



Lee's Summit Scope of Work Statement

Codes Administration Department
220 SE Green Street
Lee's Summit, MO 64063

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Revised November 22, 2011

410.87

Contractor: CATES SERVICES CO Contact Name: RICHARD FRUITT
Address: 14361 W 96th TERR
City: Lenexa State: KS Zip: 66215
Phone: 913-888-4470 Fax: 913-888-2422

Project Address: 818 SW Blue Parkway Lee's Summit Mo
Name of Owner: ZYPR Properties

Scope of Work: Replace 10 damaged rooftop units

Cost of project including labor \$ 60,000.00

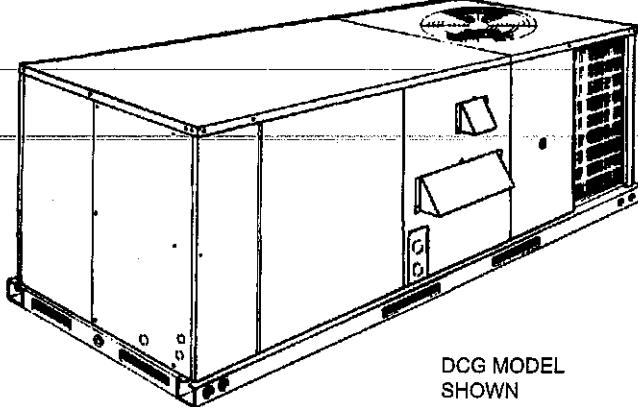
AFFIDAVIT: I hereby certify that I have the authority to make the foregoing application and that the application, the best of my knowledge, is complete and correct and that the permitted construction will conform to the regulations in the Codes adopted by the City of Lee's Summit and all applicable ordinances.

Richard Smith
Signature of Owner or Authorized Agent

Richard Pruitt
Printed Name of Applicant

4-3-14





SINGLE PACKAGE AIR-COOLED AIR CONDITIONERS

D3CE 036, 048, 060 & 076
D5CG 036, 048, 060 & 076
3, 4, 5 AND 6 NOMINAL TONS

SUNLINE 2000™ (WORLD 50 HZ)



DESCRIPTION

YORK Sunline 2000 units are convertible single package air conditioners with a common cabinet and a common roof curb for the 3, 4, 5 and 6 ton sizes. The units were designed for residential and light commercial applications. They 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 with fork lift slots on three sides and holes for overhead rigging. Every unit is completely piped, wired, charged and tested at the factory to provide for a quick and easy field installation.

The units are available in cooling only, and cooling with gas heat. Electric heaters are available as field-installed accessories.

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

These units are designed and manufactured under ISO 9002 Quality System Certification.

FEATURES

COMMON FOOTPRINT/COMMON CABINET -- All model sizes and configurations share a common cabinet and a common roof curb. The installer has the flexibility of setting one curb and placing the proper tonnage unit on that curb after the internal load has been determined. Selection of gas or electric heat can be made after the curb has been set.

HIGH EFFICIENCY -- All units have a high cooling efficiency, and gas / electric models have a minimum AFUE of 79%.

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 / bottom return is desired, remove the two knockout panels from the base of the unit 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 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 (14in.) high roof curb is shipped knocked down. An insulated deck is not required because the bottom of the unit is insulated.

WIDE RANGE OF INDOOR AIRFLOWS -- All 3, and 4-ton models operate over a wide range of design conditions with a 3-speed direct-drive fan motor. Belt-drive blowers are standard on all 5 and 6 ton models.

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.

SYSTEM PROTECTION -- Crankcase heat and internal overload protection are standard on all compressors. Every unit has a liquid line filter-drier, high and low pressure switches and a suction line freezestat to protect all system components. All units provide cooling at ambient temperatures down to 7°C (45°F).

UTILITY CONNECTIONS MADE EASY -- Gas and electric utility knockouts are provided in the unit base 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 compressor lockout indicator light and a low voltage terminal strip. An additional set of pin connectors is also provided to simplify the field interface of external controls.

