

**CITY OF SACRAMENTO**

**Permit No: 9901397**

**1231 I Street, Sacramento, CA 95814**

**Insp Area: 1**

**Site Address: 1912 I ST SAC**

**Sub-Type: NOTHR**

**Parcel No: 0070014006**

**STE 102**

**Housing (Y/N): N**

**CONTRACTOR**

RAND MECHANICAL INC  
1800 VERNON ST #3  
ROSEVILLE CA 95678

**OWNER**

HOLSTEDT JOHN  
1912 I ST  
SACRAMENTO CA 95814

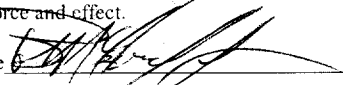
**ARCHITECT**

**Nature of Work: HVAC CHANGE OUT**

**CONSTRUCTION LENDING AGENCY :** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

**LICENSED CONTRACTORS DECLARATION:** I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is ~~in full force and effect.~~

License Class \_\_\_\_\_ License Number 504575 Date 2-12-99 Contractor Signature 

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00);

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

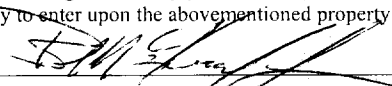
I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

I am exempt under Sec. \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_

Date \_\_\_\_\_ Owner Signature \_\_\_\_\_

**IN ISSUING THIS BUILDING PERMIT,** the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 2-12-99 Applicant/Agent Signature 

**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

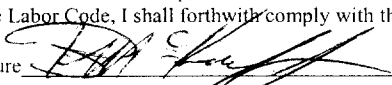
I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier **MID-CENTURY INS CO**

Policy Number **A05107260**

Exp Date **10/01/1999** 

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 2-12-99 Applicant Signature 

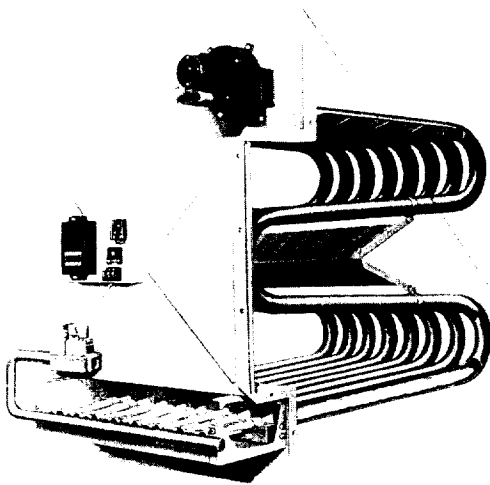
**WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.**

**THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.**

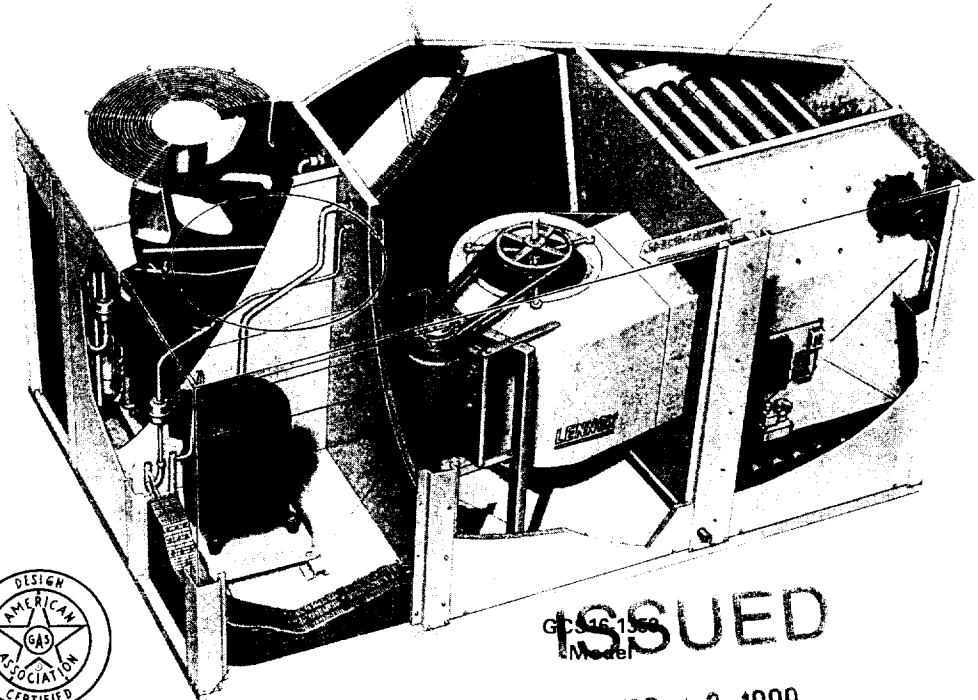
*New* → **GCS16-953 thru GCS16-3003**  
**PACKAGED UNITS**  
**COOLING & GAS HEAT**  
**\*88,000 to 284,000 Btuh Cooling Capacity**  
**126,000 to 470,000 Btuh Input Heating Capacity**

