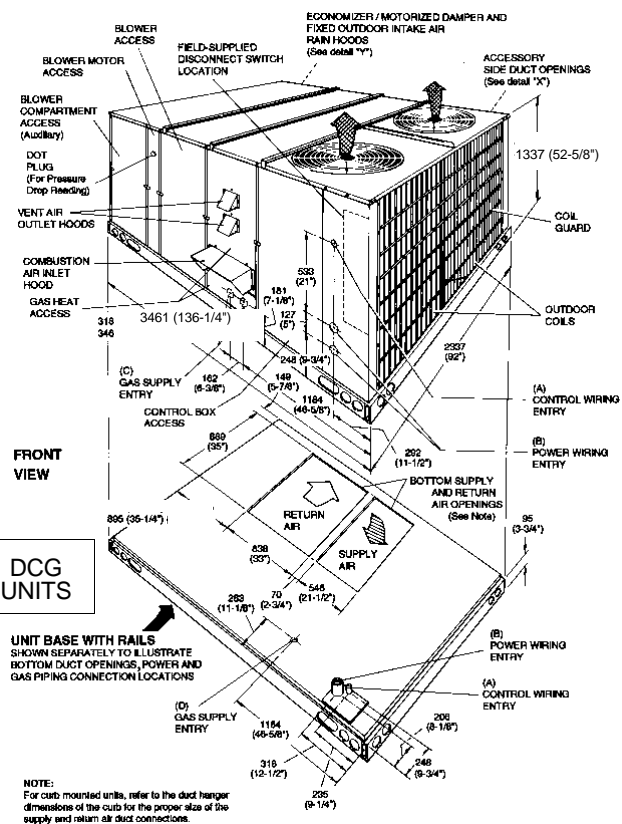
# UNIT DIMENSIONS - (DCE / DCG)

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



HOLE	OPENING (DIA.) (mm / in.)	USED FOR	
		Control Wiring	Power Wiring
A	29 / 1-1/8" KO	Control Wiring	Front
	19 / 3/4" NPS (Fem.)	Control Wiring	Bottom
B	92 / 3-5/8" KO	Power Wiring	Front
	76 / 3" NPS (Fem.)	Power Wiring	Bottom
C	60 / 2-3/8" KO	Gas Piping (Front)	
D	43 / 1-11/16" Hole	Gas Piping (Bottom)*	

\*Opening in the bottom of the unit can be located by the slice in the insulation.



## CLEARANCES (mm / in.)

Front	914 / 36"
Back	610 / 24" (Less Economizer) 1245 / 49" (With Economizer)
Left Side (Filter Access)	610 / 24" (Less Economizer) 1372 / 54" (With Economizer)
Right Side (Cond. Coil)	914 / 36"
Below Unit <sup>1</sup>	0 / 0"
Above Unit <sup>2</sup>	1829 / 72" With 914 / 36" Maximum Horizontal Overhang (For Condenser Air Discharge)

<sup>1</sup>Units (applicable in U.S.A. only) may be installed on combustible floors made from wood or class A, B or C roof covering material.  
<sup>2</sup>Units must be installed outdoors. 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.

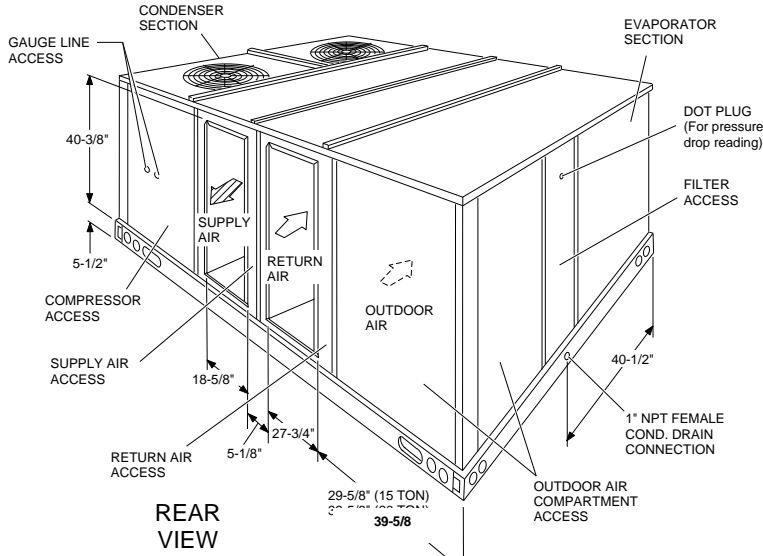
Locate unit so that the vent air outlet hood is at least:

- Three (3) feet above any forced air inlet located within 10 horizontal feet (excluding those integral to the unit).
- Four (4) feet below, 4 horizontal feet from, or 1 foot above any door or gravity air inlet into the building.
- Four (4) feet from electric meters, gas meters, regulators and relief equipment.