Physical Data**ZF036-076 Physical Data****NEW**

Component	Models			
	ZF036	ZF048	ZF060	ZF076
Nominal Tonnage	3.0	4.0	5.0	6.3
ARI COOLING PERFORMANCE				
Gross Capacity @ ARI A point (Btu)	36400	51300	60400	72600
ARI net capacity (Btu)	35200	47000	57800	69100
EER (Net)	11.5	11.5	11.5	10.9
SEER	13.0	13.0	13.0	-
Nominal CFM	1200	1600	2000	2500
System power (kW)	4.2	4.2	4.9	6.3
Refrigerant type	R-410A	R-410A	R-410A	R-410A
Refrigerant charge (lb-oz)				
System 1	4-12	5-4	5-4	6-8
ARI HEATING PERFORMANCE				
Heating model	N04	N08	N06	N10
Heat input (K Btu)	50	100	75	125
Heat output (K Btu)	40	80	60	100
AFUE %	80.9	80.5	80.9	80.3
Steady state efficiency (%)	-	-	-	-
No. burners	2	4	3	5
No. stages	1	1	1	1
Temperature Rise Range (°F)	15-45	45-75	25-70	45-75
Gas Limit Setting (°F) - Direct Drive	240	170	210	165
Gas Limit Setting (°F) - Belt Drive	-	-	-	210
Gas piping connecting (in.)	1/2	1/2	1/2	1/2
DIMENSIONS (inches)				
Length	82 1/4	82 1/4	82 1/4	82 1/4
Width	44 7/8	44 7/8	44 7/8	44 7/8
Height	32 5/8	32 5/8	32 5/8	32 5/8
OPERATING WT. (lbs.)	468	541	569	640
COMPRESSORS				
Type	Recip	Recip	Scroll	Scroll
Quantity	1	1	1	1
Unit Capacity Steps (%)	100	100	100	100
CONDENSER COIL DATA				
Face area (Sq. Ft.)	16.3	16.3	16.3	16.3
Rows	1	1	1	1
Fins per inch	23	23	23	23
Tube diameter (in./mm)	0.71 / 18	0.71 / 18	0.71 / 18	1.0 / 25.4
Circuitry Type	2-pass Microchannel	2-pass Microchannel	2-pass Microchannel	2-pass Microchannel
EVAPORATOR COIL DATA				
Face area (Sq. Ft.)	5.06	5.06	5.06	5.06
Rows	3	4	4	4
Fins per inch	13	13	13	13
Tube diameter	0.375	0.375	0.375	0.375
Circuitry Type	Intertwined	Intertwined	Intertwined	Intertwined
Refrigerant control	Fixed Orifice	Fixed Orifice	Fixed Orifice	Fixed Orifice

PHYSICAL DATA - BASIC UNITS

Existing

Model (DCE/DCG)		036	048	060	076
Evaporator blower	Centrifugal Blower (Dia. x Wd. mm (in.))	12 x 10 (305 x 254) 1/3	12 x 10 (305 x 254) 3/4	12 x 10 (305 x 254) 1.5	12 x 11 (305 x 279) 1.5
	Fan Motor Hp (direct-drive) Fan Motor Hp (belt-drive)	-	-	-	-
Evaporator coil	Rows Deep Fins Per 25mm (1in.) Face Area (m ² /ft ²)	3 13 0.33 / 3.6	3 13 0.40 / 4.3	3 13 0.57 / 5.1	3 13 0.57 / 5.1
Condenser fan	Propeller Dia. (mm/in.) Fan Motor HP Nom. CFM Total	610 / 24 1/2 4,500	610 / 24 1/2 4,500	610 / 24 1/2 4,500	610 / 24 1/2 4,500
Condenser coil	Rows Deep Fins Per 25mm (1in.) Face Area (m ² /ft ²)	1 16 1.60 / 17.1	1 19 1.60 / 17.1	1 22 1.60 / 17.1	2 16 1.55 / 16.7
Air filters (see Note)	Quantity Per Unit (14" X 20" X 1") Quantity Per Unit (14" X 25" X 1") total Face Area (m ² /ft ²)	2 1 0.59 / 6.3	2 1 0.59 / 6.3	2 1 0.59 / 6.3	2 1 0.59 / 6.3
Charge	Refrigerant-22 (kg/lbs./oz.)	2.72 (6/0)	3.0 (6/10)	3.3 (7/4)	4.9 (10/12)

NOTE: Filter racks are adapted for 25mm (1") or 50mm (2") thick filters.

COMPONENT WEIGHTS (kg/lbs)

COMPONENT		MODELS DCE & DCG			
		036	048	060	076
Basic Unit	DCE (Cooling only)	250 / 550	268 / 590	286 / 630	313 / 690
	DCG (Gas / Electric)	41 Mbh	277 / 610	-	-
		62 Mbh	-	295 / 650	-
		82 Mbh	-	-	313 / 690
		103 Mbh	-	-	338 / 745
Options and Accessories	Economizer			23 / 50	
	Motorized Outdoor Air Damper			22 / 48	
	Electric Heat (Nominal KW) (DCE only)	5 - 7 KW		8 / 18	
		10 - 15 KW		10 / 23	
		20 - 30 KW		13 / 28	
	Roof Mounting Curb			42 / 92	
	Relief / Fixed Air Damper			5 / 10	