**GCS16**  
**(7.5 to 25 Ton)**

Bulletin No. 480022  
November 1993  
Supersedes April 1993

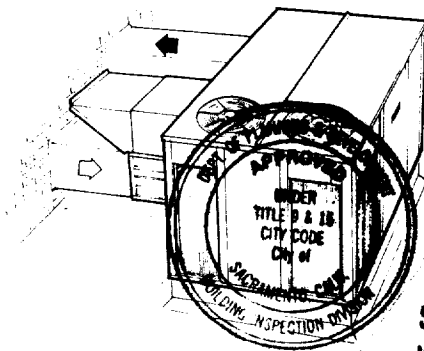


Tubular Heat Exchanger, Inshot Gas Burners, induced Draft Blower and Gas Train.

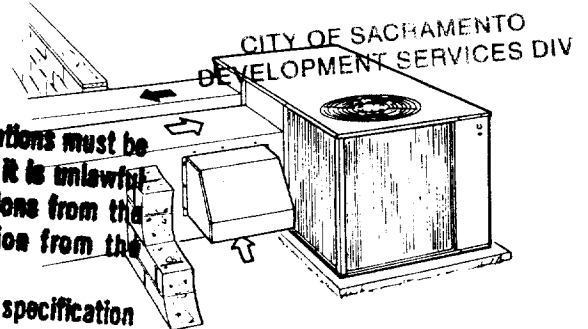


Typical Applications

**ISSUED**  
FEB 12 1999



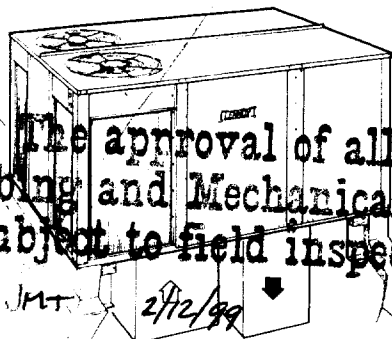
Horizontal (side) Supply and Return Air Installation with OAD16 Outdoor Air Dampers.  
with RMF16 Roof Mounting Frame and EMDH16M Economizer Dampers.



CITY OF SACRAMENTO  
DEVELOPMENT SERVICES DIV

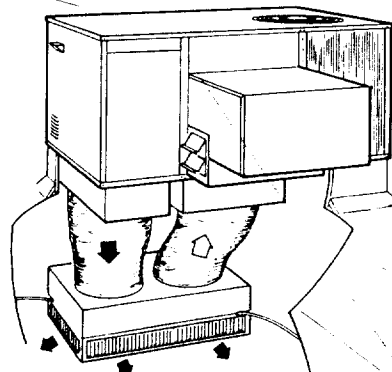
**This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.**  
**The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.**

**The approval of all Plumbing and Mechanical work is subject to field inspection**



Down-Flo Supply and Return Air Installation with RMF16 Roof Mounting Frame

*Provide smoke detector shutoff if in excess of 2000 f.*



Down-Flo Supply and Return Air Installation with RMF16 Roof Mounting Frame, REMD16M Economizer Dampers and RTD11 Ceiling Diffuser.

