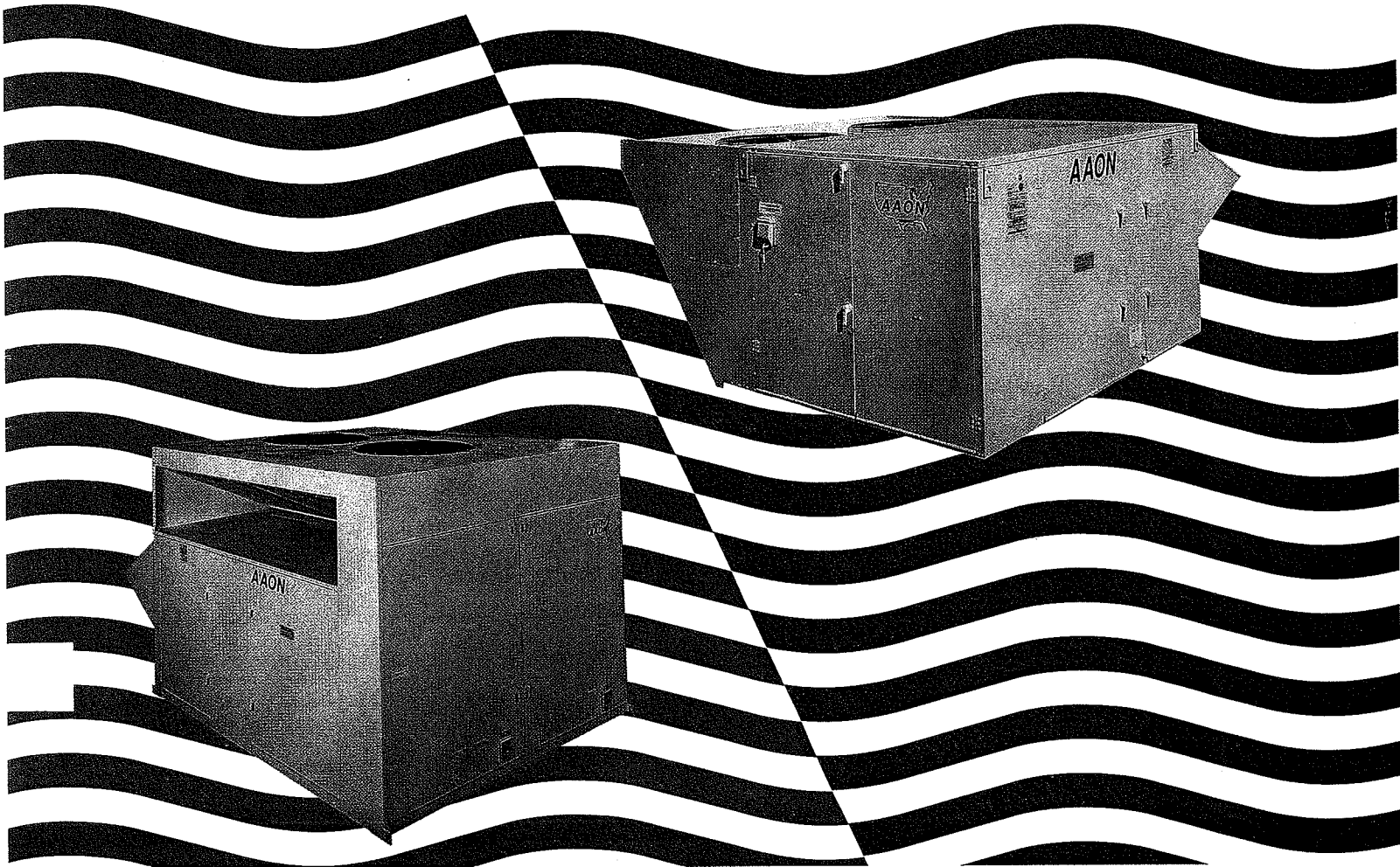
AAON

RH Rooftop Heating and Cooling Units 2 to 60 tons

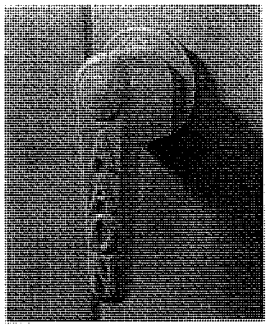


AAON HVAC Equipment: Engineered for a Lifetime of Value

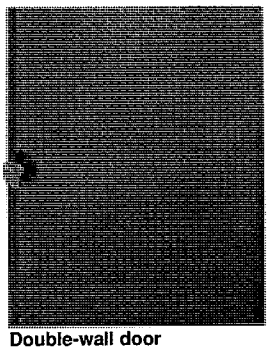
Manufacturers of rooftop units have historically focused on the initial cost of the unit, leaving life-cycle costs a distant second thought. AAON rooftop units are changing that balance. We at AAON believe that the total life cycle cost of equipment is of ultimate importance. Therefore, AAON units are designed to not only have a reasonable first cost but also to maximize life expectancy, functionality, energy efficiency and maintainability while minimizing installation requirements. The AAON equation results in a quality unit with the best total value.

Long-life Expectancy

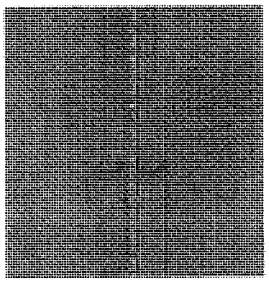
AAON's heavy gauge G90 galvanized sheet metal construction with standard double wall doors, optional double wall cabinet, stainless steel door hinges, molded zinc door handles and an external coat of durable epoxy paint result in a cabinet designed to last for many years with minimal deterioration. High quality components including 200,000 hour bearing designs, oversized v-belt drives, and gas heat exchangers with heavy gauge tubes create a sturdy internal construction.



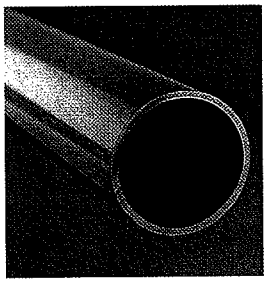
Handle to quality



Double-wall door

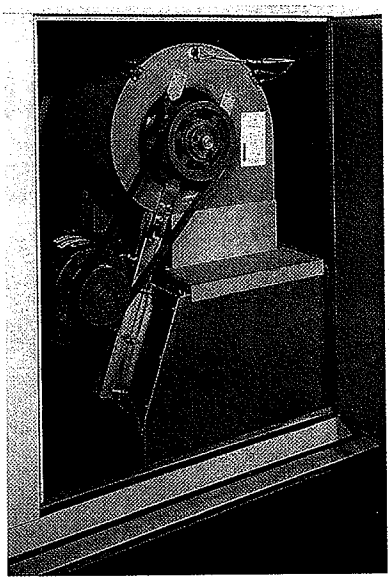


Stainless steel hinge

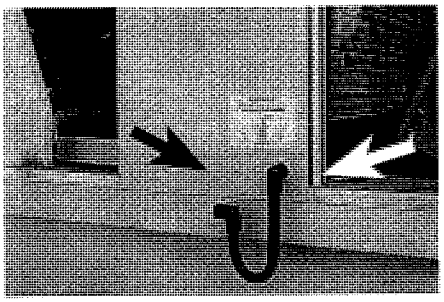


Heat exchanger tubes

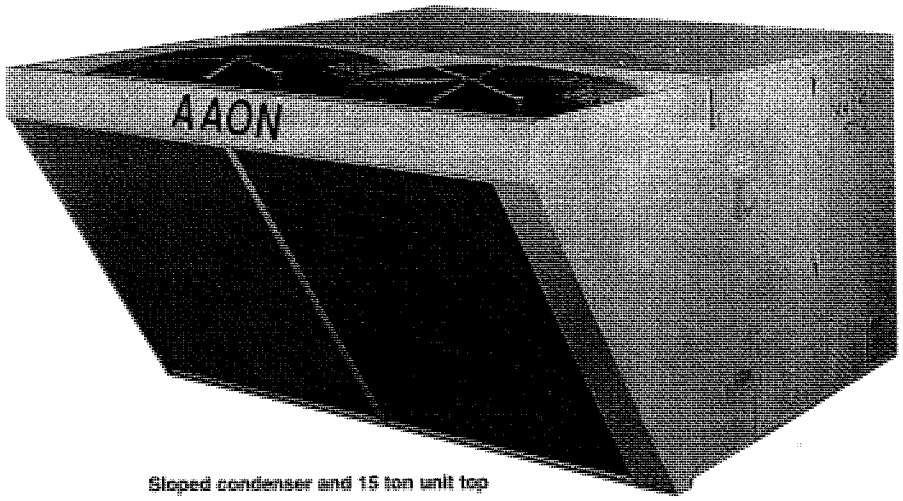
To further ensure longevity, AAON evacuates refrigeration systems to 50 microns prior to charging, thereby eliminating moisture and non-condensables and installs both low and high pressure switches on all refrigeration circuits resulting in an extended expected life for the compressor. Lastly, there are the more simple design elements such as sloped drain pans, condenser coils angled for protection and roofs which are cross broken and sloped for drainage which lengthen the useful life of an AAON unit.



"D" box blower



IAQ sloped drain pan

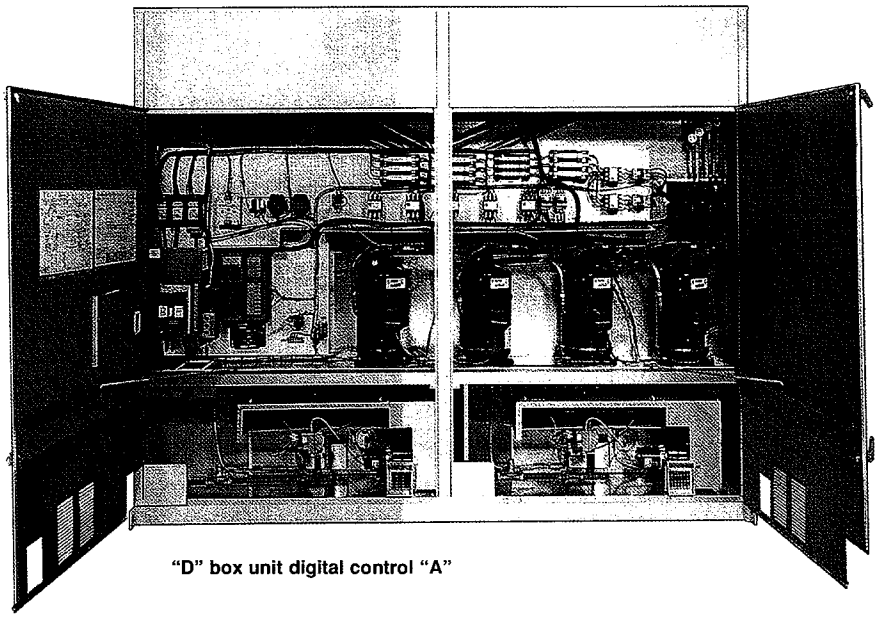


Sloped condenser end 15 ton unit top

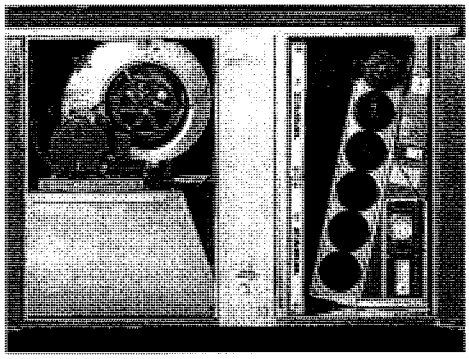
We stand behind our products with a substantial warranty. AAON covers all parts for one year, the compressor for five years and the heat exchanger for 10 years. Since AAON equipment will be around for a long time, it is also designed to meet customer specific performance requirements.

Functionality

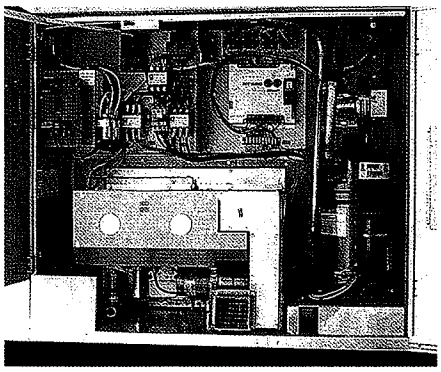
AAON rooftop units are manufactured to function in accordance with your particular heating and/or cooling requirements. AAON offers heating only (natural gas, propane, electric, hot water, steam, heat reclaim, or heat pump) and cooling only (DX self contained, DX coil only, or chilled water) along with combination heating and cooling units. By specifying a combination of these various heating and cooling possibilities, and selecting from options such as hot gas reheat, hot gas bypass, alternative coils and filters with numerous other options including an economizer and a power exhaust you can create a unit which meets your performance demands. Even the unit controls are specifically tailored to your needs through a choice of controls made by various control manufacturers.



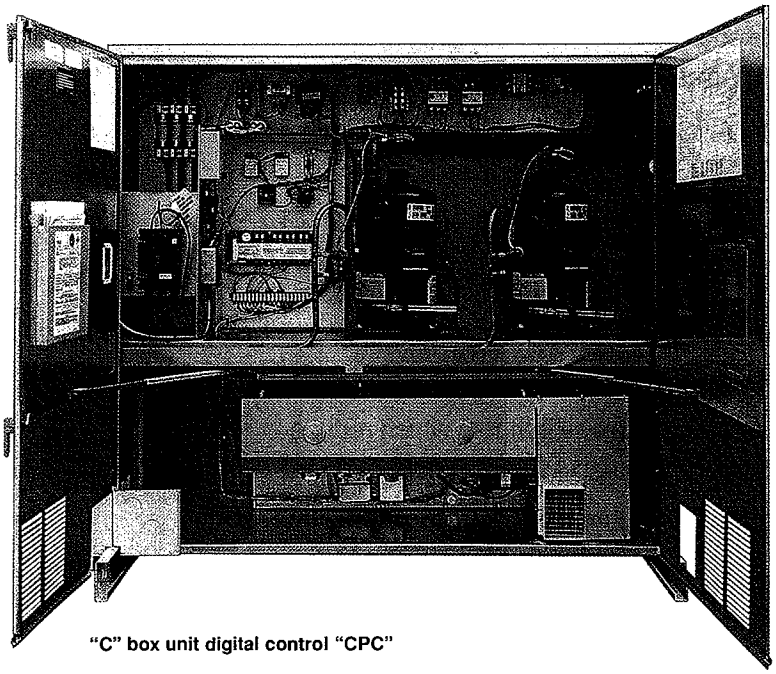
"D" box unit digital control "A"



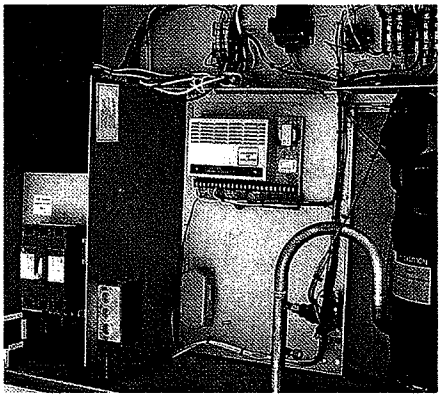
"B" with economizer and smoke detector



"A" box unit digital control "AL"



"C" box unit digital control "CPC"

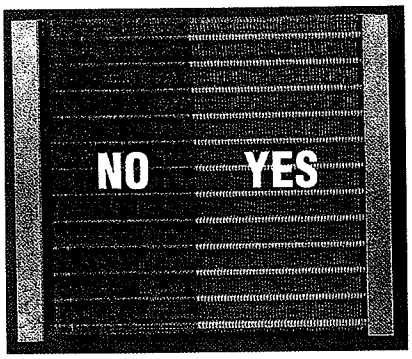


"C" box unit digital control "N"

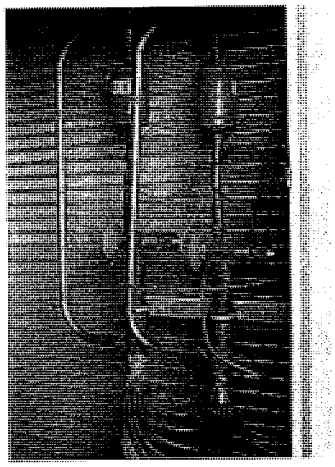
Humidity control capabilities consist of six row coil options, hot gas reheat which allows the unit to function as a dehumidifier, and/or with the heatwheel which removes outside air moisture continually during cooling season.

Energy Efficiency

In order to provide high energy efficiency ratios (EERs), all AAON units are designed with high efficiency compressors and large surface areas on both the evaporator and condenser coils. Equally important, the refrigerant system is controlled with an expansion valve and not fixed orifices. Therefore, efficiencies are maximized at all operation conditions and not simply at the rated condition.

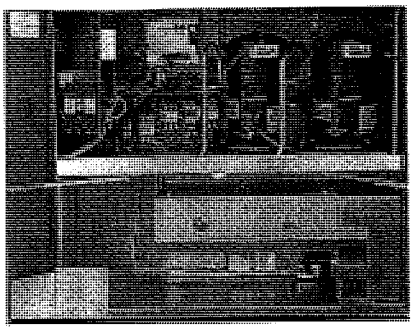


Condenser coil

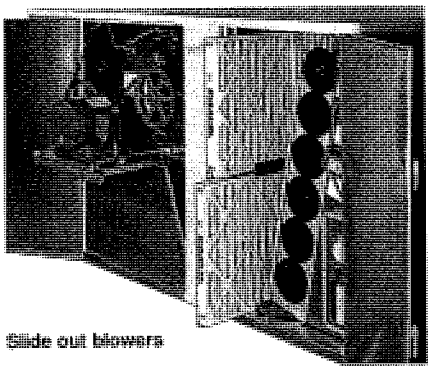

Expansion valves / hot gas by-pass

Our coil design is a single slab with a low fin count per inch. The AAON coil design minimizes plugging and dirt buildup, which can be exacerbated by a high fin concentration or the split row fins associated with bent condenser coils, thereby enabling the coil to maintain its efficiency longer without cleaning.

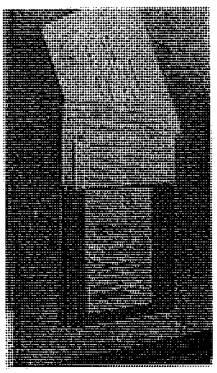
In addition to our high efficiency cooling systems, AAON rooftop units feature gas furnaces with better than 80% annual fuel utilization efficiency (AFUE).


"B" box unit

Easy Maintenance


Slide out blowers

Although we design and build our product for a long life and with quality components. AAON recognizes the need for easy maintenance. Considering the increasing costs of service personnel, it is critical to reduce the time necessary to do any necessary maintenance. Toward this goal, AAON designs its units for simple and efficient maintenance. For example, AAON utilizes doors with stainless steel hinges and quarter-turn handles in all usual maintenance areas to reduce access time.

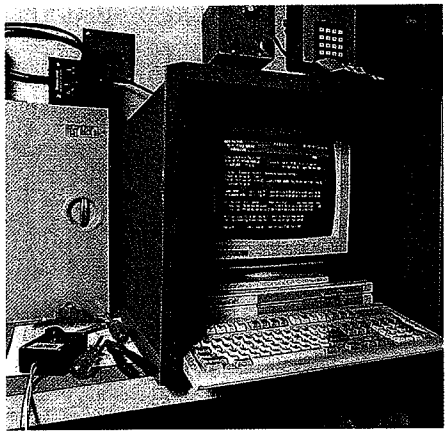

Door pocket

AAON also ensures the availability of necessary information by providing both an installation/ maintenance manual, contained in a metal pocket on the inside of the control compartment door, and a "unit specific" laminated, color-coordinated wiring diagram in both ladder and point-to-point versions, also affixed to the inside of the control compartment door. The colors on the wiring diagram closely match those of individual wires thereby allowing easier tracing of electrical connections.

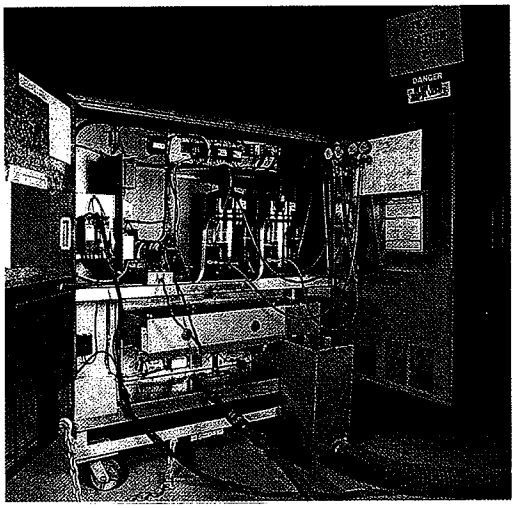
From a mechanical standpoint, AAON has designed in many features which reduce maintenance time and, therefore, costs. The blower assemblies are on slide out mountings and can be removed without disconnecting any wiring. Compressors and heating sections are accessible from the control enclosure to ease maintenance and understanding of the system. Additionally, electrical and mechanical components are marked with labels which are color-coordinated to individual refrigerant circuits. These features minimize the amount of time required to perform standard maintenance on the unit and help to reduce possible errors in the performance of maintenance tasks.

Testing

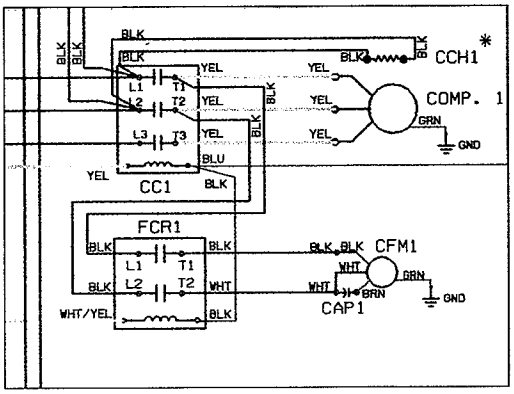
Every AAON unit is completely run tested on cooling and heating. Each electrical component has the amperage and voltage checked for acceptability. The refrigerant circuit is checked with suction and discharge readings against the ambient condition to assure proper performance. Heating sections are completely checked, including the rate of gas flow on gas heaters. In addition to which, by simulating condenser fan or evaporator blower failures all safety devices are checked and recorded. A copy of the run test sheet on which data is recorded can be found in the door pocket of each unit. During this thorough operational check, additional items such as vibration and tightness of components are checked to assure ease of jobsite check-out, as well as proper operation and long life. Upon final clean-up, painting, labeling, and crating, another AAON unit is ready for a satisfied customer.



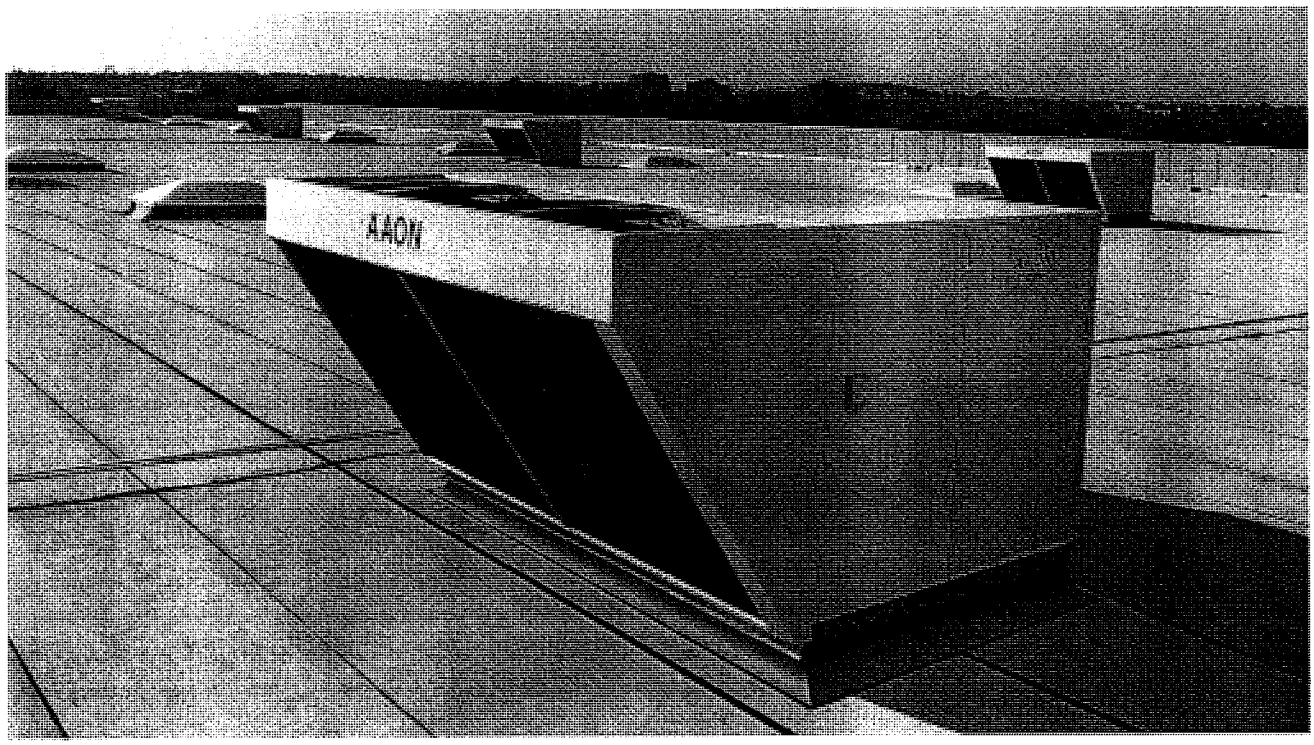
Unit test area, test computer



Ready to test



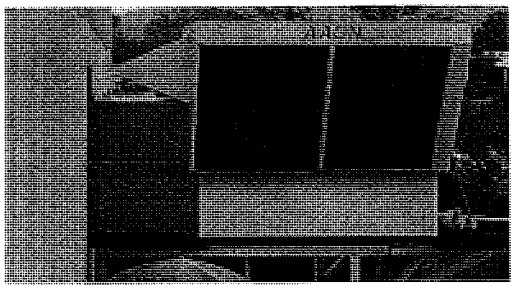
Section of a custom wiring diagram



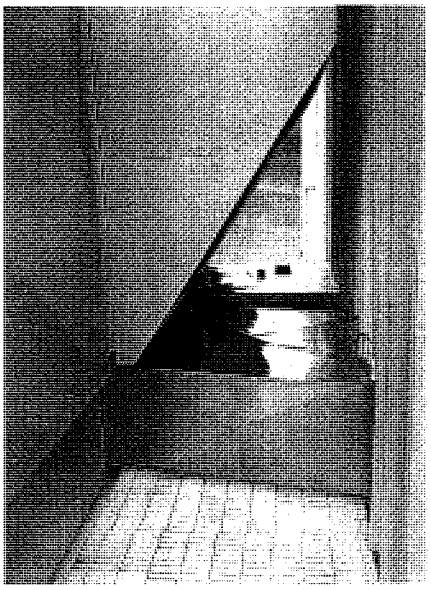
20 ton units

Installation

By factory installing, and testing, all engineering features required to meet your needs, AAON eliminates the costs and uncertain performance of field installed options. As a result of this factory testing and installation, your unit is able to be placed into service with minimal effort.



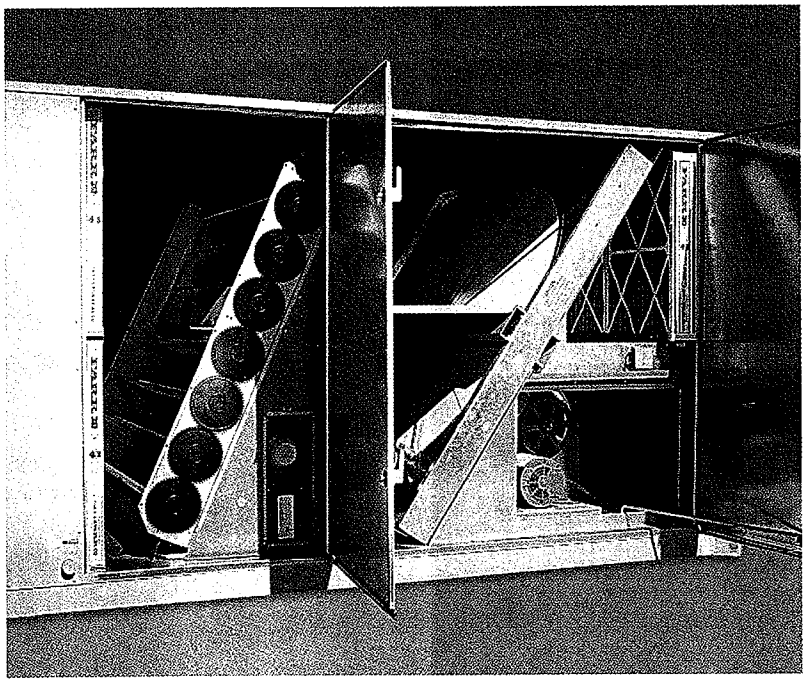
Horizontal-end supply and return air (above photos)



Horizontal-side supply and return air

To ensure flexibility, AAON units sized 2 through 15 tons all fit on a common size roof curb. Similarly, the 16 through 24, and 25 through 60 ton units fit on common curbs respectively. By using only three different curb sizes, AAON units enable you to change the capacity of your equipment, within ranges, with no roof work. Some available curb options include: the solid bottom acoustical curb, knock down curb for field assembly and vertical or horizontal discharge designs.

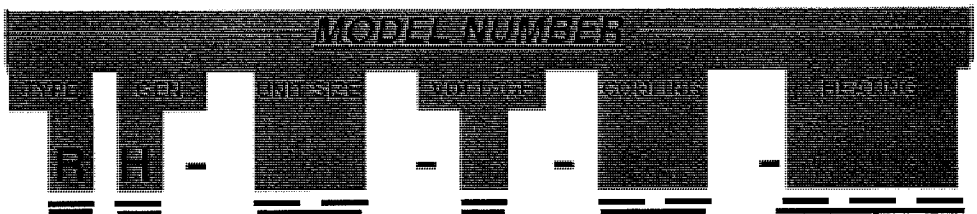
Dehumidifier and Energy Saver



AAONAIRE™ incorporates a commercially available energy recovery wheel into AAON's rooftop heating and air-conditioning product line. An energy recovery wheel reduces the cost of heating and cooling a structure by transferring a portion of the heating, or cooling, which is being exhausted from the building to air being brought into the building.

In AAONAIRE™ our engineers have invented a method to combine heating, cooling and an energy recovery wheel into a single unit. This combination can increase the effective capacity of a 10-ton unit to the equivalent of a 14-ton unit with a minimal increase in energy consumption. The principle of increased capacity and efficiency can be applied to all unit sizes in our product line with similar results when the energy recovery wheel is selected as an option. Refer to AAON Heat Recovery unit supplemental for engineering data.

'RH SERIES' MODELMASTER



TYPE

R = ROOFTOP

GENERATION

H = SIXTH GENERATION HIGH EFFICIENCY

NOMINAL UNIT SIZE

	TONS / CFM	CAB. SIZE
02 =	2 / 800	A
03 =	3 / 1200	
04 =	4 / 1600	
05 =	5 / 2000	
06 =	6 / 2400	
07 =	7 / 2800	
08 =	8 / 3200	B
10 =	10 / 4000	
13 =	13 / 5200	
15 =	15 / 6000	
16 =	16 / 6400	C
20 =	20 / 8000	
24 =	24 / 9600	
25 =	25 / 10000	D
30 =	30 / 12000	
40 =	40 / 16000	
50 =	50 / 20000	E
60 =	60 / 24000	

VOLTAGE

1 = 208-230v or 240v / 1ø / 60Hz
2 = 208-230v or 240v / 3ø / 60Hz
3 = 460v or 480v / 3ø / 60Hz
4 = 575v / 3ø / 60Hz

COOLING

COMPRESSORIZED w/ COIL = E
COMPRESSORIZED•6 ROW COIL = F

NO CONDENSING SECTION

NO COOLING (no cond. section) = Ø
CHILLED WATER • 4 ROW COIL = 3
CHILLED WATER • 6 ROW COIL = 4
NON-COMPRESSORIZED w/ DX COIL = 5
NON-COMPRESSORIZED • 6 ROW COIL = 6

Ø = **STANDARD**
1 = Phenolic Coated Coils (Specified Corrosion Protection)
2 = Pre-Coated Fin Stock with Corrosion Protected Coil Casing

HEATING

TYPE

Ø = **N/A** *(No Heating)*
1 = Elect. Heat•Belt Drive
2 = NAT. GAS (NG)
3 = **Stainless Stl~NG**
4 = LP GAS **(LP)**
5 = **Stainless Stl~LP**
6 = **Steam~Non-Freeze**
7 = Hot Water Heat
8 = Elect. Heat•Direct Drive

DESIGNATION

ELECTRIC HEAT *RATED KW @*

	208v	240v•480v•575v
A =	7.5	10.0
B =	15.0	20.0
C =	22.5	30.0
D =	30.2	40.0
M =	37.5	50.0
E =	45.1	60.0
F =	60.1	80.0
G =	75.1	100.0
H =	90.1	120.0
J =	120.1	160.0
K =	150.2	200.0

OR

GAS ; STEAM ; or HOT WATER HEATING

Ø = **N/A** *(No Heating)*
1 = ** **LOW HEAT** *GAS*
2 = ** **MEDIUM HEAT** *HEAT*
3 = ** **HIGH HEAT** *ONLY*
4 = 2 Row-(Steam Only)
5 = 2 Row-(Hot Water Only)

** AAON GAS HEATING DESIGNATIONS

CAB. SIZE A	B	C	D & E
1 • 3	2 • 3	1 • 3	1 • 2

STAGE

Ø = **N/A** *(No Heating)*
1 = 1 Stage (Gas or Elect.)
2 = 2 Stage (Gas or Elect.)
4 = 4 Stage (Elect. Heat)
7 = 4 Stage (Gas Heat)

GAS HEAT ONLY
5 = 1 Stage Ctl • High Altitude
6 = 2 Stage Ctl • High Altitude
8 = 4 Stage Ctl • High Altitude

AAON ELECT HEAT DESIGNATIONS

VOLTAGE	CABINET 'A'				'B'		'C'	'D'		'E'
	02•03	04	05	06•07	08 • 10	13 • 15	16 • 20 • 24	25	30 • 40	50 • 60
208-240v Single Phase	A • B	A • B • C • D	B • C • D		B • C • D					
208-240 / 480v Three Phase	A • B	A • B • C • D	B • C • D		B • C • D • M • E		B • D • E • F • G	D • F • H • J		D • F • H • J • K
575v Three Phase		A • B • C • D	B • C • D		B • C • D • M • E		B • D • E • F • G	D • F • H • J		D • F • H • J • K

OPTIONAL FEATURES

NOTE: SOME OPTIONS DO NOT APPLY TO ALL ROOFTOP UNITS.