Cont'd.



# UNIT DIMENSIONS - CONT'D. - (DCE / DCG)



**DUCT COVERS** - Units are shipped with the bottom duct openings covered. An accessory flange kit is available for connecting side ducts.

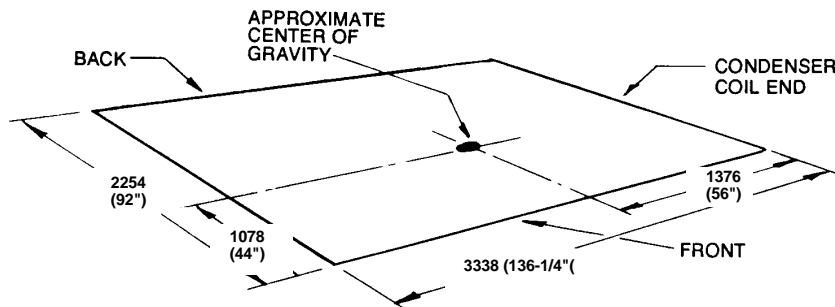
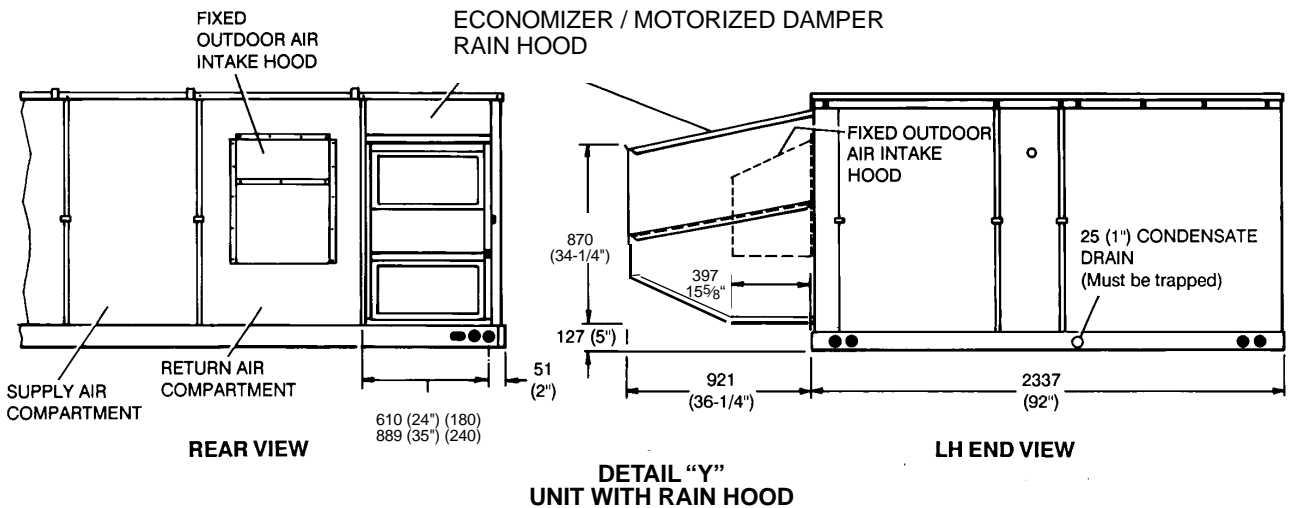
**For bottom duct applications:**

1. Remove the side panels from the supply and return air compartments to gain access to the bottom supply and return air duct covers.
2. Remove and discard the bottom duct covers. (Duct openings are closed with sheet metal covers except when the unit includes a power exhaust option. The covering consists of a heavy black paper composition.)
3. Replace the side supply and return air compartment panels.