## HIGH ALTITUDE DERATE

If the heating value of the gas does not exceed the values listed in table, derating of unit is not required. Should the heating value of the gas exceed the table values, or if the elevation is greater than 6,000 feet above sea level, it will be necessary to derate the unit. Lennox requires that derate conditions be 4% per thousand feet above sea level. Thus, at an altitude of 4000 feet, if the heating value of the gas exceeds 1000 btu/ft.<sup>3</sup>, the unit will require a 16% derate.

Elevation Above Sea Level (Feet)	Maximum Heating Value (Btu/ft. <sup>3</sup> )
5001 — 6000	900
4001 — 5000	950
3001 — 4000	1000
2001 — 3000	1050
Sea Level — 2000	1100

## SPECIFICATIONS — GCS16-953

Model No.		GCS16-953	
*ARI Standard 210/240 Ratings	Total cooling capacity (btuh)	88,000	
	Total unit watts	9,780	
	EER (Btuh/Watts)	9.0	
*ARI Standard 270 SRN (Bels)		8.6	
Refrigerant (22) Charge	Stage 1	6 lbs. 4 oz.	
	Stage 2	5 lbs. 14 oz.	
Evaporator Blower and Drive Selection	Blower wheel nominal diameter x width (in.)		
	12 x 12		
	Factory Installed ***Drives	Nominal motor horsepower	2
		Maximum usable horsepower	2.30
Voltage & phase		208/230/460v-3ph	
RPM range		740 — 1010	
Evaporator Coil	Net face area (sq. ft.)		
	7.75		
	Tube diameter (in.) & No. of rows		
3/8 — 3			
Fins per inch		14	
Condenser Coil	Net face area (sq. ft.)		
	15.67		
	Tube diameter (in.) & No. of rows		
3/8 — 2			
Fins per inch		20	
Condenser Fans	Diameter (in.) & No. of blades		
	24 — 4		
	Air volume (cfm)		
	5300		
Motor horsepower		3/4	
Motor watts		660	
Two Stage Heating Capacity (Natural Gas Only)	Btuh Input (low)		
	126,000		
	Btuh Output (low)		
	98,000		
	Btuh Input (High)		
200,000			
Btuh Output (High)		160,000	
A.G.A. Thermal Efficiency		80%	
Two Stage Heating Capacity (**LPG Gas Only)	Btuh Input (low)		
	126,000		
	Btuh Output (low)		
	98,000		
	Btuh Input (High)		
175,000			
Btuh Output (High)		142,000	
A.G.A. Thermal Efficiency		81.5%	
Gas Supply Connections fpt (in.)	Natural		
	3/4		
Recommended Gas Supply Pressure (wc. in.)	**LPG		
	3/4		
Condensate drain size mpt (in.)	Natural		
	7		
Recommended Gas Supply Pressure (wc. in.)	**LPG		
	11		
Condensate drain size mpt (in.)		1	
No. & size of filters (in.)		(4) 16 x 20 x 2	
Net weight of basic unit (lbs.) (1 Package)		875	
Electrical characteristics		208/230v or 460v — 60 hertz — 3 phase	

\*Sound Rating Number in accordance with ARI Standard 270.

\*\*Rated in accordance with ARI Standard 210/240; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air.

\*\*\*For LPG units a field conversion kit is required and must be ordered extra. See Optional Accessories table.

\*\*\*Using total air volume and system static pressure requirements determine from blower performance tables rpm and bhp required. Maximum usable hp of motors furnished by Lennox are shown. If motors of comparable hp are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