FEATURE NUMBER

O.S.A / BLWR. MTR. / FILTERS / REFRIG. ELECT / REFRIG / POWER / SAFETY

1 2 3 4 5 6 7

OUTSIDE AIR OPTIONS (1)

Ø = **STANDARD** - Manual Outside Air **(0 - 25% Adjustable)**
N = MFA (0 - 25%) **w/ Adjustable Compressor Lockout**
L = 100% O.S.A HOOD **(Non-Motorized - NO RETURN AIR)**
A = 3 POSITION ECONOMIZER **w/ Sensible Limit Control**
B = 3 POSITION ECON. **w/ Enthalpy Limit Control**
C = FULL MODULATING ECON. CONTROL, **Mixed Air,w/ Enthalpy Limit**
K = FULL MODULATING ECON., **DDC Signal**
T = FULL MODULATING ECON. CONTROL, **Mixed Air,w/ Sensible Limit**
D = 2 POSITION MOTORIZED O.S.A Damper-(0 - 50%)
E = 2 POSITION MOTORIZED O.S.A Damper-(0 -100% -**NO RETURN AIR)**
F = POWER EXHAUST **w/ "C" Econ., Standard Mtr.,Damper Volume Ctl.**
G = PWR. EXH. **w/ "C" Econ., Oversize Mtr.,Damper Volume Control**
H = PWR. EXH. **w/ "C" Econ., Standard Mtr., ON/OFF Operation**
J = PWR. EXH. **w/ "C" Econ., Oversize Mtr., ON/OFF Operation**
U = PWR. EXH. w/ 3 POSITION ECON.,**Standard Mtr., ON/OFF Operation**
V = PWR. EXH. w/ 3 POSITION ECON., **Oversize Mtr., ON/OFF Operation**
M = PROPELLER EXH. (1) Fan **w/ "C" Econ., ON/OFF Operation**
R = PROPELLER EXH. (2) Fans **w/ "C" Econ., ON/OFF Operation**
P = PROPELLER EXH. (1) Fan **w/ "B" Econ., ON/OFF Operation**
Q = PROPELLER EXH. (2) Fans **w/ "B" Econ., ON/OFF Operation**
W = HEAT RECOVERY UNIT w/ 3 POSITION ECON.
Y = HEAT RECOVERY UNIT FULL MOD. ECON.
Z = HEAT RECOVERY UNIT FULL MOD. ECON. w/ BYPASS

EVAP. BLOWER MOTOR OPTIONS (2)

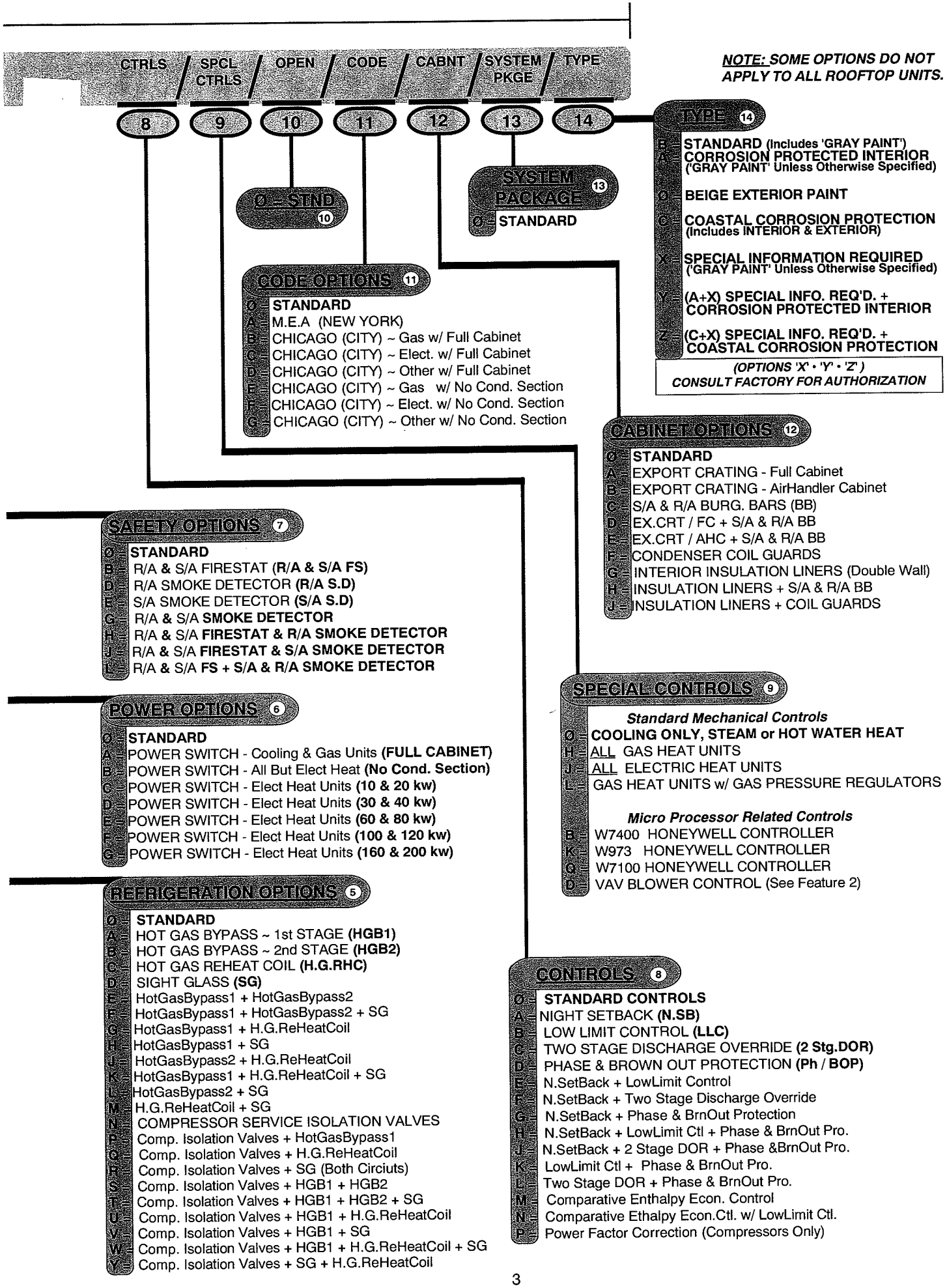
Ø = **STANDARD**
A = **OVERSIZE MOTOR**
B = **DOUBLE OVERSIZE MOTOR**
C = **STANDARD MOTOR w/ INVERTER CONTROLLER**
D = **OVERSIZE MOTOR w/ INVERTER CONTROLLER**
E = **DOUBLE OVERSIZE MOTOR w/ INVERTER CONTROLLER**
F = **STANDARD HIGH EFFICIENCY MOTOR**
G = **OVERSIZED HIGH EFFICIENCY MOTOR**
H = **DBLE. OVERSIZED HIGH EFFICIENCY MOTOR**
J = **STANDARD HIGH EFFICIENCY MOTOR w/ INVERTER CONTROLLER**
K = **OVERSIZED HIGH EFFICIENCY MOTOR w/ INVERTER CONTROLLER**
L = **DBLE.OVERSIZED HIGH EFFICIENCY MOTOR w/ INVERTER CONTROLLER**
M = **STANDARD MOTOR w/ AILERON VOLUME CONTROL**
N = **OVERSIZED MOTOR w/ AILERON VOLUME CONTROL**
P = **DBLE. OVERSIZED MOTOR w/ AILERON VOLUME CONTROL**
R = **STANDARD HIGH EFFICIENCY MTR. w/ AILERON VOLUME CONTROL**
S = **OVERSIZED HIGH EFFICIENCY MTR. w/ AILERON VOLUME CONTROL**
T = **DBLE. OVERSIZED HIGH EFFICIENCY MTR. w/ AILERON VOLUME CONTROL**

FILTER OPTIONS (3)

Ø = **STANDARD** ~ 2" Throw Away* / Pleated
A = **2"** Permanent Filter Frame w/ Replaceable Media **(2" PERM)**
B = **2"** PLEATED FILTERS ***(**Stnd. for some units)
C = **4"** PLEATED FILTERS ~ **Includes Clogged Filter Switch**
D = CLOGGED FLTR SWITCH ~ **CFS (2")**
E = MAGNAHELIC GUAGE **(MAG.Ga)**
F = **2"** PERM + CLOG. FLTR SW **(2")**
G = **2"** PERM + MAG.Ga.
H = **2"** PERM + CLOG. FLTR SW **(2")** + MAG.Ga.
J = **2"** PLEATED + CLOG. FLTR SW **(2")**
K = **2"** PLEATED + MAG.Ga.
L = **2"** PLEATED + CLOG. FLTR SW **(2")** + MAG.Ga.
M = **4"** PLEATED + MAG.Ga.
N = CLOG. FLTR SW **(2")** + MAG.Ga.
P = **2"** PLEATED w/ LINT FILTER + CFS + 2.5" FILTER CHANNEL
Q = **2"** PLEATED w/ 2" LINT SCREENS + 4" FILTER CHANNEL

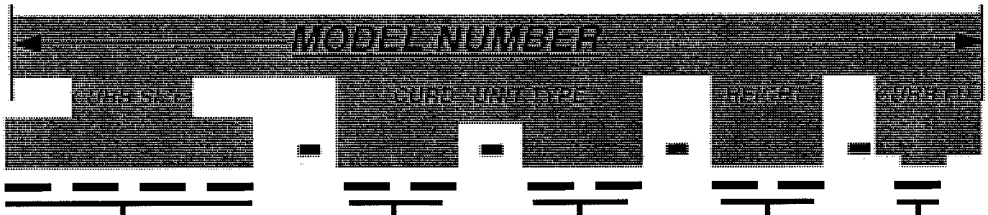
REFRIGERATION CONTROL (ELECTRICAL) (4)

Ø = **STANDARD (Low Ambient to 20 deg.)**
A = 5 MIN. TIME DELAY RELAY ~ **1 per Stage (5 MTDR)**
B = 20 SECOND TIME DELAY RELAY **(20 STDR)**
C = 115v GFI Outlet **(Field Wired) 20 Amps Max.**
D = 115v GFI Outlet **(Factory Wired @ 13 Amps)**
E = **5** MTDR + **20** STDR
F = **5** MTDR + 115v Outlet **(Field Wired)**
G = **5** MTDR + 115v Outlet **(Factory Wired)**
H = **5** MTDR + 20 STDR + 115v Outlet **(Field Wired)**
J = **5** MTDR + 20 STDR + 115v Outlet **(Factory Wired)**
K = 20 STDR + 115v Outlet **(Field Wired)**
L = 20 STDR + 115v Outlet **(Factory Wired)**
M = FAN CYCLING (ALL CIRCUITS)
N = FAN CYCLING w/ 20 Amp Convenience Outlet **(Field Wired)**
O = **5** MTDR + Fan Cycling
R = 20 STDR + Fan Cycling
S = 115v GFI Outlet **(Factory 13 Amps.)** + Fan Cycling
T = **5** MTDR + **20** STDR + Fan Cycling
U = **5** MTDR + 115v Outlet **(Factory Wired)** + Fan Cycling
W = **5** MTDR + 115v Outlet **(Field Wired)** + Fan Cycling


CTRLS / SPCL CTRLS / OPEN / CODE / CABNT / SYSTEM PKGE / TYPE
8 9 10 11 12 13 14
NOTE: SOME OPTIONS DO NOT APPLY TO ALL ROOFTOP UNITS.
TYPE 14
B = STANDARD (Includes 'GRAY PAINT')
A = CORROSION PROTECTED INTERIOR ('GRAY PAINT' Unless Otherwise Specified)
O = BEIGE EXTERIOR PAINT
C = COASTAL CORROSION PROTECTION (Includes INTERIOR & EXTERIOR)
X = SPECIAL INFORMATION REQUIRED ('GRAY PAINT' Unless Otherwise Specified)
Y = (A+X) SPECIAL INFO. REQ'D. + CORROSION PROTECTED INTERIOR
Z = (C+X) SPECIAL INFO. REQ'D. + COASTAL CORROSION PROTECTION
(OPTIONS 'X' • 'Y' • 'Z')
CONSULT FACTORY FOR AUTHORIZATION
SYSTEM PACKAGE 13
Ø = STANDARD
Ø = STND 10
CODE OPTIONS 11
Ø = STANDARD
A = M.E.A (NEW YORK)
B = CHICAGO (CITY) ~ Gas w/ Full Cabinet
C = CHICAGO (CITY) ~ Elect. w/ Full Cabinet
D = CHICAGO (CITY) ~ Other w/ Full Cabinet
E = CHICAGO (CITY) ~ Gas w/ No Cond. Section
F = CHICAGO (CITY) ~ Elect. w/ No Cond. Section
G = CHICAGO (CITY) ~ Other w/ No Cond. Section
CABINET OPTIONS 12
Ø = STANDARD
A = EXPORT CRATING - Full Cabinet
B = EXPORT CRATING - AirHandler Cabinet
C = S/A & R/A BURG. BARS (BB)
D = EX.CRT / FC + S/A & R/A BB
E = EX.CRT / AHC + S/A & R/A BB
F = CONDENSER COIL GUARDS
G = INTERIOR INSULATION LINERS (Double Wall)
H = INSULATION LINERS + S/A & R/A BB
J = INSULATION LINERS + COIL GUARDS
SAFETY OPTIONS 7
Ø = STANDARD
B = R/A & S/A FIRESTAT (R/A & S/A FS)
D = R/A SMOKE DETECTOR (R/A S.D)
E = S/A SMOKE DETECTOR (S/A S.D)
G = R/A & S/A SMOKE DETECTOR
H = R/A & S/A FIRESTAT & R/A SMOKE DETECTOR
J = R/A & S/A FIRESTAT & S/A SMOKE DETECTOR
L = R/A & S/A FS + S/A & R/A SMOKE DETECTOR
SPECIAL CONTROLS 9
Standard Mechanical Controls
Ø = COOLING ONLY, STEAM or HOT WATER HEAT
H = ALL GAS HEAT UNITS
J = ALL ELECTRIC HEAT UNITS
L = GAS HEAT UNITS w/ GAS PRESSURE REGULATORS
Micro Processor Related Controls
B = W7400 HONEYWELL CONTROLLER
K = W973 HONEYWELL CONTROLLER
Q = W7100 HONEYWELL CONTROLLER
D = VAV BLOWER CONTROL (See Feature 2)
POWER OPTIONS 6
Ø = STANDARD
A = POWER SWITCH - Cooling & Gas Units (FULL CABINET)
B = POWER SWITCH - All But Elect Heat (No Cond. Section)
C = POWER SWITCH - Elect Heat Units (10 & 20 kw)
D = POWER SWITCH - Elect Heat Units (30 & 40 kw)
E = POWER SWITCH - Elect Heat Units (60 & 80 kw)
F = POWER SWITCH - Elect Heat Units (100 & 120 kw)
G = POWER SWITCH - Elect Heat Units (160 & 200 kw)
REFRIGERATION OPTIONS 5
Ø = STANDARD
A = HOT GAS BYPASS ~ 1st STAGE (HGB1)
B = HOT GAS BYPASS ~ 2nd STAGE (HGB2)
C = HOT GAS REHEAT COIL (H.G.RHC)
D = SIGHT GLASS (SG)
E = HotGasBypass1 + HotGasBypass2
F = HotGasBypass1 + HotGasBypass2 + SG
G = HotGasBypass1 + H.G.ReHeatCoil
H = HotGasBypass1 + SG
J = HotGasBypass2 + H.G.ReHeatCoil
K = HotGasBypass1 + H.G.ReHeatCoil + SG
L = HotGasBypass2 + SG
M = H.G.ReHeatCoil + SG
N = COMPRESSOR SERVICE ISOLATION VALVES
P = Comp. Isolation Valves + HotGasBypass1
Q = Comp. Isolation Valves + H.G.ReHeatCoil
R = Comp. Isolation Valves + SG (Both Circiuts)
S = Comp. Isolation Valves + HGB1 + HGB2
T = Comp. Isolation Valves + HGB1 + HGB2 + SG
U = Comp. Isolation Valves + HGB1 + H.G.ReHeatCoil
V = Comp. Isolation Valves + HGB1 + SG
W = Comp. Isolation Valves + HGB1 + H.G.ReHeatCoil + SG
Y = Comp. Isolation Valves + SG + H.G.ReHeatCoil
CONTROLS 8
Ø = STANDARD CONTROLS
A = NIGHT SETBACK (N.SB)
B = LOW LIMIT CONTROL (LLC)
C = TWO STAGE DISCHARGE OVERRIDE (2 Stg.DOR)
D = PHASE & BROWN OUT PROTECTION (Ph / BOP)
E = N.SetBack + LowLimit Control
F = N.SetBack + Two Stage Discharge Override
G = N.SetBack + Phase & BrnOut Protection
H = N.SetBack + LowLimit Ctl + Phase & BrnOut Pro.
J = N.SetBack + 2 Stage DOR + Phase &BrnOut Pro.
K = LowLimit Ctl + Phase & BrnOut Pro.
L = Two Stage DOR + Phase & BrnOut Pro.
M = Comparative Enthalpy Econ. Control
N = Comparative Ethalpy Econ.Ctl. w/ LowLimit Ctl.
P = Power Factor Correction (Compressors Only)

roof curbs

FOR CURB DIMENSIONS AND DETAILS REFER TO PAGE 78



CURB SIZE
- 0215 = 2 thru 15 Ton ('A & B' Cab)
- 1624 = 16 thru 24 Ton ('C' Cab)
- 2560 = 25 thru 60 Ton ('D & E' Cab)

CURB I.D.
- O = STANDARD
- X = SPECIAL INFORMATION REQUIRED *(CONSULT FACTORY FOR AUTHORIZATION)*

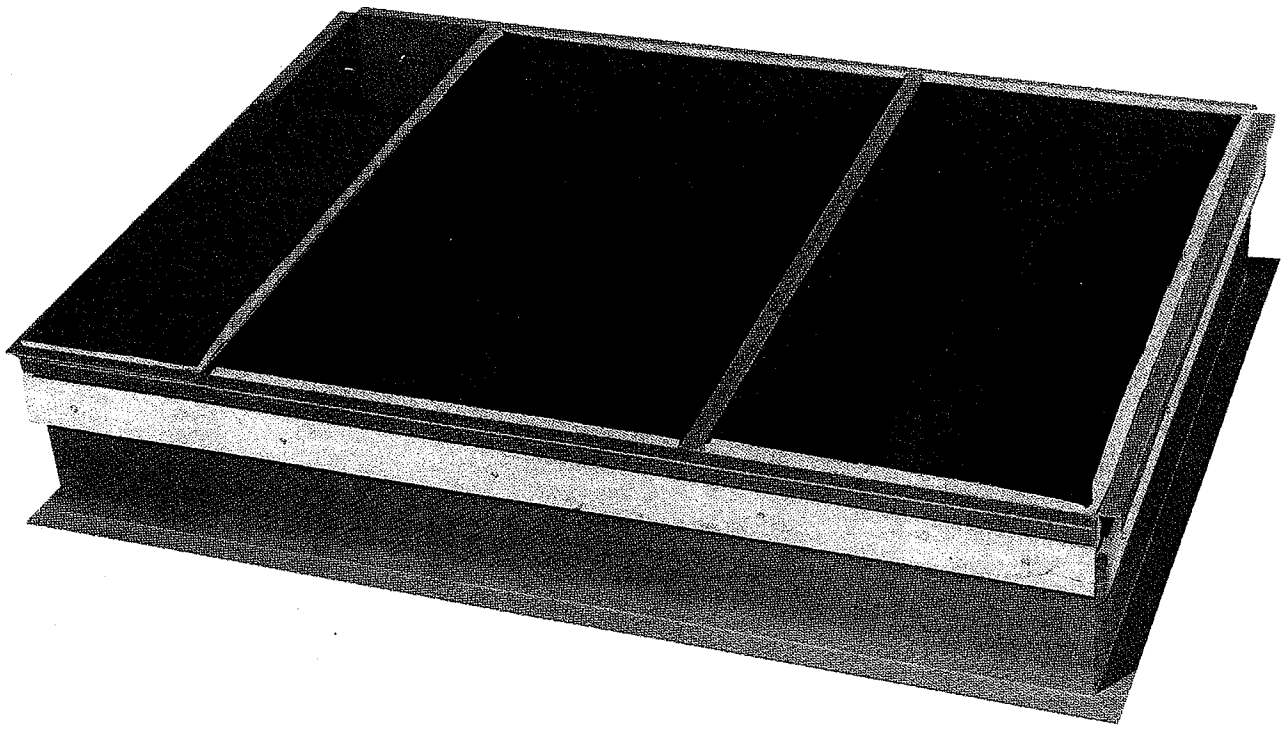
CURB TYPE
- KD = KNOCKDOWN (Field Assembled)
- SB = SOLID BOTTOM (Factory Assembled)

UNIT TYPE
- OO = STANDARD UNIT CURB
- RV = FOR HEAT RECOVERY UNITS*
- PR = FOR 'D & E' PROP. EXHAUST UNITS ONLY**

HEIGHT
- 14 = 14" HIGH
- 24 = 24" HIGH

CURB TYPE	AVAILABLE IN:	HEIGHT	DESCRIPTION
KNOCKDOWN 'KD'	ALL CABINETS	14"	FULL PERIMETER CURB • FIELD ASSEMBLY REQUIRED
		24"	OPTIONAL DUCT SUPPORT RAILS AVAILABLE
SOLID BOTTOM 'SB' ACOUSTIC CURB	ALL CABINETS	14"	FULLY ASSEMBLED AND INSULATED •
		24"	FIELD CUT S/A AND R/A OPENINGS REQUIRED

* FOR INFORMATION ON AAON HEAT RECOVERY CURBS / UNITS, REFER TO THE HEAT RECOVERY ENGINEERING BULLETIN.
** THE SELECTION OF A 25 - 60 TON UNIT WITH PROPELLER EXHAUST OPTION REQUIRES THE USE OF A 'PR' EXTENDED CURB.



Typical acoustical 'solid bottom' curb

index

ARI AIR-CONDITIONING & REFRIGERATION INSTITUTE

A Participating Company in the ARI 210 and 360 Certification Programs

LISTED ETL

All models are certified by ETL in accordance with UL-1995-1993: Standard for Safety, Heating and Cooling Equipment, and ANSI Standard Z21.47.

ARI Listings

BASE MODEL @ ESP	CFM	MOTOR OPTION	COOLING OPTION					
			STANDARD COIL - COOLING "E" OPTION			6 ROW COIL - COOLING "F" OPTION		
			MBH	EER (*SEER)	IPLV	MBH	EER (*SEER)	IPLV
RH - 02* @ 0.15" WC	800	Ø	27.4	10.6				
		A	27.0	10.2				
RH - 03* @ 0.15" WC	1200	Ø	35.5	11.0		SIX ROW N/A 2&3 TON		
		A	35.3	10.8				
		B or H	35.2	10.6				
RH - 04* @ 0.15" WC	1600	Ø	46.5	10.9		48.0	10.9	
		A	46.5	10.9		47.5	10.7	
		B or H	45.5	10.1		47.0	10.1	
RH - 05* @ 0.20" WC	2000	Ø	63.0	11.0		65.0	11.0	
		A or G	61.5	10.0		63.5	10.0	
		B or H	60.5	9.7		62.5	9.7	
RH - 06 @ 0.20" WC	2400 2800	Ø or F	75.0	10.3		72.0	9.9	
		A or G	74.0	10.2		71.0	9.8	
		B or H	73.0	10.0		71.0	9.7	
RH - 07 @ 0.25" WC	2800	Ø or F	92.0	9.1		92.0	8.9	
		A or G	91.0	8.9		92.0	8.9	
RH - 08 @ 0.25" WC	3200	Ø or F	95.0	10.2	10.6	104.4	10.4	10.9
		A or G	94.6	10.0	10.3	104.1	10.3	10.3
		B or H	94.0	9.7	9.8	103.5	10.0	9.8
RH - 10 @ 0.30" WC	4000	Ø or F	126.0	9.7	10.0	129.0	9.7	10.0
		A or G	124.0	9.3	9.6	128.0	9.3	9.6
		B or H	123.0	9.0	9.3	127.0	9.0	9.3
RH - 13 @ 0.35" WC	5200	Ø or F	152.0	9.8	9.6	152.0	9.8	9.6
		A or G	150.0	9.7	9.5	150.0	9.7	9.5
		B or H	150.0	9.4	9.0	150.0	9.4	9.0
RH - 15 @ 0.35" WC	5200	Ø or F	178.0	9.2	9.3			
	6000	A or G	180.0	9.1	9.0	SIX ROW STANDARD		
	6000	B or H	180.0	9.1	9.0			
RH - 16 @ 0.35" WC	6400	Ø or F	188.0	9.7	9.6	198.0	9.7	9.6
		A or G	186.0	9.0	9.1	196.0	9.0	9.1
		B or H	184.0	8.5	8.5	194.0	8.5	8.5
RH - 20 @ 0.40" WC	8000	Ø or F	236.0	9.5	9.9			
		A or G	234.0	9.0	9.3	SIX ROW STANDARD		
		B or H	234.0	8.8	9.0			

* 2 THROUGH 5 TON UNITS LISTED ARE SEER

ALL LISTINGS REFLECT NET COOLING CAPACITIES AT 80/67 ENTERING THE EVAPORATOR COIL AND 95°F OUTSIDE AIR. AIRFLOW AND EXTERNAL STATIC PRESSURE ARE GIVEN FOR EACH MODEL.

Models listed that are rated below 135,000 Btu/h are certified under ARI 210 Unitary Air-Conditioner Certification Program.
Models listed that are rated at or above 135,000 Btu/h but below 250,000 Btu/h are certified under ARI 360 Unitary Large Equipment Certification Program.
Models above 250,000 Btu/h, no certification program is available, however, units are tested in accordance with ARI standards.

specifications • 'A' cabinet

UNIT FEATURES		UNIT SIZE					
		02	03	04	05	06	07
NOMINAL CAPACITY TONS		2	3	4	5	6	7
EER - FULL LOAD *①						10.3	9.1
SEER - FULL LOAD *①		10.6	11.0	10.9	11.0		
REFRIGERANT CHARGE	lbs. / no. of systems	5.0 (1)	7.0 (1)	9.5 (1)	10.5 (1)	11.50 (1)	13.00 (1)
COMPRESSOR (HERMETIC)	Quantity	(1)					
CONDENSER COIL Face Area Sq. Ft. / Rows / Fins per inch		16 / 1 / 10			16 / 2 / 10		
CONDENSER FANS Quantity / Diameter		(1) / 22"				(2) / 22"	
CONDENSER FAN MOTORS Watts / RPM	Each	470 / 1100					
EVAPORATOR COIL - Standard Face Area Sq. Ft. / Rows / Fins per inch		5.7 / 2 / 16		7.6 / 2 / 14		7.6 / 3 / 10	
EVAPORATOR COIL - 6 Row Face Area Sq. Ft. / Rows / Fins per inch				4.3 / 6 / 10			
EVAPORATOR BLOWER • BELT DRIVE ② Quantity / Wheel D x W / Type			(1) / 10 x 10 / FC				
EVAP. BLOWER MOTOR	HP - Standard (Qty)	0.3 ②			0.5 ②	(1) 1	(1) 2
	HP - Oversize	0.5 ②			(1) 1	(1) 2	(1) 3
	HP - Double Oversize		(1) 1		(1) 2	(1) 3	
GAS FURNACES • TYPE Standard Material / Optional Material		TUBULAR - INDUCED DRAFT ALUMINIZED STEEL / STAINLESS STEEL					
IGNITION		NON-STANDING , AUTOMATIC , SPARK RELIGHT					
GAS CONNECTION (F.P.T.)		0.5					
FILTERS - TYPE QTY / SIZE	THROWAWAY	(4) / 16" x 20" x 2"					
FILTERS - TYPE QTY / SIZE	PLEATED					(4) / 16" x 20" x 2" (optional 4")	
POWER EXHAUST FANS • DIRECT DRIVE Quantity / Wheel D x W / Type		(1) / 12 x 9 / FC					
POWER EXH. FAN MOTOR	HP - Standard	(1) 1 HP					
	HP - Oversize	N / A					
UNIT NET WEIGHTS		02	03	04	05	06	07
BASE UNIT (Cooling Only)		700	700	750	760	805	875
GAS Heat Exchanger • high heat • Std / SS		75 / 86		105 / 120			
GAS Heat Exchanger • low heat • Std / SS				75 / 86			
ELECTRIC HEAT		50					
HOT WATER OR STEAM COIL		60					
ECONOMIZER		143					
POWER EXHAUST		120					
VAV (Variable Air Volume)				50			
CURB WEIGHTS							
KNOCKDOWN CURB • 14" / 24" HIGH		160 / 320					
ACOUSTICAL CURB • 14" / 24" HIGH		200 / 360					

① AT STANDARD A.R.I TEST CONDITIONS. UNITS RATED BELOW 135,000 BTUH ARE CERTIFIED UNDER ARI 210 UNITARY AIR CONDITIONER CERTIFICATION PROGRAM.

② ALL UNITS BELT DRIVE EXCEPT 1/3 & 1/2 HP DIRECT DRIVE.

2 ton • mechanical cooling capacities

* NOTE: 6 ROW COIL IS NOT AVAILABLE 2 & 3 TON.

TEMP. ENT. EVAP		GROSS COOLING	STANDARD EVAPORATOR* @ 800 CFM • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115
72	90	Total	33727	32524	31340	30084	28792
		Sensible	26538	26111	25703	25268	24828
	85	Total	33721	32407	31174	29863	28494
		Sensible	22119	21655	21221	20767	20300
	80	Total	33607	32340	31053	29745	28412
		Sensible	17664	17214	16762	16308	15851
	75	Total	33451	32186	30901	29589	28268
		Sensible	13193	12743	12290	11835	11380
67	90	Total	31849	30855	29851	28826	27781
		Sensible	31529	30855	29851	28826	27781
	85	Total	31500	30292	29130	27897	26690
		Sensible	26983	26506	26048	25570	25106
	80	Total	31147	29987	28724	27536	26229
		Sensible	22591	22128	21631	21166	20664
	75	Total	31151	29944	28724	27471	26230
		Sensible	18044	17564	17083	16595	16116
	70	Total	31003	29804	28585	27341	26095
		Sensible	13587	13108	12627	12143	11660
62	90	Total	31831	30851	29835	28811	27768
		Sensible	31831	30851	29835	28811	27768
	85	Total	30293	29319	28335	27345	26309
		Sensible	30293	29319	28335	27345	26309
	80	Total	29243	28130	26958	25888	24887
		Sensible	27327	26836	26327	25866	24887
	75	Total	28872	27711	26586	25363	24223
		Sensible	22773	22262	21771	21244	20756
	70	Total	28782	27646	26472	25302	24131
		Sensible	18350	17848	17336	16830	16329
57	75	Total	27273	26345	25400	24448	23468
		Sensible	27273	26345	25400	24448	23468
	70	Total	26610	25534	24570	23514	22416
		Sensible	22964	22444	21987	21485	20970

			STANDARD EVAPORATOR* @ 600 CFM • Air Temp. Ent. Cond.°F				
80	90	Total	36202	34940	33638	32313	30958
		Sensible	16487	16090	15687	15284	14878
	85	Total	36090	34814	33514	32191	30847
		Sensible	13124	12722	12320	11915	11511
72	90	Total	32160	30989	29793	28558	27329
		Sensible	22440	21992	21541	21083	20633
	85	Total	32095	30929	29740	28516	27288
		Sensible	19112	18665	18216	17761	17310
	80	Total	32017	30854	29668	28450	27223
		Sensible	15779	15332	14883	14429	13977
	75	Total	31892	30728	29543	28335	27107
		Sensible	12428	11980	11530	11078	10626
67	90	Total	29921	28854	27756	26654	25497
		Sensible	26141	25686	25224	24767	24294
	85	Total	29663	28562	27433	26293	25185
		Sensible	22736	22268	21792	21318	20862
	80	Total	29571	28475	27336	26199	25063
		Sensible	19526	19056	18575	18101	17632
	75	Total	29561	28465	27336	26198	25041
		Sensible	16110	15640	15163	14689	14213
	70	Total	29450	28354	27235	26097	24938
		Sensible	12771	12300	11827	11351	10873
62	90	Total	28617	27758	26890	26017	25098
		Sensible	28617	27758	26890	26017	25098
	85	Total	27687	26674	25581	24707	23818
		Sensible	26419	25942	25435	24707	23818
	80	Total	27313	26266	25211	24326	23264
		Sensible	22956	22464	21974	21569	21088
	75	Total	27289	26244	25177	24129	23040
		Sensible	19662	19170	18675	18192	17698
	70	Total	27225	26191	25126	24063	22971
		Sensible	16350	15862	15367	14877	14381

* NOTE: 6 ROW COIL IS NOT AVAILABLE 2 & 3 TON.

mechanical cooling capacities • 3 ton

TEMP. ENT. EVAP.		GROSS COOLING	STANDARD EVAPORATOR* @ 1200 CFM • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115
72	90	Total	43070	41513	39931	38303	36673
		Sensible	37197	36671	36142	35587	35001
	85	Total	42662	40973	39346	37770	36021
		Sensible	30416	29846	29301	28776	28202
	80	Total	42428	40880	39206	37544	35861
		Sensible	23705	23179	22618	22065	21510
	75	Total	42155	40560	38935	37298	35621
		Sensible	16978	16436	15889	15343	14788
67	90	Total	41981	40668	39326	37952	36540
		Sensible	41981	40668	39326	37952	36540
	85	Total	40169	38707	37236	35995	34624
		Sensible	37563	36988	36456	35995	34624
	80	Total	39486	38017	36476	34883	33485
		Sensible	31045	30482	29899	29301	28786
	75	Total	39414	37882	36325	34816	33174
		Sensible	24196	23611	23023	22456	21847
	70	Total	39149	37633	36103	34534	32927
		Sensible	17487	16908	16328	15739	15142
62	90	Total	41958	40646	39305	37932	36533
		Sensible	41958	40646	39305	37932	36533
	85	Total	39900	38614	37301	35947	34590
		Sensible	39900	38614	37301	35947	34590
	80	Total	37874	36619	35345	34020	32696
		Sensible	37874	36619	35345	34020	32696
	75	Total	36626	35434	33964	32504	31024
		Sensible	31150	30752	30114	29430	28752
	70	Total	36486	35063	33632	32109	30575
		Sensible	24562	23995	23405	22756	22058
57	75	Total	35867	34636	33368	32102	30794
		Sensible	35867	34636	33368	32102	30794
	70	Total	34147	32803	31436	30045	28959
		Sensible	31556	30848	30142	29428	28959

			STANDARD EVAPORATOR* @ 900 CFM • Air Temp. Ent. Cond.°F				
80	90	Total	46016	44370	42748	41058	39274
		Sensible	22186	21700	21225	20737	20230
	85	Total	45798	44168	42502	40806	39093
		Sensible	17118	16635	16148	15657	15166
72	90	Total	41048	39630	38049	36471	34925
		Sensible	30968	30452	29888	29332	28792
	85	Total	40966	39477	37930	36368	34804
		Sensible	25974	25433	24880	24327	23780
	80	Total	40850	39351	37845	36288	34682
		Sensible	20966	20422	19880	19328	18765
	75	Total	40597	39101	37574	36025	34436
		Sensible	15909	15365	14816	14266	13708
67	90	Total	38626	37303	35898	34749	33516
		Sensible	36597	36058	35493	34749	33516
	85	Total	38008	36656	35385	33950	32481
		Sensible	31388	30838	30334	29765	29190
	80	Total	37904	36483	34985	33509	32069
		Sensible	26572	25993	25391	24803	24235
	75	Total	37823	36406	34978	33506	31997
		Sensible	21421	20845	20269	19684	19091
	70	Total	37590	36176	34739	33267	31764
		Sensible	16381	15805	15225	14639	14048
62	90	Total	38279	37116	35937	34722	33494
		Sensible	38279	37116	35937	34722	33494
	85	Total	36439	35311	34154	32986	31775
		Sensible	36439	35311	34154	32986	31775
	80	Total	35398	34092	32768	31406	30012
		Sensible	31860	31273	30684	30085	29439
	75	Total	35011	33678	32306	30908	29542
		Sensible	26751	26151	25541	24927	24331
	70	Total	34927	33588	32236	30835	29428
		Sensible	21782	21179	20576	19960	19346

4 ton • mechanical cooling capacities

* NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 2000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 2000 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	58630	56984	55322	53911	52486	60652	59031	57505	55551	54189
		Sensible	56325	55720	55076	53911	52486	58285	57635	57029	55551	54189
	85	Total	57570	55746	54266	52583	50931	59913	58108	56466	54762	52956
		Sensible	46016	45279	44984	44295	43717	46989	46402	45865	45314	44738
	80	Total	57359	55598	53831	52068	50320	59549	57796	55964	54187	52463
		Sensible	35060	34489	33918	33314	32721	35802	35227	34633	34058	33503
	75	Total	57059	55288	53510	51737	49950	59304	57528	55746	53969	52196
		Sensible	23897	23320	22745	22174	21602	24654	24070	23489	22911	22339
67	90	Total	58152	56709	55278	53867	52479	59778	58334	56903	55523	54139
		Sensible	58152	56709	55278	53867	52479	59778	58334	56903	55523	54139
	85	Total	55158	53649	52144	50651	49183	56717	55223	53716	52227	50725
		Sensible	55158	53649	52144	50651	49183	56717	55223	53716	52227	50725
	80	Total	53702	51952	50190	48451	46713	55634	53833	52019	50273	48465
		Sensible	46706	45944	45167	44417	43672	47929	47263	46597	45960	45303
	75	Total	53299	51479	49643	47810	45987	55296	53448	51604	49741	47986
		Sensible	35565	34879	34180	33470	32778	36437	35755	35080	34402	33763
	70	Total	53024	51196	49352	47512	45659	55092	53242	51378	49516	47659
		Sensible	24557	23887	23216	22549	21882	25340	24655	23970	23291	22617
62	90	Total	58115	56672	55240	53829	52441	59735	58314	56886	55480	54095
		Sensible	58115	56672	55240	53829	52441	59735	58314	56886	55480	54095
	85	Total	55145	53639	52136	50651	49185	56678	55184	53677	52188	50720
		Sensible	55145	53639	52136	50651	49185	56678	55184	53677	52188	50720
	80	Total	52246	50688	49125	47575	46043	53697	52121	50567	49006	47463
		Sensible	52246	50688	49125	47575	46043	53697	52121	50567	49006	47463
	75	Total	50074	48296	46499	44708	42989	51766	49934	48151	46365	44349
		Sensible	46509	45710	44881	44073	42989	48138	47296	46523	45664	44349
	70	Total	49420	47570	45695	43823	41953	51280	49395	47485	45631	43753
		Sensible	35967	35190	34398	33626	32839	37047	36273	35493	34740	33982
57	75	Total	49392	47794	46183	44581	42991	50776	49156	47526	45905	44273
		Sensible	49392	47794	46183	44581	42991	50776	49156	47526	45905	44273
	70	Total	46608	44983	43334	41689	40052	48249	46280	44607	42917	41257
		Sensible	46608	44983	43334	41689	40052	48169	46280	44607	42917	41257

			STANDARD EVAPORATOR @ 1600 CFM					6 ROW EVAPORATOR @ 1600 CFM *				
72	90	Total	56893	55234	53569	51982	50292	58830	57028	55436	53685	52028
		Sensible	49413	48821	48148	47694	46857	50093	49481	48938	48353	47801
	85	Total	56304	54587	52851	51034	49400	58469	56664	55011	53277	51559
		Sensible	40361	39780	39197	38596	38051	41129	40514	39950	39366	38791
	80	Total	56122	54381	52634	50894	49174	58229	56470	54703	53008	51267
		Sensible	31459	30869	30281	29700	29130	32205	31603	31003	30427	29844
	75	Total	55848	54094	52331	50575	48848	58069	56305	54536	52773	51017
		Sensible	22523	21927	21333	20745	20172	23306	22700	22097	21500	20910
67	90	Total	54953	53527	52109	50711	49335	56202	54769	53345	51970	50558
		Sensible	54953	53527	52109	50711	49335	56202	54769	53345	51970	50558
	85	Total	53031	51323	49611	47906	46367	54677	52956	51210	49519	47573
		Sensible	49685	48944	48222	47473	46367	50717	50056	49393	48756	47573
	80	Total	52082	50310	48500	46948	45236	54063	52339	50540	48760	46975
		Sensible	41170	40502	39795	39238	38601	41965	41298	40610	39934	39263
	75	Total	52068	50281	48478	46678	44885	54008	52189	50353	48518	46683
		Sensible	32081	31398	30717	30041	29374	32847	32147	31446	30752	30063
	70	Total	51828	50033	48221	46411	44607	53855	52031	50199	48367	46528
		Sensible	23182	22496	21810	21129	20457	23980	23276	22576	21880	21187
62	90	Total	54919	53494	52075	50676	49301	56181	54751	53330	51929	50552
		Sensible	54919	53494	52075	50676	49301	56181	54751	53330	51929	50552
	85	Total	52181	50707	49233	47775	46337	53385	51901	50418	48953	47509
		Sensible	52181	50707	49233	47775	46337	53385	51901	50418	48953	47509
	80	Total	49500	47989	46469	44961	43468	50528	49120	47587	46066	44562
		Sensible	49500	47989	46469	44961	43468	50528	49120	47587	46066	44562
	75	Total	48533	46793	45030	43268	41510	50198	48367	46579	44690	42929
		Sensible	41550	40787	39954	39119	38278	42278	41496	40738	39946	39210
	70	Total	48200	46395	44564	42731	40902	49966	48117	46242	44366	42513
		Sensible	32629	31864	31094	30331	29565	33402	32611	31817	31028	30256
57	75	Total	46851	45316	43760	42211	40646	47940	46362	44786	43217	41660
		Sensible	46851	45316	43760	42211	40646	47940	46362	44786	43217	41660
	70	Total	45031	43289	41521	39745	37971	46408	44618	42793	41021	39319
		Sensible	41736	40777	39917	38949	37971	42688	41849	41000	40131	39226

* NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

mechanical cooling capacities • 4 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 1200 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 1200 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	61050	59460	57874	56299	54736	63379	61794	60210	58702	57162
		Sensible	29498	29028	28563	28105	27655	30228	29753	29282	28834	28381
	85	Total	60838	59221	57621	56057	54453	63263	61683	60096	58523	56974
		Sensible	22767	22287	21816	21361	20895	23522	23047	22572	22107	21653
72	90	Total	54296	52586	50951	49215	47534	56276	54655	52950	51265	49485
		Sensible	41136	40519	39932	39319	38730	41887	41291	40672	40067	39438
	85	Total	54207	52508	50798	49091	47450	56125	54472	52769	50982	49374
		Sensible	34486	33870	33258	32652	32073	35216	34607	33987	33348	32771
	80	Total	54075	52368	50668	48968	47279	56086	54369	52645	50936	49229
		Sensible	27820	27200	26589	25984	25389	28581	27950	27322	26705	26096
	75	Total	53842	52130	50408	48692	46985	55967	54243	52522	50799	49086
		Sensible	21116	20493	19873	19261	18659	21918	21282	20655	20032	19419
67	90	Total	51108	49466	47816	46169	44863	52366	50676	49032	47492	45665
		Sensible	48637	47972	47302	46169	44863	49159	48467	47802	47188	45665
	85	Total	50251	48778	47113	45454	43805	52042	50364	48636	46830	45108
		Sensible	41680	41089	40422	39763	39116	42436	41746	41044	40322	39638
	80	Total	50054	48331	46589	44851	43119	51793	50051	48273	46577	44781
		Sensible	35237	34537	33835	33142	32460	35974	35257	34533	33847	33132
	75	Total	50036	48311	46559	44816	43080	51851	50094	48320	46549	44784
		Sensible	28408	27706	27001	26307	25622	29172	28449	27727	27014	26311
	70	Total	49831	48095	46339	44585	42836	51751	49994	48217	46431	44659
		Sensible	21729	21023	20315	19616	18926	22537	21814	21089	20367	19660
62	90	Total	50272	48901	47528	46171	44835	51093	49712	48332	46970	45629
		Sensible	50272	48901	47528	46171	44835	51093	49712	48332	46970	45629
	85	Total	47847	46449	45040	43642	42260	48639	47228	45809	44402	43013
		Sensible	47847	46449	45040	43642	42260	48639	47228	45809	44402	43013
	80	Total	46794	45138	43455	41773	40099	48067	46335	44578	42860	41144
		Sensible	42301	41558	40811	40021	39285	42888	42103	41315	40553	39801
	75	Total	46303	44579	42824	41063	39313	47911	46153	44363	42563	40847
		Sensible	35500	34726	33947	33173	32412	36246	35449	34646	33847	33091
	70	Total	46191	44468	42708	40950	39193	47825	46059	44265	42469	40674
		Sensible	28878	28103	27320	26545	25780	29635	28833	28026	27228	26438

			STANDARD EVAPORATOR @ 800 CFM					6 ROW EVAPORATOR @ 800 CFM *				
80	100	Total	57164	55628	54096	52567	51070	59109	57563	56013	54551	52973
		Sensible	33753	33236	32729	32228	31745	34450	33920	33397	32907	32391
	90	Total	56957	55427	53884	52354	50839	59031	57492	55952	54425	52919
		Sensible	24831	24315	23800	23297	22804	25572	25041	24517	24005	23507
	85	Total	56785	55230	53701	52161	50634	58966	57419	55887	54357	52840
		Sensible	20347	19820	19310	18802	18304	21123	20588	20066	19551	19047
72	100	Total	50365	48791	47477	45966	44510	51907	50388	48709	47196	45538
		Sensible	41699	41057	40538	39940	39369	42356	41725	41043	40432	39778
	90	Total	50244	48659	47059	45464	43878	51829	50216	48600	46989	45388
		Sensible	32858	32210	31566	30932	30311	33537	32868	32207	31557	30921
	85	Total	50171	48585	46983	45385	43797	51807	50196	48579	46967	45365
		Sensible	28433	27783	27136	26500	25876	29132	28463	27799	27148	26509
	80	Total	50070	48480	46874	45272	43678	51770	50165	48547	46933	45328
		Sensible	23995	23342	22692	22053	21427	24722	24053	23387	22733	22092
	75	Total	49900	48322	46708	45096	43492	51724	50115	48480	46858	45245
		Sensible	19527	18880	18225	17582	16950	20307	19634	18960	18301	17655
67	90	Total	46300	44730	43135	41501	40211	47700	46114	44507	42817	41218
		Sensible	37691	36980	36268	35551	34994	38348	37619	36892	36141	35439
	85	Total	46242	44665	43060	41453	39858	47630	46015	44386	42769	41151
		Sensible	33283	32569	31851	31143	30450	33937	33196	32459	31737	31025
	80	Total	46079	44502	42896	41288	39682	47496	45893	44264	42633	41006
		Sensible	28999	28281	27560	26849	26149	29668	28929	28188	27457	26738
	75	Total	46082	44502	42904	41292	39667	47580	45976	44343	42710	41079
		Sensible	24447	23728	23012	22299	21591	25153	24412	23670	22938	22218
	70	Total	45946	44378	42763	41144	39526	47539	45930	44294	42656	41020
		Sensible	20002	19289	18564	17847	17142	20752	20008	19263	18528	17804
62	90	Total	43237	41738	40497	39232	38002	43899	42521	40860	39591	38356
		Sensible	42688	41738	40497	39232	38002	43016	42328	40860	39591	38356
	85	Total	42794	41306	39784	38254	36732	43769	42162	40559	39000	37402
		Sensible	38089	37351	36605	35866	35140	38584	37779	36987	36226	35458
	80	Total	42466	40920	39341	37747	36150	43696	42118	40507	38908	37291
		Sensible	33552	32785	32011	31242	30482	34181	33389	32592	31810	31033

5 ton • mechanical cooling capacities

* NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 2500 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 2500 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	79831	77011	74083	71010	67885	83420	80397	77146	74073	70916
		Sensible	71855	70691	69484	68106	66843	75073	73932	72473	71383	69967
	85	Total	78733	75906	72800	69681	66497	82579	79368	76140	72881	69624
		Sensible	58680	57868	56649	55568	54564	61267	60201	59136	58069	57009
	80	Total	78483	75583	72581	69443	66291	82092	78953	75819	72510	69032
		Sensible	45574	44583	43563	42351	41446	47282	46234	45194	44108	42979
	75	Total	77991	75099	72107	69001	65839	81783	78664	75441	72091	68679
		Sensible	32051	31094	30112	29103	28081	33351	32307	31237	30137	29025
67	90	Total	78345	75948	73386	70790	68010	81380	78807	76114	73351	70440
		Sensible	78345	75948	73386	70790	68010	81380	78807	76114	73351	70440
	85	Total	74719	72058	69775	67234	64592	78138	75349	72652	69693	66894
		Sensible	72037	70835	69775	67234	64592	75398	74018	72500	69693	66894
	80	Total	73209	70518	67948	65090	62231	76845	74008	70946	67894	64830
		Sensible	59791	58837	58088	56584	55484	62632	61563	60128	58964	58004
	75	Total	73077	70366	67536	64590	61646	76476	73537	70499	67471	64181
		Sensible	46290	45302	44176	42888	41965	48285	47180	46047	44925	43723
	70	Total	72614	69897	67082	64175	61215	76184	73258	70238	67098	63906
		Sensible	33033	32020	30979	29912	28836	34405	33302	32173	31012	29839
62	90	Total	78291	75896	73337	70743	67967	81320	78749	76059	73300	70392
		Sensible	78291	75896	73337	70743	67967	81320	78749	76059	73300	70392
	85	Total	74487	72136	69694	67191	64517	77389	74902	72305	69646	66849
		Sensible	74487	72136	69694	67191	64517	77389	74902	72305	69646	66849
	80	Total	70735	68457	66129	63680	61103	73508	71101	68624	66029	63308
		Sensible	70735	68457	66129	63680	61103	73508	71101	68624	66029	63308
	75	Total	68448	65964	63404	60744	58016	71593	68873	66097	63276	60397
		Sensible	60283	59052	57825	56484	55163	62630	61396	60237	58764	57606
	70	Total	67845	65282	62653	59935	57120	71028	68271	65427	62608	59555
		Sensible	46935	45840	44788	43655	42421	49183	48029	46816	45684	44222
57	75	Total	67024	64798	62547	60152	57699	69642	67307	64920	62419	59800
		Sensible	67024	64798	62547	60152	57699	69642	67307	64920	62419	59800
	70	Total	63697	61349	58921	56766	54405	66579	64058	61555	59120	56400
		Sensible	60326	59089	57794	56766	54405	63077	61756	60182	58970	56400

			STANDARD EVAPORATOR @ 2000 CFM					6 ROW EVAPORATOR @ 2000 CFM *				
72	90	Total	77095	74737	71908	69033	66115	80887	77935	75016	71745	68515
		Sensible	63230	62768	61470	60306	59308	65157	64126	63113	61998	60905
	85	Total	76965	74204	71276	68261	65198	80419	77583	74393	71335	67938
		Sensible	52533	51608	50500	49366	48371	53949	52953	51851	50800	49653
	80	Total	76692	73916	71046	68032	64998	80278	77263	74164	71031	67666
		Sensible	41558	40598	39614	38594	37573	42853	41796	40720	39642	38502
	75	Total	76247	73475	70594	67628	64577	79977	76991	73900	70690	67425
		Sensible	30360	29399	28410	27404	26375	31702	30652	29576	28473	27359
67	90	Total	74010	71797	69494	67131	64591	76858	74157	71763	69240	66609
		Sensible	74010	71797	69494	67131	64591	76762	74157	71763	69240	66609
	85	Total	72308	69791	67184	64420	61693	75417	72610	69829	66897	63970
		Sensible	64154	63021	61864	60447	59446	66147	65045	63937	62549	61468
	80	Total	71400	68794	66117	63252	60460	74687	71893	69133	66140	63030
		Sensible	53528	52488	51480	50156	49272	55230	54128	53046	51890	50702
	75	Total	71269	68668	65983	63161	60300	74612	71796	68904	65887	62851
		Sensible	42479	41453	40431	39128	38025	43828	42718	41590	40426	39265
	70	Total	70856	68258	65562	62786	59931	74339	71546	68658	65662	62618
		Sensible	31318	30305	29264	28205	27124	32719	31616	30486	29329	28162
62	90	Total	73982	71749	69448	67087	64550	76420	74127	71676	69189	66527
		Sensible	73982	71749	69448	67087	64550	76420	74127	71676	69189	66527
	85	Total	70442	68273	66077	63757	61306	72784	70529	68217	65780	63211
		Sensible	70442	68273	66077	63757	61306	72784	70529	68217	65780	63211
	80	Total	67369	64996	62550	60437	58102	70160	67612	65090	62435	59927
		Sensible	64337	63166	62003	60437	58102	66736	65480	63999	62435	59927
	75	Total	66295	63795	61323	58667	56316	69405	66798	64161	61388	58583
		Sensible	53842	52618	51672	50406	49563	55727	54588	53445	52258	51068
	70	Total	66038	63596	61081	58472	55797	69115	66499	63825	61015	58157
		Sensible	43091	42013	40951	39782	38637	44635	43491	42331	41127	39913
57	75	Total	63457	61461	59363	57156	54898	65620	63492	61319	59010	56644
		Sensible	63457	61461	59363	57156	54898	65620	63492	61319	59010	56644
	70	Total	61514	59292	56992	54613	52138	64237	61833	59347	56767	54152
		Sensible	54546	53369	52133	50838	49316	56318	55165	53984	52687	51100

* NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

mechanical cooling capacities • 5 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 1500 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 1500 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	82971	80084	77081	73941	70715	86742	83632	80397	77042	73562
		Sensible	38864	37988	37089	36163	35223	40075	39114	38129	37121	36092
	85	Total	82602	79719	76725	73619	70402	86540	83435	80208	76844	73387
		Sensible	30424	29547	28651	27730	26789	31684	30722	29735	28723	27697
72	90	Total	74192	71613	68863	66037	63254	77465	74710	71843	68954	65817
		Sensible	53735	52777	51770	50749	49751	55014	53972	52903	51838	50703
	85	Total	73976	71396	68673	65898	63070	77275	74480	71601	68596	65543
		Sensible	45392	44431	43433	42425	41410	46678	45620	44545	43439	42329
	80	Total	73729	71152	68457	65688	62840	77122	74360	71494	68491	65460
		Sensible	37034	36073	35082	34075	33050	38355	37306	36233	35126	34019
	75	Total	73344	70769	68107	65342	62482	76918	74155	71278	68313	65253
		Sensible	28624	27662	26682	25675	24646	30012	28961	27883	26785	25666
67	90	Total	69549	67238	64840	62331	59706	72159	69613	66994	64303	61617
		Sensible	63070	62028	60966	59822	58588	64246	63171	62078	60974	59881
	85	Total	68718	66256	63756	61167	58845	71707	69153	66584	63852	60966
		Sensible	54526	53504	52476	51425	50498	55824	54745	53670	52544	51373
	80	Total	68386	65964	63496	60917	58259	71385	68820	66183	63348	60553
		Sensible	46449	45438	44417	43365	42294	47753	46664	45558	44388	43247
	75	Total	68293	65889	63376	60816	58152	71405	68838	66185	63387	60580
		Sensible	37881	36877	35842	34797	33725	39227	38139	37027	35873	34726
	70	Total	67946	65541	63058	60480	57818	71227	68657	65984	63232	60395
		Sensible	29500	28495	27471	26418	25345	30917	29825	28705	27566	26405
62	90	Total	67651	65707	63744	61628	59453	69369	67357	65317	63158	60869
		Sensible	67651	65707	63744	61628	59453	69369	67357	65317	63158	60869
	85	Total	64654	62483	60650	58627	56553	66874	64664	61987	60074	57887
		Sensible	63359	62290	60650	58627	56553	64957	63808	61987	60074	57887
	80	Total	63399	61541	59268	57005	54539	66229	63907	61517	58918	56408
		Sensible	55055	54251	53106	52197	50823	56446	55362	54258	53077	51945
	75	Total	63295	61024	58715	56310	53834	66037	63649	61205	58662	56054
		Sensible	46842	45798	44746	43663	42561	48147	47032	45904	44744	43569
	70	Total	63086	60837	58487	56100	53618	65919	63525	61056	58488	55850
		Sensible	38536	37499	36430	35352	34246	39882	38763	37622	36449	35260

			STANDARD EVAPORATOR @ 1000 CFM					6 ROW EVAPORATOR @ 1000 CFM *				
80	100	Total	77554	75055	72427	69672	66891	80759	78101	75321	72337	69314
		Sensible	44293	43418	42515	41589	40665	45486	44533	43555	42530	41510
	90	Total	77190	74695	72088	69368	66536	80590	77928	75146	72223	69203
		Sensible	33115	32239	31339	30418	29473	34378	33418	32434	31423	30397
	85	Total	76917	74420	71827	69110	66262	80472	77802	75021	72120	69100
		Sensible	27492	26613	25718	24795	23844	28810	27847	26861	25853	24825
72	100	Total	68406	66188	63980	61580	59487	71079	68758	66432	63848	61320
		Sensible	54402	53463	52540	51558	50722	55585	54582	53591	52515	51476
	90	Total	68246	66044	63749	61373	58894	70951	68604	66179	63622	61085
		Sensible	43354	42418	41459	40481	39480	44556	43539	42505	41437	40390
	85	Total	68110	65909	63606	61229	58747	70886	68564	66108	63583	60990
		Sensible	37807	36870	35907	34926	33922	39040	38031	36984	35925	34854
	80	Total	67920	65725	63436	61046	58565	70813	68489	66052	63527	60910
		Sensible	32236	31300	30342	29354	28349	33520	32508	31467	30405	29323
	75	Total	67661	65460	63185	60777	58294	70713	68386	65965	63438	60810
		Sensible	26634	25696	24743	23747	22740	27988	26973	25937	24872	23785
67	90	Total	62928	60885	58789	56508	54197	65287	63161	60953	58647	56265
		Sensible	49457	48498	47528	46492	45459	50606	49590	48551	47483	46398
	85	Total	62828	60786	58640	56467	54179	65201	63056	60824	58543	56064
		Sensible	43938	42978	41986	40993	39967	45096	44070	43019	41960	40834
	80	Total	62574	60536	58406	56214	53926	65021	62871	60621	58334	55928
		Sensible	38568	37606	36618	35613	34583	39764	38732	37669	36603	35503
	75	Total	62544	60506	58384	56173	53881	65104	62944	60712	58398	55983
		Sensible	32859	31900	30916	29903	28873	34108	33072	32017	30940	29836
	70	Total	62317	60288	58165	55936	53667	65021	62876	60642	58306	55889
		Sensible	27278	26323	25337	24316	23297	28597	27567	26509	25420	24313
62	90	Total	58648	56806	54901	52864	51149	60098	58142	56139	54090	51893
		Sensible	55702	54754	53788	52770	51149	56459	55441	54412	53378	51893
	85	Total	57817	55913	53928	52291	50242	59938	57964	55897	53769	51573
		Sensible	49802	48825	47822	47011	46004	50921	49893	48832	47755	46662
	80	Total	57731	55822	53851	51800	49675	59820	57826	55780	53608	51380
		Sensible	44299	43320	42322	41298	40254	45405	44366	43315	42216	41107

6 ton • mechanical cooling capacities

* NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 3000 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 3000 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	95888	92660	89507	86213	82822	96838	93417	89926	86457	82834
		Sensible	86183	84833	83714	82125	80495	86787	85501	84326	82914	81414
	85	Total	94813	91539	88279	84846	81313	95786	92273	88666	85008	81106
		Sensible	70656	69596	68631	67378	66065	70768	69569	68288	67083	65418
	80	Total	94554	91303	87885	84373	80790	95174	91631	87961	84194	80336
		Sensible	55170	54046	52830	51656	50473	53890	52689	51446	50159	48832
	75	Total	94103	90859	87435	83914	80328	94836	91290	87619	83856	80010
		Sensible	38648	37573	36446	35297	34135	37365	36176	34947	33695	32424
67	90	Total	93140	90487	87687	84823	81825	94356	91458	88431	85306	82136
		Sensible	93140	90487	87687	84823	81825	94356	91458	88431	85306	82136
	85	Total	89784	86878	83822	80415	77491	90316	87188	83434	80655	77524
		Sensible	86321	84778	83167	80415	77491	87268	85857	83434	80655	77524
	80	Total	88250	85212	82050	78785	75432	88636	85333	81898	78514	74948
		Sensible	71933	70712	69476	68132	66762	71520	70193	68807	67804	66303
	75	Total	87956	84853	81612	78258	74838	88122	84761	81272	77711	74121
		Sensible	55852	54761	53518	52218	50945	54787	53514	52186	50877	49504
	70	Total	87559	84439	81181	77853	74428	87809	84445	80956	77384	73734
		Sensible	39811	38646	37439	36216	34966	38300	37032	35723	34393	33045
62	90	Total	93069	90418	87620	84759	81763	94274	91380	88355	85234	82068
		Sensible	93069	90418	87620	84759	81763	94274	91380	88355	85234	82068
	85	Total	88479	85917	83185	80357	77435	89372	86544	83590	80589	77460
		Sensible	88479	85917	83185	80357	77435	89372	86544	83590	80589	77460
	80	Total	83986	81451	78782	76019	73171	84566	81808	78931	75966	72917
		Sensible	83986	81451	78782	76019	73171	84566	81808	78931	75966	72917
	75	Total	82181	79284	76268	73138	70073	82130	78978	75822	72543	69283
		Sensible	71996	70693	69373	67927	66495	72049	70646	69151	67657	66218
	70	Total	81562	78612	75520	72348	69100	81318	78157	74872	71505	68066
		Sensible	56568	55382	54028	52702	51353	55670	54284	52876	51433	49968
57	75	Total	79493	77011	74407	71711	68935	79751	77045	74259	71368	68399
		Sensible	79493	77011	74407	71711	68935	79751	77045	74259	71368	68399
	70	Total	76214	73632	70852	67996	64785	75918	73067	70231	66746	63974
		Sensible	72424	70845	69171	67466	64785	72402	70737	69408	66746	63974

			STANDARD EVAPORATOR @ 2400 CFM					6 ROW EVAPORATOR @ 2400 CFM *				
72	90	Total	93310	90229	87010	83686	80316	93722	90518	87083	83384	79825
		Sensible	76268	74996	73804	72563	71407	75460	74520	73329	71747	70641
	85	Total	92725	89573	86278	82885	79446	93146	89760	86384	82701	78998
		Sensible	63256	62185	61037	59858	58756	62131	60898	59975	58491	57158
	80	Total	92499	89338	86045	82677	79198	92906	89506	85977	82354	78643
		Sensible	50052	48955	47823	46676	45504	48815	47626	46391	45128	43834
	75	Total	92073	88944	85643	82247	78760	92630	89202	85679	82063	78358
		Sensible	36651	35563	34426	33267	32089	35449	34112	32877	31623	30353
67	90	Total	88526	85514	82968	80295	77531	87955	85660	82929	80039	77147
		Sensible	88389	85514	82968	80295	77531	87955	85660	82929	80039	77147
	85	Total	86854	83948	80892	77850	74766	86858	83692	80488	77194	73925
		Sensible	76819	75589	74310	73099	71523	76335	74902	73535	72148	70785
	80	Total	85904	82941	79828	76724	73508	86007	82807	79479	76122	72705
		Sensible	64499	63310	62076	60902	59574	63212	61912	60562	59353	58006
	75	Total	85853	82875	79744	76531	73236	85826	82600	79257	75828	72321
		Sensible	51120	49958	48749	47520	46270	49690	48393	47082	45740	44379
	70	Total	85502	82510	79378	76158	72855	85572	82349	78993	75568	72063
		Sensible	37783	36614	35402	34167	32912	36339	35073	33596	32266	30920
62	90	Total	87888	85480	82905	80235	77473	88215	85576	82817	80013	77080
		Sensible	87888	85480	82905	80235	77473	88215	85576	82817	80013	77080
	85	Total	83654	81263	78742	76129	73430	83702	81147	78454	75673	72808
		Sensible	83654	81263	78742	76129	73430	83702	81147	78454	75673	72808
	80	Total	80824	78181	75408	72070	69445	80385	77542	74741	71430	68594
		Sensible	77252	75759	74206	72070	69445	76847	75307	73946	71430	68594
	75	Total	79676	76984	74097	71103	68043	79351	76271	73249	70054	66787
		Sensible	64832	63566	62222	60831	59442	63705	62212	60933	59472	57998
	70	Total	79456	76636	73672	70627	67505	78985	75895	72772	69529	66210
		Sensible	52009	50749	49419	48102	46765	50402	48900	47675	46268	44832
57	75	Total	75272	72955	70536	68031	65446	74838	72370	69792	67132	64398
		Sensible	75272	72955	70536	68031	65446	74838	72370	69792	67132	64398
	70	Total	73826	71185	68445	65596	62773	73003	70152	67162	64266	61229
		Sensible	65164	63823	62454	61007	59638	64198	62772	61128	59796	58255

* NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

mechanical cooling capacities • 6 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 1800 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 1800 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	100627	97108	93725	90234	86639	101041	97546	93929	90204	86376
		Sensible	46988	45917	44898	43859	42803	46208	45117	44003	42861	41691
	85	Total	100281	96781	93391	89882	86331	100852	97363	93733	90016	86197
		Sensible	36890	35820	34797	33750	32704	36032	34959	33738	32602	31450
72	90	Total	89424	86474	83392	80209	77124	89424	86287	83008	79616	76211
		Sensible	64654	63557	62422	61265	60158	63666	62474	61219	59881	58726
	85	Total	89246	86320	83241	80060	76785	89179	85999	82703	79309	75880
		Sensible	54671	53578	52441	51282	50103	53542	52313	51077	49805	48511
	80	Total	89029	86104	83025	79845	76570	89080	85887	82625	79222	75753
		Sensible	44671	43576	42437	41275	40093	43437	42132	41030	39654	38392
	75	Total	88708	85773	82677	79485	76201	88900	85719	82429	79037	75557
		Sensible	34631	33530	32383	31214	30027	33341	32020	30928	29685	28426
67	90	Total	83532	80826	77978	75258	72387	82818	79828	76960	73869	70857
		Sensible	75648	74457	73220	71925	70480	74345	72943	71730	70270	68932
	85	Total	82722	80110	77275	74344	71325	82318	79300	76231	73128	69933
		Sensible	65562	64475	63306	62111	60896	64341	62936	61639	60284	58953
	80	Total	82406	79644	76743	73745	70661	81913	78883	75849	72696	69460
		Sensible	55902	54745	53544	52317	51070	54441	53032	51756	50441	49110
	75	Total	82392	79611	76697	73709	70601	81955	78974	75875	72688	69419
		Sensible	45660	44496	43290	42069	40812	44188	42933	41642	40330	38999
	70	Total	82110	79321	76401	73388	70292	81805	78808	75711	72516	69241
		Sensible	35659	34490	33280	32046	30793	34135	32732	31584	30271	28942
62	90	Total	80394	78239	75968	73609	71169	79539	77246	74851	72373	69817
		Sensible	80394	78239	75968	73609	71169	79539	77246	74851	72373	69817
	85	Total	77694	75246	72273	69929	67501	76466	74002	70924	68526	65980
		Sensible	75945	74573	72273	69929	67501	74797	73540	70924	68526	65980
	80	Total	76637	74074	71391	68605	65747	75584	72774	69918	66975	64054
		Sensible	66398	65176	63881	62557	61222	64832	63358	61998	60615	59394
	75	Total	76191	73570	70829	67992	65064	75261	72469	69573	66550	63525
		Sensible	56337	55128	53878	52598	51292	54841	53525	52171	50622	49369
	70	Total	76028	73396	70649	67824	64893	75137	72321	69379	66397	63317
		Sensible	46409	45193	43938	42662	41352	44801	43481	41969	40748	39353

			STANDARD EVAPORATOR @ 1200 CFM					6 ROW EVAPORATOR @ 1200 CFM *				
80	100	Total	93893	91067	88089	84997	81797	93477	90472	87300	84017	80659
		Sensible	53483	52489	51457	50405	49336	52652	51600	50462	49273	48140
	90	Total	93613	90765	87787	84696	81497	93447	90428	87260	84010	80641
		Sensible	40123	39113	38076	37018	35944	39082	38017	36832	35804	34572
	85	Total	93383	90499	87546	84451	81248	93378	90346	87189	83931	80563
		Sensible	33408	32384	31354	30292	29214	32292	31141	30123	28906	27767
72	100	Total	82658	80345	77740	75037	72194	81499	78824	76019	73230	70262
		Sensible	65557	64573	63481	62366	61216	64282	63115	61903	60873	59671
	90	Total	82498	79964	77289	74510	71638	81402	78707	75863	72953	69951
		Sensible	52312	51230	50106	48957	47789	50876	49708	48421	47207	45979
	85	Total	82386	79852	77177	74399	71527	81381	78693	75881	72969	69965
		Sensible	45676	44592	43465	42314	41144	44068	42900	41701	40485	39255
	80	Total	82238	79702	77026	74246	71372	81380	78690	75874	72960	69952
		Sensible	39024	37937	36808	35654	34481	37342	36172	34972	33754	32522
	75	Total	82030	79479	76809	74023	71143	81348	78642	75813	72887	69890
		Sensible	32346	31251	30123	28965	27788	30690	29527	28333	27121	25770
67	90	Total	75947	73562	71051	68597	65976	74398	71899	69299	66612	63814
		Sensible	59579	58455	57290	56169	54989	58075	56876	55658	54433	53133
	85	Total	75865	73482	70979	68365	65677	74312	71790	69133	66443	63707
		Sensible	52972	51849	50685	49488	48276	51325	50110	48765	47514	46426
	80	Total	75604	73225	70726	68126	65427	74179	71664	69040	66322	63537
		Sensible	46548	45422	44255	43060	41838	44669	43449	42200	40931	39781
	75	Total	75644	73260	70756	68150	65440	74327	71800	69166	66439	63629
		Sensible	39732	38604	37436	36239	35014	37944	36733	35491	34229	32952
	70	Total	75469	73081	70571	67960	65263	74293	71760	69120	66386	63586
		Sensible	33081	31950	30778	29577	28357	31241	30027	28783	27518	26107
62	90	Total	70322	68258	66069	63792	61032	67995	65725	63369	61183	58461
		Sensible	66823	65763	64652	63512	61032	64888	63639	62353	61117	58461
	85	Total	69887	67683	65381	62985	60515	67797	65396	62934	60427	57895
		Sensible	60045	58911	57743	56544	55326	58323	56976	55677	54293	53123
	80	Total	69631	67374	65019	62569	60043	67695	65345	62894	60358	57748
		Sensible	53361	52200	51004	49778	48534	51598	50385	49122	47841	46551

7 ton • mechanical cooling capacities

NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 3500 CFM • Air Temp. Ent. Cond. °F					6 ROW EVAP. @ 3500 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	125756	120517	115031	109328	103795	127567	122196	116782	111013	105292
		Sensible	106295	104322	102297	100194	97875	108204	106226	104199	101759	99670
	85	Total	124453	119084	113505	107897	102009	126192	120660	115003	109348	103191
		Sensible	87873	86007	84097	82285	80170	89339	87349	85317	83684	81211
	80	Total	124020	118691	113107	107332	101310	125356	119913	114248	108364	102262
		Sensible	69231	67425	65551	63548	61581	69711	67860	65954	63998	61991
	75	Total	123351	118040	112482	106702	100667	124614	119201	113570	107726	101601
		Sensible	49667	47863	45994	44072	42086	50113	48268	46370	44421	42406
67	90	Total	120132	115942	111521	106860	101886	122937	118629	113988	109222	104083
		Sensible	120132	115942	111521	106860	101886	122937	118629	113988	109222	104083
	85	Total	116503	111875	107047	101986	96400	118437	113559	108701	103491	98413
		Sensible	106739	104866	102303	99676	96400	108693	106544	104415	101594	98413
	80	Total	114644	109939	104906	99676	94227	116333	111396	106232	100987	95359
		Sensible	89110	87263	85223	83021	80859	90582	88763	86540	84618	82163
	75	Total	114486	109532	104377	99031	93467	115707	110663	105420	100060	94354
		Sensible	70117	68192	66209	64100	62077	70879	68952	66969	64962	62853
	70	Total	113870	108945	103797	98448	92869	115023	110004	104795	99384	93774
		Sensible	50893	49014	47069	45069	43004	51349	49428	47455	45427	43348
62	90	Total	120026	115841	111426	106769	101802	122862	118521	113885	109125	103994
		Sensible	120026	115841	111426	106769	101802	122862	118521	113885	109125	103994
	85	Total	113738	109704	105456	100986	96227	116401	112166	107765	103197	98284
		Sensible	113738	109704	105456	100986	96227	116401	112166	107765	103197	98284
	80	Total	108357	104018	99566	95276	90718	110094	106114	101778	97344	92689
		Sensible	106336	103909	99566	95276	90718	108480	106041	101778	97344	92689
	75	Total	106093	101599	96923	92057	87004	107505	102922	98197	93190	88275
		Sensible	89102	87078	84884	82746	80490	90623	88526	86500	84136	81905
	70	Total	105306	100717	85955	91001	85873	106422	101798	96961	91892	86796
		Sensible	70706	68720	66604	64578	62338	71778	69843	67810	65547	63424
57	75	Total	101362	97621	93700	89540	85231	103680	99762	95758	91469	87020
		Sensible	101362	97621	93700	89540	85231	103680	99762	95758	91469	87020
	70	Total	97599	93416	89293	84946	80432	98871	94832	90493	86179	81866
		Sensible	89256	87083	84961	82437	79752	90759	88698	86431	84014	81495

			STANDARD EVAPORATOR @ 2800 CFM					6 ROW EVAPORATOR @ 2800 CFM *				
72	90	Total	121644	116715	111557	106160	100519	123109	118112	112900	107472	101674
		Sensible	94164	92286	90294	88272	86214	94724	92933	91094	89203	87214
	85	Total	121041	115971	110664	105152	99384	122335	117168	111898	106447	100549
		Sensible	78499	76690	74821	72908	70932	78991	77141	75279	73376	71352
	80	Total	120646	115581	110295	104804	99065	121914	116767	111398	105856	100000
		Sensible	62908	61097	59231	57321	55350	63386	61540	59639	57701	55686
	75	Total	120060	114998	109715	104246	98516	121295	116164	110813	105244	99455
		Sensible	47249	45436	43568	41661	39690	47710	45865	43968	42019	40021
67	90	Total	114271	109911	105338	100484	96071	115541	111344	107111	102304	97778
		Sensible	109387	107141	104812	100484	96071	110697	108719	106651	102304	97778
	85	Total	112431	107859	103072	98077	92874	113857	109196	104322	99344	94184
		Sensible	94668	92724	90656	88577	86494	95907	94038	91993	89930	87688
	80	Total	111232	106562	101686	96607	91524	112576	107866	103002	97904	92598
		Sensible	79946	78007	76045	74029	72138	80527	78632	76699	74698	72644
	75	Total	111119	106442	101580	96500	91205	112262	107510	102595	97452	92066
		Sensible	63998	62126	60204	58220	56178	64478	62569	60618	58604	56524
	70	Total	110588	105912	101068	95992	90712	111703	106963	102030	96896	91561
		Sensible	48394	46519	44602	42616	40578	48857	46951	44991	42978	40914
62	90	Total	112262	108521	104571	100400	95937	114476	110568	106500	102269	97686
		Sensible	112262	108521	104571	100400	95937	114476	110568	106500	102269	97686
	85	Total	106431	102864	99054	95038	90750	108528	104791	100854	96798	92397
		Sensible	106431	102864	99054	95038	90750	108528	104791	100854	96798	92397
	80	Total	103583	99333	95245	90839	86238	104736	100649	96328	91957	87628
		Sensible	94992	92937	90868	88497	85981	96068	94023	92095	89823	87460
	75	Total	102304	97979	93687	89111	84345	103642	99285	94768	90023	85274
		Sensible	80012	78009	76109	74061	71810	80880	78947	76965	74909	72864
	70	Total	101987	97669	93182	88493	83631	103015	98630	94097	89331	84415
		Sensible	64782	62870	60907	58878	56800	65256	63310	61319	59252	57147
57	75	Total	95835	91756	88188	84424	80570	97066	93417	89825	86012	82009
		Sensible	94688	91756	88188	84424	80570	96102	93417	89825	86012	82009
	70	Total	93914	90005	85934	81699	77290	94856	91008	86882	82592	78143
		Sensible	80324	78226	76135	74063	71856	81191	79321	77231	85087	72462

NOTE: 6 ROW COIL DATA 'ZERO' % BYPASS

mechanical cooling capacities • 7 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 2100 CFM • Air Temp. Ent. Cond. °F					6 ROW EVAP. @ 2100 CFM* • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	131324	126042	120530	114725	108649	132700	127336	121743	115825	109600
		Sensible	59198	57517	55796	54013	52182	59667	57952	56194	54370	52491
	85	Total	130843	125563	120027	114272	108206	132239	126885	121273	115405	109227
		Sensible	47399	45716	43981	42211	40378	47871	46155	44389	42574	40703
72	90	Total	115683	111066	106228	101145	96033	116867	112235	107363	102418	96953
		Sensible	79783	77998	76157	74257	72377	80272	78472	76610	74748	72734
	85	Total	115452	110825	106001	100936	95634	116566	111882	107003	101882	96497
		Sensible	68133	66340	64501	62602	60648	68591	66768	64899	62972	60982
	80	Total	115118	110506	105699	100641	95331	116243	111568	106673	101574	96210
		Sensible	56441	54650	52815	50915	48954	56901	55078	53201	51278	49291
	75	Total	114651	110038	105246	100190	94864	115800	111128	106235	101123	95766
		Sensible	44697	42903	41072	39169	37199	45163	43339	41460	39529	37545
67	90	Total	107148	103011	98688	94131	89620	107994	103883	99488	95023	90232
		Sensible	92569	90788	88952	87048	85088	92955	91175	89303	87429	85393
	85	Total	106138	101902	97669	93156	88426	107289	103054	98604	94034	89142
		Sensible	80605	78782	76989	75103	73160	81127	79295	77400	75482	73465
	80	Total	105693	101466	97039	92404	87566	106672	102388	97916	93223	88429
		Sensible	69319	67493	65607	63663	61668	69764	67905	65994	64020	62034
	75	Total	105638	101404	96990	92336	87493	106621	102331	97860	93159	88267
		Sensible	57347	55518	53642	51692	49696	57791	55932	54023	52048	50025
	70	Total	105225	100988	96589	91917	87073	106233	101945	97461	92778	87890
		Sensible	45646	43814	41942	39982	37983	46098	44238	42321	40352	38328
62	90	Total	101169	98057	94718	91133	87394	102576	99349	95932	92351	88543
		Sensible	101169	98057	94718	91133	87394	102576	99349	95932	92351	88543
	85	Total	98396	94912	91123	87146	82770	99356	95566	91792	88149	83861
		Sensible	93071	91211	89038	86913	82770	93664	91721	89768	87874	83861
	80	Total	97404	93609	89628	85472	81117	98224	94299	90387	86096	81690
		Sensible	81229	79433	77576	75661	73685	81634	79770	77936	75957	73954
	75	Total	96884	92989	88916	84660	80216	97746	93734	89759	85505	81075
		Sensible	69491	67648	65746	63786	61771	69917	68014	66149	64184	62168
	70	Total	96631	92751	88680	84414	79975	97485	93557	89442	85134	80592
		Sensible	57882	56044	54141	52174	50158	58303	56435	54506	52515	50449

			STANDARD EVAPORATOR @ 1400 CFM					6 ROW EVAPORATOR @ 1400 CFM				
80	100	Total	120944	116536	111876	106956	101747	121938	117493	112708	107740	102418
		Sensible	66583	64940	63243	61497	59691	66982	65316	63567	61794	59947
	90	Total	120508	116100	111475	106551	101323	121556	117105	112402	107394	102198
		Sensible	50967	49318	47628	45871	44050	51386	49711	47982	46190	44369
	85	Total	120178	115766	111154	106229	101031	121296	116843	112136	107168	101930
		Sensible	43116	41463	39776	38015	36203	43561	41882	40148	38366	36531
72	100	Total	105083	101303	97566	93495	89191	105927	102177	98221	93882	89583
		Sensible	80286	78608	76980	75243	73446	80677	79002	77271	75416	73613
	90	Total	104838	101071	97072	92860	88414	105530	101684	97670	93497	88945
		Sensible	64821	63143	61394	59593	57734	65147	63428	61668	59875	57968
	85	Total	104675	100917	96928	92715	88255	105388	101566	97580	93337	88871
		Sensible	57069	55392	53647	51842	49972	57405	55693	53941	52117	50240
	80	Total	104463	100714	96724	92483	88039	105224	101419	97409	93168	88700
		Sensible	49295	47620	45872	44051	42186	49652	47944	46180	44354	42473
	75	Total	104174	100432	96438	92221	87726	105004	101195	97175	92937	88465
		Sensible	41485	39812	38060	36249	34360	41873	40162	38391	36563	34678
67	90	Total	95680	92235	88605	84773	80987	96258	92833	89228	85345	81416
		Sensible	72937	71256	69516	67716	65972	73231	71554	69820	67990	66172
	85	Total	95569	92131	88498	84665	80628	96074	92612	88966	85180	81122
		Sensible	65226	63547	61804	59999	58137	65487	63790	62036	60248	58371
	80	Total	95200	91778	88154	84334	80295	95738	92283	88670	84829	80790
		Sensible	57712	56034	54289	52485	50613	57989	56290	54544	52724	50849
	75	Total	95273	91829	88196	84342	80304	95852	92393	88743	84893	80840
		Sensible	49769	48081	46334	44514	42647	50064	48364	46603	44781	42901
	70	Total	95039	91590	87953	84079	80074	95670	92201	88548	84707	80652
		Sensible	41997	40306	38554	36723	34871	42318	40611	38846	37028	35145
62	90	Total	87841	84747	81495	78382	74958	87948	84857	81652	78352	74956
		Sensible	81019	79380	77684	76094	74371	81074	79434	77760	76068	74361
	85	Total	87038	84146	80904	77489	73890	87592	84452	81078	77669	74067
		Sensible	72950	71421	69733	67985	66176	73251	71585	69826	68077	66264
	80	Total	86951	83785	80460	76962	73273	87336	84160	80912	77441	73705
		Sensible	65266	63590	61859	60070	58218	65479	63795	62098	60317	58438

gas heating capacities

TABLE 18 - 1

CABINET	UNIT SIZE	Designation (1 - 3)*	HEATING INPUT (MBH)	OUTPUT CAPACITY (MBH)	TEMPERATURE RISE RANGE (°F)
A	02	(3)	65.0	52.65	35 - 65
	03	(3)	65.0	52.65	25 - 55
	04	(1)	75.0	60.75	20 - 50
		(3)	120.0	97.20	40 - 70
	05	(1)	75.0	60.75	15 - 45
		(3)	142.5	115.43	40 - 70
	06	(3)	142.5	115.43	30 - 60
	07	(3)	142.5	115.43	30 - 60

* **AAON HEAT RANGE DESIGNATIONS** **(1) = LOW HEAT**
(3) = HIGH HEAT

NOTES: **1)** To calculate air temperature rise: ΔT = Output capacity / (CFM x 1.085)
2) Use tabulated ratings for elevations to 2000 FT.
3) For elevations above 2000 FT. derate 4% for each 1000 FT. above sea level and use the following formula:
ΔT = Output capacity / (.24 x 60 x specific WT of air x CFM)(Refer to Table 80-2 for information about Specific Weight of Air)
4) Gas pressure supply range (inches of water guage): Natural 6-10.5 ; Propane 11-13.
5) Gas manifold pressure (inches of water guage): Natural 3.5; Propane 10.5.
6) Above 2000FT.; Specify "HI ALTITUDE KIT".