**For side duct applications;**

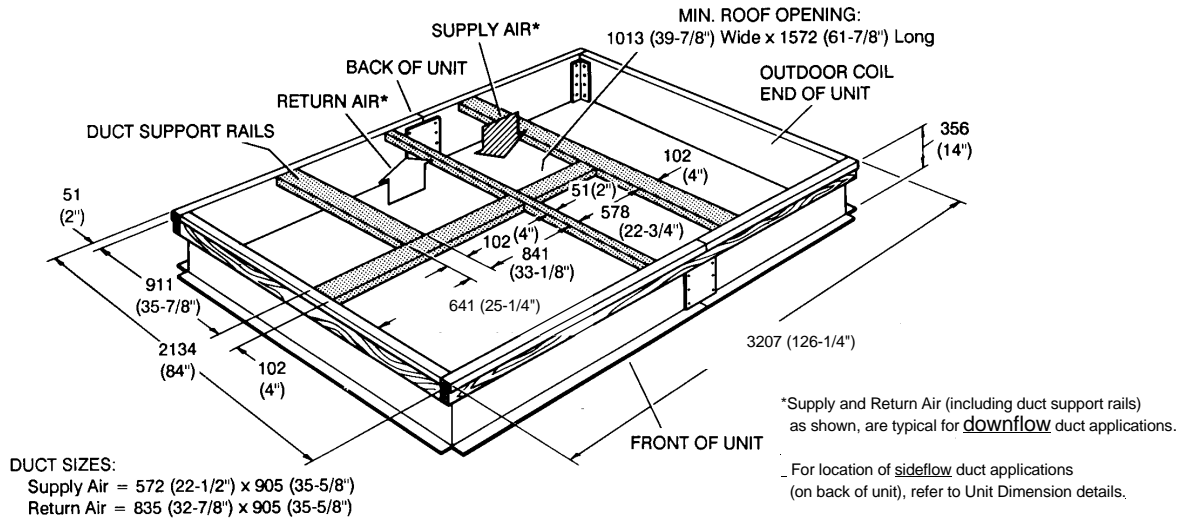
1. Replace the side panels on the supply and return air compartments with the accessory flange kit panels.
2. Connect ductwork to the duct flanges on the rear of the unit.