**GCS16-953 Thru -1603 OPTIONAL ACCESSORIES (Must Be Ordered Extra)**

Unit Model No.		GCS16-953	GCS16-1353	GCS16-1603
** PG Conversion Kit		LB-55755DA (32G88)	LB-55755DA (32G88)	
Pool Mounting Frame — (Net Weight)		RMF16-95 (107 lbs.) (32G90)	RMF16-135/160 (119 lbs.) (32G91)	
Economizer Dampers — (Net Weight) No. & size of filters (in.)		REMD16M-95 (118 lbs.) (2) 16 x 25 x 1 (74G22)	REMD16M-135 (125 lbs.) (2) 16 x 25 x 1 (74G23)	REMD16M-160 (140 lbs.) (2) 20 x 25 x 1 (51G25)
Horizontal Economizer Dampers — (Net Weight) No. & size of filters (in.)		EMDH16M-95 (120 lbs.) (2) 16 x 25 x 1 (24H03)	EMDH16M-135 (137 lbs.) (2) 16 x 25 x 1 (24H04)	EMDH16M-160 (147 lbs.) (2) 20 x 25 x 1 (24H05)
Exhaust Dampers — (Net Weight) (Net Face Area)		GED16-95/135/160 (5 lbs.) (0.43 sq. ft.) (34G80)		
Differential Enthalpy Control		54G44		
Horizontal Supply and Return Air Kit — (Net Weight)		LB-55756BA (30 lbs.) (34G71)	LB-55756BB (35 lbs.) (35G42)	LB-55756BC (42 lbs.) (51G27)
Bottom Power Entry Kit — (Net Weight)		LB-55757CA (12 lbs.) (34G70)		Furnished
Ceiling Supply and Return Air Diffusers (Net Weight)	Step-Down	RTD11-95 (88 lbs.) (29G04)	RTD11-135 (125 lbs.) (29G05)	RTD11-185 (392 lbs.) (29G06)
	Flush	FD11-95 (75 lbs.) (29G05)	FD11-135 (95 lbs.) (29G09)	FD11-185 (289 lbs.) (29G10)
	Transition	SRT16-95 (29 lbs.) (33G96)	SRT16-135 (38 lbs.) (97H10)	SRT16-160 (70 lbs.) (97H11)
Ceiloor Air Dampers — (Net Weight) No. & size of filters (in.)		OAD16-95 (41 lbs.) (1) 16 x 20 x 1 (35G26)	OAD16-135 (43 lbs.) (1) 16 x 20 x 1 (35G25)	OAD16-160 (45 lbs.) (1) 16 x 20 x 1 (51G30)
Automatic OAD16 Damper Kit — (Net Weight)		35G21 (7 lbs.)		
Low Ambient Control Kit		LB-57113BG (15J80)	LB-57113BH (16J86)	LB-57113BJ (16J87)
Turned Off Control Kit (2) LB-50709BA		40G20		

\*\*For PG units a field conversion kit is required and must be ordered extra.

**GCS16-1853 Thru -3003 OPTIONAL ACCESSORIES (Must Be Ordered Extra)**

Unit Model No.		GCS16-1853	GCS16-2553, GCS16-2753 & GCS16-3003	
** PG Conversion Kit		LB-81509DA (12H31)	LB-81509DA (12H31) (2 required on -470)	
Pool Mounting Frame — (Net Weight)		RMF16-185 (127 lbs.) (12H05)	RMF16-300 (180 lbs.) (41H04)	
Economizer Dampers with Gravity Exhaust— (Net Weight) No. & size of filters (in.)		REMD16M-185 (160 lbs.) (2) 25 x 25 x 1 (40H14)	REMD16M-300 (210 lbs.) (3) 20 x 25 x 1 (44H47)	
Differential Enthalpy Control		54G44		
Optional Power Exhaust Fans (Down Flo Only)	Model No. (Net Weight)	208/230v	PED16-185 (60 lbs.) (12H16)	PED16-300 (91 lbs.) (44H79)
		460v	PED16-185 (60 lbs.) (12H17)	PED16-300 (91 lbs.) (44H80)
	Diameter (in.) & No. of Blades		(2) 16 — 5	(3) 16 — 5
	Total air volume (cfm)		4200	6300
	Motor Horsepower		(2) 1/4	(3) 1/4
	Watts input (total)		500	750
Horizontal Supply and Return Air Kit — (Net Weight)		LB-55756BD (52 lbs.) (12H04)	LB-55756BE (60 lbs.) (41H23)	
Ceiling Supply and Return Air Diffusers (Net Weight)	Step-Down	RTD11-185 (392 lbs.) (29G06)	RTD11-275 (403 lbs.) (29G07)	
	Flush	FD11-185 (289 lbs.) (29G10)	FD11-275 (363 lbs.) (29G11)	
	Transition	SRT16-185 (75 lbs.) (97H12)	SRT16-300 (120 lbs.) (97H13)	
Ceiloor Air Dampers — (Net Weight) No. & size of filters (in.)		OAD16-185 (120 lbs.) (1) 25 x 27 x 1 (12H03)	OAD16-300 (84 lbs.) (1) 26 x 31 x 1 (40H47)	
Automatic OAD16 Damper Kit — (Net Weight)		35G21 (7 lbs.)		
Low Ambient Control Kit		LB-57113BK (16J88)	LB-57113BL (16J89)	

\*\*For PG units a field conversion kit is required and must be ordered extra.