CAUTION: **FOR APPLICATIONS OUTSIDE THE TEMPERATURE RANGE SHOWN, CONTACT THE FACTORY.**

electric heating capacities

TABLE 18 - 2

SINGLE PHASE

Heating Designation and Unit Availability			No. of Strips	208 / 60 / 1			240 / 60 / 1		
02 - 03	04	05		MBH	KW	AMPS	MBH	KW	AMPS
A	A		1	25.6	7.5	36.06	34.1	10.0	41.67
B	B	B	2	51.2	15.0	72.12	68.3	20.0	83.33
	C	C	3	76.8	22.5	108.18	102.4	30.0	125.00
	D	D	4	102.4	30.0	144.20	136.6	40.0	166.67

THREE PHASE

Heating Designation and Unit Availability			No. of Strips	208 / 60 / 3			240 / 60 / 3			480 / 60 / 3			575 / 60 / 3 (1)		
02-03 (1)	04	05-06-07		MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS
A	A		1	25.6	7.5	20.80	34.1	10.0	24.1	34.1	10.0	12.0	34.1	10.0	10.0
B	B	B	2	51.2	15.0	41.60	68.3	20.0	48.2	68.3	20.0	24.0	68.3	20.0	20.0
	C	C	3	76.8	22.5	62.40	102.4	30.0	72.3	102.4	30.0	36.0	102.4	30.0	30.0
	D	D	4	102.4	30.0	83.28	136.6	40.0	96.4	136.6	40.0	48.0	136.6	40.0	40.0

(1) **MODEL 02 AND 03 IS NOT AVAILABLE IN 575 / 60 / 3.**

steam heating data

TABLE 19 - 1 • FACE VELOCITY vs. SELECTION FACTOR • 2.81 SQ. FT. FACE AREA

FV (fpm)	SF	FV (fpm)	SF	FV (fpm)	SF
200	.707	475	.541	750	.454
225	.684	500	.531	775	.448
250	.664	525	.522	800	.442
275	.646	550	.513	825	.437
300	.629	575	.504	850	.431
325	.613	600	.496	875	.425
350	.599	625	.489	900	.420
375	.586	650	.481	925	.415
400	.574	675	.474	950	.410
425	.562	700	.467	975	.406
450	.551	725	.461	1000	.401

TABLE 19 - 2

SATURATED STEAM PROPERTIES		
PSIG	TEMPERATURE	LATENT HEAT
2	218	966
5	227	961
7	233	958
10	239	953
15	250	946

TABLE 19 - 3

PRESSURE DROP AIR SIDE			
FV (FPM)	ΔP AIR (in. WC)	FV (FPM)	ΔP AIR (in. WC)
200	.027	700	.248
300	.055	800	.314
400	.092	900	.386
500	.136	1000	.466
600	.188		

EXAMPLE: What is the Expected Leaving Air Temperature with 2 PSIG Saturated Steam and 2000 cfm entering at 60°F ?
The coil face velocity is 2000 ÷ 2.81 = 711 FPM.

FROM TABLE 19-1: SF = .465 (by interpolation)
FROM TABLE 19-2: SST = 218°F.

TEMPERATURE RISE = SF (SST - EAT) = .465 (218 - 60) = 73.5°F.

CONDENSATE GENERATED

BTUH = 1.085 x CFM x ΔT.
FROM TABLE 19-2: LATENT HEAT = 966.
FROM TABLE 19-3: AIR SIDE PRESSURE DROP = .255 (by interpolation)

CONDENSATE LOAD = BTUH ÷ LATENT HEAT @ OPERATING PSIG.
CONDENSATE LOAD = (1.085 x 73.5 x 2000) ÷ 966 = 165.1 lbs. / hr.

hot water coil performance data

TABLE 19 - 4 'A' CABINET • 180° F EWT, 60° F EAT • 2.81 SQ. FT. FACE AREA

C.F.M	ΔP AIR	10 GPM (.5 ft. ΔP)			15 GPM (1.0 ft. ΔP)			20 GPM (1.7 ft. ΔP)		
		ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH
1000	.16	69.2	15.1	75.6	73.0	10.6	79.8	75.2	8.2	82.1
2000	.53	48.6	21.3	106.3	52.7	15.4	115.2	55.1	12.0	120.4
3000	1.07	38.2	25.1	125.2	41.8	18.3	137.0	44.3	14.5	145.3

EXAMPLE: "A" Cabinet with 2000 cfm, 180°F EWT, 60°F EAT, and 10 GPM has a capacity of 106.3 MBH from Table 19-4.
For 190°F EWT and 60°F EAT the correction factor is 1.08, actual coil capacity = 1.08 x 106.3 = 114.8 MBH.

$$\text{NEW } \Delta T\ H_2O = \frac{114{,}800}{(500)\ (GPM)} = \frac{114{,}800}{(500)\ (10)} = 23°\ F$$

$$\text{NEW } \Delta T\ AIR = \frac{114{,}800}{1.08\ (CFM)} = \frac{114{,}800}{1.08\ (2000)} = 53.1°\ F$$

CORRECTION FACTORS FOR OTHER THAN 180° F HW ENT. AND 60° F AIR							
AIR TEMP.	WATER TEMP.						
	210	200	190	180	170	160	150
50°	1.38	1.28	1.18	1.08	1.00	0.90	0.82
60°	1.28	1.18	1.08	1.00	0.90	0.82	0.72
70°	1.18	1.08	1.00	0.90	0.82	0.72	0.64

coil static pressure drops (in. wg.)

TABLE 20 - 1 • 'A' CABINET

• INDOOR COIL• NOTE: 6 ROW COIL N/A IN 2 & 3 TON			* 6 ROW COIL DATA "ZERO " % BYPASS			
C.F.M	2 & 3 TON UNITS		4 TON UNIT			
	STANDARD COIL		STANDARD COIL		6 ROW COIL*	
	WET	DRY	WET	DRY	WET	DRY
500	.035	.021	.026	.012	.061	.039
1000	.105	.062	.063	.036	.159	.113
1500	.198	.117	.104	.066	.293	.221
2000	.312	.184	.149	.103	.463	.364
2500	.443	.262	.197	.147	.669	.540
3000			.250	.197	.912	.751
3500			.306	.255	1.190	.922

• INDOOR COIL•	NOTE: * 6 ROW COIL DATA "ZERO" % BYPASS											
C.F.M	5 TON UNIT				6 TON UNIT				7 TON UNIT			
	STANDARD COIL		6 ROW COIL*		STANDARD COIL		6 ROW COIL*		STANDARD COIL		6 ROW COIL*	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
500	.028	.012	.061	.039	.018	.012	.061	.039	.021	.012	.061	.039
1000	.068	.036	.159	.113	.047	.033	.159	.113	.050	.033	.159	.113
1500	.114	.066	.293	.221	.084	.061	.293	.221	.090	.061	.293	.221
2000	.167	.103	.463	.364	.130	.096	.463	.364	.138	.096	.463	.364
2500	.227	.147	.669	.540	.183	.138	.669	.540	.196	.138	.669	.540
3000	.293	.197	.912	.751	.245	.187	.912	.751	.263	.187	.912	.751
3500	.365	.255	1.190	.996	.315	.242	1.190	.996	.339	.242	1.190	.996

component static pressure drops (in. wg.)

TABLE 20 - 2 • 'A' CABINET

C.F.M	HEATING SECTION						FILTERS			ECON 100% R / A	Acoustical CURB
	GAS HEAT		ELECTRIC HEAT				2" Throw Away	2" Pleated	4" Pleated		
	* HIGH	** LOW	A	B	C	D					
500	.032	.022	.020	.028	.034	.042	.014	.018	.019	.010	.008
1000	.065	.044	.041	.055	.068	.084	.029	.040	.040	.022	.018
1500	.097	.066	.061	.083	.102	.126	.047	.063	.063	.036	.029
2000	.130	.088	.082	.110	.136	.167	.067	.090	.087	.051	.041
2500	.162	.110	.102	.138	.170	.209	.089	.119	.113	.068	.054
3000	.195	.132	.123	.165	.204	.251		.151	.141	.086	.068
3500	.227	.154	.143	.193	.238	.293		.186	.171	.105	.084

* 4 - 7 TON ONLY

** 2 - 5 TON ONLY (2 & 3 TON HIGH HEAT / 4 & 5 TON LOW HEAT)

blower performance
motor input rpm and kw

TABLE 21 - 1 • 2 - 5 TON • DIRECT DRIVE •

C.F.M	TOTAL STATIC PRESSURE (IN. WG.)	
	1/3 HP • 8 POLE MOTOR • 900 RPM 2 • 3 • 4 TON UNIT ONLY	1/2 HP • 6 POLE MOTOR • 1200 RPM 2 • 3 • 4 • 5 TON UNIT
600	0.70	1.10
800	0.70	1.10
1000	0.66	1.00
1200	0.64	0.98
1400	0.60	0.90
1600	0.45	0.80
1800		0.64
2000		0.58

TABLE 21 - 2 • 3 - 7 TON • BELT DRIVE •

C.F.M	TOTAL STATIC PRESSURE									
	0.5		1.0		1.5		2.0		2.5	
	RPM	KW	RPM	KW	RPM	KW	RPM	KW	RPM	KW
500	800	.20	1000	.40	1250	.53				
1000	810	.26	1080	.54	1310	.83	1500	1.15	1660	1.47
1500	900	.45	1160	.78	1380	1.15	1560	1.48	1720	1.87
2000	1020	.75	1250	1.10	1440	1.55	1620	1.95	1780	2.27
2500	1160	1.13	1370	1.60	1550	2.08	1700	2.52		
3000	1290	1.66	1500	2.26	1660	2.75				
3500	1440	2.40	1620	3.00						

1 hp · 2 hp · 3 hp

NOT AVAILABLE

NOTE: TOTAL STATIC = INTERNAL STATIC + EXTERNAL STATIC

BLOWER PERFORMANCE TABLES INCLUDE INTERNAL RESISTANCE OF CABINET ONLY. FOR TOTAL STATIC PRESSURE DETERMINATION, SYSTEM EXTERNAL STATIC PRESSUREMUST BE ADDED TO THE APPROPRIATE COMPONENT STATIC PRESSURE DROPS.
SEE TABLES
20-1, 20-2, 19-3 AND 19-4 FOR COMPONENT STATIC PRESSURE DROPS.

REFER TO TABLE FOR 'KW' TO 'HP' CONVERSION.

INDOOR BLOWER MOTOR DATA			
NOMINAL MOTOR H.P.	PERCENT EFFICIENCY	MAXIMUM KW	SERVICE FACTOR
1/3	62	.39	1.00
1/2	68	.55	
1	81	1.06	1.15
2	83	2.07	
3	84	3.06	

$$BHP = \frac{KW \times EFF}{0.746}$$

power exhaust performance

TABLE 21 - 3 • 2 - 7 TON • BELT DRIVE

C.F.M	TOTAL STATIC PRESSURE									
	0.2		0.4		0.6		0.8		1.0	
	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
600	420	1	590	1	690	1	800	1	890	1
800	450	1	600	1	700	1	810	1	900	1
1000	490	1	620	1	740	1	820	1	920	1
1200	520	1	650	1	760	1	850	1	940	1
1400	560	1	690	1	790	1	870	1	960	1
1600	620	1	720	1	820	1	900	1	980	1
1800	670	1	760	1	850	1	940	1	1010	1
2000	710	1	810	1	890	1	970	1		
2200	760	1	850	1	940	1				
2400	820	1	900	1						

NOT AVAILABLE

electrical data

TABLE 22 - 1 • 'A' CABINET •

SINGLE PHASE	208 - 240 / 1 / 60										
UNIT SIZE	02		03			04			05		
BLOWER MOTOR (HP)	.33	.50	.33	.50	1.0	.33	.50	1.0	.50	1.0	2.0
BLOWER MOTOR F.L.A	3.6	4.9	3.6	4.9	8.0	3.6	4.9	8.0	4.9	8.0	12.0
COMPRESSOR 1 F.L.A (ea)	10.0		13.0			16.2			23.8		
COMPRESSOR 1 L.R.A (ea)	61		87			109			169		
CONDENSER FAN MTR. F.L.A (ea)	(1) 3.6 (1/3 Hp mtr)										
COMBUSTION BLOWER MTR. F.L.A (ea)	0.9 (1/16 Hp mtr)										
POWER EXH. MOTOR F.L.A (HP)	8.0 (1 Hp mtr)										
COOLING F.L.A	17	19	20	22	25	23	25	28	32	35	39
COOLING M.C.A	20	21	23	25	28	27	29	32	38	41	45
Max. Overcurrent Protection	25	30	35		40		45		60		
COOLING F.L.A	25	27	28	30	33	31	33	36	40	43	47
w/ POWER EXH. M.C.A	28	29	31	33	36	35	37	40	46	49	53
Max. Overcurrent Protection	35		40	45		50			70		
ELEC. HEAT F.L.A	45	47	45	47	50	45	47	50	47	50	54
Designation • A • M.C.A	57	58	57	58	62	57	58	62	58	62	67
Max. Overcurrent Protection	60				70	60		70	60	70	
ELEC. HEAT F.L.A	87	88	87	88	91	87	88	91	88	91	95
Designation • B • M.C.A	109	110	109	110	114	109	110	114	110	114	119
Max. Overcurrent Protection	110				125	110		125	110	125	
ELEC. HEAT F.L.A						129	130	133	130	133	137
Designation • C • M.C.A						161	162	166	162	166	171
Max. Overcurrent Protection						175					
ELEC. HEAT F.L.A						170	172	175	172	175	179
Designation • D • M.C.A						213	214	218	214	218	223
Max. Overcurrent Protection						225					

NOTE: THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS.

TABLE 23 - 1 • 'A' CABINET •

THREE PHASE		208 - 240 / 3 / 60																
UNIT SIZE		02		03			04			05			06			07	
BLOWER MOTOR	(HP)	0.33	0.5	0.33	0.5	1.0	0.33	0.5	1.0	0.5	1.0	2.0	1.0	2.0	3.0	2.0	3.0
	F.L.A	3.6	4.9	3.6	4.9	3.6	3.6	4.9	3.6	4.9	3.6	6.8	3.6	6.8	9.6	6.8	9.6
COMPRESSOR 1	F.L.A (ea)	6.8		8.3			10.4			14.6			18.2			25.0	
	L.R.A (ea)	55		66			88			123			156			185	
CONDENSER FAN MTR.	F.L.A (ea)	(1) 3.6 (1/3 Hp mtr)											(2) 7.2 (1/3 Hp mtrs)				
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.9 (1/16 Hp mtr)															
POWER EXH. MOTOR	F.L.A (HP)	3.6 (1 Hp mtr)															
COOLING	F.L.A	14	15	16	17	16	18	19	18	23	22	25	36	40	42	39	42
	M.C.A	16	17	18	19	18	20	22	20	27	25	29	41	44	77	45	48
Max. Overcurrent Protection		20		25			30			40			50	60		70	
COOLING w/ POWER EXH.	F.L.A	18	19	19	20	19	21	23	21	27	25	29	40	43	46	43	45
	M.C.A	19	21	21	22	21	24	25	24	30	29	32	44	48	50	49	52
Max. Overcurrent Protection		25			30	25	30	35	30	40		45	60			70	
ELEC. HEAT Designation • A •	F.L.A	28	29	28	29	28	28	29	28	29	28	31	36	40	42	39	42
	M.C.A	35	36	35	36	35	35	36	35	36	35	39	41	44	47	45	48
Max. Overcurrent Protection		35	40	35	40	35		40	35	40	35	40	50	60		70	
ELEC. HEAT Designation • A • w/ POWER EXH.	F.L.A	28	29	28	29	28	28	29	28	29	28	31	40	43	46	43	45
	M.C.A	35	36	35	36	35	35	36	35	36	35	39	44	48	50	49	52
Max. Overcurrent Protection		35	40	35	40	35	35	40	35	40		45	60			70	
ELEC. HEAT Designation • B •	F.L.A	52	53	52	53	52	52	53	52	53	52	55	52	55	58	55	58
	M.C.A	65	66	65	66	65	65	66	65	66	65	69	65	69	72	69	72
Max. Overcurrent Protection							70								80	70	80
ELEC. HEAT Designation • C •	F.L.A						76	77	76	77	76	79	76	79	82	79	82
	M.C.A						76	96	95	96	95	99	95	99	102	99	102
Max. Overcurrent Protection							100								110	100	110
ELEC. HEAT Designation • D •	F.L.A						100	101	100	101	100	103	100	103	106	103	106
	M.C.A						125	126	125	126	125	129	125	129	132	129	132
Max. Overcurrent Protection							125	150	125	150	125	150	125	150			

NOTE: THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS.

electrical data

TABLE 24 - 1 • 'A' CABINET •

THREE PHASE		480/3/60																
UNIT SIZE		02		03			04			05			06			07	
BLOWER MOTOR	(HP)	0.33	0.5	0.33	0.5	1.0	0.33	0.5	1.0	0.5	1.0	2.0	1.0	2.0	3.0	2.0	3.0
	F.L.A	1.8	2.5	1.8	2.5	1.8	1.8	2.5	1.8	2.5	1.8	3.4	1.8	3.4	4.8	3.4	4.8
COMPRESSOR 1	F.L.A (ea)	4.2		4.2			5.2			7.3			9.1			12.4	
	L.R.A (ea)	28		33			44			62			70			89	
CONDENSER FAN MTR.	F.L.A (ea)	(1) 1.8 (1/3 Hp mtr)											(2) 3.6 (1/3 Hp mtrs)				
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.5 (1/16 Hp mtr)															
POWER EXH. MOTOR	F.L.A (HP)	1.8 (1 Hp mtr)															
COOLING	F.L.A	7	8	8	9	8	9	10	9	12	11	13	18	20	21	19	21
	M.C.A	8	9	9	10	9	10	11	10	13	13	14	20	22	19	23	24
Max. Overcurrent Protection		15								20			25		30		35
COOLING w/ POWER EXH.	F.L.A	9	10	10	10	10	11	11	11	13	13	14	20	22	23	21	23
	M.C.A	10	10	11	11	11	12	13	12	15	15	16	22	24	25	24	26
Max. Overcurrent Protection		15								20			30			35	
ELEC. HEAT Designation • A •	F.L.A	14	15	14	15	14	14	15	14	15	14	15	18	20	21	19	21
	M.C.A	17	18	17	18	17	17	18	17	18	17	19	20	22	23	23	24
Max. Overcurrent Protection		20											25		30		35
ELEC. HEAT Designation • A • w/ POWER EXH.	F.L.A	14	15	14	15	14	14	15	14	15	14	15	20	22	23	21	23
	M.C.A	17	18	17	18	17	17	18	17	18	17	19	22	24	25	24	26
Max. Overcurrent Protection		20											30			35	
ELEC. HEAT Designation • B •	F.L.A	26	27	26	27	26	26	27	26	27	26	27	26	27	29	27	29
	M.C.A	33	33	32	33	32	32	33	32	33	32	34	32	34	36	34	36
Max. Overcurrent Protection		35													40	35	40
ELEC. HEAT Designation • C •	F.L.A						38	39	38	39	38	39	38	39	41	39	41
	M.C.A						47	48	47	48	47	49	47	49	51	49	51
Max. Overcurrent Protection							50								60	50	60
ELEC. HEAT Designation • D •	F.L.A						50	51	50	51	50	51	50	51	53	51	53
	M.C.A						62	63	62	63	62	64	62	64	66	64	66
Max. Overcurrent Protection							70										

NOTE: THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS.

TABLE 25 - 1 • 'A' CABINET •

THREE PHASE		575 / 3 / 60										
UNIT SIZE		04			05			06			07	
BLOWER MOTOR	(HP)	0.33	0.5	1.0	0.5	1.0	2.0	1.0	2.0	3.0	2.0	3.0
	F.L.A	1.5	2.1	1.4	2.1	1.4	2.7	1.4	2.7	3.9	2.7	3.9
COMPRESSOR 1	F.L.A (ea)	4.2			5.8			7.6			9.8	
	L.R.A (ea)	35			50			54			78	
CONDENSER FAN MTR.	F.L.A (ea)	(1) 1.8 (1/3 Hp mtr)						(2) 3.6 (1/3 Hp mtrs)				
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.5 (1/16 Hp mtr)										
POWER EXH. MOTOR.	F.L.A (HP)	1.4 (1 Hp mtr)										
COOLING	F.L.A	8	8	7	10	9	10	16	18	19	16	17
	M.C.A	9	9	8	11	10	12	18	20	21	19	20
Max. Overcurrent Protection		15						25				
COOLING	F.L.A	9	10	9	11	10	12	18	19	20	18	18
w/ POWER EXH.	M.C.A	10	10	10	11	12	13	20	21	22	20	21
Max. Overcurrent Protection		15						25				30
ELEC. HEAT	F.L.A	12	12	11	12	11	13	16	18	19	16	17
Designation • A •	M.C.A	14	15	14	15	14	16	18	20	21	19	20
Max. Overcurrent Protection		15					20	25				
ELEC. HEAT	F.L.A	12	12	11	12	11	13	18	19	20	18	18
Designation • A • w/ POWER EXH.	M.C.A	14	15	14	15	14	16	20	21	22	20	21
Max. Overcurrent Protection		15					20	25				30
ELEC. HEAT	F.L.A	22	22	21	21	21	23	21	23	24	23	24
Designation • B •	M.C.A	27	28	27	28	27	28	27	28	30	28	30
Max. Overcurrent Protection		30										
ELEC. HEAT	F.L.A	32	32	32	32	31	33	31	33	34	33	34
Designation • C •	M.C.A	39	40	39	40	39	41	39	41	42	41	42
Max. Overcurrent Protection		40					45	40	45			
ELEC. HEAT	F.L.A	42	42	41	42	41	43	41	43	44	43	44
Designation • D •	M.C.A	52	53	52	53	52	53	52	53	55	53	55
Max. Overcurrent Protection		60										

NOTE: THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS.

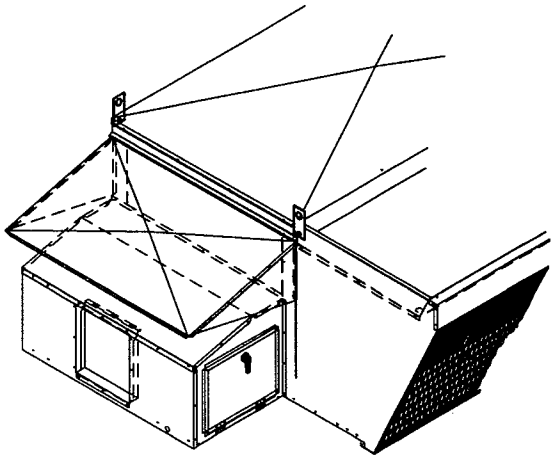
NOTE: 575v N/A FOR 2 AND 3 TON UNITS.

dimensions • A cabinet • 2 - 7 ton

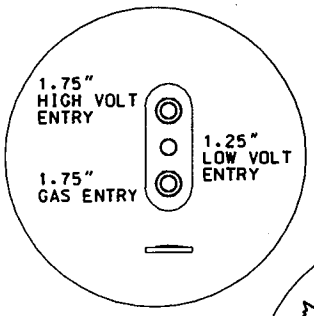
NOTE: For Roof Curb Details, Refer To Page 78

CLEARANCES

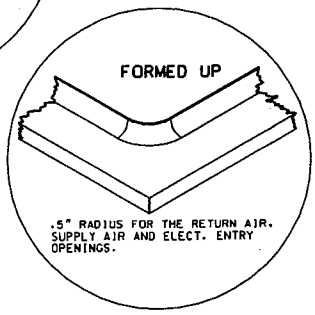
LOCATION	UNIT SIZE 2•3•4•5•6•7
RETURN AIR (BACK)	36
VENT SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED



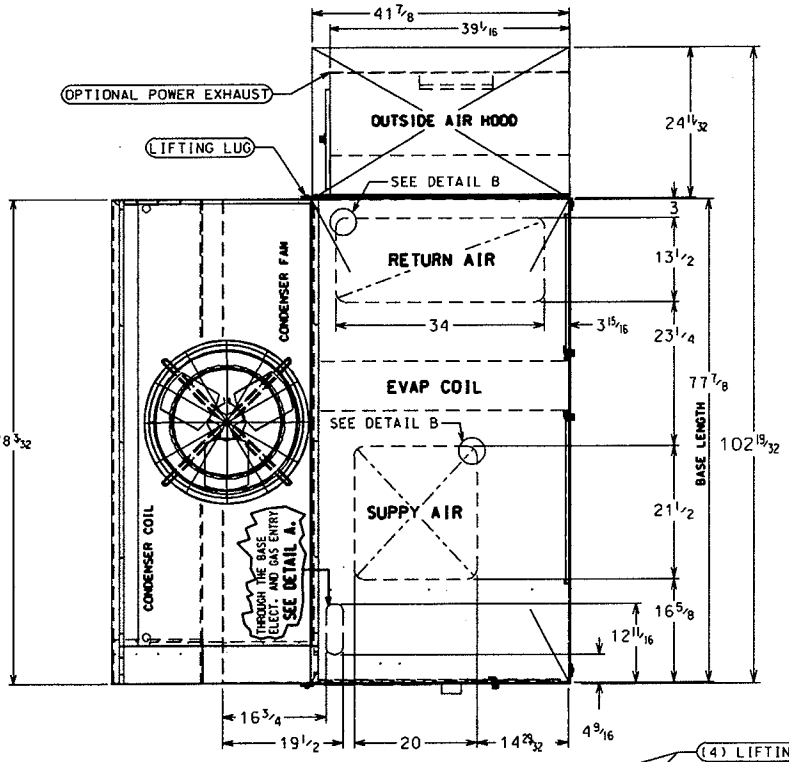
A BOX UNIT W/ POWER EXHAUST



DETAIL A

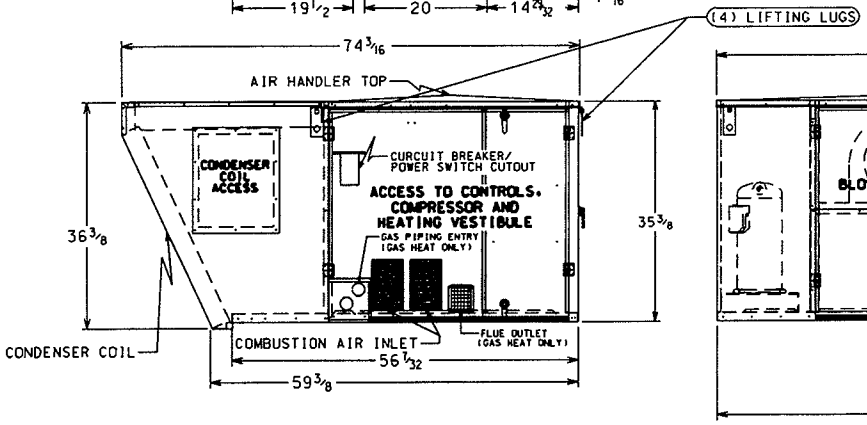


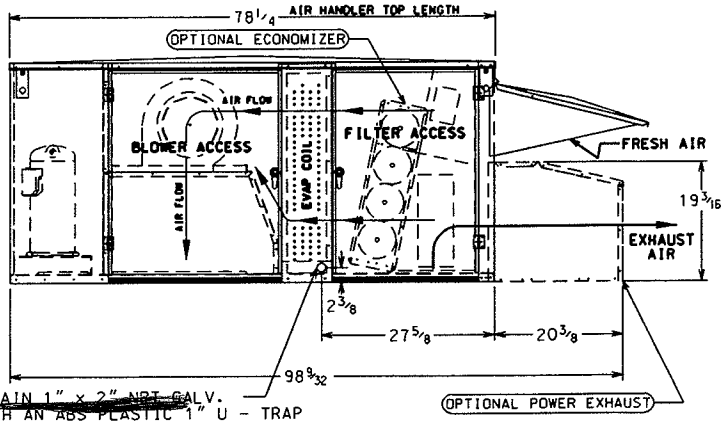
DETAIL B



NUMBER OF CONDENSER FANS

2-3 TON - 1 FAN
4-5 TON - 1 FAN
6-7 TON - 2 FANS





CONDENSATE DRAIN 1" x 2" NPT GALV. PIPE FTG. WITH AN ABS PLASTIC 1" U - TRAP FTG. AND A 1" 90° PVC ELBOW SLIP x FPT FTG., A 1" 90° PVC ELBOW SLIP x SLIP FTG.

specifications • 'B' cabinet

UNIT FEATURES		UNIT SIZE			
		08	10	13	15
NOMINAL CAPACITY TONS		8	10	13	15
EER - FULL LOAD ①		10.2	9.7	9.8	9.2
REFRIGERANT CHARGE	lbs. / no. of systems	9.6 (2)	10.0 (2)	12.75 (2)	11.5 (2)
COMPRESSOR (HERMETIC)	Quantity	(2)			
CONDENSER COIL Face Area Sq. Ft. / Rows / Fins per inch		23 / 2 /10	23 / 2 / 14	23 / 3 / 10	
CONDENSER FANS Quantity / Diameter		(1) / 26"		(2) / 26"	
CONDENSER FAN MOTORS Watts / RPM	EACH	700 / 1100		700 / 1100	
EVAPORATOR COIL - Standard Face Area Sq. Ft. / Rows / Fins per inch		11.67 / 2 / 12	11.67 / 3 / 14	11.67 / 4 / 12	11.67 / 6 / 12
EVAPORATOR COIL - 6 Row Face Area Sq. Ft. / Rows / Fins per inch		11.67 / 6 / 12			
EVAPORATOR BLOWER • BELT DRIVE Quantity / Wheel D x W / Type		(1) / 15 x 15 / FC			
EVAP. BLOWER MOTOR	HP - Standard	(1) 1	(1) 2	(1) 3	
	HP - Oversize	(1) 2	(1) 3	(1) 5	
	HP - Double Oversize	(1) 3	(1) 5	(1) 7.5	
GAS FURNACES • TYPE Standard Material / Optional Material		TUBULAR - INDUCED DRAFT / ALUMINIZED STEEL / STAINLESS STEEL			
IGNITION		NON-STANDING , AUTOMATIC , SPARK RELIGHT			
GAS CONNECTION (F.P.T.)		.75			
FILTERS - TYPE QTY / SIZE	THROWAWAY	(6) / 16" x 20" x 2"			
FILTERS - TYPE QTY / SIZE	PLEATED	(6) / 16" x 20" x 2" (optional 4")			
POWER EXHAUST FANS • BELT DRIVE Quantity / Wheel D x W / Type		(2) / 12 x 9 / FC			
POWER EXH. FAN MOTOR	HP - Standard	(1) 2 HP			
	HP - Oversize	(1) 3 HP			
UNIT NET WEIGHTS		**08**	**10**	**13**	**15**
BASE UNIT (Cooling Only)		960	1130	1250	1300
GAS Heat Exchanger • high heat • Std / SS		185 / 211			
GAS Heat Exchanger • low heat • Std / SS		160 / 183			
ELECTRIC HEAT		75			
HOT WATER OR STEAM COIL		110			
ECONOMIZER		155			
POWER EXHAUST		240			
VAV (Variable Air Volume)		50		85	
CURB WEIGHTS					
KNOCKDOWN CURB • 14" HIGH / 24" HIGH		160 / 320			
ACOUSTICAL CURB • 14" HIGH / 24" HIGH		200 / 360			

① AT STANDARD A.R.I TEST CONDITIONS. UNITS RATED BELOW 135,000 BTUH ARE CERTIFIED UNDER ARI 210 UNITARY AIR CONDITIONER CERTIFICATION PROGRAM. UNITS RATED AT OR ABOVE 135,000 BTUH BUT BELOW 250,000 BTUH ARE CERTIFIED UNDER ARI 360 UNITARY LARGE EQUIPMENT CERTIFICATION PROGRAM.