**DETAIL "X"**  
**ACCESSORY SIDE SUPPLY AND RETURN AIR OPENINGS**

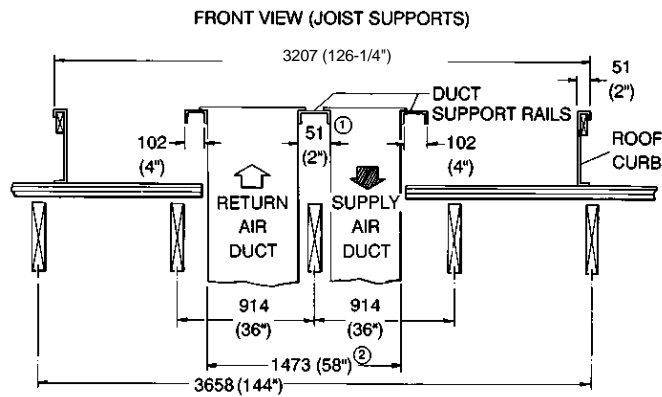


**CENTER OF GRAVITY**

# ROOF CURB DIMENSIONS - (DCE / DCG)



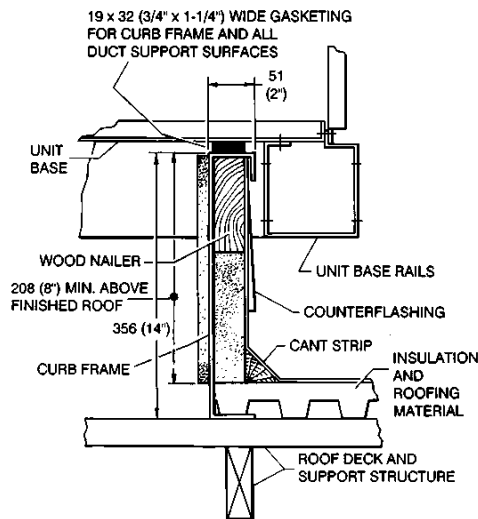
## ROOF CURB BENEFITS



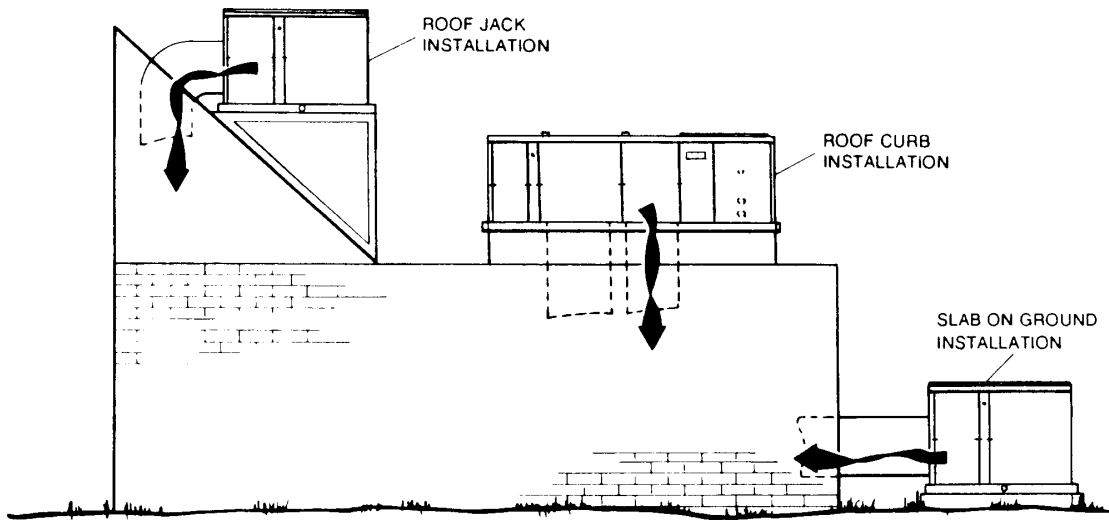
- ① The 51 (2") space between the duct allows for "jumping" an existing roof joist.
- ② The 1486 (58-1/2") overall dimension of the ducts allows ductwork penetration between roof joists that are spaced on 1829 (72") centers.

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

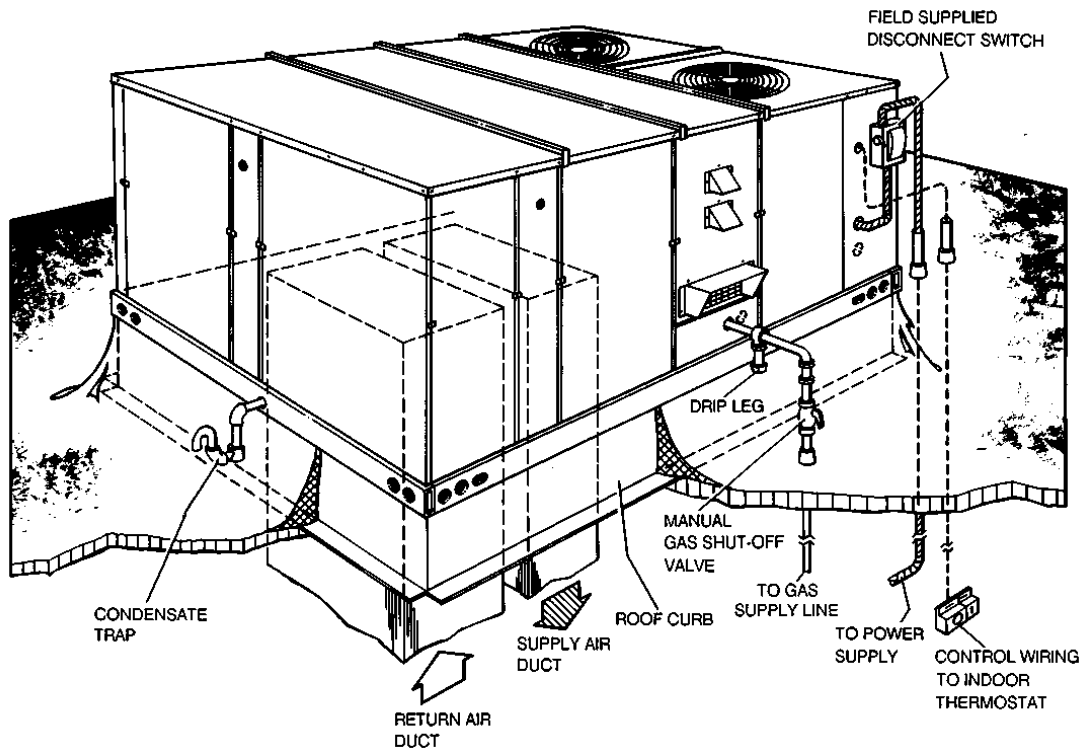
## UNIT AND CURB APPLICATION



# TYPICAL APPLICATIONS



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





Heating and Air Conditioning

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