**ELECTRICAL DATA — GCS16-953, -1353 & -1603**

Model No.		GCS16-953		GCS16-1353				GCS16-1603	
Line voltage data — 60 hz — 3 phase		208/230v	460v	208/230v	460v	208/230v	460v	208/230v	460v
Compressors (2)	Rated load amps — each (total)	14.8/14.1 (28.9)	7.7/7.1 (14.8)	17.3/17.3 (34.6)	9.6/9.6 (19.2)	27.1/17.9 (45.0)	14.2/10.0 (24.2)		
	Locked rotor amps — each (total)	130/130 (260.0)	64/64 (128.0)	150/150 (300.0)	73/73 (146.0)	183/150 (323.0)	91/73 (164)		
Condenser Fan Motor(s)	Full load amps (total)	3.7	1.9	2.1/2.1 (4.2)	1.2/1.2 (2.4)	3.0/3.0 (6.0)	1.5/1.5 (3.0)		
	Locked rotor amps (total)	7.3	3.7	5.1/5.1 (10.2)	2.7/2.7 (5.4)	6.2/6.2 (12.4)	3.4/3.4 (6.8)		
Evaporator Blower Motor	Horsepower	2	2	2	3	2	3	3	3
	Full load amps	7.5	3.4	7.5	10.6	3.4	4.8	10.6	4.8
	Locked rotor amps	41.0	20.4	41.0	58.0	20.4	26.8	58.0	26.8
**Recommended maximum fuse size (amps)		50	25	60	60	35	35	90	45
*Minimum Circuit Ampacity		44.0	23.0	51.0	54.0	28.0	29.0	69.0	36.0
Unit power factor		.88	.88	.88	.88	.88	.88	.88	.88

\*Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE — Extremes of operating range are plus and minus 10 % of line voltage.

\*\*Where current does not exceed 100 amps, HACR type circuit breaker may be used in place of fuse.

**ELECTRICAL DATA — GCS16-1853, -2553, -2753 & -3003**

Model No.			GCS16-1853				GCS16-2553				GCS16-2753				GCS16-3003			
Line voltage data — 60 hz — 3 phase			208/230v	460v	208/230v	460v	208/230v	460v	208/230v	460v	208/230v	460v	208/230v	460v	208/230v	460v		
Compressors	Rated load amps	each	(3) 19.2	(3) 9.6	(2) 31.0	(2) 16.8	(2) 37.1	(2) 17.8	(2) 46.5	(2) 22.2								
		total	57.6	28.8	62.0	33.6	74.2	35.6	93.0	44.4								
	Locked rotor amps	each	(3) 124	(3) 62	(2) 205.0	(2) 104.0	(2) 239.0	(2) 120.0	(2) 269.0	(2) 135.0								
		total	372.0	186.0	410.0	208.0	478.0	240.0	538.0	270.0								
Condenser Fan Motors (2)	Full load amps (total)	9.6	4.8	9.6	4.8	9.6	4.8	9.6	4.8	9.6	4.8	9.6	4.8	9.6	4.8			
	Locked rotor amps (total)	24.0	12.0	46.0	23.0	46.0	23.0	46.0	23.0	46.0	23.0	46.0	23.0	46.0	23.0			
Evaporator Blower Motor	Horsepower	3	5	3	5	5	7-1/2	5	7-1/2	5	7-1/2	5	7-1/2	7-1/2	10	7-1/2	10	
	Full load amps	10.6	16.7	4.8	7.6	16.7	24.2	7.6	11.0	16.7	24.2	7.6	11.0	24.2	30.8	11.0	14.0	
	Locked rotor amps	58.0	91.0	26.8	45.6	105.0	152.0	45.6	66.0	105.0	152.0	45.6	66.0	152.0	193.0	66.0	84.0	
Optional Power Exhaust Fans	(No.) Horsepower	(2) — 1/4	(2) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	(3) — 1/4	
	Full load amps (total)	2.8	1.4	4.2	2.2	4.2	2.2	4.2	2.2	4.2	2.2	4.2	2.2	4.2	2.2	4.2	2.2	
	Locked rotor amps (total)	6.5	3.3	8.7	3.9	8.7	3.9	8.7	3.9	8.7	3.9	8.7	3.9	8.7	3.9	8.7	3.9	
**Recommended max. fuse size (amps)	With Exhaust Fans	100	110	50	50	125	125	60	70	150	150	70	70	175	175	90	90	
	Less Exhaust Fans	100	110	50	50	125	125	60	70	125	150	70	70	175	175	90	90	
*Minimum Circuit Ampacity	With Exhaust Fans	85.0	95.0	45.0	50.0	101.0	108.0	53.0	56.0	114.0	122.0	55.0	58.0	143.0	150.0	68.0	71.0	
	Less Exhaust Fans	82.0	92.0	43.0	48.0	97.0	104.0	51.0	54.0	110.0	118.0	53.0	56.0	139.0	146.0	66.0	69.0	
Unit Power Factor	With Exhaust Fans	.84	.84	.84	.84	.88	.88	.88	.88	.88	.88	.88	.88	.87	.87	.87	.87	
	Less Exhaust Fans	.84	.84	.84	.84	.88	.88	.88	.88	.88	.88	.88	.88	.87	.87	.87	.87	