8 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 4000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 4000 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	120855	116407	111846	107481	103083	128095	122972	117956	113082	122988
		Sensible	109719	107822	105780	104058	100968	118850	116738	113506	110315	121959
	85	Total	119330	114748	110036	105280	100673	127055	121626	116342	110946	119470
		Sensible	89729	88260	86639	85048	83580	96384	94591	92857	91105	105778
	80	Total	118971	114354	109667	104865	100091	126642	121312	116044	110387	118925
		Sensible	69566	67992	66403	64593	63180	74123	72357	70620	68784	83459
	75	Total	118246	113646	108951	104195	99388	126209	120941	115486	109979	118386
		Sensible	49122	47615	46092	44546	43021	51856	50102	48306	46510	61153
67	90	Total	118706	114860	110932	106920	102801	125879	121494	117036	112493	122731
		Sensible	118706	114860	110932	106920	102801	125879	121494	117036	112493	122731
	85	Total	113367	109351	105220	101385	97364	120234	115641	111289	106623	116619
		Sensible	110120	107198	104086	101385	97364	117409	114189	111243	106623	116619
	80	Total	110925	106697	102335	97869	93615	117992	113002	107941	103028	111849
		Sensible	91402	89723	87971	86000	84464	98385	96519	94601	92796	105800
	75	Total	110756	106330	101868	97319	92750	117762	112666	107644	102567	110516
		Sensible	70640	68832	67138	65331	63710	75569	73665	71804	69939	85078
	70	Total	110084	105695	101219	96695	92111	117473	112397	107217	102043	110018
		Sensible	50476	48944	47069	45367	43768	53425	51525	49606	47704	62484
62	90	Total	118620	114777	110853	106846	102729	125828	121447	116980	112424	122653
		Sensible	118620	114777	110853	106846	102729	125828	121447	116980	112424	122653
	85	Total	112828	109069	105232	101317	97277	119639	115362	111003	106561	116560
		Sensible	112828	109069	105232	101317	97277	119639	115362	111003	106561	116560
	80	Total	107123	103447	99698	95853	91931	113535	109350	105111	100771	110566
		Sensible	107123	103447	99698	95853	91931	113535	109350	105111	100771	110566
	75	Total	103543	99541	95419	91297	87065	109896	105038	100409	95807	105033
		Sensible	91770	89867	87669	85823	83700	99021	96600	94520	92140	102601
	70	Total	102814	98633	94336	90083	85667	109150	104346	99710	94603	102454
		Sensible	71607	69825	67774	66222	64150	76851	74855	72938	70824	85871
57	75	Total	101453	97863	94203	90434	86629	107459	103390	99264	95036	104606
		Sensible	101453	97863	94203	90434	86629	107459	103390	99264	95036	104606
	70	Total	96432	92525	88930	85141	81512	102138	97909	93628	89450	98810
		Sensible	91946	89537	87189	84394	81512	98907	95796	92366	89346	98810

			STANDARD EVAPORATOR @ 3200 CFM					6 ROW EVAPORATOR @ 3200 CFM				
72	90	Total	117368	112980	108576	104303	99872	126678	121589	116416	111337	106290
		Sensible	97628	95857	94214	92563	90906	103294	101528	99752	98023	96320
	85	Total	116800	112296	107753	103145	98571	126297	121377	115944	110826	105426
		Sensible	80688	78996	77391	75780	74442	85502	83783	81918	80171	78357
	80	Total	116380	111942	107383	102788	98159	126001	121026	115906	110759	105291
		Sensible	63885	62401	60624	59031	57631	67733	65992	64220	62460	60618
	75	Total	115739	111289	106766	102171	97505	125781	120721	115621	110315	105037
		Sensible	46416	44894	43361	41819	40267	49985	48212	46442	44627	42840
67	90	Total	112392	108953	105314	101595	97746	119943	115935	111934	107846	103655
		Sensible	111737	108953	105314	101595	97746	119444	115935	111934	107846	103655
	85	Total	109654	105560	101396	97185	93145	117697	112879	108181	103462	98738
		Sensible	98490	96485	94475	92543	90720	104670	102786	100970	98874	96276
	80	Total	108310	104111	99744	95423	91160	117047	112158	107562	102552	97374
		Sensible	82086	80499	78608	77051	75574	87410	85494	83702	81778	79816
	75	Total	108146	103935	99602	95259	90846	116986	112249	107384	102533	97443
		Sensible	64920	63347	61448	59877	58275	69203	67342	65453	63588	61656
	70	Total	107552	103327	99033	94670	90242	116830	111928	107116	102139	97193
		Sensible	47851	46225	44588	42942	41285	51539	49616	47741	45827	43942
62	90	Total	112412	108877	105241	101525	97678	119827	115895	111879	107778	103572
		Sensible	112412	108877	105241	101525	97678	119827	115895	111879	107778	103572
	85	Total	107006	103543	99982	96323	92585	114085	110239	106312	102304	98181
		Sensible	107006	103543	99982	96323	92585	114085	110239	106312	102304	98181
	80	Total	102180	98606	94889	91086	87591	109297	105241	100964	96917	92900
		Sensible	98486	96485	93706	90890	87591	105637	102979	99794	96917	92900
	75	Total	100592	96494	92612	88613	84460	108571	104054	99385	94802	90148
		Sensible	82622	80593	78978	77357	75384	88089	86125	84118	82167	80206
	70	Total	100228	96180	92106	87988	83782	108335	103711	99274	94489	89677
		Sensible	65933	63932	62154	60495	58675	70448	68437	66521	64485	62456
57	75	Total	96402	93065	89639	86142	82614	102777	99101	95370	91536	87626
		Sensible	96402	93065	89639	86142	82614	102777	99101	95370	91536	87626
	70	Total	93189	89451	85863	82080	78216	100194	96004	91639	87383	83181
		Sensible	83194	81196	79408	77449	75353	88876	86878	84748	82703	80577

mechanical cooling capacities • 8 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 2400 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 2400 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	126195	121630	116977	112247	107421	136088	130789	125629	120333	114885
		Sensible	60201	58838	57468	56092	54707	63294	61672	60108	58525	56924
	85	Total	125672	121107	116459	111729	106917	135830	130677	125467	120088	114622
		Sensible	46718	45353	43980	42599	41213	49898	48311	46725	45117	43507
72	90	Total	112837	108631	104314	99932	95520	120790	116306	111439	106610	101654
		Sensible	83643	82053	80378	78715	77162	86828	85142	83345	81584	79807
	85	Total	112538	108336	104050	99711	95343	120787	115973	111408	106497	101454
		Sensible	70465	68918	67357	65781	64290	73608	71803	70106	68314	66502
	80	Total	112169	107991	103717	99382	94993	120609	115965	111180	106249	101482
		Sensible	57103	55570	54025	52474	50920	60324	58572	56795	54994	53266
	75	Total	111614	107438	103183	98849	94431	120517	115826	110999	106150	101255
		Sensible	43671	42138	40595	39040	37476	47065	45294	43501	41720	39946
67	90	Total	105868	102084	98215	94400	90653	112007	107656	103178	98926	94726
		Sensible	97468	95699	93890	92062	89330	101321	99502	97653	95763	92935
	85	Total	104519	100540	96728	92689	88648	111670	107277	102929	98327	93623
		Sensible	84507	82813	81303	79506	77909	88018	86178	84377	82502	80613
	80	Total	104060	100109	96043	91978	87838	111466	107030	102528	97965	93267
		Sensible	71959	70294	68453	66896	65315	75237	73371	71502	69631	67736
	75	Total	103928	99969	95937	91850	87691	111566	107139	102599	97999	93444
		Sensible	58392	56766	55131	53489	51840	61634	.59772	57890	56008	54166
	70	Total	103424	99478	95454	91352	87179	111420	107015	102479	97921	93319
		Sensible	45004	43384	41747	40098	38443	48402	46543	44661	42790	40924
62	90	Total	103362	100225	96992	93659	90246	108261	104863	101388	97812	94153
		Sensible	103362	100225	96992	93659	90246	108261	104863	101388	97812	94153
	85	Total	98821	95493	92255	88988	85665	103900	100162	96927	92964	89399
		Sensible	97202	94761	92255	88988	85665	101699	99032	96593	92964	89399
	80	Total	96871	93187	89699	86032	82229	103046	98861	94689	90483	86202
		Sensible	85267	83414	81742	80126	78209	88942	87009	85105	83210	81303
	75	Total	96334	92555	88751	84934	80931	102918	98775	94571	90363	85864
		Sensible	72374	70446	68699	67180	65175	75757	73839	71916	70013	68012
	70	Total	96032	92280	88479	84629	80678	102851	98638	94374	90143	85795
		Sensible	59407	57627	55877	54278	52430	62593	60641	58692	56776	54835

			STANDARD EVAPORATOR @ 1600 CFM					6 ROW EVAPORATOR @ 1600 CFM				
80	100	Total	118531	114481	110334	106053	101757	125642	121055	116476	111840	107130
		Sensible	68948	67563	66170	64764	63371	71466	69854	68273	66703	65138
	90	Total	117992	113944	109802	105567	101240	125445	121059	116485	111794	107050
		Sensible	51073	49684	48286	46883	45474	53737	52176	50587	48989	47404
	85	Total	117560	113507	109378	105155	100799	125421	120983	116420	111764	107018
		Sensible	42076	40681	39286	37886	36462	44892	43311	41720	40129	38538
72	100	Total	104736	101092	97652	93921	90059	110062	106274	102083	98138	93845
		Sensible	85065	83554	82156	80660	79462	87321	85703	83960	82339	80615
	90	Total	104426	100761	97039	93200	89322	110124	106146	101967	97827	93727
		Sensible	67364	65840	64315	62773	61237	69796	68098	66354	64652	62991
	85	Total	104212	100565	96815	92997	89096	110058	106052	101969	97828	93639
		Sensible	58486	56967	55432	53892	52345	60993	59283	57569	55862	54164
	80	Total	103927	100280	96548	92724	88807	110009	106061	101963	97823	93608
		Sensible	49580	48059	46528	44984	43427	52196	50503	48781	47069	45357
	75	Total	103520	99880	96154	92325	88390	109949	105997	101942	97800	93561
		Sensible	40620	39102	37571	36024	34460	43394	41695	39986	38269	36543
67	90	Total	96351	92937	89408	85833	82442	101105	97400	93724	89723	85852
		Sensible	77117	75545	73946	72351	70866	79346	77604	75901	74085	72356
	85	Total	96201	92764	89276	85701	82040	101093	97375	93515	89778	85761
		Sensible	68289	66705	65121	63523	61913	70591	68841	67058	65352	63557
	80	Total	95810	92387	88881	85315	81653	100822	97118	93302	89552	85622
		Sensible	59697	58114	56517	54915	53299	62070	60319	58547	56826	55058
	75	Total	95761	92345	88840	85249	81578	101006	97311	93514	89706	85758
		Sensible	50567	48990	47394	45784	44166	53052	51306	49541	47796	46021
	70	Total	95404	92004	88494	84886	81195	100954	97274	93499	89640	85689
		Sensible	41640	40069	38471	36852	35223	44278	42535	40776	39008	37227
62	90	Total	89952	86895	84023	81024	78181	92806	89487	86190	83068	80674
		Sensible	87009	85283	83154	80854	78181	88569	86871	84697	82373	80446
	85	Total	88822	85687	82463	79422	.76115	92639	89279	85721	82086	78407
		Sensible	77814	76232	74630	73145	71549	79760	78035	76240	74434	72636
	80	Total	88441	85208	81938	78571	75069	92610	89180	85665	82073	78282
		Sensible	68881	67252	65625	63977	62292	71021	69259	67481	65692	63840

10 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 5000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 5000 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	160742	154834	148544	141990	135138	164330	157976	151154	144648	138390
		Sensible	147248	144970	142146	138936	135138	148854	146714	143764	141468	138390
	85	Total	158888	152548	146032	139524	132520	162962	156194	149294	142342	135246
		Sensible	120434	118258	115872	113944	111044	121776	119532	117264	114998	112646
	80	Total	158024	151586	144990	138154	131318	162446	155692	148480	141236	134466
		Sensible	92490	90360	88196	85978	83774	93950	91702	89332	86974	84772
	75	Total	157238	150808	144224	137448	130590	161484	154812	147892	140796	133636
		Sensible	64572	62440	60274	58070	55852	65984	63756	61470	59148	56826
67	90	Total	157682	152318	146760	141002	135030	161888	156284	150470	144468	138294
		Sensible	157682	152318	146760	141002	135030	161888	156284	150470	144468	138294
	85	Total	150924	145156	139372	133882	128122	153794	148582	142976	137214	131232
		Sensible	147022	144202	139372	133882	128122	149734	147990	142976	137214	131232
	80	Total	148052	142118	136032	129740	123470	151600	145308	139036	132286	125712
		Sensible	122392	119988	117526	114852	112676	124446	122078	119600	116226	113700
	75	Total	147032	141106	134944	128552	122110	150746	144446	137998	131706	124762
		Sensible	94276	92120	89842	87356	84984	95714	93354	90960	88640	86114
	70	Total	146396	140382	134194	127898	121508	150118	143910	137466	130850	124216
		Sensible	66550	64302	62014	59702	57372	67942	65608	63212	60772	58348
62	90	Total	157568	152208	146656	140904	134942	161778	156216	150374	144376	138210
		Sensible	157568	152208	146656	140904	134942	161778	156216	150374	144376	138210
	85	Total	149832	144664	139320	133794	128074	153824	148418	142846	137132	131152
		Sensible	149832	144664	139320	133794	128074	153824	148418	142846	137132	131152
	80	Total	142156	137216	132070	126760	121272	145976	140778	135446	129918	124212
		Sensible	142156	137216	132070	126760	121272	145976	140778	135446	129918	124212
	75	Total	137980	132410	126606	121204	115430	141016	134952	129054	123366	117124
		Sensible	122636	120154	117276	114772	111734	124700	121304	118692	116720	113040
	70	Total	136562	130932	125076	119290	113186	139678	133822	127844	121946	115564
		Sensible	95882	93498	90656	88612	85750	97060	94610	92140	90010	86950
57	75	Total	134612	129802	124850	119748	114486	138176	133156	128038	122732	117244
		Sensible	134612	129802	124850	119748	114486	138176	133156	128038	122732	117244
	70	Total	128466	123344	118162	112866	107848	130556	125448	120324	115684	110446
		Sensible	123350	120000	117032	112866	107848	124376	122182	119512	115684	110446

			STANDARD EVAPORATOR @ 4000 CFM					6 ROW EVAPORATOR @ 4000 CFM				
72	90	Total	156366	150262	143970	137502	130980	159334	152830	146352	139714	132616
		Sensible	128416	126306	124156	121972	119788	129414	127156	124934	122680	119772
	85	Total	154934	148754	142392	135902	129642	158470	152110	145876	138948	132016
		Sensible	105816	103676	101498	99302	97204	107030	104812	102658	100306	97976
	80	Total	154548	148388	142066	135500	128940	158182	151976	145124	138570	131466
		Sensible	83586	81446	79276	77050	74844	84842	82668	80308	78068	75676
	75	Total	153850	147706	141386	134882	128272	157736	151372	144782	137894	131042
		Sensible	61250	59108	56934	54724	52494	62594	60366	58084	55732	53414
67	90	Total	148578	143784	138760	133548	128092	151632	146630	141488	136066	130534
		Sensible	148578	143784	138760	133548	128092	151632	146630	141488	136066	130534
	85	Total	145512	139836	134458	128614	122798	147974	142102	136100	130054	124156
		Sensible	129776	127482	125844	122694	120258	130880	128420	125974	123320	121288
	80	Total	143582	138240	132376	126456	120474	146824	141172	134826	128598	122274
		Sensible	108168	106076	103816	101552	99284	109416	107192	104732	102342	99940
	75	Total	143520	137854	131884	125848	119756	146656	140718	134802	128302	121940
		Sensible	85402	83186	80886	78578	76272	86616	84286	81986	79498	77082
	70	Total	142972	137230	131316	125284	119138	146302	140316	134134	127880	121542
		Sensible	63176	60930	58646	56336	54006	64472	62120	59718	57314	54902
62	90	Total	148524	143682	138662	133454	128004	151534	146522	141344	136024	130414
		Sensible	148524	143682	138662	133454	128004	151534	146522	141344	136024	130414
	85	Total	141348	136662	131816	126796	121554	144206	139362	134364	129238	123846
		Sensible	141348	136662	131816	126796	121554	144206	139362	134364	129238	123846
	80	Total	135874	130774	125088	120212	115174	137374	132270	127586	122526	117344
		Sensible	131000	128314	125088	120212	115174	131520	129410	127482	122526	117344
	75	Total	133816	128444	123044	117506	111950	136358	130830	124932	119170	113542
		Sensible	109266	106702	104280	101824	99764	110346	107942	105230	102752	100582
	70	Total	132936	127576	122086	116466	110714	135686	130078	124590	118654	112644
		Sensible	86950	84628	82274	79886	77468	88130	85690	83322	80794	78260
57	75	Total	127230	122840	118316	113608	108796	129786	125264	120646	115846	110894
		Sensible	127230	122840	118316	113608	108796	129786	125264	120646	115846	110894
	70	Total	123942	118884	113824	108738	103826	125590	120728	115548	110214	104680
		Sensible	110290	107360	104860	102704	100174	110906	108902	106342	103586	100246

mechanical cooling capacities • 10 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 3000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 3000 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	167354	160848	154266	147428	140312	171028	164580	157368	150308	143192
		Sensible	78238	76260	74278	72254	70182	79342	77354	75182	73078	70986
	85	Total	166810	160360	153734	146880	139844	170790	164140	157142	150134	142842
		Sensible	61412	59442	57442	55410	53350	62614	60564	58444	56346	54200
72	90	Total	149424	143492	137972	132050	126098	151962	146176	140064	133884	127500
		Sensible	107936	105734	103704	101556	99422	108848	106678	104420	102170	99880
	85	Total	149002	143378	137492	131344	125206	151782	146062	139724	133484	127208
		Sensible	91250	89142	86974	84744	82542	92258	90104	87762	85484	83224
	80	Total	148734	142978	137098	131050	124900	151522	145696	139602	133284	126872
		Sensible	74608	72456	70284	68080	65868	75634	73438	71174	68864	66552
	75	Total	148200	142484	136604	130554	124336	151222	145310	139280	133042	126590
		Sensible	57872	55728	53552	51344	49108	58992	56760	54514	52226	49894
67	90	Total	139794	134634	129622	124378	118910	140978	135716	130318	124648	119158
		Sensible	126596	124438	122378	120244	118034	127022	124822	122590	120276	117700
	85	Total	138712	133394	128050	122712	117072	140722	135032	129458	123756	118122
		Sensible	109654	107440	105238	103060	100794	110452	108072	105768	103440	101166
	80	Total	137772	132484	126936	121342	115722	140060	134630	129054	123058	117166
		Sensible	93376	91158	88868	86584	84316	94306	92018	89700	87248	84866
	75	Total	137722	132426	126926	121328	115640	140084	134508	128902	123144	117252
		Sensible	76290	74072	71802	69518	67224	77258	74914	72586	70228	67848
	70	Total	137242	131940	126490	120888	115132	139706	134246	128686	122888	116988
		Sensible	59616	57392	55134	52846	50524	60632	58332	56018	53638	51250
62	90	Total	135340	131186	126878	122352	117702	137010	132730	128320	123802	119072
		Sensible	135340	131186	126878	122352	117702	137010	132730	128320	123802	119072
	85	Total	130180	130180	120744	116366	111872	130590	125986	122146	117750	113182
		Sensible	127808	127808	120744	116366	111872	128066	125550	122146	117750	113182
	80	Total	128294	123452	118472	113530	108226	129676	124458	119426	114282	108740
		Sensible	110954	108720	106450	104218	101858	111542	109132	106832	104506	101884
	75	Total	127454	122418	117358	112296	107042	129288	124234	119068	113596	108242
		Sensible	94132	91814	89506	87220	84888	94950	92610	90246	87774	85386
	70	Total	127158	122180	117122	111990	106664	129050	124000	118692	113390	107926
		Sensible	77572	75274	72964	70646	68272	78424	76082	73652	71252	68812

			STANDARD EVAPORATOR @ 2000 CFM					6 ROW EVAPORATOR @ 2000 CFM				
80	100	Total	156440	150884	145002	139020	132982	158198	152766	146914	140794	134242
		Sensible	89142	87186	85164	83142	81136	89698	87770	85740	83662	81496
	90	Total	155950	150390	144630	138632	132442	158128	152446	146560	140530	134170
		Sensible	66858	64890	62892	60860	58800	67586	65562	63510	61448	59324
	85	Total	155580	150018	144252	138290	132100	157908	152226	146338	140276	133932
		Sensible	55670	53698	51694	49668	47604	56466	54438	52378	50300	48176
72	100	Total	138160	133458	128492	123542	118150	138926	134032	128788	123466	118172
		Sensible	109444	107444	105372	103334	101168	109682	107596	105408	103230	101092
	90	Total	137570	132652	127634	122552	117194	138510	133784	128552	123290	118062
		Sensible	87230	85136	83034	80936	78772	87574	85548	83354	81184	79064
	85	Total	137386	132544	127490	122352	116984	138572	133678	128638	123238	117770
		Sensible	76170	74100	71980	69858	67684	76626	74526	72402	70174	67958
	80	Total	137148	132310	127286	122112	116742	138406	133504	128468	123220	117754
		Sensible	65090	63012	60902	58760	56584	65584	63478	61350	59176	56954
	75	Total	136820	131970	126978	121756	116396	138218	133312	128256	122976	117536
		Sensible	53960	51880	49780	47616	45444	54532	52420	50280	48088	45874
67	90	Total	126654	122182	117840	113240	108290	127250	122832	118200	113238	108514
		Sensible	99346	97240	95226	93126	90916	99560	97472	95324	93066	90946
	85	Total	126474	122012	117400	112740	107828	127056	122586	117944	113122	108182
		Sensible	88318	86212	84072	81942	79740	88534	86424	84268	82066	79850
	80	Total	126112	121622	117020	112316	107400	126840	122208	117748	112812	107966
		Sensible	77640	75518	73374	71214	69000	77936	75742	73658	71398	69210
	75	Total	126190	121720	117106	112354	107402	126974	122512	117868	113038	108078
		Sensible	66284	64172	62024	59846	57622	66616	64500	62334	60120	57886
	70	Total	125908	121466	116846	112070	107114	126810	122336	117686	112856	107886
		Sensible	55202	53100	50948	48758	46522	55600	53476	51304	49086	46844
62	90	Total	117266	113610	109618	104714	101024	116814	112846	108544	105762	101378
		Sensible	111414	109534	107508	104714	101024	111096	109060	106890	105542	101378
	85	Total	116654	112610	108478	104178	99598	116664	112500	108126	103702	99176
		Sensible	100174	98092	95996	93848	91602	100114	97974	95762	93558	91340
	80	Total	116096	112022	107790	103402	98740	116392	112238	107956	103506	98898
		Sensible	88970	86870	84724	82534	80250	89070	86932	84762	82542	80284

13 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 6500 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 6500 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	195108	187940	180580	173138	165812	197946	190464	182850	176663	169157
		Sensible	183298	180802	177496	173138	165812	184509	181886	178373	176663	169157
	85	Total	192152	184450	176924	168566	160632	195010	187195	178986	171123	162798
		Sensible	149468	146700	144808	141274	139228	150140	147487	144406	142104	139129
	80	Total	190832	183304	175428	167084	158696	193866	185969	177681	169494	161103
		Sensible	114736	112774	110294	106896	103824	115772	113147	109929	107258	104605
	75	Total	189836	182118	174234	166006	157884	192539	184578	176599	168285	159992
		Sensible	79096	76576	74020	71384	68790	79958	77353	74761	72087	69438
67	90	Total	193504	186904	179992	173000	165682	197524	190793	183706	176453	168906
		Sensible	193504	186904	179992	173000	165682	197524	190793	183706	176453	168906
	85	Total	183614	177504	170930	164190	157122	187234	181184	174399	167479	160295
		Sensible	183238	177504	170930	164190	157122	186675	181184	174399	167479	160295
	80	Total	178864	171940	164670	157240	149814	181310	173997	166588	159288	151516
		Sensible	151646	149522	146300	142754	139974	152634	149353	146319	144001	140529
	75	Total	177660	170358	163190	155622	147588	180201	172628	165081	157725	149575
		Sensible	116400	113494	111534	108748	104880	117322	114024	111202	109330	105552
	70	Total	176710	169482	162110	154408	146828	178881	171532	163956	156291	148521
		Sensible	81422	78762	76068	73286	70556	82201	79491	76721	73941	71144
62	90	Total	193362	186770	179864	172880	165570	197390	190664	183584	176339	168800
		Sensible	193362	186770	179864	172880	165570	197390	190664	183584	176339	168800
	85	Total	183792	177436	170792	164082	157012	187554	181006	174262	167303	160141
		Sensible	183792	177436	170792	164082	157012	187554	181006	174262	167303	160141
	80	Total	174306	168176	161904	155382	148602	177863	171573	165127	158447	151512
		Sensible	174306	168176	161904	155382	148602	177863	171573	165127	158447	151512
	75	Total	167056	160472	153568	147128	140338	168738	161938	155384	148532	141822
		Sensible	152212	149074	145230	142624	139160	152180	149074	146399	143254	140036
	70	Total	164914	158110	151364	144052	136972	167002	159927	152882	146051	138535
		Sensible	117918	115012	112798	109038	105904	118671	115261	112316	110327	106336
57	75	Total	164978	159002	152984	146720	140220	168237	162156	155915	149479	142917
		Sensible	164978	159002	152984	146720	140220	168237	162156	155915	149479	142917
	70	Total	155940	149888	144292	138268	132080	157123	151415	147059	140874	134520
		Sensible	152924	148956	144292	138268	132080	152971	150158	147059	140874	134520

			STANDARD EVAPORATOR @ 5200 CFM					6 ROW EVAPORATOR @ 5200 CFM				
72	90	Total	189184	181808	174658	167292	159286	191861	184229	176643	168642	160943
		Sensible	160944	158348	155730	153330	149810	162169	158945	156174	152914	150193
	85	Total	187742	180326	172990	165212	157000	190048	182699	174983	167021	158867
		Sensible	132806	130290	127818	125230	122016	133483	130920	128116	125345	122383
	80	Total	186976	179512	171854	164252	156218	189434	181864	174111	166167	157909
		Sensible	103814	101272	98690	96146	93492	104621	102035	99414	96756	94025
	75	Total	186042	178618	171006	163114	155142	188412	180748	173036	165299	157047
		Sensible	74756	72222	69650	67014	64374	75540	72920	70307	67708	64973
67	90	Total	182914	176844	170716	164280	157548	185936	179825	173478	166926	160217
		Sensible	182914	176844	170716	164280	157548	185936	179825	173478	166926	160217
	85	Total	176816	170068	162972	156528	149540	178137	171382	164546	157565	151779
		Sensible	162474	159482	155978	153236	149540	162172	159605	156498	153558	151563
	80	Total	174330	167426	160602	153404	146088	176467	169280	162119	154859	147191
		Sensible	135330	132416	130162	127310	124604	136250	133003	130155	127431	124087
	75	Total	173738	166774	159638	152244	144888	175729	168820	161445	154217	146676
		Sensible	106002	103332	100624	97616	95110	106708	104080	101198	98552	95739
	70	Total	172864	165932	158844	151470	144140	174781	167638	160439	153014	145577
		Sensible	77044	74382	71686	68914	66176	77755	75009	72266	69467	66688
62	90	Total	182780	176716	170594	164164	157440	185858	179684	173359	166811	160047
		Sensible	182780	176716	170594	164164	157440	185858	179684	173359	166811	160047
	85	Total	173874	168010	162022	155906	149436	176749	170783	164680	158333	151868
		Sensible	173874	168010	162022	155906	149436	176749	170783	164680	158333	151868
	80	Total	165390	159438	153710	147742	141578	166270	161689	156179	150107	143841
		Sensible	163222	159438	153710	147742	141578	163143	161584	156179	150107	143841
	75	Total	162190	155658	149208	142366	135636	163352	156813	150276	143739	136583
		Sensible	136128	132934	130410	127144	123602	135732	132804	130236	127577	123572
	70	Total	160962	154460	147920	141014	133956	162521	156087	149220	142243	135362
		Sensible	107866	104998	102356	99176	95712	108227	105780	102484	99223	96644
57	75	Total	156364	150880	145364	139554	133626	158805	153285	147577	141759	135733
		Sensible	156364	150880	145364	139554	133626	158805	153285	147577	141759	135733
	70	Total	150050	144362	138158	132158	126214	151157	145146	138863	132993	126585
		Sensible	136864	134062	130038	127590	123908	136798	133689	130131	127811	123637

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 3900 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 3900 CFM • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	203002	195162	187088	178782	170490	205577	197637	189481	181086	172357
		Sensible	97270	94938	92570	90166	87788	97990	95621	93220	90780	88282
	85	Total	202298	194496	186374	178124	169650	204879	196904	188711	180317	171701
		Sensible	75382	73056	70670	68274	65844	76116	73731	71312	68866	66391
72	90	Total	181782	174972	167798	160348	153088	183338	176281	169110	161667	153993
		Sensible	135662	133180	130602	127966	125416	136173	133597	131013	128368	125680
	85	Total	180940	173942	166738	159634	152126	182480	175604	168374	160953	153234
		Sensible	113848	111294	108700	106168	103530	114367	111848	109236	106593	103882
	80	Total	180466	173522	166382	158928	151532	182129	175027	167897	160355	153050
		Sensible	92164	89624	87044	84394	81786	92735	90132	87550	84859	82278
	75	Total	179710	172776	165586	158268	150822	181419	174384	167165	159685	152209
		Sensible	70376	67836	65240	62626	59994	70972	68387	65770	63095	60453
67	90	Total	170232	164024	157534	151734	145440	171000	164317	158320	151911	147097
		Sensible	159172	156398	153344	150566	145440	159313	155845	153460	150264	147097
	85	Total	168462	162094	155764	148704	141860	169398	163088	156310	149495	142771
		Sensible	137600	134998	132436	129546	126934	137926	135280	132441	129633	126930
	80	Total	167300	160908	154298	147206	140626	168471	161892	155310	148481	141683
		Sensible	116440	113816	111138	108308	105700	116879	114177	111504	108766	106071
	75	Total	167154	160702	154126	147150	140184	168423	161869	155036	148438	141451
		Sensible	94202	91558	88894	86112	83362	94685	91996	89228	86581	83817
	70	Total	166470	160024	153344	146556	139650	167715	161196	154419	147582	140690
		Sensible	72492	69846	67144	64426	61690	72973	70294	67545	64803	62071
62	90	Total	167254	162008	156632	151166	145324	169112	163820	158405	152768	146979
		Sensible	167254	162008	156632	151166	145324	169112	163820	158405	152768	146979
	85	Total	159236	154210	149010	143702	138126	160977	155902	150654	145234	139640
		Sensible	159236	154210	149010	143702	138126	160977	155902	150654	145234	139640
	80	Total	155838	149886	144064	138216	131890	156305	150680	144395	138452	132016
		Sensible	138952	136154	133166	131006	127788	138758	136444	132880	130525	127115
	75	Total	154858	148854	142842	136610	130260	155745	149601	143330	137148	130711
		Sensible	117372	114656	111966	109208	106432	117734	114952	112146	109353	106479
	70	Total	154382	148378	142260	135908	129450	155314	149256	143053	136723	130237
		Sensible	95798	93078	90336	87524	84696	96185	93437	90655	87849	85008

			STANDARD EVAPORATOR @ 2600 CFM					6 ROW EVAPORATOR @ 2600 CFM				
80	100	Total	190998	184154	177070	169428	161858	191726	185195	177777	170604	162896
		Sensible	111538	109208	106840	104350	101920	111708	109473	106999	104643	102169
	90	Total	190260	183428	176356	168950	161396	191450	184572	177465	169989	162419
		Sensible	82518	80180	77804	75372	72932	82862	80504	78113	75649	73201
	85	Total	189770	182936	175866	168526	160978	190984	184118	177020	169763	162206
		Sensible	67962	65620	63240	60822	58376	68329	65970	63576	61173	58720
72	100	Total	168898	162976	157114	150604	144340	168739	162983	157030	150552	143949
		Sensible	137734	135288	132900	130306	127842	137569	135190	132770	130191	127608
	90	Total	168130	162014	155724	149336	142982	168170	162435	156289	149858	143220
		Sensible	108838	106310	103754	101198	98690	108786	106406	103902	101330	98722
	85	Total	167818	161844	155538	149154	142714	167984	162012	155839	149465	142891
		Sensible	94424	91944	89378	86818	84274	94431	91954	89436	86881	84292
	80	Total	167488	161514	155276	148894	142376	167855	161887	155787	149429	142851
		Sensible	80000	77514	74970	72406	69828	80097	77615	75119	72563	69965
	75	Total	167032	161056	154872	148488	141898	167414	161442	155324	148959	142346
		Sensible	65526	63032	60506	57936	55330	65636	63149	60642	58080	55465
67	90	Total	155120	149718	144158	138382	132412	154702	149396	143778	137849	131997
		Sensible	124666	122186	119674	117106	114494	124398	121966	119434	116806	114250
	85	Total	154648	149224	143468	137492	131612	154441	148991	143476	137584	131555
		Sensible	110212	107720	105120	102464	99888	110052	107553	105059	102443	99808
	80	Total	154154	148604	142854	137132	131106	153923	148663	142808	136997	131155
		Sensible	96306	93750	91144	88582	85934	96144	93717	91067	88474	85906
	75	Total	154198	148628	142938	137126	131072	154179	148739	143080	137216	131049
		Sensible	81524	78964	76384	73786	71128	81465	78959	76395	73780	71079
	70	Total	153808	148288	142594	136718	130656	153786	148339	142672	136783	130764
		Sensible	67102	64562	61976	59346	56688	67051	64541	61969	59340	56697
62	90	Total	143906	139564	134394	130050	125532	142887	138019	134985	130647	126139
		Sensible	140446	138276	134394	130050	125532	139638	136576	134985	130647	126139
	85	Total	142782	137788	132404	127208	121740	141975	137147	131840	126469	121006
		Sensible	125668	123158	120498	117960	115338	125195	122774	120155	117538	114784
	80	Total	142116	136940	131792	126372	120832	141648	136658	131273	126030	120649
		Sensible	111132	108534	105984	103342	100682	110839	108336	105676	103121	100539

15 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 7500 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 7500 CFM • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total						241527	231249	220072	209727	199251
		Sensible						222398	218231	211327	205047	198042
	85	Total						238097	227202	216226	204586	193257
		Sensible						180686	177079	173480	169715	166014
	80	Total						236405	225567	214378	202617	190826
		Sensible						138633	135036	131363	127551	123763
	75	Total						235288	224283	213049	201454	189771
		Sensible						96768	93112	89416	85646	81878
67	90	Total						236486	227437	218134	208448	198479
		Sensible						236486	227437	218134	208448	198479
	85	Total						225070	215893	206615	196786	187132
		Sensible						218496	212336	205942	196786	187132
	80	Total						219801	209755	199481	189119	178603
		Sensible						183947	179845	175733	171818	167311
	75	Total						218312	208127	197808	186969	175901
		Sensible						140762	136964	133150	129192	125193
	70	Total						217302	207023	196466	185708	174809
		Sensible						99059	95223	91320	87382	83427
62	90	Total						236335	227332	218000	208335	198328
		Sensible						236335	227332	218000	208335	198328
	85	Total						223670	214972	205963	196641	186961
		Sensible						223670	214972	205963	196641	186961
	80	Total						211117	202724	194075	185127	175813
		Sensible						211117	202724	194075	185127	175813
	75	Total						203325	194094	184791	174949	165590
		Sensible						183395	179181	174994	168413	162371
	70	Total						200951	191363	181799	171842	161558
		Sensible						142559	138586	134653	130603	126204
57	75	Total						198765	190642	182335	173706	164759
		Sensible						198765	190642	182335	173706	164759
	70	Total						187801	179426	171167	162619	154053
		Sensible						181709	175288	169154	162619	154053

SIX ROW EVAPORATOR

STANDARD

FOR 15 TON UNIT

			STANDARD EVAPORATOR @ 6000 CFM					6 ROW EVAPORATOR @ 6000 CFM				
72	90	Total						233377	222815	212517	201734	190623
		Sensible						192319	188670	185145	181501	177701
	85	Total						231413	220972	210573	199370	188427
		Sensible						158502	154882	151311	147528	143866
	80	Total						230581	220036	209348	198440	187099
		Sensible						125065	121402	117729	114028	110233
	75	Total						229700	219210	208373	197338	186092
		Sensible						91605	87952	84229	80480	76704
67	90	Total						221668	213108	204687	195980	186939
		Sensible						219766	213108	204687	195980	186939
	85	Total						215715	206252	196738	186771	177390
		Sensible						194348	190524	186586	180107	174233
	80	Total						213124	203323	193569	183477	172836
		Sensible						161472	157653	153887	150040	146041
	75	Total						212472	202675	192721	182359	171842
		Sensible						127110	123293	119458	115518	111568
	70	Total						211674	201920	191839	181576	171115
		Sensible						93777	89970	86085	82173	78230
62	90	Total						220965	212900	204522	195823	186751
		Sensible						220965	212900	204522	195823	186751
	85	Total						209325	201519	193416	185009	176249
		Sensible						209325	201519	193416	185009	176249
	80	Total						199540	191310	182903	174358	165876
		Sensible						193116	187355	180967	174358	165876
	75	Total						196259	187385	178259	168805	159239
		Sensible						162060	158229	154336	150199	146128
	70	Total						195057	185990	176648	167246	157406
		Sensible						128635	124722	120737	116764	112661
57	75	Total						186374	179096	171596	163745	155618
		Sensible						186374	179096	171596	163745	155618
	70	Total						180077	171913	163474	154830	146535
		Sensible						162844	158851	154163	148994	143350

mechanical cooling capacities • 15 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 4500 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 4500 CFM • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total						251725	240758	229616	217927	206113
		Sensible						117714	114358	110996	107536	104091
	85	Total						251072	240181	228942	217331	205452
		Sensible						92517	89169	85773	82325	78852
72	90	Total						222279	212538	202680	192458	182078
		Sensible						161335	157709	154086	150394	146702
	85	Total						221343	211779	201711	191729	181095
		Sensible						136192	132615	128918	125297	121516
	80	Total						220939	211271	201304	190965	180488
		Sensible						111229	107612	103939	100194	96453
	75	Total						220282	210624	200638	190390	179852
		Sensible						86174	82552	78868	75144	71375
67	90	Total						205729	197057	187969	179496	171041
		Sensible						188315	184715	180014	174514	169015
	85	Total						203996	195238	186177	176706	167425
		Sensible						162889	159244	155531	151703	148004
	80	Total						202803	193907	184711	175332	165648
		Sensible						138563	134849	131064	127260	123395
	75	Total						202807	193902	184601	175105	165424
		Sensible						112967	109252	105432	101587	97722
	70	Total						202237	193318	184092	174618	164867
		Sensible						88012	84285	80488	76643	72746
62	90	Total						199082	192258	185148	177697	169937
		Sensible						199082	192258	185148	177697	169937
	85	Total						190161	182850	175169	168127	160614
		Sensible						186317	180983	175169	168127	160614
	80	Total						186892	178905	170651	162141	153238
		Sensible						163951	160290	156559	152704	147569
	75	Total						185980	177801	169201	160643	151624
		Sensible						138899	135149	131263	127441	123475
	70	Total						185500	177273	168688	160016	151018
		Sensible						114039	110263	106378	102502	98537

SIX ROW EVAPORATOR

STANDARD

FOR 15 TON UNIT

			STANDARD EVAPORATOR @ 3000 CFM					6 ROW EVAPORATOR @ 3000 CFM				
80	100	Total						233008	223745	214184	204063	193564
		Sensible						133292	130029	126733	123328	119884
	90	Total						232573	223281	213628	203561	193172
		Sensible						99966	96677	93335	89932	86499
	85	Total						232204	222907	213256	203230	192853
		Sensible						83249	79951	76603	73203	69763
72	100	Total						202795	194799	186656	177780	168867
		Sensible						162384	159004	155629	152036	148498
	90	Total						202206	194026	185647	176944	168002
		Sensible						129201	125744	122265	118725	115160
	85	Total						202005	193955	185512	176780	167838
		Sensible						112640	109225	105715	102159	98585
	80	Total						201786	193722	185332	176618	167632
		Sensible						96071	92644	89147	85589	81989
	75	Total						201477	193419	185054	176346	167287
		Sensible						79461	76029	72540	68975	65338
67	90	Total						184609	177326	169759	161886	153479
		Sensible						146584	143192	139729	136192	132496
	85	Total						184245	176958	169191	161301	153149
		Sensible						130003	126602	123051	119504	115904
	80	Total						183686	176292	168614	160743	152527
		Sensible						113975	110516	106990	103435	99796
	75	Total						183954	176571	168903	160973	152715
		Sensible						97017	93565	90044	86464	82809
	70	Total						183702	176344	168693	160727	152432
		Sensible						80473	77028	73508	69908	66228
62	90	Total						168659	162714	156597	150281	143936
		Sensible						163047	158750	154360	149841	143936
	85	Total						167971	161356	154322	147154	139810
		Sensible						146737	143384	139880	136367	132827
	80	Total						167557	160882	153897	146581	138984
		Sensible						130156	126772	123287	119699	116040

gas heating capacities

TABLE 36 - 1

CABINET	UNIT SIZE	Designation (2 • 3)*	HEATING INPUT (MBH)	OUTPUT CAPACITY (MBH)	TEMPERATURE RISE RANGE (°F)
B	08	(2)	182.4	147.77	30 - 60
		(3)	225.0	182.25	35 - 65
	10	(2)	228.0	184.68	25 - 55
		(3)	285.0	230.85	35 - 65
	13	(2)	228.0	184.68	20 - 50
		(3)	285.0	230.85	25 - 55
	15	(2)	228.0	184.68	20 - 50
		(3)	285.0	230.85	25 - 55

* **AAON HEAT RANGE DESIGNATIONS** **(2) = MEDIUM HEAT**
(3) = HIGH HEAT

NOTES: **1)** To calculate air temperature rise: ΔT = Output capacity / (CFM x 1.085)
2) Use tabulated ratings for elevations to 2000 FT.
3) For elevations above 2000 FT. derate 4% for each 1000 FT. above sea level and use the following formula:
ΔT = Output capacity / (.24 x 60 x specific WT of air x CFM)(Refer to Table 80-2 for information about Specific Weight of Air)
4) Gas pressure supply range (inches of water guage): Natural 6 - 10.5 ; Propane 11 - 13.
5) Gas manifold pressure (inches of water guage): Natural 3.5; Propane 10.5.
6) Above 2000FT.; Specify "HI ALTITUDE KIT".
CAUTION: **FOR APPLICATIONS OUTSIDE THE TEMPERATURE RANGE SHOWN, CONTACT THE FACTORY.**

electric heating capacities

TABLE 36 - 2

SINGLE PHASE

Heating Designation and Unit Availability 08 • 10	No. of Strips	208 / 60 / 1			240 / 60 / 1		
		MBH	KW	AMPS	MBH	KW	AMPS
B	2	51.2	15.0	72.1	68.3	20.0	83.3
C	3	76.8	22.5	108.2	102.4	30.0	125.0
D	4	102.4	30.0	144.2	136.6	40.0	166.7

TABLE 36 - 3

THREE PHASE

Heating Designation and Unit Availability 08 • 10 • 13 • 15	No. of Strips	208 / 60 / 3			240 / 60 / 3			480 / 60 / 3			575 / 60 / 3		
		MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS
B	2	51.2	15.0	41.60	68.3	20.0	48.2	68.3	20.0	24.0	68.3	20.0	20.0
C	3	76.8	22.5	62.44	102.4	30.0	72.3	102.4	30.0	36.0	102.4	30.0	30.0
D	4	102.4	30.0	83.28	136.6	40.0	96.4	136.6	40.0	48.0	136.6	40.0	40.0
M	5	128.0	37.5	104.0	170.7	50.0	120.5	170.7	50.0	60.0	170.7	50.0	50.0
E	6	154.0	45.1	124.8	205.2	60.0	144.6	205.2	60.0	72.0	205.2	60.0	60.0

steam heating data

TABLE 37 - 1 • FACE VELOCITY vs. SELECTION FACTOR • 5.7 SQ. FT. FACE AREA

FV (fpm)	SF	FV (fpm)	SF	FV (fpm)	SF
200	.707	475	.541	750	.454
225	.684	500	.531	775	.448
250	.664	525	.522	800	.442
275	.646	550	.513	825	.437
300	.629	575	.504	850	.431
325	.613	600	.496	875	.425
350	.599	625	.489	900	.420
375	.586	650	.481	925	.415
400	.574	675	.474	950	.410
425	.562	700	.467	975	.406
450	.551	725	.461	1000	.401

TABLE 37 - 2

SATURATED STEAM PROPERTIES		
PSIG	TEMPERATURE	LATENT HEAT
2	218	966
5	227	961
7	233	958
10	239	953
15	250	946

TABLE 37 - 3

PRESSURE DROP AIR SIDE			
FV (FPM)	ΔP AIR (in. WC)	FV (FPM)	ΔP AIR (in. WC)
200	.027	700	.248
300	.055	800	.314
400	.092	900	.386
500	.136	1000	.466
600	.188		

EXAMPLE: What is the Expected Leaving Air Temperature with 2 PSIG Saturated Steam and 4000 cfm entering at 60°F ?
The coil face velocity is 4000 ÷ 5.7 = 702 FPM.

FROM TABLE 37-1: SF = .467 (by interpolation)

FROM TABLE 37-2: SST = 218°F.

TEMPERATURE RISE = SF (SST - EAT) = .467 (218 - 60) = 73.8°F.

CONDENSATE GENERATED

BTUH = 1.085 x CFM x ΔT .

FROM TABLE 37-2: LATENT HEAT = 966.

CONDENSATE LOAD = BTUH ÷ LATENT HEAT @ OPERATING PSIG.

CONDENSATE LOAD = (1.085 x 73.8 x 4000) ÷ 966 = 331.1 lbs. / hr.

FROM TABLE 37-3: AIR SIDE PRESSURE DROP = .248 (by interpolation)

hot water coil performance data

TABLE 37 - 4 'B' CABINET • 180° F EWT, 60° F EAT • 5.7 SQ. FT. FACE AREA

C.F.M	ΔP AIR	15 GPM (.2 ft. ΔP)			20 GPM (.33 ft. ΔP)			30 GPM (.68 ft. ΔP)		
		ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH
3000	.17	50.7	22.6	164.8	53.7	18.0	174.8	57.2	12.8	186.2
4000	.29	42.7	25.4	185.2	45.7	20.4	198.2	49.2	14.6	213.4
5000	.43	37.0	27.5	200.6	39.9	22.3	216.2	43.3	16.1	234.8
6000	.60	32.7	29.2	212.9	35.5	23.7	230.7	38.8	17.3	252.2

EXAMPLE: "B" Cabinet with 5000 cfm, 180°F EWT, 60°F EAT, and 15 GPM has a capacity of 200.6 MBH from Table 37-4.
For 190°F EWT and 60°F EAT, the correction factor is 1.08. Actual capacity = 1.08 x 200.6 = 216.6 MBH .

$$\text{NEW } \Delta T\ H_2O = \frac{216{,}600}{(500)\ (GPM)} = \frac{216{,}600}{(500)\ (15)} = 28.9°\ F$$

$$\text{NEW } \Delta T\ AIR = \frac{216{,}600}{(1.08)(CFM)} = \frac{216{,}600}{(1.08)\ (5000)} = 39.9°\ F$$

CORRECTION FACTORS FOR OTHER THAN 180°F HW ENT. AND 60°F AIR							
AIR TEMP.	WATER TEMP.						
	210	200	190	180	170	160	150
50°	1.38	1.28	1.18	1.08	1.00	0.90	0.82
60°	1.28	1.18	1.08	1.00	0.90	0.82	0.72
70°	1.18	1.08	1.00	0.90	0.82	0.72	0.64

coil static pressure drops (in. wg.)

TABLE 38 - 1 • 'B' CABINET

• INDOOR COIL •								
C.F.M	8 TON UNIT				10 TON UNIT			
	STANDARD COIL		6 ROW COIL		STANDARD COIL		6 ROW COIL	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY
2500	.084	.061	.252	.183	.151	.146	.252	.183
3000	.112	.081	.336	.224	.202	.195	.336	.224
3500	.143	.104	.428	.311	.257	.248	.428	.311
4000	.176	.128	.528	.385	.318	.306	.528	.385
4500					.382	.369	.636	.463
5000					.451	.435	.751	.546

• INDOOR COIL •						
C.F.M	13 TON UNIT				15 TON UNIT	
	STANDARD COIL		6 ROW COIL		6 ROW IS STANDARD COIL	
	WET	DRY	WET	DRY	WET	DRY
2500	.168	.163	.252	.183	.252	.183
3000	.224	.217	.336	.224	.336	.224
3500	.285	.276	.428	.311	.428	.311
4000	.352	.341	.528	.385	.528	.385
4500	.424	.411	.636	.463	.636	.463
5000	.501	.485	.751	.546	.751	.546
5500	.582	.563	.872	.635	.872	.635
6000	.667	.646	1.000	.728	1.000	.728
6500	.757	.733	1.135	.826	1.135	.826

component static pressure drops (in. wg.)

TABLE 38 - 2 • 'B' CABINET

C.F.M	HEATING SECTION							FILTERS			ECON	Acoustical
	GAS HEAT		ELECTRIC HEAT					2" Throw Away	2" Pleated	4" Pleated	100% R/A	CURB
	HIGH	MEDIUM	B	C	D	E	M					
2500	.098	.082	.044	.050	.066	.073	.069	.054	.074	.070	.058	.046
3000	.129	.107	.058	.066	.087	.097	.091	.068	.092	.086	.073	.059
3500	.162	.135	.073	.083	.109	.122	.115	.082	.112	.103	.090	.072
4000	.198	.165	.090	.102	.133	.149	.140	.098	.132	.121	.108	.086
4500	.237	.197	.107	.122	.159	.177	.167		.154	.140	.127	.101
5000	.277	.231	.125	.142	.186	.208	.196		.176	.160	.147	.117
5500	.320	.266	.145	.164	.215	.240	.226		.200	.180	.168	.134
6000	.365	.303	.165	.187	.245	.273	.257		.225	.201	.190	.152
6500	.411	.342	.186	.211	.276	.308	.290		.252	.224	.214	.171

blower performance
motor input rpm and kw

TABLE 39 - 1 • 'B' CABINET • BELT DRIVE

C.F.M	TOTAL STATIC PRESSURE									
	0.5		1.5		2.5		3.5		4.5	
	RPM	KW	RPM	KW	RPM	KW	RPM	KW	RPM	KW
2500	560	.50	840	1.12	1100	1.90	NOT AVAILABLE			
3000	580	.68	860	1.40	1110	2.25	1300	3.06		
3500	620	.92	890	1.70	1120	2.58	1310	3.54	1470	4.48
4000	670	1.24	920	2.02	1140	3.00	1320	3.95	1480	5.00
4500	730	1.58	960	2.48	1160	3.40	1330	4.46	1490	6.10
5000	780	2.00	1000	3.00	1180	3.90	1350	5.05	1500	6.59
5500	840	2.54	1040	3.60	1210	4.55	1370	5.98	1510	7.22
6000	900	3.15	1080	4.20	1230	5.04	1400	6.87	NOT AVAILABLE	

1 hp · 2 hp · 3 hp · 5 hp · 7 1/2 hp

NOTE: TOTAL STATIC = INTERNAL STATIC + EXTERNAL STATIC

BLOWER PERFORMANCE TABLES INCLUDE INTERNAL RESISTANCE OF CABINET ONLY. FOR TOTAL STATIC PRESSURE DETERMINATION, SYSTEM EXTERNAL STATIC PRESSUREMUST BE ADDED TO THE APPROPRIATE COMPONENT STATIC PRESSURE DROPS.
SEE TABLES
38-1, 38-2, 37-3 AND 37-4 FOR COMPONENT STATIC PRESSURE DROPS.

REFER TO TABLE FOR 'KW' TO 'HP' CONVERSION.

INDOOR BLOWER MOTOR DATA			
NOMINAL MOTOR H.P.	PERCENT EFFICIENCY	MAXIMUM KW	SERVICE FACTOR
1	81	1.06	1.15
2	83	2.07	
3	84	3.06	
5	85	5.05	
7.5	83	7.75	

$$BHP = \frac{KW \times EFF}{0.746}$$

power exhaust performance

TABLE 39 - 2 • 'B' CABINET • BELT DRIVE

C.F.M	TOTAL STATIC PRESSURE									
	0.2		0.4		0.6		0.8		1.0	
	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
1600	NOT AVAILABLE		660	2	760	2	860	2	960	2
2000	500	2	650	2	760	2	850	2	950	2
2400	580	2	680	2	780	2	860	2	940	2
2800	660	2	720	2	800	2	880	2	950	2
3200	740	2	800	2	850	2	910	2	980	2
3600	810	2	860	2	900	2	950	2	1000	2
4000	880	2	910	2	960	2	1000	2	1050	3
4400	940	2	980	2	1010	3	1050	3	1110	3
4800	1010	3	1050	3	1100	3	1120	3	NOT AVAILABLE	

electrical data

TABLE 40 - 1 • 'B' CABINET •

SINGLE PHASE — 208 - 240 / 1 / 60

UNIT SIZE		08			10	
BLOWER MOTOR	(HP)	1.0	2.0	3.0	2.0	3.0
	F.L.A	8.0	12.0	17.0	12.0	17.0
COMPRESSOR 1	F.L.A (ea)	22.3			23.8	
	L.R.A (ea)	131			169	
COMPRESSOR 2	F.L.A (ea)	22.3			23.8	
	L.R.A (ea)	131			169	
CONDENSER FAN MTR.	F.L.A (ea)	(1) 6.9				
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.9 (1/16 Hp mtr) or 1.3 (1/4 Hp mtr)				
POWER EXH. MOTOR	F.L.A (HP)	8.0 (1 Hp mtr) or 12.0 (2 Hp mtr)				
COOLING	F.L.A	60	64	69	67	71
	M.C.A	65	69	74	72	77
Max. Overcurrent Protection		80	90		90	100
ELEC. HEAT	F.L.A	91	95	100	95	100
Designation • B •	M.C.A	114	118	125	119	125
Max. Overcurrent Protection		125				
ELEC. HEAT	F.L.A	133	137	142	137	142
Designation • C •	M.C.A	166	170	178	171	178
Max. Overcurrent Protection		175		200	175	200
ELEC. HEAT	F.L.A	175	179	184	179	184
Designation • D •	M.C.A	219	223	230	223	230
Max. Overcurrent Protection		225		250	225	250

THREE PHASE — 208 - 240 / 3 / 60

UNIT SIZE		08			10			13			15		
BLOWER MOTOR	(HP)	1.0	2.0	3.0	2.0	3.0	5.0	3.0	5.0	7.5	3.0	5.0	7.5
	F.L.A	3.6	6.8	9.6	6.8	9.6	15.2	9.6	15.2	22.0	9.6	15.2	22.0
COMPRESSOR 1	F.L.A (ea)	13.2			14.6			18.2			18.7		
	L.R.A (ea)	91			123			156			142		
COMPRESSOR 2	F.L.A (ea)	13.2			14.6			18.2			25.0		
	L.R.A (ea)	91			123			156			185		
CONDENSER FAN MTR.	F.L.A (ea)	(1) 6.9						(2) 6.9					
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.9 (1/16 Hp mtr) or 1.3 (1/4 Hp mtr)											
POWER EXH. MOTOR.	F.L.A (HP)	3.6 (1 Hp) or 6.8 (2 Hp)			6.8 (2 Hp mtr) or 9.6 (3 Hp mtr)								
COOLING	F.L.A	37	40	43	43	46	51	60	65	72	67	73	80
	M.C.A	40	43	46	47	49	55	64	70	77	73	79	86
Max. Overcurrent Protection		50			60		70	80		90		100	110
ELEC. HEAT	F.L.A	52	55	58	55	58	63	60	65	72	67	73	80
Designation • B •	M.C.A	65	69	72	69	72	79	72	79	88	73	79	88
Max. Overcurrent Protection		70		80	70		80			90		100	110
ELEC. HEAT	F.L.A	76	79	82	79	82	87	82	87	94	82	87	94
Designation • C •	M.C.A	95	99	102	99	102	109	102	109	118	102	109	118
Max. Overcurrent Protection		100		110	100		110			125	110		125
ELEC. HEAT	F.L.A	100	103	106	103	106	111	106	111	118	106	111	118
Designation • D •	M.C.A	125	129	132	129	132	139	132	139	148	132	139	148
Max. Overcurrent Protection		125	150										
ELEC. HEAT	F.L.A	124	127	130	127	130	135	130	135	142	130	135	142
Designation • M •	M.C.A	125	129	132	129	132	139	132	139	148	132	139	148
Max. Overcurrent Protection		125	150										
ELEC. HEAT	F.L.A	148	151	154	151	154	159	154	159	166	154	159	166
Designation • E •	M.C.A	149	153	156	153	156	163	156	163	172	156	163	172
Max. Overcurrent Protection		150	175										

NOTE: THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS. SINCE THE POWER EXHAUST FAN OPERATES ONLY DURING ECONOMIZER CYCLE, THE ELECTRICAL DATA IN TABLES 40-1 AND 41-1 DOES NOT CHANGE WITH THE ADDITION OF THE POWER EXHAUST OPTION.

TABLE 41 - 1 • 'B' CABINET •

480 / 3 / 60													
UNIT SIZE		08			10			13			15		
BLOWER MOTOR	(HP)	1.0	2.0	3.0	2.0	3.0	5.0	3.0	5.0	7.5	3.0	5.0	7.5
	F.L.A	1.8	3.4	4.8	3.4	4.8	7.6	4.8	7.6	11.0	4.8	7.6	11.0
COMPRESSOR 1	F.L.A (ea)	6.6			7.3			9.1			9.4		
	L.R.A (ea)	46			62			70			72		
COMPRESSOR 2	F.L.A (ea)	6.6			7.3			9.1			12.3		
	L.R.A (ea)	46			62			70			89		
CONDENSER FAN MTR.	F.L.A (ea)	(1) 3.5						(2) 3.5					
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.5 (1/16 Hp mtr) or 0.7 (1/4 Hp mtr)											
POWER EXH. MOTOR.	F.L.A (HP)	1.8 (1 Hp) or 3.4 (2 Hp)			3.4 (2 Hp mtr) or 4.8 (3 Hp mtr)								
COOLING	F.L.A	19	20	22	22	23	26	30	33	36	34	36	40
	M.C.A	20	22	23	23	25	28	32	35	39	37	39	43
Max. Overcurrent Protection		25			30			40		45		50	
ELEC. HEAT	F.L.A	26	27	29	27	29	32	30	33	36	34	36	40
Designation • B •	M.C.A	32	34	36	34	36	40	36	40	44	37	40	44
Max. Overcurrent Protection		35		40	35	40				45		50	
ELEC. HEAT	F.L.A	38	40	41	39	41	44	41	44	47	41	44	47
Designation • C •	M.C.A	47	49	51	49	51	55	51	55	59	51	55	59
Max. Overcurrent Protection		50		60	50	60							
ELEC. HEAT	F.L.A	50	51	53	51	53	56	53	56	59	53	56	59
Designation • D •	M.C.A	62	64	66	64	66	70	66	70	74	66	70	74
Max. Overcurrent Protection		70								80	70		80
ELEC. HEAT	F.L.A	62	63	65	63	65	68	65	68	71	65	68	71
Designation • M •	M.C.A	62	64	66	64	66	70	66	70	74	66	70	74
Max. Overcurrent Protection		70								80	70		80
ELEC. HEAT	F.L.A	74	75	77	75	77	80	77	80	83	77	80	83
Designation • E •	M.C.A	74	76	78	76	78	82	78	82	86	78	82	86
Max. Overcurrent Protection		80					90	80		90	80		90

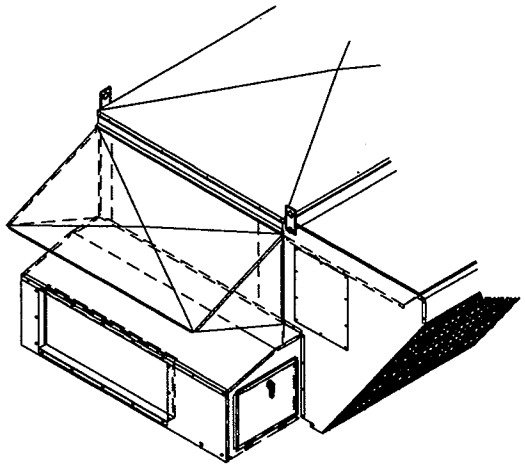
575 / 3 / 60													
UNIT SIZE		08			10			13			15		
BLOWER MOTOR	(HP)	1.0	2.0	3.0	2.0	3.0	5.0	3.0	5.0	7.5	3.0	5.0	7.5
	F.L.A	1.4	2.7	3.9	2.7	3.9	6.1	3.9	6.1	9.0	3.9	6.1	9.0
COMPRESSOR 1	F.L.A (ea)	5.5			5.8			7.6			7.5		
	L.R.A (ea)	39			50			54			58		
COMPRESSOR 2	F.L.A (ea)	5.5			5.8			7.6			9.8		
	L.R.A (ea)	39			50			54			78		
CONDENSER FAN MTR.	F.L.A (ea)	(1) 2.8 (3.5 @ 460 VAC)**						(2) 2.8 (3.5 @ 460 VAC)**					
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.4 (1/16 Hp mtr)(0.5 @ 460 VAC) or 0.56 (1/4 Hp mtr)(0.7 @ 460 VAC)**											
POWER EXH. MOTOR.	F.L.A (HP)	1.4 (1 Hp) or 2.7 (2 Hp)			2.7 (2 Hp mtr) or 3.9 (3 Hp mtr)								
COOLING	F.L.A	15	17	18	17	18	21	25	27	30	27	29	32
	M.C.A	17	18	19	19	20	22	27	29	32	29	31	34
Max. Overcurrent Protection		20			25			30		35		40	
ELEC. HEAT	F.L.A	21	23	24	23	24	26	25	27	30	27	29	30
Designation • B •	M.C.A	27	28	30	28	30	33	30	33	36	30	33	36
Max. Overcurrent Protection		30					35	30	35	40	35	40	
ELEC. HEAT	F.L.A	32	33	34	33	34	36	34	36	39	34	36	39
Designation • C •	M.C.A	39	41	42	41	42	45	42	45	49	42	45	49
Max. Overcurrent Protection		40	45							50	45		50
ELEC. HEAT	F.L.A	41	43	44	43	44	46	44	46	49	44	46	49
Designation • D •	M.C.A	52	53	55	53	55	58	55	58	61	55	58	61
Max. Overcurrent Protection		60								70	60		70
ELEC. HEAT	F.L.A	51	53	54	53	54	56	54	56	59	54	56	59
Designation • M •	M.C.A	52	53	55	53	55	58	55	58	61	55	58	61
Max. Overcurrent Protection		60								70	60		70
ELEC. HEAT	F.L.A	61	63	64	63	64	66	64	66	69	64	66	69
Designation • E •	M.C.A	62	63	65	63	65	68	65	68	71	65	68	71
Max. Overcurrent Protection		70								80	70		80

dimensions • B cabinet • 8 - 15 ton

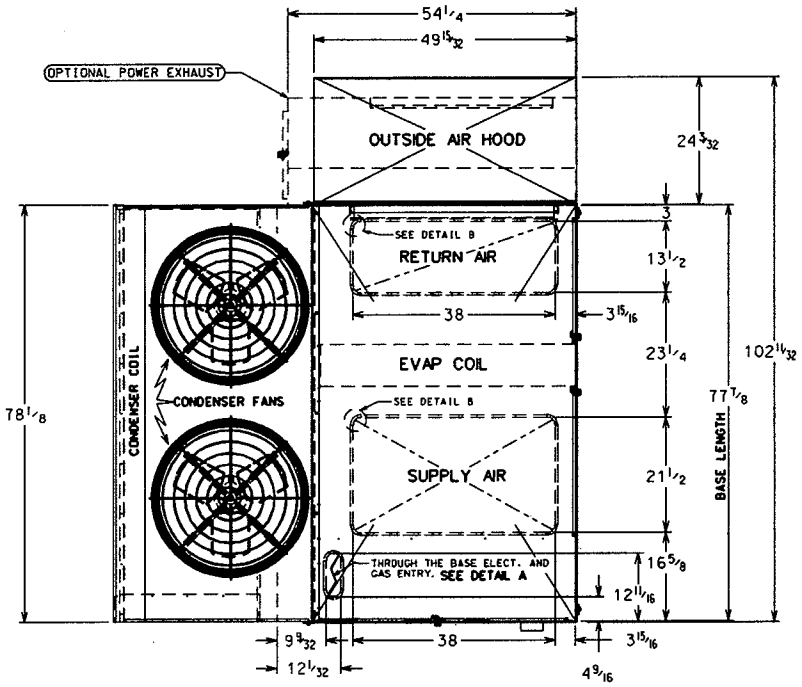
NOTE: For Roof Curb Details, Refer To Page 78

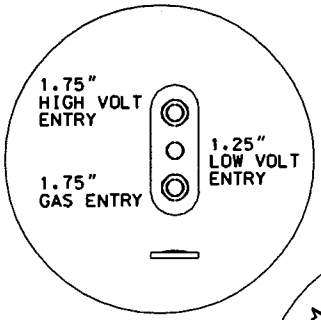
CLEARANCES

LOCATION	UNIT SIZE 8 • 10 • 13 • 15
RETURN AIR (BACK)	48
VENT SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	60
TOP	UNOBSTRUCTED

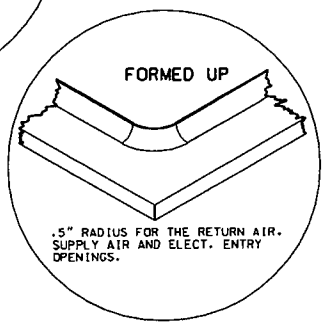


B BOX UNIT W/POWER EXHAUST



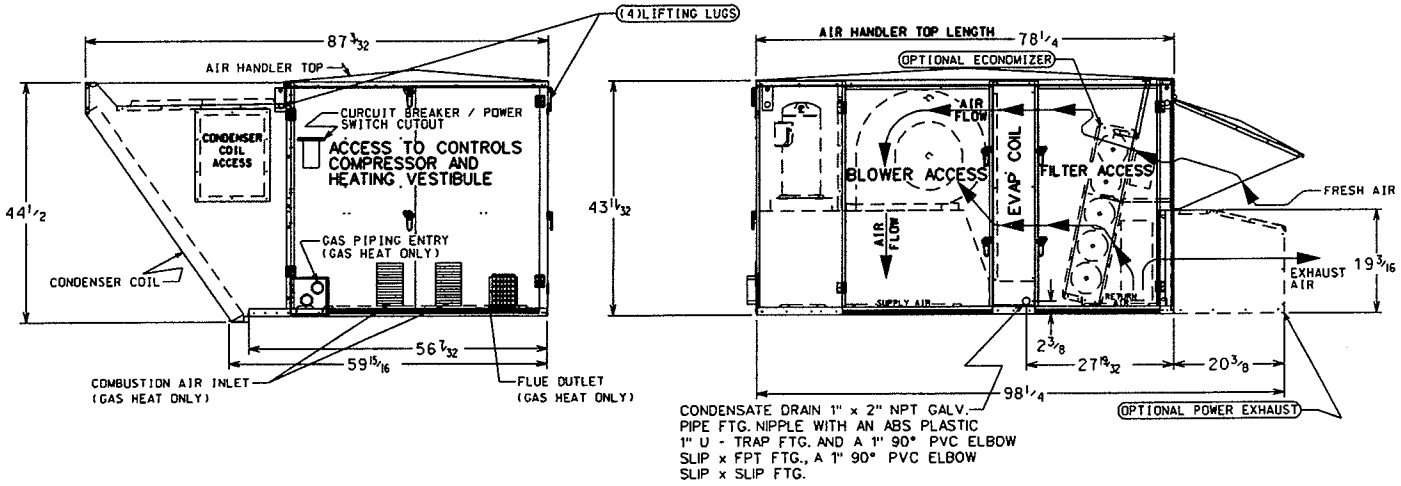


DETAIL A



DETAIL B

NUMBER OF CONDENSER FANS
08-10 TON - 1 FAN
13-15 TON - 2 FAN



specifications • 'C' cabinet

UNIT FEATURES		UNIT SIZE 16	20	24
NOMINAL CAPACITY TONS		16	20	24
EER - FULL LOAD ①		9.7	9.5	9.0
REFRIGERANT CHARGE	lbs. / no. of systems	17.0 (2)	19.5 (2)	21.0 (2)
COMPRESSOR (HERMETIC)	Quantity	(2)		
CONDENSER COIL Face Area Sq. Ft. / Rows / Fins per inch		31 / 3 / 10	31 / 4 / 10	
CONDENSER FANS Quantity / Diameter		(2) / 26"		(3) / 26"
CONDENSER FAN MOTORS Watts / RPM	EACH	700 / 1100		
EVAPORATOR COIL - Standard Face Area Sq. Ft. / Rows / Fins per inch		17.33 / 3 / 12	17.33 / 6 / 8	
EVAPORATOR COIL - 6 Row Face Area Sq. Ft. / Rows / Fins per inch		17.33 / 6 / 8		
EVAPORATOR BLOWER • BELT DRIVE Quantity / Wheel D x W / Type		(2) / 15 x 11 / FC		
EVAP. BLOWER MOTOR	HP - Standard	(1) 3	(1) 5	(1) 7.5
	HP - Oversize	(1) 5	(1) 7.5	(1) 10
	HP - Double Oversize	(1) 7.5	(1) 10	(1) 15
GAS FURNACES • TYPE Standard Material / Optional Material		TUBULAR - INDUCED DRAFT ALUMINIZED STEEL / STAINLESS STEEL		
IGNITION		NON-STANDING , AUTOMATIC , SPARK RELIGHT		
GAS CONNECTION (F.P.T.)		.75		
FILTERS - QTY / SIZE	PLEATED	(2) / 16" x 25" x 2" (4) / 20" x 25" x 2" (optional 4")		
POWER EXHAUST FANS • BELT DRIVE Quantity / Wheel D x W / Type		(2) / 12 x 9 / FC		
POWER EXH. FAN MOTOR	HP - Standard	(1) 3 HP		
	HP - Oversize	(1) 5 HP		
UNIT NET WEIGHTS		**16**	**20**	**24**
BASE UNIT (Cooling Only)		1652	1815	1860
GAS HEAT EXCHANGER • high heat • Std / SS		220 / 251		
GAS HEAT EXCHANGER • low heat • Std / SS		185 / 211		
ELECTRIC HEAT		75		
HOT WATER OR STEAM COIL		125		
ECONOMIZER		228		
POWER EXHAUST		360		
VAV (Variable Air Volume)		85	125	
CURB WEIGHTS				
KNOCKDOWN CURB • 14" HIGH / 24" HIGH		180 / 360		
ACOUSTICAL CURB • 14" HIGH / 24" HIGH		230 / 410		

① AT STANDARD A.R.I TEST CONDITIONS. UNITS RATED AT OR ABOVE 135,000 BTUH BUT BELOW 250,000 BTUH ARE CERTIFIED UNDER ARI 360 UNITARY LARGE EQUIPMENT CERTIFICATION PROGRAM. UNITS ABOVE 250,000 BTUH NO CERTIFICATION PROGRAM IS APPLICABLE , HOWEVER, UNITS ARE TESTED IN ACCORDANCE WITH ARI STANDARDS. 24 TON TEST CONDITIONS AT 80/67 RETURN AIR AND 95° OUTSIDE AIR • 8200 CFM.

16 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 8000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 8000 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	244368	233769	223116	212147	202510	258492	246044	233922	222260	210394
		Sensible	224572	220662	215342	210559	202510	235506	230532	226014	220880	210394
	85	Total	240571	229816	218400	207216	196041	255754	243280	230344	217900	205162
		Sensible	183744	178800	175885	171253	167887	193112	188872	184838	180610	175282
	80	Total	239217	227957	216050	205248	193871	254512	241680	228482	216234	203362
		Sensible	141360	137471	133318	129822	126408	148530	144290	138874	135998	131878
	75	Total	237410	226193	214495	203771	192396	253302	240590	227658	215026	202564
		Sensible	98546	94880	91089	87646	84029	103882	99668	95422	91320	87318
67	90	Total	241530	231848	222421	212332	202328	252914	242664	231806	220980	210210
		Sensible	241530	231848	222421	212332	202328	252914	242664	231806	220980	210210
	85	Total	228566	219819	210104	201070	191497	240388	230036	219106	209374	199112
		Sensible	224597	219819	210104	201070	191497	235234	229812	219106	209374	199112
	80	Total	222998	212587	202239	192242	182095	235904	224488	212944	201740	190580
		Sensible	185702	181380	177231	173327	169952	195620	190574	183990	180944	176986
	75	Total	215677	210531	200226	190170	179567	235128	223526	211520	200410	188806
		Sensible	140818	138766	135269	131404	127561	150870	146550	142126	138074	133884
	70	Total	219366	209005	198746	188731	178180	234014	222430	210314	199310	187726
		Sensible	100871	97057	93315	89694	85913	106390	102068	97594	93572	89380
62	90	Total	241339	231669	222252	212175	202183	252728	242490	231644	220830	210070
		Sensible	241339	231669	222252	212175	202183	252728	242490	231644	220830	210070
	85	Total	228805	219655	210007	200916	191358	239040	229496	218946	209224	198966
		Sensible	228805	219655	210007	200916	191358	239040	229496	218946	209224	198966
	80	Total	215811	207037	198386	189768	180609	226402	216960	206968	197704	187908
		Sensible	215811	207037	198386	189768	180609	226402	216960	206968	197704	187908
	75	Total	206159	196900	187954	179135	169681	218072	207506	197554	187778	177798
		Sensible	184914	180872	177431	172720	167580	194836	190068	184846	181334	176306
	70	Total	203776	194071	184762	175516	165676	216374	205402	195032	184814	174346
		Sensible	144032	140225	136328	132721	128748	152458	147540	142494	138882	135234
57	75	Total	203139	195213	186861	178631	169866	212994	203974	195022	186230	176828
		Sensible	203139	195213	186861	178631	169866	212994	203974	195022	186230	176828
	70	Total	191106	182432	175648	167738	159347	200890	191722	183336	174920	165950
		Sensible	185158	180070	175648	167738	159347	194576	189364	183336	174920	165950

			STANDARD EVAPORATOR @ 6400 CFM					6 ROW EVAPORATOR @ 6400 CFM				
72	90	Total	237110	226446	215609	205034	194817	250312	238690	226298	214202	202708
		Sensible	198050	193889	189777	186227	183037	205474	201460	197242	192946	188728
	85	Total	234795	224044	212603	202147	191724	248838	237014	224586	212448	200828
		Sensible	163584	159999	155013	152138	149477	169618	165530	161288	157196	153322
	80	Total	233743	223182	211744	201263	190257	248180	236392	224022	211634	199594
		Sensible	128966	125359	121460	118007	114124	134044	129950	125708	121538	117518
	75	Total	232212	221481	210310	199933	188982	247218	234584	222950	210820	198854
		Sensible	93083	89414	85637	82171	78554	98356	93966	89974	85864	81864
67	90	Total	227543	219204	210091	201472	192373	236656	227662	217812	208686	199012
		Sensible	227543	219204	210091	201472	192373	236656	227662	217812	208686	199012
	85	Total	219635	209496	200731	191575	182105	231546	220700	209754	199632	189552
		Sensible	201066	194643	191097	186619	181938	207282	202892	198198	193524	189016
	80	Total	215988	206292	196824	187470	177485	229044	218124	207094	196590	185404
		Sensible	165869	162159	158731	154951	150968	172780	168526	164274	160278	156082
	75	Total	215556	205728	195751	186098	175916	228846	218046	206424	195768	184628
		Sensible	130795	127159	123247	119262	115478	136318	132108	127640	123604	119422
	70	Total	214400	204261	194470	184864	174725	227948	216988	205526	195014	183924
		Sensible	95428	91533	87815	84206	80437	100756	96482	92066	88066	83898
62	90	Total	227655	219034	209931	201321	192232	236482	227496	217656	208532	198874
		Sensible	227655	219034	209931	201321	192232	236482	227496	217656	208532	198874
	85	Total	215393	207205	198926	190746	182008	223742	215158	206364	197652	188402
		Sensible	215393	207205	198926	190746	182008	223742	215158	206364	197652	188402
	80	Total	203712	195984	188110	180266	171871	213538	204354	195230	186916	177992
		Sensible	198834	195464	188110	180266	171871	207266	202612	195230	186916	177992
	75	Total	199678	190855	182240	173442	164075	211182	201232	191012	181736	171368
		Sensible	166380	162122	158375	154435	150144	173538	169236	163456	160884	155626
	70	Total	198030	188945	180440	171457	162038	209966	199948	190084	180448	170144
		Sensible	131423	128085	124349	120589	116675	137922	133590	129386	125318	121022
57	75	Total	192103	184415	177305	169786	161744	199976	191672	184090	176116	167586
		Sensible	192103	184415	177305	169786	161744	199976	191672	184090	176116	167586
	70	Total	183455	175620	167665	160236	151910	193650	184240	176042	167272	158184
		Sensible	166314	162604	158111	154578	149806	174374	168658	165226	160756	155436

mechanical cooling capacities • 16 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 4800 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 4800 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	255499	244182	232304	220352	208701	270492	258142	244006	231026	218486
		Sensible	121359	117978	114479	111021	107690	126002	122236	118000	114192	110544
	85	Total	254248	242974	231052	219253	207590	269890	256442	244248	230490	217778
		Sensible	94316	90942	87422	83992	80655	99174	95056	91388	87320	83626
72	90	Total	226123	216288	206504	196861	186865	238458	227820	216154	205832	194664
		Sensible	167764	164216	160703	157291	153794	172444	168486	164220	160500	156544
	85	Total	225440	215493	205249	195383	185102	237882	227140	215860	205040	193466
		Sensible	141092	137452	133763	130263	126661	145778	141816	137664	133730	129630
	80	Total	224652	214594	204501	194790	184448	237408	226258	215082	204444	193160
		Sensible	114337	110651	107004	103546	99920	119144	114990	110876	107030	103020
	75	Total	223404	213426	203294	193609	183341	236854	225584	214402	203746	192592
		Sensible	87407	83745	80079	76628	73021	92484	88272	84148	80288	76310
67	90	Total	211149	202639	194258	185772	177442	220234	210850	201134	192194	182338
		Sensible	196115	192837	188472	184110	177442	198378	197160	192638	189334	182338
	85	Total	208819	199933	191013	182186	172836	219100	209340	199504	189872	179766
		Sensible	169828	166209	162567	158879	155082	172146	170174	166152	162266	158250
	80	Total	207118	198030	188823	179896	170287	218174	208144	197996	188344	178372
		Sensible	143779	140050	136329	132761	128982	148434	144248	140092	136174	132190
	75	Total	206554	197544	188593	179577	170050	218228	208090	198114	188460	178056
		Sensible	116252	112565	108944	105348	101601	121156	116930	112832	108928	104786
	70	Total	205396	196492	187443	178503	169036	217206	207518	197514	187810	177532
		Sensible	89406	85755	82093	78524	74796	94374	90324	86210	82278	78172
62	90	Total	207027	199853	192500	185200	177305	213526	205780	198112	190410	182212
		Sensible	207027	199853	192500	185200	177305	213526	205780	198112	190410	182212
	85	Total	196440	189317	182637	175597	167996	203336	195462	188032	180652	172698
		Sensible	196214	189317	182637	175597	167996	201892	195462	188032	180652	172698
	80	Total	192131	183810	176064	168139	160026	200794	192260	183338	174648	165354
		Sensible	170737	166851	163148	159601	155416	175414	171514	167486	163602	159194
	75	Total	190216	181724	173835	165640	157109	199832	190594	182314	173460	164080
		Sensible	144264	140429	136911	133301	129516	148702	144470	140730	136772	132642
	70	Total	189433	180915	173185	164873	156106	199556	190198	181886	172906	163470
		Sensible	117623	113773	110319	106651	102832	122300	118004	114238	110224	106064

			STANDARD EVAPORATOR @ 3200 CFM					6 ROW EVAPORATOR @ 3200 CFM				
80	100	Total	238787	229045	218814	208609	198331	250620	239804	228616	217592	206180
		Sensible	138529	135187	131761	128427	125124	142708	138922	135082	131390	127670
	90	Total	237754	227868	217730	207713	197329	250066	239472	228170	217052	205814
		Sensible	102770	99373	95958	92658	89312	107154	103410	99510	95768	92078
	85	Total	236929	227041	216570	206853	196523	249516	239020	227742	216564	205432
		Sensible	84783	81377	77846	74640	71306	89270	85560	81654	77882	74216
72	100	Total	209738	201337	193097	185130	176043	218134	209102	199982	191034	181688
		Sensible	170276	166806	163464	160279	156737	173820	170006	166234	162612	158900
	90	Total	208239	199670	191143	182816	173857	217504	208372	199364	190320	180732
		Sensible	134491	130933	127465	124138	120630	138430	134558	130818	127144	123330
	85	Total	207885	199289	190799	182416	173440	217370	208172	199014	190118	180526
		Sensible	116759	113184	109724	106370	102849	120800	116894	113090	109464	105640
	80	Total	207395	198750	190293	181885	172917	217148	207920	198806	189848	180132
		Sensible	98970	95369	91916	88549	85025	103136	99210	95414	91758	87878
	75	Total	206472	197941	189494	181107	172141	216726	207600	198422	189460	179860
		Sensible	80996	77443	73990	70628	67101	85386	81496	77666	74002	70156
67	90	Total	190624	183105	176177	168661	160807	198470	190380	182592	174578	165704
		Sensible	153289	149846	146731	143406	139984	156946	153170	149612	146010	142104
	85	Total	190248	182424	175175	167525	159373	198248	190494	182186	174146	165402
		Sensible	135591	132006	128741	125351	121802	139334	135716	131906	128286	124426
	80	Total	189470	181680	174541	166778	158626	197676	189288	181752	173560	164804
		Sensible	118400	114814	111584	108132	104569	122256	118324	114858	111154	107274
	75	Total	189437	181640	174450	166707	158516	197964	189530	181958	173722	164918
		Sensible	100163	96579	93330	89891	86316	104168	100220	96738	93018	89122
	70	Total	188743	180944	173748	166022	157831	197662	189232	181580	173410	164688
		Sensible	82314	78725	75473	72037	68460	86510	82558	79034	75338	71468
62	90	Total	177044	170756	164628	158924	152827	181434	174610	168200	161790	155496
		Sensible	172839	169585	164628	158924	152827	175020	171560	166675	161790	155496
	85	Total	174620	168107	161677	154673	147261	180766	173660	166562	159176	151578
		Sensible	154103	150846	147676	144276	140735	157214	153606	150066	146440	142766
	80	Total	173367	166649	160038	153155	145907	180342	173162	166222	158814	150968
		Sensible	135990	132631	129375	126034	122575	139534	135888	132420	128776	124982