\*Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE -- Extremes of operating range are plus and minus 10 % of line voltage.

\*\*Where current does not exceed 100 amps, HACR type circuit breaker may be used in place of fuse.

# UNIT DIMENSIONS (inches)

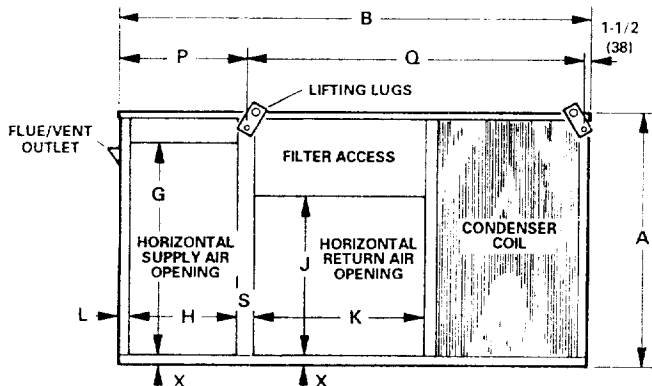
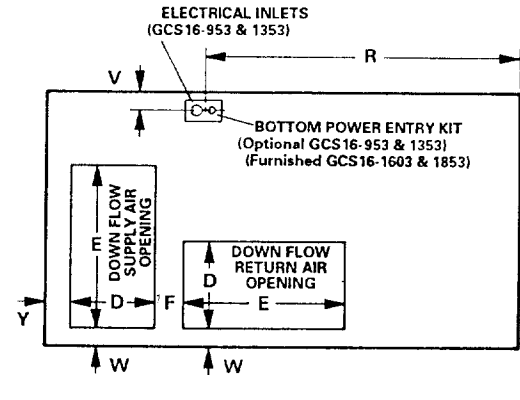
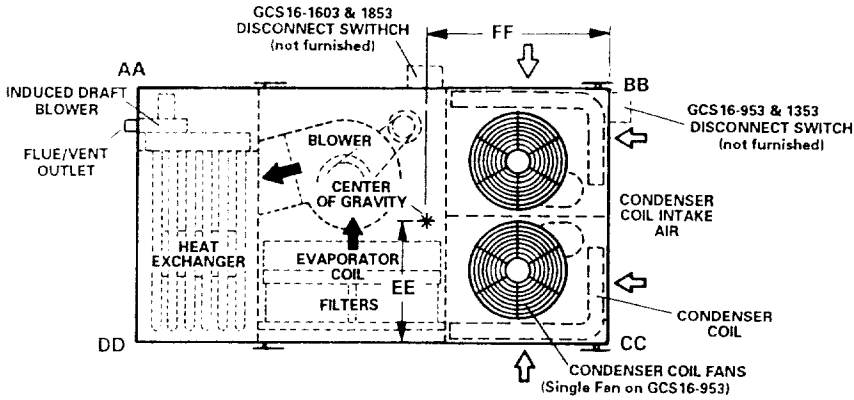
GCS16-953, -1353, -1603 & -1853 (-235 Size Shown)

CORNER WEIGHTS (lbs.)