20 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 10,000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP.@ 10,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total						311541	298330	284245	270855	256979
		Sensible						290047	285657	278995	270855	256979
	85	Total						306874	293267	278741	263280	247928
		Sensible						236682	233155	228298	221857	216903
	80	Total						305527	290859	276465	261304	245206
		Sensible						183325	177478	173610	168875	162692
	75	Total						303472	289281	274654	259491	243821
		Sensible						126258	121624	116889	112030	107059
67	90	Total						308350	296431	283716	270506	256773
		Sensible						308350	296431	283716	270506	256773
	85	Total						292166	280602	268554	256025	242749
		Sensible						290502	280602	268554	256025	242749
	80	Total						284544	271177	257717	244572	230297
		Sensible						240950	234689	229307	225144	218635
	75	Total						282644	269139	255424	241628	227162
		Sensible						185183	179389	174170	169937	164877
	70	Total						280779	267633	254099	240071	225578
		Sensible						129354	124520	119586	114523	109343
62	90	Total						308111	296207	283507	270312	256593
		Sensible						308111	296207	283507	270312	256593
	85	Total						291883	280476	268329	255848	242660
		Sensible						291883	280476	268329	255848	242660
	80	Total						275844	264845	253421	241403	228841
		Sensible						275844	264845	253421	241403	228841
	75	Total						263210	251629	239412	227088	215162
		Sensible						239422	234272	228616	221539	215162
	70	Total						260195	248321	235730	222910	209617
		Sensible						185739	181724	176632	171463	166007
57	75	Total						259871	249322	238445	226997	214972
		Sensible						259871	249322	238445	226997	214972
	70	Total						244118	234082	223829	212847	201555
		Sensible						239569	233444	223829	212847	201555

SIX ROW EVAPORATOR

STANDARD

FOR 20 TON UNIT

			STANDARD EVAPORATOR @ 8000 CFM					6 ROW EVAPORATOR @ 8000 CFM				
72	90	Total						301791	288837	274871	260856	245588
		Sensible						255065	251084	246037	240923	233913
	85	Total						299512	286246	271718	257223	242037
		Sensible						211379	206868	201179	196295	190788
	80	Total						298262	284556	270778	256153	240558
		Sensible						165317	160652	156006	151140	146031
	75	Total						296798	283220	269149	254619	239544
		Sensible						119173	114539	109792	104943	99980
67	90	Total						290213	279534	268083	256302	243676
		Sensible						290213	279534	268083	256302	243676
	85	Total						279993	267833	255579	243422	230547
		Sensible						256771	251362	246384	241085	230547
	80	Total						276490	263648	251102	237710	223678
		Sensible						214542	208758	204659	199176	192692
	75	Total						275429	262788	249686	236599	222681
		Sensible						168152	163318	158108	153455	148307
	70	Total						274055	261521	248575	235145	221245
		Sensible						122163	117358	112449	107413	102264
62	90	Total						289988	279317	267881	256112	243501
		Sensible						289988	279317	267881	256112	243501
	85	Total						274910	264546	253694	242429	230379
		Sensible						274910	264546	253694	242429	230379
	80	Total						260023	250088	239773	228884	217470
		Sensible						256494	250088	239773	228884	217470
	75	Total						254795	243519	231629	219449	207160
		Sensible						213698	208874	203281	197970	192733
	70	Total						253388	241743	229650	217241	204774
		Sensible						169920	164753	159335	154087	149936
57	75	Total						245256	235639	225787	215294	204411
		Sensible						245256	235639	225787	215294	204411
	70	Total						234538	223932	213547	202730	191806
		Sensible						214809	209322	204231	198274	191806

mechanical cooling capacities • 20 ton

TEMP. ENT. EVAP.		GROSS COOLING CAPACITY	STD. EVAP. @ 6000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 6000 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb		75	85	95	105	115	75	85	95	105	115
80	90	Total						325699	311188	296464	280928	264496
		Sensible						155456	151138	146810	142318	137656
	85	Total						324602	310209	295270	279701	263294
		Sensible						120703	116404	112005	107493	102828
72	90	Total						288951	276205	263528	249902	235639
		Sensible						215542	210910	206352	201541	196591
	85	Total						287683	274919	262210	248430	234408
		Sensible						180921	176272	171696	166823	161935
	80	Total						286975	274361	261233	247769	233446
		Sensible						146496	141889	137162	132381	127386
	75	Total						285767	273196	260135	246551	232448
		Sensible						111890	107289	102574	97746	92813
67	90	Total						268562	257814	246592	235191	224281
		Sensible						251393	247129	241853	235191	224281
	85	Total						265762	254299	242970	230718	217578
		Sensible						217795	213126	208564	203711	197980
	80	Total						264238	252624	240707	228512	215389
		Sensible						184320	179572	174765	169910	164774
	75	Total						264065	252494	240577	228099	215009
		Sensible						149024	144297	139489	134531	129410
	70	Total						262978	251441	239459	227003	214069
		Sensible						114541	109820	104984	100026	94954
62	90	Total						263786	254543	244921	234908	224099
		Sensible						263786	254543	244921	234908	224099
	85	Total						250276	241448	232186	222559	212192
		Sensible						250276	241448	232186	222559	212192
	80	Total						244343	233919	223317	212587	201210
		Sensible						218676	213712	209229	204266	197578
	75	Total						242850	232368	221491	210057	198040
		Sensible						185003	180283	175444	170426	165204
	70	Total						242111	231494	220556	209020	197169
		Sensible						150742	145953	141079	136012	130874

SIX ROW EVAPORATOR STANDARD FOR 20 TON UNIT

			STANDARD EVAPORATOR @ 4000 CFM					6 ROW EVAPORATOR @ 4000 CFM				
80	100	Total						304383	292321	279204	265580	250867
		Sensible						177499	173381	169014	164572	159905
	90	Total						303594	291173	278138	264556	249991
		Sensible						131533	127281	122915	118463	113814
	85	Total						302832	290421	277403	263672	249409
		Sensible						108424	104166	99795	95297	90719
72	100	Total						266815	256279	245196	233415	221809
		Sensible						218131	213797	209322	204671	200163
	90	Total						265649	254681	243472	232071	219783
		Sensible						172272	167756	163221	158690	153916
	85	Total						265130	254483	243364	231672	219374
		Sensible						149369	144966	140454	135805	131018
	80	Total						264614	253975	242848	231162	218889
		Sensible						126461	122054	117531	112875	108088
	75	Total						263928	253287	242134	230410	218218
		Sensible						103481	99068	94527	89857	85085
67	90	Total						243300	233745	223424	212795	201898
		Sensible						196576	192221	187605	182934	178234
	85	Total						242532	232880	222928	212097	201348
		Sensible						173613	169210	164745	159985	155335
	80	Total						241795	232004	222053	211443	200380
		Sensible						151541	147060	142577	137887	133088
	75	Total						241913	232238	222129	211484	200374
		Sensible						128084	123656	119109	114409	109595
	70	Total						241326	231655	221516	210897	199763
		Sensible						105193	100763	96195	91501	86675
62	90	Total						223887	216861	208520	200820	192758
		Sensible						220692	216861	208520	200820	192758
	85	Total						222040	213423	204097	194893	184956
		Sensible						197200	192909	188349	183907	179209
	80	Total						221124	212413	203267	193743	183364
		Sensible						174189	169850	165369	160774	155867

24 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 10,000 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP. @ 10,000 CFM • Air Temp. Ent. Cond.°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total						356824	342888	328578	314558	300296
		Sensible						309607	304530	298613	293879	288760
	85	Total						353011	338329	324364	308893	294089
		Sensible						255056	248928	245081	238840	234747
	80	Total						350604	336853	321728	307067	291193
		Sensible						198279	194566	188464	184455	178077
	75	Total						348418	334190	319542	304664	289141
		Sensible						141568	136804	131946	127054	122007
67	90	Total						347739	336128	324126	311634	298955
		Sensible						347630	336022	324024	311536	298861
	85	Total						331182	318094	305839	293606	281801
		Sensible						310494	304322	299120	292866	281713
	80	Total						325452	312145	297892	284153	270060
		Sensible						258172	252992	246535	241120	235848
	75	Total						323453	310005	296599	282394	267327
		Sensible						200418	195224	191181	185984	179202
	70	Total						321469	308046	294365	280145	265455
		Sensible						144921	139870	134766	129513	124142
62	90	Total						347458	335857	323865	311382	298716
		Sensible						347348	335751	323763	311284	298622
	85	Total						329040	317724	306016	293812	281431
		Sensible						328937	317623	305919	293719	281343
	80	Total						310894	299922	288614	276830	264528
		Sensible						310796	299828	288523	276743	264444
	75	Total						300095	287989	274917	261740	249202
		Sensible						257737	252225	245625	239687	235035
	70	Total						297600	284889	271779	258480	244992
		Sensible						202692	197050	191303	185997	181175
57	75	Total						292847	282176	271016	259683	247832
		Sensible						292755	282087	270931	259601	247754
	70	Total						275954	265028	253276	242136	231714
		Sensible						257304	251610	245323	239716	231641

SIX ROW EVAPORATOR STANDARD FOR 24 TON UNIT

			STANDARD EVAPORATOR @ 9600 CFM					6 ROW EVAPORATOR @ 9600 CFM				
72	90	Total						354186	340954	326737	312599	297444
		Sensible						301561	297584	292507	287264	280237
	85	Total						350428	337274	322785	307622	292217
		Sensible						248487	245056	239910	234091	228401
	80	Total						349028	335313	320826	305803	290081
		Sensible						195194	191311	186569	181372	175133
	75	Total						346894	332774	318230	303443	288025
		Sensible						140107	135341	130479	125579	120530
67	90	Total						343754	332338	320530	308233	295744
		Sensible						343646	332234	320429	308136	295650
	85	Total						328916	316059	303493	290283	278840
		Sensible						303963	298031	293106	286268	278752
	80	Total						323687	309982	296885	282873	268446
		Sensible						252975	246665	242536	237178	230368
	75	Total						321883	308603	294764	281141	266264
		Sensible						197304	192257	186751	182851	176310
	70	Total						319950	306638	293057	278943	264366
		Sensible						143436	138388	133282	128029	122662
62	90	Total						343475	332069	320269	307985	295504
		Sensible						343366	331965	320168	307888	295411
	85	Total						325328	314201	302680	290672	278472
		Sensible						325226	314102	302585	290580	278384
	80	Total						305568	296652	285530	273930	261942
		Sensible						302582	296558	285440	273843	261860
	75	Total						298056	286272	273301	260704	247590
		Sensible						251866	247350	240702	236079	230179
	70	Total						296069	283317	270400	257310	243908
		Sensible						199590	193522	188002	183001	178121
57	75	Total						289612	279157	268181	257019	245347
		Sensible						289521	279069	268096	256938	245270
	70	Total						274487	263151	251506	240259	229083
		Sensible						253293	246873	240561	235157	228722

SIX ROW EVAPORATOR STANDARD FOR 24 TON UNIT

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 7200 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 7200 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total						382470	367844	353339	337459	321602
		Sensible						185154	180855	176630	172087	167596
	85	Total						380862	366300	351287	335689	320235
		Sensible						142631	138338	133965	129483	125081
72	90	Total						339390	325667	312710	298123	284040
		Sensible						258100	252211	248361	242255	237067
	85	Total						337537	323901	310201	296105	281755
		Sensible						215785	210887	206018	201076	196104
	80	Total						336294	322997	309148	295048	280710
		Sensible						173610	168817	163889	158933	153955
	75	Total						334375	321133	307544	293450	278911
		Sensible						131189	126409	121559	116594	111544
67	90	Total						316147	304492	293083	282487	271369
		Sensible						298493	293438	287771	282398	271284
	85	Total						311901	300090	287271	274310	261455
		Sensible						258533	254408	248208	242715	238281
	80	Total						309394	297436	284525	271121	257692
		Sensible						219027	214709	209559	203482	198172
	75	Total						309246	296805	283773	270524	257152
		Sensible						176476	171458	166268	161053	155848
	70	Total						307493	295092	282348	269110	255432
		Sensible						134196	129189	124100	118882	113560
62	90	Total						313333	303365	293005	282188	271119
		Sensible						313234	303270	292912	282099	271034
	85	Total						297133	287445	277337	266978	255954
		Sensible						297039	287354	277249	266894	255873
	80	Total						287336	275981	264351	252824	241030
		Sensible						260321	254869	248701	243713	237121
	75	Total						284364	272797	260904	249043	236311
		Sensible						219460	213877	208418	203967	198206
	70	Total						283395	271599	259613	247479	234459
		Sensible						178456	173204	167903	162633	156775

SIX ROW EVAPORATOR STANDARD FOR 24 TON UNIT

			STANDARD EVAPORATOR @ 4800 CFM					6 ROW EVAPORATOR @ 4800 CFM				
80	100	Total						359102	346199	332261	318302	304612
		Sensible						212337	208016	203450	198956	194608
	90	Total						357343	344414	331006	317305	303048
		Sensible						155930	151582	147155	142709	138172
	85	Total						356071	343151	329751	315971	301709
		Sensible						127590	123238	118804	114324	109777
72	100	Total						314342	302962	291817	279702	267281
		Sensible						261561	256955	252505	247766	242988
	90	Total						312687	300734	288782	276397	263945
		Sensible						205447	200603	195835	190979	186174
	85	Total						312082	300568	288631	276212	262970
		Sensible						177476	172793	168018	163137	158037
	80	Total						311159	299647	287750	275329	262426
		Sensible						149380	144692	139924	135035	130046
	75	Total						309986	298472	286531	274102	261230
		Sensible						121177	116482	111694	106796	101813
67	90	Total						286762	276290	264975	253501	242287
		Sensible						235249	230546	225552	220563	215762
	85	Total						285469	274846	263779	252336	240805
		Sensible						207043	202271	197378	192398	187455
	80	Total						284597	273585	262905	251044	239372
		Sensible						180082	175123	170372	165199	160177
	75	Total						284431	273856	262760	251161	239224
		Sensible						151307	146541	141618	136558	131433
	70	Total						283407	272807	261703	250131	238176
		Sensible						123213	118430	113501	108445	103307
62	90	Total						265764	258194	250020	241473	232668
		Sensible						263879	258113	249941	241397	232595
	85	Total						261894	252082	242051	231821	221618
		Sensible						236129	231320	226258	221040	216281
	80	Total						260324	250651	240715	229812	218800
		Sensible						207804	203055	198241	193049	187880

gas heating capacities

TABLE 50 - 1

CABINET	UNIT SIZE	Designation (1•3)*	HEATING INPUT (MBH)	OUTPUT CAPACITY (MBH)	TEMPERATURE RISE RANGE (°F)
C	16	(1)	285.0	230.85	20 - 50
		(3)	350.0	283.50	30 - 60
	20	(1)	285.0	230.85	10 - 40
		(3)	360.0	291.60	20 - 50
	24	(1)	285.0	230.85	10 - 40
		(3)	360.0	291.60	15 - 45

* **AAON HEAT RANGE DESIGNATIONS** **(1) = LOW HEAT**
(3) = HIGH HEAT

NOTES: 1) To calculate air temperature rise: ΔT = Output capacity / (CFM x 1.085)
2) Use tabulated ratings for elevations to 2000 FT.
3) For elevations above 2000 FT. derate 4% for each 1000 FT. above sea level and use the following formula:
ΔT = Output capacity / (.24 x 60 x specific WT of air x CFM)(Refer to Table 80-2 for information about Specific Weight of Air)
4) Gas pressure supply range (inches of water guage): Natural 6 - 10.5 ; Propane 11 - 13.
5) Gas manifold pressure (inches of water guage): Natural 3.5; Propane 10.5.
6) Above 2000FT.; Specify "HI ALTITUDE KIT".

CAUTION: FOR APPLICATIONS OUTSIDE THE TEMPERATURE RANGE SHOWN, CONTACT THE FACTORY.

electric heating capacities

TABLE 50 - 2

THREE PHASE

Heating Designation and Unit Availability 16 • 20 • 24	No. of Strips	208 / 60 / 3			240 / 60 / 3			480 / 60 / 3			575 / 60 / 3		
		MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS
B	2	51.2	15.0	41.60	68.3	20.0	48.2	68.3	20.0	24.0	68.3	20.0	20.0
D	4	102.4	30.0	83.28	136.6	40.0	96.4	136.6	40.0	48.0	136.6	40.0	40.0
E	6	154.0	45.1	124.80	205.2	60.0	144.6	205.2	60.0	72.0	205.2	60.0	60.0
F	8	205.2	60.1	166.56	273.2	80.0	192.8	273.2	80.0	96.0	273.2	80.0	80.0
G	10	256.5	75.1	208.13	341.5	100.0	241.0	341.5	100.0	120.0	341.5	100.0	100.0

steam heating data

TABLE 51 - 1 • FACE VELOCITY vs. SELECTION FACTOR • 6.8 SQ. FT. FACE AREA

FV (fpm)	SF	FV (fpm)	SF	FV (fpm)	SF
200	.707	475	.541	750	.454
225	.684	500	.531	775	.448
250	.664	525	.522	800	.442
275	.646	550	.513	825	.437
300	.629	575	.504	850	.431
325	.613	600	.496	875	.425
350	.599	625	.489	900	.420
375	.586	650	.481	925	.415
400	.574	675	.474	950	.410
425	.562	700	.467	975	.406
450	.551	725	.461	1000	.401

TABLE 51 - 2

SATURATED STEAM PROPERTIES		
PSIG	TEMPERATURE	LATENT HEAT
2	218	966
5	227	961
7	233	958
10	239	953
15	250	946

TABLE 51 - 3

PRESSURE DROP AIR SIDE			
FV (FPM)	ΔP AIR (in. WC)	FV (FPM)	ΔP AIR (in. WC)
200	.027	700	.248
300	.055	800	.314
400	.092	900	.386
500	.136	1000	.466
600	.188		

EXAMPLE: What is the Expected Leaving Air Temperature with 2 PSIG Saturated Steam and 6000 cfm entering at 60°F ?
The coil face velocity is 6000 ÷ 6.8 = 882 FPM.

FROM TABLE 51-1: SF = .424 (by interpolation)

FROM TABLE 51-2: SST = 218°F.

TEMPERATURE RISE = SF (SST - EAT) = .424(218 - 60) = 67.0°F.

CONDENSATE GENERATED

BTUH = 1.085 x CFM x ΔT.

FROM TABLE 51-2: LATENT HEAT = 966.

CONDENSATE LOAD = BTUH ÷ LATENT HEAT @ OPERATING PSIG.

CONDENSATE LOAD = (1.085 x 67.0 x 6000) ÷ 966 = 526.8 lbs. / hr.

FROM TABLE 51-3: AIR SIDE PRESSURE DROP = .373 (by interpolation)

hot water coil performance data

TABLE 51 - 4 'C' CABINET • 180° F EWT, 60° F EAT • 7.3 SQ. FT. FACE AREA

C.F.M	ΔP AIR	30 GPM (.9 ft. ΔP)			40 GPM (1.5 ft. ΔP)			50 GPM (2.2 ft. ΔP)		
		ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH
5000	.43	46.0	16.8	251.4	48.1	13.2	263.1	49.5	10.8	270.8
6000	.59	41.6	18.2	272.8	43.7	14.3	286.6	45.1	11.8	295.9
7000	.78	38.0	19.4	291.0	40.1	15.3	306.9	41.5	12.7	317.6
8000	.98	35.1	20.5	307.0	37.1	16.2	324.7	38.5	13.5	336.7
9000	1.21	32.6	21.4	321.1	34.6	17.0	340.6	35.9	14.2	353.8
10000	1.45	30.5	22.2	333.6	32.4	17.7	354.8	33.8	14.8	369.2

EXAMPLE: "C" Cabinet with 6000 cfm, 180°F EWT, 60°F EAT, and 30 GPM has a capacity of 272.8 MBH from Table 51-4.
For 190°F EWT and 60°F EAT, the correction factor is 1.08. Actual capacity = 1.08 x 272.8 = 294.6 MBH.

$$\text{NEW } \Delta T\ H_2O = \frac{294{,}600}{(500)\ (GPM)} = \frac{294{,}600}{(500)\ (30)} = 19.6^\circ F$$

$$\text{NEW } \Delta T\ AIR = \frac{294{,}600}{(1.08)\ (CFM)} = \frac{294{,}600}{(1.08)\ (6000)} = 45.5^\circ F$$

CORRECTION FACTORS FOR OTHER THAN 180° F HW ENT. AND 60° F AIR							
AIR TEMP.	WATER TEMP.						
	210	200	190	180	170	160	150
50°	1.38	1.28	1.18	1.08	1.00	0.90	0.82
60°	1.28	1.18	1.08	1.00	0.90	0.82	0.72
70°	1.18	1.08	1.00	0.90	0.82	0.72	0.64

coil static pressure drops (in. wg.)

TABLE 52 - 1 • 'C' CABINET

C.F.M	• INDOOR COIL •							
	16 TON UNIT				20 TON UNIT		24 TON UNIT	
	STANDARD COIL		6 ROW COIL		6 ROW IS STANDARD COIL		6 ROW IS STANDARD COIL	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY
5000	.213	.146	.279	.220	.279	.220	.279	.220
5500	.247	.170	.324	.255	.324	.255	.324	.255
6000	.283	.195	.372	.293	.372	.293	.372	.293
6500	.321	.221	.422	.332	.422	.332	.422	.332
7000	.361	.249	.474	.373	.474	.373	.474	.373
7500	.403	.277	.529	.416	.529	.416	.529	.416
8000	.446	.307	.585	.460	.585	.460	.585	.460
8500	.491	.338	.644	.507	.644	.507	.644	.507
9000	.537	.369	.705	.554	.705	.554	.705	.554
9500	.584	.402	.767	.603	.767	.603	.767	.603

component static pressure drops (in. wg.)

TABLE 52 - 2 • 'C' CABINET

C.F.M	HEATING SECTION							FILTERS			ECON	Acoustical CURB
	GAS HEAT		ELECTRIC HEAT					2" Throw Away	2" Pleated	4" Pleated	100% R / A	
	HIGH	LOW	B	D	E	F	G					
5000	.113	.088	.067	.091	.111	.115	.122	.087	.116	.109	.069	.055
5500	.130	.101	.077	.105	.129	.132	.141	.098	.131	.122	.078	.063
6000	.148	.115	.088	.119	.147	.151	.161		.146	.136	.088	.070
6500	.167	.130	.099	.135	.165	.170	.181		.163	.150	.098	.078
7000	.187	.145	.111	.151	.185	.190	.202		.179	.164	.108	.086
7500	.207	.161	.123	.167	.205	.210	.224		.197	.179	.118	.095
8000	.228	.178	.135	.184	.226	.232	.247		.215	.195	.129	.103
8500	.250	.195	.148	.201	.247	.254	.271		.234	.210	.141	.112
9000	.272	.212	.161	.219	.269	.277	.295		.253	.226	.152	.122
9500	.295	.230	.175	.238	.292	.300	.320		.273	.243	.164	.132

blower performance
motor input rpm and kw

TABLE 53 - 1 • 'C' CABINET • BELT DRIVE

C.F.M	TOTAL STATIC PRESSURE									
	0.5		1.5		2.5		3.5		4.5	
	RPM	KW	RPM	KW	RPM	KW	RPM	KW	RPM	KW
5000	610	1.24	880	2.56	1130	4.22	NOT AVAILABLE			
5500	630	1.50	890	2.84	1130	4.51				
6000	660	1.84	910	3.20	1130	4.81	1340	6.61		
6500	690	2.20	930	3.59	1140	5.23	1340	6.99		
7000	720	2.60	960	4.07	1160	5.77	1350	7.49	1520	9.72
7500	750	3.02	990	4.58	1170	6.24	1350	7.93	1520	10.23
8000	780	3.48	1010	5.11	1190	6.86	1360	8.52	1520	10.80
8500	810	3.98	1030	5.79	1210	7.53	1370	9.16	1530	11.59
9000	820	4.40	1040	6.47	1215	8.30	1370	9.80	1530	11.90
9500	NOT AVAILABLE		1050	7.13	1220	9.07	1380	10.44	1530	12.20

3 hp · 5 hp · 7 1/2 hp · 10 hp · 15 hp

NOTE: TOTAL STATIC = INTERNAL STATIC + EXTERNAL STATIC

BLOWER PERFORMANCE TABLES INCLUDE INTERNAL RESISTANCE OF CABINET ONLY. FOR TOTAL STATIC PRESSURE DETERMINATION, SYSTEM EXTERNAL STATIC PRESSUREMUST BE ADDED TO THE APPROPRIATE COMPONENT STATIC PRESSURE DROPS.
SEE TABLES
52-1, 52-2, 51-3 AND 51-4 FOR COMPONENT STATIC PRESSURE DROPS.

REFER TO TABLE FOR 'KW' TO 'HP' CONVERSION.

INDOOR BLOWER MOTOR DATA			
NOMINAL MOTOR H.P.	PERCENT EFFICIENCY	MAXIMUM KW	SERVICE FACTOR
3	84	3.06	1.15
5	85	5.05	
7.5	83	7.75	
10	86	9.98	
15	88	14.62	

$$BHP = \frac{KW \times EFF}{0.746}$$

power exhaust performance

TABLE 53 - 2 • 'C' CABINET • BELT DRIVE

C.F.M	TOTAL STATIC PRESSURE									
	0.2		0.4		0.6		0.8		1.0	
	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
4000	650	3	700	3	780	3	850	3	940	3
5000	700	3	800	3	880	3	960	3	1040	3
6000	840	3	910	3	1000	3	1080	3	1130	5
7000	1000	5	1080	5	1120	5	1190	5	1230	5
8000	1120	5	1180	5	NOT AVAILABLE					

electrical data

TABLE 54 - 1 • 'C' CABINET

208 - 240 / 3 / 60										
UNIT SIZE		16			20			24		
BLOWER MOTOR	(HP)	3.0	5.0	7.5	5.0	7.5	10.0	7.5	10.0	15.0
	F.L.A	9.6	15.2	22.0	15.2	22.0	28.0	22.0	28.0	42.0
COMPRESSOR 1	F.L.A (ea)	24.7			27.9			34.1		
	L.R.A (ea)	185			205			239		
COMPRESSOR 2	F.L.A (ea)	24.7			27.9			34.1		
	L.R.A (ea)	185			205			239		
CONDENSER FAN MTR	F.L.A (ea)	(2) 6.9						(3) 6.9		
COMBUSTION BLOWER MTR.	F.L.A (ea)	1.3 (1/4 Hp mtr)								
POWER EXH. MOTOR	F.L.A (HP)	9.6 (3 Hp mtr) or 15.2 (5 Hp mtr)								
COOLING	F.L.A	73	78	85	85	92	98	111	117	131
	M.C.A	79	85	91	92	99	105	119	125	139
Max. Overcurrent Protection		100		110		125		150		
ELEC. HEAT	F.L.A	73	78	85	85	92	98	111	117	131
Designation • B •	M.C.A	79	85	91	92	99	105	119	125	139
Max. Overcurrent Protection		100		110		125		150		
ELEC. HEAT	F.L.A	106	111	118	111	118	124	118	124	138
Designation • D •	M.C.A	132	139	148	139	148	155	148	155	173
Max. Overcurrent Protection		150					175	150	175	
ELEC. HEAT	F.L.A	154	159	166	159	166	172	166	172	186
Designation • E •	M.C.A	156	163	172	163	172	179	172	179	197
Max. Overcurrent Protection		175					200	175	200	225
ELEC. HEAT	F.L.A	202	207	214	207	214	220	214	220	234
Designation • F •	M.C.A	204	211	220	211	220	227	220	227	245
Max. Overcurrent Protection		225					250	225	250	
ELEC. HEAT	F.L.A	250	255	262	255	262	268	262	268	282
Designation • G •	M.C.A	252	259	268	259	268	275	268	275	293
Max. Overcurrent Protection		300								

480 / 3 / 60										
UNIT SIZE		16			20			24		
BLOWER MOTOR	(HP)	3.0	5.0	7.5	5.0	7.5	10.0	7.5	10.0	15.0
	F.L.A	4.8	7.6	11.0	7.6	11.0	14.0	11.0	14.0	21.0
COMPRESSOR 1	F.L.A (ea)	12.3			14.2			16.8		
	L.R.A (ea)	89			104			119		
COMPRESSOR 2	F.L.A (ea)	12.3			14.2			16.8		
	L.R.A (ea)	89			104			119		
CONDENSER FAN MTR.	F.L.A (ea)	(2) 3.5						(3) 3.5		
COMBUSTION BLOWER MTR.	F.L.A (ea)	0.7 (1/4 Hp mtr)								
POWER EXH. MOTOR	F.L.A (HP)	4.8 (3 Hp mtr) or 7.6 (5 Hp mtr)								
COOLING	F.L.A	36	39	43	43	46	49	55	58	65
	M.C.A	39	42	46	47	50	53	59	62	69
Max. Overcurrent Protection		50			60			70		80
ELEC. HEAT	F.L.A	36	39	43	43	46	49	55	58	65
Designation • B •	M.C.A	39	42	46	47	50	53	59	62	69
Max. Overcurrent Protection		50			60			70		80
ELEC. HEAT	F.L.A	53	56	59	56	59	62	59	62	69
Designation • D •	M.C.A	66	70	74	70	74	78	74	78	86
Max. Overcurrent Protection		70		80	70		80			90
ELEC. HEAT	F.L.A	77	80	83	80	83	86	83	86	93
Designation • E •	M.C.A	78	82	86	82	86	90	86	90	98
Max. Overcurrent Protection		80	90				100	90	100	110
ELEC. HEAT	F.L.A	101	104	107	104	107	110	107	110	117
Designation • F •	M.C.A	102	106	110	106	110	114	110	114	122
Max. Overcurrent Protection		110					125	110	125	
ELEC. HEAT	F.L.A	125	128	131	128	131	134	131	134	141
Designation • G •	M.C.A	126	130	134	130	134	138	134	138	146
Max. Overcurrent Protection		150								

TABLE 55 - 1 • 'C' CABINET

575 / 3 / 60										
UNIT SIZE		16			20			24		
BLOWER MOTOR	(HP)	3.0	5.0	7.5	5.0	7.5	10.0	7.5	10.0	15.0
	F.L.A	3.9	6.2	9.0	6.1	9.0	11.0	9.0	11.0	17.0
COMPRESSOR 1	F.L.A (ea)	9.8			11.4			13.5		
	L.R.A (ea)	78			78			111		
COMPRESSOR 2	F.L.A (ea)	9.8			11.4			13.5		
	L.R.A (ea)	78			78			111		
CONDENSER FAN MTR	F.L.A (ea)	(2) 2.8 (3.5 @ 460 VAC)**						(3) 2.8**		
COMBUSTION BLOWER MTR	F.L.A (ea)	0.56 (1/4 Hp mtr) (0.7 @ 460 VAC)**								
POWER EXH MOTOR	F.L.A (HP)	3.9 (3 Hp mtr) or 6.1 (5 Hp mtr)								
COOLING	F.L.A	29	31	34	35	37	39	44	46	52
	M.C.A	32	34	37	37	40	42	48	50	56
Max. Overcurrent Protection		40		45		50		60		
ELEC. HEAT	F.L.A	29	31	34	35	37	39	44	46	52
Designation • B •	M.C.A	32	34	37	37	40	42	48	50	56
Max. Overcurrent Protection		40		45		50		60		
ELEC. HEAT	F.L.A	44	46	49	46	49	51	49	51	57
Designation • D •	M.C.A	55	58	61	58	61	64	61	64	71
Max. Overcurrent Protection		60		70	60	70				80
ELEC. HEAT	F.L.A	64	66	69	66	69	71	69	71	77
Designation • E •	M.C.A	65	68	71	68	71	74	71	74	81
Max. Overcurrent Protection		70		80	70	80				90
ELEC. HEAT	F.L.A	84	86	89	86	89	91	89	91	97
Designation • F •	M.C.A	85	88	91	88	91	94	91	94	101
Max. Overcurrent Protection		90		100	90	100				110
ELEC. HEAT	F.L.A	104	106	109	106	109	111	109	111	117
Designation • G •	M.C.A	105	108	111	108	111	114	111	114	121
Max. Overcurrent Protection		110		125	110	125				

NOTE: *THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS.*

NOTE: *SINCE THE POWER EXHAUST FAN OPERATES ONLY DURING ECONOMIZER CYCLE, THE ELECTRICAL DATA IN TABLES 54-1 AND 55-1 DOES NOT CHANGE WITH THE ADDITION OF THE POWER EXHAUST OPTION.*

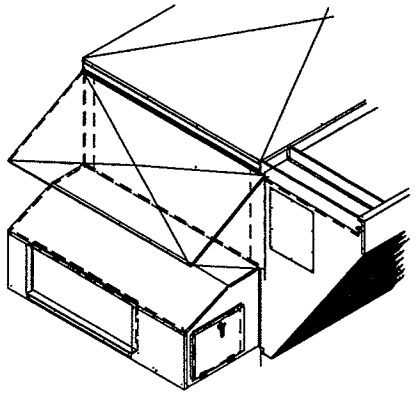
*** 460 VAC CONDENSER AND COMBUSTION BLOWER MOTORS ARE USED WITH A STEP DOWN TRANSFORMER. THE INDICATED 575V VALUE ASSUMES NO LOSS THROUGH TRANSFORMER AND 100% POWER FACTOR.*

dimensions • C cabinet • 16 - 24 ton

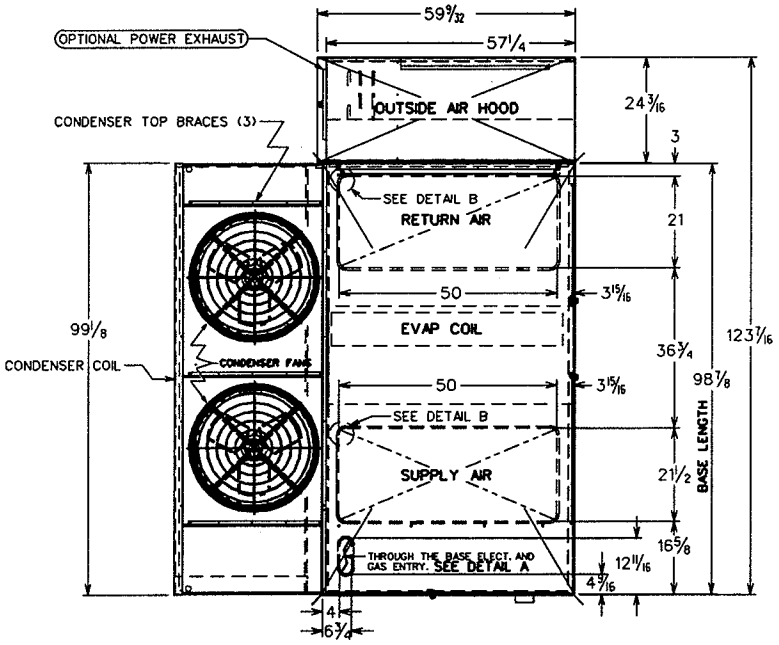
NOTE: For Roof Curb Details, Refer To Page 78

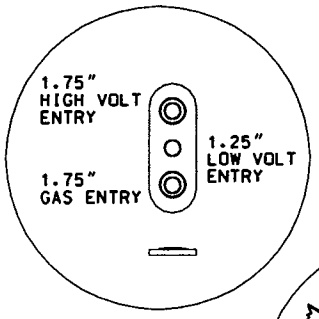
CLEARANCES

LOCATION	UNIT SIZE 16 • 20 • 24
RETURN AIR (BACK)	48
VENT SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	60
TOP	UNOBSTRUCTED

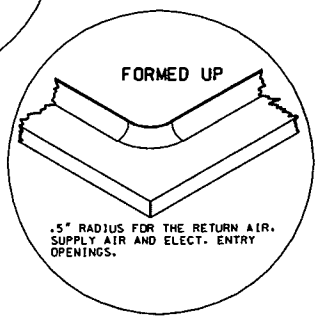


C BOX UNIT W/POWER EXHAUST



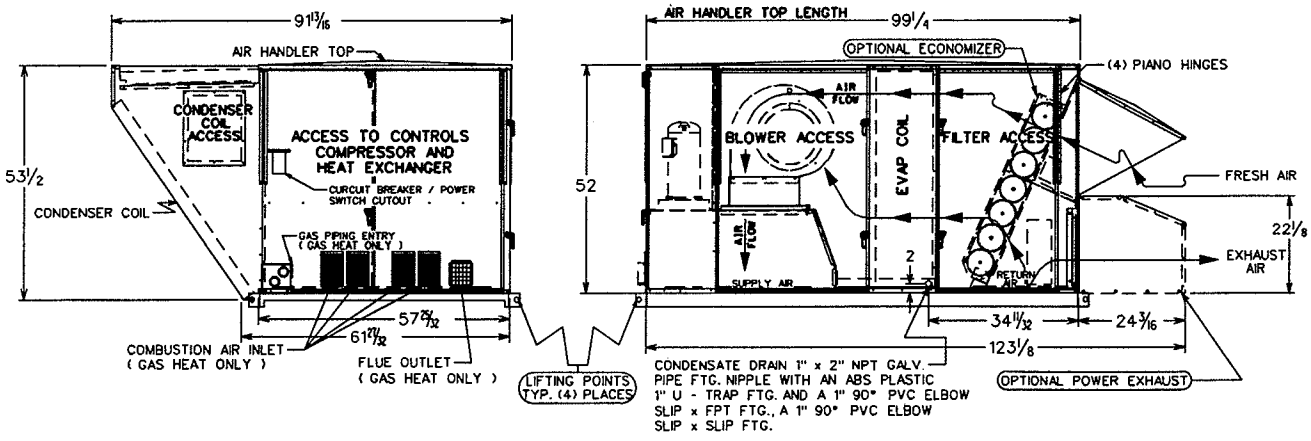


DETAIL A



DETAIL B

NUMBER OF CONDENSER FANS
16-20 TON - 2 FAN
24 TON - 3 FAN



specifications • 'D&E' cabinet

UNIT FEATURES	'D' Cabinet			'E' Cabinet	
	25	30	40	50	60
NOMINAL CAPACITY TONS	25	30	40	50	60
EER - FULL LOAD (1)	10.0	9.9	9.8	9.4	9.6
REFRIGERANT CHARGE lbs./ no. of systems	9.5 (4)	11.0 (4)	16.0 (4)	18.5 (4)	26.7 (4)
COMPRESSOR (HERMETIC) Quantity	(4)				
CONDENSER COIL Face Area Sq. Ft. / Rows / Fins per inch	63 / 2 /10		63 / 3 / 10	63 / 4 / 12	
CONDENSER FANS Quantity / Diameter	(2) / 36"			(2) / 36"	
CONDENSER FAN MOTORS HP / RPM EACH	1 HP / 1140	2 HP / 1140		3 HP / 1140	
EVAPORATOR COIL - Standard Face Area Sq. Ft. / Rows / Fins per inch	31.0 / 3 /12		31.0 / 4 /12	38.75 / 4 / 12	38.75 / 6 / 12
EVAPORATOR COIL - 6 Row Face Area Sq. Ft. / Rows / Fins per inch	31.0 / 6 / 12			38.75 / 6 / 12	
EVAPORATOR BLOWER • BELT DRIVE Quantity / Wheel D x W / Type	(2) 15x15 / FC	(4) / 15 x 11 / FC			
EVAP. BLOWER MOTOR HP - Standard	(2) 3		(2) 5	(2) 10	(2) 15
EVAP. BLOWER MOTOR HP - Oversize	(2) 5		(2) 7.5	(2) 15	(2) 20
EVAP. BLOWER MOTOR HP - Double Oversize	(2) 7.5		(2) 10	(2) 20	(2) 25
GAS FURNACES • TYPE Standard Material / Optional Material	TUBULAR - INDUCED DRAFT / ALUMINIZED STEEL / STAINLESS STEEL				
IGNITION	NON-STANDING , AUTOMATIC , SPARK RELIGHT				
GAS CONNECTION (F.P.T.)	2 @ .75				
FILTERS - TYPE PLEATED QTY / SIZE	(10) 20" x 25" x 2" (optional 4")			(12) 20" x 25" x 2" (optional 4")	
POWER EXHAUST • PROPELLER FANS • *Extended Curb Required*	(1) or (2) 36" DIRECT DRIVE PROP. EXH. FANS (1) or (2) 3 HP MTR. • 1140 RPM EA. •				
POWER EXHAUST • Quantity / Wheel D x W / Type • FORWARD CURVED FANS • BELT DRIVE MTRS.	(4) BELT DRIVE / 15 x 11 / FC				
	(2) 3 HP - Standard			(2) 5 HP - Standard	
	(2) 5 HP - Oversize			(2) 7.5 HP - Oversize	
UNIT NET WEIGHTS	25	30	40	50	60
BASE UNIT (Cooling Only)	3410	3500	3900	4250	4475
GAS Heat Exchanger • high heat • Standard	370				
GAS Heat Exchanger • low heat • Standard	320				
ELECTRIC HEAT	150				
HOT WATER OR STEAM COIL	250				
ECONOMIZER	383				
POWER EXHAUST • PROP / FC	600 / 900				
VAV (Variable Air Volume)	170	250			
CURB WEIGHTS					
KNOCKDOWN CURB • 14" / 24" HIGH	360 / 710				
ACOUSTICAL CURB • 14" / 24" HIGH	480 / 830				
POWER EXH.(PROP)EXTENDED CURB • 14" / 24"	576 / 987				

(1) 80/67 RETURN AIR, 400 CFM / TON, E.S.P. = .50 H_20, 95° OUTSIDE AIR. UNITS RATED AT OR ABOVE 250,000 BTUH NO CERTIFICATION PROGRAM IS APPLICABLE, HOWEVER, UNITS ARE TESTED IN ACCORDANCE WITH ARI STANDARDS.