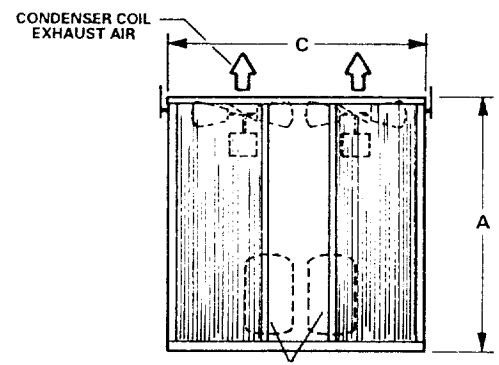
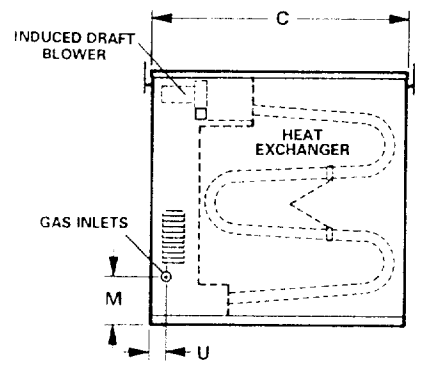
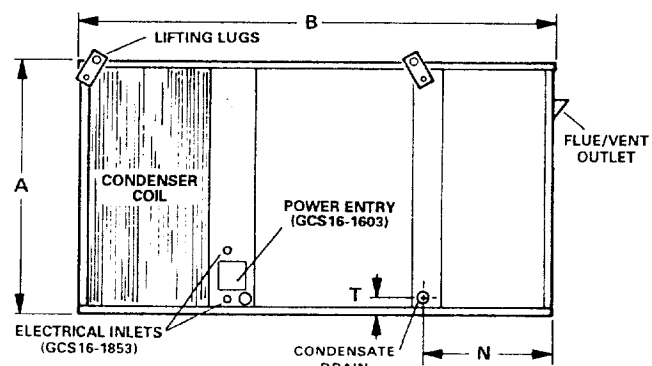
Model No.	AA	BB	CC	DD
GCS16-953	236	283	194	162
GCS16-1353	255	345	287	213
GCS16-1603	285	394	353	256
GCS16-1853	419	552	435	329

CENTER OF GRAVITY (in.)

Model No.	EE	FF
GCS16-953	28-1/2	40
GCS16-1353	32-3/4	40
GCS16-1603	31-5/8	42-3/8
GCS16-1853	38	50



With HORIZONTAL SUPPLY & RETURN AIR OPENINGS



Model No.	A	B	C	D	E	F	G	H	J	K	L
GCS16-953	39	88-1/2	48	16-1/2	30-3/8	5-5/8	32-1/8	19-7/16	24-5/8	33	1-5/8
GCS16-1353	46	94	60	24	30-3/8	4-7/16	39-1/8	25-1/4	31-5/8	33	2
GCS16-1603	46	102	60	24	38	4-7/16	39-1/8	25-1/4	31-5/8	41	2
GCS16-1853	51-1/2	116	68	24-1/2	44	5-5/8	41-1/2	25-3/4	32-3/4	50-1/8	2

Model No.	M	N	P	Q	R	S	T	U	V	W	X	Y
GCS16-953	9-3/4	25-1/16	22-1/8	64-7/8	53-1/2	2-3/4	2-3/8	2-7/8	4-3/16	3-1/16	1-1/2	3-1/16
GCS16-1353	14	31-3/16	28-1/2	64	53-1/2	2-3/4	2-3/8	2-7/8	4-3/16	3-1/16	1-1/2	3-1/16
GCS16-1603	14	31-3/16	28-1/2	72	25-1/2	2-3/4	2-3/8	2-7/8	4-3/16	3-1/16	1-1/2	3-1/16
GCS16-1853	15-1/2	33-1/2	33	81-1/2	36	4-1/4	4	4	7-1/4	5	3	4-1/16