25 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 12,500 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP.@ 12,500 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	372820	360248	347192	335372	322900	388624	375320	361548	349368	336228
		Sensible	351528	345724	339524	335372	322900	365140	360072	355596	349368	336228
	85	Total	366652	353640	340824	326712	312468	385888	368448	353496	338812	323584
		Sensible	285724	280792	277456	271768	266708	297284	288676	282904	278068	272628
	80	Total	364580	351288	337580	323516	309400	383640	369328	354676	339484	323632
		Sensible	219452	214120	209664	205020	201088	227412	222720	217928	213008	207924
	75	Total	362528	349180	335464	321392	306900	381732	367784	353020	337900	321824
		Sensible	151240	146884	142440	137916	133300	157664	153044	148212	143300	138136
67	90	Total	369832	358648	347020	334976	322528	386156	374232	361888	349108	335904
		Sensible	369832	358648	347020	334976	322528	386156	374232	361888	349108	335904
	85	Total	350892	340004	328672	316928	304968	366420	354804	342780	330328	317608
		Sensible	350892	340004	328672	316928	304968	366420	354804	342780	330328	317608
	80	Total	340760	328344	315576	302900	288936	356724	343780	329776	315848	301544
		Sensible	290036	284368	279144	275120	268540	302776	297980	292128	286612	281188
	75	Total	338632	325660	313180	299380	286148	355220	341988	327948	313360	299360
		Sensible	222284	216388	213016	206804	203028	231196	226296	221136	215820	210740
	70	Total	336340	323780	310776	297452	283816	353920	340776	326816	312480	297376
		Sensible	155260	150644	145900	141076	136176	161860	156968	151824	146584	141116
62	90	Total	369576	358400	346784	334756	322316	385904	373988	361656	348884	335688
		Sensible	369576	358400	346784	334756	322316	385904	373988	361656	348884	335688
	85	Total	350620	339764	328448	316744	304500	366124	354564	342560	330148	317340
		Sensible	350620	339764	328448	316744	304500	366124	354564	342560	330148	317340
	80	Total	331976	321432	310408	298996	287392	346696	335460	323772	311668	299344
		Sensible	331976	321432	310408	298996	287392	346696	335460	323772	311668	299344
	75	Total	316728	305260	293912	282020	269464	331556	318868	305528	292820	280332
		Sensible	289084	284648	280076	274220	266604	303512	297208	290156	284180	278620
	70	Total	313308	301528	289252	276124	263684	328116	316104	302376	289148	275260
		Sensible	224716	219892	214980	208276	204480	234604	229640	224024	218648	212640
57	75	Total	313692	303376	292612	281536	270096	327584	316604	305204	293480	281392
		Sensible	313692	303376	292612	281536	270096	327584	316604	305204	293480	281392
	70	Total	294872	285728	275152	264372	253420	306948	298168	287080	275596	263904
		Sensible	289904	285728	275152	264372	253420	302448	298168	287080	275596	263904

			STANDARD EVAPORATOR @ 10,000 CFM					6 ROW EVAPORATOR @ 10,000 CFM				
72	90	Total	361400	349080	335628	322220	309496	374068	361936	349420	334880	319808
		Sensible	306912	303348	298272	293444	290196	313508	310964	306684	301812	296820
	85	Total	357708	345076	331880	318028	304776	375008	361440	347136	331612	315136
		Sensible	252252	248748	244572	239704	235772	260180	255532	250668	245472	238484
	80	Total	356884	344176	330992	317420	303488	373908	359836	346336	331776	316332
		Sensible	198672	194348	189904	185368	180760	204584	199752	195136	190220	185072
	75	Total	354804	341956	328716	315120	301188	372900	359064	344844	329972	315048
		Sensible	142708	138328	133856	129304	124684	149012	144232	139368	134340	129344
67	90	Total	348964	338748	328072	317008	305452	361328	350544	339364	327780	315796
		Sensible	348964	338748	328072	317008	305452	361328	350544	339364	327780	315796
	85	Total	335496	323684	312912	300724	289204	348968	335952	323584	310564	298896
		Sensible	309320	304696	300360	294248	289204	319612	313376	309880	303804	298896
	80	Total	330784	319432	307076	294412	282016	346044	333140	320204	306208	327588
		Sensible	257596	253880	248356	242984	239120	265304	260304	255340	250036	284824
	75	Total	330352	318328	305700	292808	280176	346092	332636	319252	306208	291824
		Sensible	201872	197492	192452	187388	183428	208484	203292	198168	193204	187808
	70	Total	328608	316548	304028	291188	278036	344912	331976	318584	304552	290752
		Sensible	146652	142032	137280	132448	127548	153020	148004	142860	137532	132332
62	90	Total	348724	338516	327852	316796	305248	361044	350316	339140	327560	315588
		Sensible	348724	338516	327852	316796	305248	361044	350316	339140	327560	315588
	85	Total	331152	321212	310796	299912	288756	342892	332456	321548	310168	298496
		Sensible	331152	321212	310796	299912	288756	342892	332456	321548	310168	298496
	80	Total	313476	304196	294020	283484	272788	323520	314896	304220	293212	281992
		Sensible	311128	304196	294020	283484	272788	319592	314896	304220	293212	281992
	75	Total	307344	296300	284656	272828	260632	320196	307736	295400	282732	270124
		Sensible	258716	253964	248676	243660	238356	266876	261552	256316	250972	245712
	70	Total	305184	293884	282016	269672	257268	319124	306492	294504	281628	268420
		Sensible	204516	199868	194740	188936	183736	211592	206184	201072	195644	190128
57	75	Total	296808	287388	277392	267152	256608	307468	297508	287100	276360	265340
		Sensible	296808	287388	277392	267152	256608	307468	297508	287100	276360	265340
	70	Total	283732	273188	262464	252192	241076	294328	283752	271588	260012	248140
		Sensible	259488	254040	249488	244612	238540	268000	263696	256184	251104	244124

mechanical cooling capacities • 25 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 7500 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 7500 CFM • Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	388292	375244	361948	347852	332820	406176	391392	376768	361668	346996
		Sensible	186388	182492	178576	174484	170192	191768	187328	182976	178536	174256
	85	Total	386836	373620	360000	346140	331636	404792	390720	376120	361588	346156
		Sensible	144252	140316	136308	132264	128092	149724	145468	141104	136804	132304
72	90	Total	345168	333840	321492	308988	296660	358820	346192	333136	319752	306028
		Sensible	259224	255096	250680	246252	241916	264200	259560	254816	250016	245152
	85	Total	344756	332960	320616	307280	294068	357852	345752	332252	318736	304952
		Sensible	217708	213408	208964	204236	199596	222560	218068	213160	208300	203404
	80	Total	343804	331788	319164	306360	293204	358236	345596	331956	318360	304424
		Sensible	175992	171612	167064	162504	157872	181340	176664	171692	166792	161832
	75	Total	342056	330036	317588	304788	291640	357480	344696	331504	317932	303996
		Sensible	133996	129604	125104	120536	115900	139736	134992	130160	125256	120280
67	90	Total	323208	313396	302276	290892	280580	331844	320456	308476	296884	287096
		Sensible	304748	301148	295232	289472	280580	308924	304252	299052	294032	287096
	85	Total	319684	308840	297376	285560	273972	330832	318904	306648	294220	281448
		Sensible	262808	258400	253788	248820	244512	267336	262440	257460	252464	247392
	80	Total	317408	306228	294504	282940	270160	329372	318100	305148	293128	279516
		Sensible	222104	217536	212804	208168	203132	227028	222364	217088	212220	206800
	75	Total	317376	306192	294492	282444	269928	329736	318256	305940	292820	280268
		Sensible	179440	174876	170148	165340	160404	184556	179800	174768	169488	164472
	70	Total	315880	304644	292928	280884	268528	329404	317516	305156	292448	279408
		Sensible	137620	133028	128288	123476	118592	143232	138308	133248	128112	122904
62	90	Total	318412	309508	300108	290360	280404	326104	316912	307236	297192	287020
		Sensible	318412	309508	300108	290360	280404	326104	316912	307236	297192	287020
	85	Total	302808	294104	284924	275452	265732	310172	301196	291740	282044	271956
		Sensible	302808	294104	284924	275452	265732	310172	301196	291740	282044	271956
	80	Total	295400	285100	274692	263616	253200	304080	293680	281564	270012	258204
		Sensible	264804	259896	255868	250912	246140	269568	264832	259392	254188	248448
	75	Total	292924	282356	271740	260412	249056	303476	292448	281172	268864	256716
		Sensible	223468	218712	213972	208976	204020	228252	223236	218148	212680	207340
	70	Total	292300	281816	270796	259464	247832	303144	292112	280480	268480	256644
		Sensible	182108	177376	172456	167448	162368	187048	182016	176776	171428	166204

			STANDARD EVAPORATOR @ 5000 CFM					6 ROW EVAPORATOR @ 5000 CFM				
80	100	Total	363996	352412	340260	327684	314664	375620	363464	350800	337104	323604
		Sensible	213296	209368	205316	201196	197004	217168	212988	208704	204172	199776
	90	Total	362652	351032	339212	326664	313712	375116	362840	350236	337184	323700
		Sensible	157512	153552	149580	145440	141244	161756	157512	153220	148856	144424
	85	Total	361640	350004	337956	325388	312416	374320	362144	349880	336772	323236
		Sensible	129496	125524	121472	117320	113112	133876	129652	125452	121056	116596
72	100	Total	320580	310652	300016	289616	277808	327620	317056	306412	294576	282816
		Sensible	263060	258980	254684	250528	245924	265812	261432	257076	252336	247692
	90	Total	319356	308988	297804	286624	275016	327688	316576	305360	294252	282328
		Sensible	207592	203320	198792	194332	189772	210972	206352	201756	197264	192532
	85	Total	318724	308496	297640	286420	274812	327200	316524	305288	293656	281648
		Sensible	179860	175632	171220	166728	162156	183332	178876	174260	169560	164788
	80	Total	317820	307680	296812	285580	273932	327220	316660	305428	293816	281836
		Sensible	152012	147816	143388	138884	134296	155892	151468	146840	142132	137352
	75	Total	316924	306516	295628	284380	272780	326924	316156	304908	293284	281284
		Sensible	124164	119852	115412	110900	106320	128332	123812	119164	114440	109648
67	90	Total	293284	283984	274084	264192	253728	300144	290332	279996	268840	257800
		Sensible	237388	233144	228704	224320	219756	240412	235900	231220	226256	221412
	85	Total	293168	283308	273432	263020	251800	299728	290184	279436	268608	257896
		Sensible	209944	205452	201000	196384	191500	212884	208484	203612	198776	194056
	80	Total	291736	282496	272320	261896	250848	299268	289064	278628	267788	257068
		Sensible	182984	178744	174148	169508	164672	186392	181680	176928	172064	167316
	75	Total	291984	282352	272196	261712	250900	299636	289732	279292	268504	257368
		Sensible	154632	150224	145640	140980	136248	158124	153540	148784	143940	139024
	70	Total	291072	281404	271228	260720	249892	299364	289416	278952	268148	257000
		Sensible	126828	122396	117800	113124	108380	130636	126028	121252	116392	111460
62	90	Total	273176	264732	256324	248524	240580	275464	266584	266584	251496	243328
		Sensible	268280	264064	256324	248524	240580	269244	264804	264804	251496	243328
	85	Total	269736	261252	252020	242080	232484	274192	265108	255792	245844	235132
		Sensible	239200	234964	230416	225600	220996	241328	236768	232148	227292	222152
	80	Total	268692	259340	250136	239984	230172	274284	264748	255352	244816	234512
		Sensible	211356	206696	202160	197240	192540	214088	209304	204640	199492	194532

30 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 15,000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP.@ 15,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	515145	492901	469691	448255	424257	523560	500112	475642	450916	425670
		Sensible	446677	438646	430307	424992	413183	451426	442944	433850	425546	414108
	85	Total	508635	486235	462228	438228	414574	519012	495202	482894	457396	417128
		Sensible	365537	358596	350075	342894	335744	372850	364770	360306	351208	335804
	80	Total	505992	482964	459476	436013	411009	516686	491776	466770	441194	414942
		Sensible	285460	276714	268554	262245	254188	291522	283024	274570	266366	257880
	75	Total	499771	478048	454898	430614	406412	512182	487762	463948	438408	411776
		Sensible	204572	197376	189788	181504	174134	207114	198898	190958	182548	173886
67	90	Total	508385	489332	469562	448722	427047	516360	496416	475514	453532	430526
		Sensible	508385	489332	469562	448722	427047	516360	496416	475514	453532	430526
	85	Total	477630	459709	438784	424274	403269	484456	463390	441640	428750	406874
		Sensible	449717	442879	430896	424274	403269	452352	443516	432200	428750	406874
	80	Total	468119	447965	427601	405767	382487	477376	455544	432334	409146	385330
		Sensible	371317	364524	356993	348165	337612	376510	368358	358412	350510	340428
	75	Total	466506	445568	424150	401872	378128	475242	452482	429688	406218	381794
		Sensible	288899	280710	272981	264806	254612	294852	284976	276604	268188	259014
	70	Total	460774	440707	418841	396880	374644	471584	449924	426416	403700	379044
		Sensible	208725	201742	192265	184008	177397	211716	203518	194728	186310	177288
62	90	Total	507985	488954	469205	448385	426732	516030	495976	475090	453210	430226
		Sensible	507985	488954	469205	448385	426732	516030	495976	475090	453210	430226
	85	Total	480758	462489	443558	423555	402964	488380	469154	449166	428262	406442
		Sensible	480758	462489	443558	423555	402964	488380	469154	449166	428262	406442
	80	Total	453841	436431	418297	399559	379542	461068	442768	423776	403836	383002
		Sensible	453841	436431	418297	399559	379542	461068	442768	423776	403836	383002
	75	Total	433358	414475	394874	374560	354054	439294	419346	398340	377612	355438
		Sensible	372974	364279	355363	346312	337526	375452	367580	356798	348162	337310
	70	Total	427973	409130	389544	368401	347440	435908	415592	394124	372530	350168
		Sensible	289853	282685	275168	265075	257253	296724	288140	278240	269418	260160
57	75	Total	427198	410561	393019	375138	356194	434118	416446	398184	379208	359382
		Sensible	427198	410561	393019	375138	356194	434118	416446	398184	379208	359382
	70	Total	398029	381025	365270	351577	333690	403768	385188	367152	351136	336478
		Sensible	371487	364211	356881	351577	333690	376390	366322	357572	350354	336478

			STANDARD EVAPORATOR @ 12,000 CFM					6 ROW EVAPORATOR @ 12,000 CFM				
72	90	Total	499078	477336	456012	433713	409299	505104	482064	459828	433934	409372
		Sensible	398569	389000	381691	374132	364163	397474	388302	381510	370794	361350
	85	Total	495641	473270	450881	427641	403582	502056	478808	455482	431256	406138
		Sensible	330221	321173	313412	305481	297460	330258	322084	313962	305652	297166
	80	Total	492685	471132	448291	425280	401452	500072	477914	453444	429618	404114
		Sensible	263840	255873	246631	238702	230713	263348	255512	247000	238802	230172
	75	Total	487865	466569	444119	421362	398067	497372	474428	450852	427408	402066
		Sensible	193756	186365	178674	170964	163163	196178	188064	179836	171752	163152
67	90	Total	471516	459457	441755	423139	403758	470970	457572	442678	423440	403242
		Sensible	463961	459457	441755	423139	403758	459756	456884	442678	423440	403242
	85	Total	461052	441713	421187	400582	380497	463930	443172	422510	400552	378330
		Sensible	399895	391821	382792	375113	366335	398048	389478	380884	370692	362340
	80	Total	454978	435196	413916	392588	371499	449504	439280	417660	396100	373024
		Sensible	334774	327015	317580	309387	301834	331316	327272	318338	310522	300810
	75	Total	452642	433591	412423	391298	369985	459228	438448	417380	394672	371346
		Sensible	265253	258963	249127	241062	234471	267312	259092	250852	242106	233236
	70	Total	448959	429330	408662	388023	366306	456876	435902	414620	392690	369512
		Sensible	198200	190561	182611	174752	166583	200414	192106	183780	175306	166476
62	90	Total	476130	459092	441404	422681	403246	478310	460676	442354	423108	402908
		Sensible	476130	459092	441404	422681	403246	478310	460676	442354	423108	402908
	85	Total	450871	434660	417654	399847	381088	453170	436212	418620	400058	380854
		Sensible	450871	434660	417654	399847	381088	453170	436212	418620	400058	380854
	80	Total	424370	408990	391302	377226	359335	426924	407562	389396	374902	359132
		Sensible	400084	394420	384869	377226	359335	399180	388172	380430	374528	359132
	75	Total	418200	399202	381235	362277	342976	422446	403532	383468	363196	342426
		Sensible	335232	325696	318187	309593	302023	335952	327214	317048	307918	299178
	70	Total	415082	396889	378090	359207	338452	420684	401644	381964	360848	339822
		Sensible	267325	259157	250951	244251	234057	270236	261898	253382	243912	234714
57	75	Total	401742	386718	370888	354745	337484	403648	388140	371950	355222	337550
		Sensible	401742	386718	370888	354745	337484	403648	388140	371950	355222	337550
	70	Total	383334	367478	349902	332427	314246	385494	368532	350504	332744	313668
		Sensible	335429	328406	318221	309918	301384	334542	326776	317676	309334	298580

mechanical cooling capacities • 30 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 9000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 9000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	538782	516095	492237	467464	441932	543490	520322	495666	469576	443384
		Sensible	249671	242740	235572	228251	220826	247276	240026	232456	224598	216844
	85	Total	534969	512507	489109	464985	439595	542372	518606	493704	468098	442080
		Sensible	196031	189157	182107	174949	167546	197030	189580	181918	174178	166444
72	90	Total	474447	455486	434152	412631	391515	475862	455510	434328	412570	390084
		Sensible	339703	333602	324828	316988	310733	333932	326206	318280	310300	302190
	85	Total	473457	453772	433217	411868	389685	475150	455082	433418	411698	388404
		Sensible	288701	281348	273789	266060	258157	284126	276482	268380	260386	251974
	80	Total	471062	451423	430524	409294	387174	474554	453592	432494	410196	387324
		Sensible	235711	228368	220685	212990	205097	234356	226370	218454	210236	201950
	75	Total	467224	447722	427591	406458	384332	472262	452150	430938	408488	386234
		Sensible	182180	174886	167466	159795	151898	183948	176260	168288	160002	151910
67	90	Total	441079	423414	404319	387771	368205	438138	419946	400662	381030	360872
		Sensible	394733	386941	377800	372955	362001	387066	379592	370486	360666	351994
	85	Total	435127	417320	399204	380756	360445	435884	417504	398794	378436	357628
		Sensible	341974	334919	327410	320263	310815	337000	329226	321426	313088	304700
	80	Total	433307	414658	396141	376962	356056	434238	415296	395958	375536	354744
		Sensible	293592	284636	277302	270035	260602	288750	280706	272616	264216	255798
	75	Total	432078	414082	394901	375478	355138	433370	415478	395894	375522	354686
		Sensible	239362	231856	223977	216107	207990	237224	229622	221438	213060	204628
	70	Total	428625	410727	392269	372766	352650	432310	413700	393928	374192	353512
		Sensible	186012	178548	170951	163045	155007	187398	179490	171222	163086	154698
62	90	Total	430436	416204	401187	385481	368804	426006	411644	396540	380654	363860
		Sensible	430436	416204	401187	385481	368804	426006	411644	396540	380654	363860
	85	Total	407672	392416	380189	365016	349159	400998	384714	375806	360524	344390
		Sensible	396615	388388	380189	365016	349159	385434	377436	375806	360524	344390
	80	Total	399958	383355	366590	349665	330757	398464	380900	363782	345352	326610
		Sensible	344999	335927	327841	320891	310969	338896	330346	322470	313614	304276
	75	Total	396834	380489	362684	345343	326148	396850	379558	361942	343278	324720
		Sensible	293094	285844	276596	269827	259892	288928	280880	272792	264352	256066
	70	Total	394674	378159	361018	343161	324805	395452	378524	361306	342960	323472
		Sensible	241465	233881	225956	217723	209775	239056	231164	223238	214920	206226

			STANDARD EVAPORATOR @ 6000 CFM					6 ROW EVAPORATOR @ 6000 CFM				
80	100	Total	499809	480718	459884	439018	416847	495616	475560	455176	434246	411480
		Sensible	283035	276285	269104	262054	254743	276430	269202	262022	254814	247194
	90	Total	496496	477437	457533	436511	414347	494326	475014	454746	432822	410466
		Sensible	212219	205464	198557	191428	184088	209806	202790	195602	188030	180490
	85	Total	493933	474934	455089	434135	412038	493144	473858	453602	432550	410116
		Sensible	176483	169745	162854	155741	148419	176296	169278	162076	154768	147178
72	100	Total	434627	417790	401727	384283	365911	427252	411036	394464	376700	357948
		Sensible	344343	337211	330524	323423	316095	333408	326416	319418	312080	304504
	90	Total	432534	416217	399082	380966	362125	426634	410360	393394	375656	356450
		Sensible	274258	267319	260167	252762	245219	267384	260342	253148	245780	237994
	85	Total	431887	414967	398389	379918	360917	426126	409784	392686	374664	355742
		Sensible	239368	232177	225234	217681	210070	234276	227194	219932	212442	204748
	80	Total	430095	413496	396756	378693	359837	426022	409702	392186	374408	355284
		Sensible	204004	196935	189924	182521	174951	201334	194244	186794	179384	171596
	75	Total	427774	411486	394477	376478	357659	424982	408662	391692	373626	354670
		Sensible	168407	161459	154344	146965	139408	167994	160892	153656	146114	138372
67	90	Total	395508	380708	364642	348806	332602	388782	373956	358284	341648	325316
		Sensible	311175	304242	296863	289704	282525	301898	294862	287546	279960	272638
	85	Total	394479	379632	364111	347488	330372	388316	373036	357864	341416	324050
		Sensible	276201	269241	262092	254583	246995	268882	261628	254544	247022	239240
	80	Total	392441	377607	362497	345724	328482	386358	372164	356196	340026	322866
		Sensible	242140	235167	228175	220574	212908	236506	229724	222256	214824	207100
	75	Total	392311	377523	361932	345511	328377	387258	372588	357088	340770	323276
		Sensible	206181	199235	192044	184605	176989	202784	195786	188528	181032	173166
	70	Total	390309	375527	359955	343570	326511	386344	371702	356200	339806	322810
		Sensible	170739	163798	156613	149192	141606	169552	162560	155290	147752	140086
62	90	Total	364182	351686	339482	326818	314147	353758	340384	327234	317208	305064
		Sensible	348196	341768	335585	326818	314147	334926	328018	320792	316214	305064
	85	Total	360690	347633	333419	318841	303899	352864	339056	325596	310480	295076
		Sensible	311958	305303	298183	290991	283733	301728	294626	287802	280284	272758
	80	Total	359037	345388	331387	316240	300279	352010	338730	324580	309454	294108
		Sensible	276707	269749	262718	255247	247516	268582	261730	254556	247024	239510

40 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 18,000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP.@ 18,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	592922	566238	542336	519024	492534	596518	571656	545082	531730	504166
		Sensible	551362	539920	532566	519024	492534	549106	540878	529310	531730	504166
	85	Total	582614	555156	528730	499980	470634	585282	554436	520596	503678	474640
		Sensible	449740	438420	431170	420674	410758	443812	426818	430832	420128	409318
	80	Total	577316	550906	522474	494332	464968	581864	554394	525098	494276	481266
		Sensible	343578	335616	324686	316402	307042	343144	333080	320646	307010	306304
	75	Total	572260	545456	518176	489774	460810	574644	547434	520210	491814	462832
		Sensible	239324	230630	221854	212808	203662	239936	229750	220024	211274	202238
67	90	Total	591040	567980	543584	518318	491706	606932	582680	557440	531070	503346
		Sensible	591040	567980	543584	518318	491706	606932	582680	557440	531070	503346
	85	Total	557216	537096	514030	490082	464894	559372	550880	527006	501980	475786
		Sensible	554766	537096	514030	490082	464894	552806	550880	527006	501980	475786
	80	Total	538024	513194	488494	463492	437300	541088	504614	491600	466082	440042
		Sensible	453680	443498	434718	424142	413458	451808	438442	432458	422700	413968
	75	Total	533274	508114	483444	457112	429574	523964	511488	485768	459506	487098
		Sensible	347160	336962	329900	320404	309534	341098	336444	327120	318528	381768
	70	Total	528696	504046	478550	452408	425694	530020	493490	480274	453690	426920
		Sensible	244846	235842	226014	216030	206678	243356	231716	225328	214064	204322
62	90	Total	590572	567536	543170	517930	491352	606488	582258	557046	530702	502842
		Sensible	590572	567536	543170	517930	491352	606488	582258	557046	530702	502842
	85	Total	558892	536606	513560	489310	464396	573748	550574	526506	501400	475298
		Sensible	558892	536606	513560	489310	464396	573748	550574	526506	501400	475298
	80	Total	527646	506334	484322	461190	437490	541488	519456	496412	472084	447692
		Sensible	527646	506334	484322	461190	437490	541488	519456	496412	472084	447692
	75	Total	498924	476338	453408	432022	410940	500402	478556	455542	432834	420432
		Sensible	454622	442366	431376	423952	410940	449792	441346	431210	419726	420432
	70	Total	490742	468422	444486	419894	395572	493290	470344	445980	422082	397482
		Sensible	349680	341770	331176	320464	311032	349216	339642	328274	320050	309816
57	75	Total	496600	476242	455052	433460	410700	509426	488280	466400	443754	420094
		Sensible	496600	476242	455052	433460	410700	509426	488280	466400	443754	420094
	70	Total	463202	447086	427132	406336	384718	463026	458140	437278	415662	393226
		Sensible	455334	447086	427132	406336	384718	450002	458140	437278	415662	393226

			STANDARD EVAPORATOR @ 16,000 CFM					6 ROW EVAPORATOR @ 16,000 CFM				
72	90	Total	573686	547116	522480	495786	468212	575310	536688	523524	496804	469326
		Sensible	486426	475498	467456	456550	445946	483222	468010	462904	453344	443668
	85	Total	566844	541076	514944	488764	460462	569252	543844	503462	489804	461100
		Sensible	400130	391316	382104	374378	363896	398054	389962	375080	370198	359606
	80	Total	564000	538094	512420	484256	456498	566618	541034	514004	486842	458458
		Sensible	314392	304818	297726	286484	278342	313930	304720	295272	286236	277286
	75	Total	559762	534280	507868	481110	452938	560676	535732	509528	481524	453986
		Sensible	225528	216898	208052	199178	189956	225666	217224	208450	199186	190182
67	90	Total	556716	535820	514072	491196	467376	568424	546868	524394	500850	476396
		Sensible	556716	535820	514072	491196	467376	568424	546868	524394	500850	476396
	85	Total	531438	509344	484872	463450	441778	520500	508842	486132	462216	450034
		Sensible	487242	478872	466728	458948	441778	478584	473614	466200	452220	450034
	80	Total	523056	499484	475268	450936	424806	524304	500606	476964	450878	425494
		Sensible	406892	396702	386732	378336	367496	404336	394198	385582	373988	365154
	75	Total	519998	496408	471866	446604	421000	521458	485672	473568	448404	435602
		Sensible	317646	308540	298814	289094	280500	315936	303178	298734	289440	285054
	70	Total	516224	492716	468264	443712	417664	516406	493508	468302	443460	418454
		Sensible	230908	221962	212758	203602	194010	230822	222114	212640	203398	194194
62	90	Total	556364	535402	513676	490760	467022	567994	546472	524004	500466	475858
		Sensible	556364	535402	513676	490760	467022	567994	546472	524004	500466	475858
	85	Total	526964	506846	486030	464100	441444	537840	517192	495680	472928	449726
		Sensible	526964	506846	486030	464100	441444	537840	517192	495680	472928	449726
	80	Total	495466	478744	458968	438138	416346	493502	488376	467922	446296	424044
		Sensible	490014	478744	458968	438138	416346	484066	488376	467922	446296	424044
	75	Total	482024	460888	438930	415806	393038	482792	461136	438758	415990	393004
		Sensible	404704	396054	387066	376874	365442	403212	393710	383712	373192	362760
	70	Total	478220	456070	433414	410258	386686	467450	456530	422610	411190	387540
		Sensible	321336	310880	300746	291034	282126	314036	309220	295084	290648	281464
57	75	Total	468976	450674	431444	411742	390962	478526	459630	439812	419532	398182
		Sensible	468976	450674	431444	411742	390962	478526	459630	439812	419532	398182
	70	Total	442630	424244	404220	384548	366530	442434	423992	403864	382926	373060
		Sensible	405642	396440	385766	376804	366530	402822	394818	383916	371084	373060

mechanical cooling capacities • 40 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 12,000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 12,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	617752	590260	562200	533408	502174	619578	591720	563804	534250	503966
		Sensible	297044	288928	280756	272486	263688	297292	289076	280942	272490	263952
	85	Total	614468	587340	559354	530348	500124	615414	588352	560330	531316	501776
		Sensible	229370	221338	213168	204822	196258	229394	221394	213230	204900	196538
72	90	Total	548136	524742	500436	475184	448074	546848	524054	499538	460608	447046
		Sensible	413166	404724	396072	387214	376444	411026	403154	393600	378680	373250
	85	Total	545388	520928	496352	471208	443882	544510	520608	495750	471120	444138
		Sensible	345990	337156	328388	319544	310108	345398	336496	327292	319288	309902
	80	Total	542888	519086	494266	468652	442242	541994	517890	493964	468720	442168
		Sensible	278896	270270	261410	252394	243236	278332	269624	261092	252218	243034
	75	Total	539270	515650	491252	465966	439518	538024	515064	489860	465314	438864
		Sensible	211388	202820	194088	185170	175988	210738	202422	193436	184794	175630
67	90	Total	511998	490712	471092	451164	430690	508118	487364	466404	456656	435878
		Sensible	481386	471076	463178	451164	430690	475048	465518	456578	456656	435878
	85	Total	504270	482746	460828	437982	414758	481232	481232	458748	435828	412244
		Sensible	415200	406084	397688	389006	379608	403610	403610	393872	384492	374338
	80	Total	500132	477620	455780	432394	408826	498792	476850	454242	431096	407470
		Sensible	352144	342596	334260	325022	315840	350632	341388	331986	322978	312994
	75	Total	499140	477320	454370	431194	407324	497900	475554	453426	430280	406044
		Sensible	283508	274664	265492	256344	247050	282792	273762	264928	255820	246414
	70	Total	495838	474156	451860	428506	404340	493344	472370	450592	426824	403772
		Sensible	216220	207426	198494	189272	179860	215040	206550	197844	188486	179518
62	90	Total	506620	488768	470256	450702	430316	512954	494984	476116	456236	435470
		Sensible	506620	488768	470256	450702	430316	512954	494984	476116	456236	435470
	85	Total	480278	463288	445476	427010	407256	486406	469102	450968	432078	412168
		Sensible	480278	463288	445476	427010	407256	486406	469102	450968	432078	412168
	80	Total	463286	444056	424550	404032	384498	461280	441186	421346	401488	380456
		Sensible	416744	408214	398268	388472	379830	413416	404126	393536	384772	373616
	75	Total	459282	438490	418540	397990	375518	456946	437186	417186	395600	374394
		Sensible	353266	342528	333822	325624	314258	349924	341478	332446	321268	312780
	70	Total	457390	437384	416272	395342	372658	454980	435230	415214	393620	371726
		Sensible	286680	277724	268398	259248	249410	285222	276272	267766	257822	248362

			STANDARD EVAPORATOR @ 8000 CFM					6 ROW EVAPORATOR @ 8000 CFM				
80	100	Total	578796	554760	530010	504570	477280	574228	552296	526968	501576	475364
		Sensible	340012	331924	323766	315548	306950	337990	330628	322344	314198	305976
	90	Total	576086	552560	527968	502494	475672	571650	549094	524976	499820	472980
		Sensible	250554	242590	234438	226166	217650	248694	241096	233144	225024	216558
	85	Total	573756	550302	525788	500282	473488	570392	546866	522428	498274	471638
		Sensible	205492	197540	189396	181102	172582	204042	196116	188048	180218	171790
72	100	Total	507474	488352	466800	445432	422446	501570	481558	461756	440080	417382
		Sensible	418636	410822	402212	393814	384976	415728	407642	399776	391334	382630
	90	Total	504136	483268	462200	440636	417026	499138	478896	457970	436608	413698
		Sensible	329310	320800	312350	303858	294776	326888	318678	310344	301990	293222
	85	Total	503078	482892	461840	439804	416104	497966	478336	456772	436138	412750
		Sensible	284906	276638	268178	259492	250358	282482	274494	265896	257800	248832
	80	Total	501408	481250	460316	438314	415222	495776	476092	455534	434056	412296
		Sensible	240248	231986	223558	214872	205940	237666	229650	221430	213004	204618
	75	Total	499258	479132	458172	436204	413204	493942	474014	454144	432714	410414
		Sensible	195388	187132	178688	170008	161102	192978	184856	176892	168468	159872
67	90	Total	462268	444356	425662	405314	384948	456054	438402	419934	401014	379914
		Sensible	376612	368520	360212	351346	342612	373430	365516	357372	349162	339644
	85	Total	460176	441870	422830	402408	381952	454426	437312	418154	398970	378506
		Sensible	331846	323570	315102	306198	297424	328922	321226	312768	304434	295694
	80	Total	458732	439772	421264	400722	380272	453166	435282	416624	396796	376404
		Sensible	289058	280468	272194	263200	254390	286248	278184	269904	261266	252538
	75	Total	458306	440064	420910	400808	379942	452308	435126	416454	396634	376496
		Sensible	243328	235056	226518	217718	208746	240372	232624	224350	215722	207104
	70	Total	456440	438180	419042	399002	378144	450440	432884	414514	395078	374858
		Sensible	198648	190364	181826	173046	164070	195726	187814	179662	171190	162530
62	90	Total	429116	415210	401116	386282	370782	420596	416382	402270	387428	371708
		Sensible	424680	415210	401116	386282	370782	415702	416382	402270	387428	371708
	85	Total	422776	405750	388414	371304	353650	415978	399438	382980	365448	348272
		Sensible	378306	369906	361474	353212	344952	374378	365522	357716	348296	339316
	80	Total	419486	402756	386118	368262	349030	413826	397574	380580	363118	344794
		Sensible	332966	324704	316600	308052	299012	329900	321924	313698	305394	296820

50 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 24,000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP.@ 24,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total	816168	782412	747692	711748	673446	860220	823412	785802	746422	705180
		Sensible	681368	666556	652604	635670	621896	732248	718942	706626	688722	672434
	85	Total	784840	751844	722792	688150	651680	831272	793928	760858	722494	681608
		Sensible	560038	549806	541974	526992	511230	592564	580334	569412	557694	542038
	80	Total	777140	743686	708310	671458	633142	824588	786532	747124	706362	664086
		Sensible	433970	424354	414000	401712	387794	457472	444724	434342	421086	405966
	75	Total	770750	736422	702364	665560	627876	818610	780750	741996	701220	659290
		Sensible	308618	296892	285116	273920	263296	325080	311986	298458	285816	273694
67	90	Total	800276	771112	739900	707634	672764	839354	807486	773726	738666	700934
		Sensible	800276	771112	739900	707634	672764	839354	807486	773726	738666	700934
	85	Total	761288	731142	698384	665258	630692	803216	769916	734666	699170	662196
		Sensible	685316	670322	657102	641698	620518	739960	724476	708100	691718	662196
	80	Total	735150	705826	674236	641526	607258	778344	744876	709666	672874	635004
		Sensible	569416	556758	541278	527418	512816	603604	590876	576336	561466	548124
	75	Total	717760	686238	653216	619578	584612	761886	726632	689444	652244	613968
		Sensible	441372	429706	418844	406030	392020	467738	454462	440784	426766	412178
	70	Total	711310	680036	648212	614680	579314	755958	721310	685548	647664	609026
		Sensible	316682	306158	293122	281222	269196	333894	321914	307220	293556	280680
62	90	Total	799942	770520	739422	707210	672780	838830	806972	773174	738150	700990
		Sensible	799942	770520	739422	707210	672780	838830	806972	773174	738150	700990
	85	Total	757396	728866	698878	668178	635074	794300	763454	731268	697632	661840
		Sensible	757396	728866	698878	668178	635074	794300	763454	731268	697632	661840
	80	Total	710904	682352	659094	629354	598682	751276	720504	689518	657194	624012
		Sensible	689222	671844	659094	629354	598682	743386	720504	689518	657194	624012
	75	Total	684830	655968	626236	595824	563642	723672	692092	659102	625492	590598
		Sensible	571446	556178	541734	528300	511090	609930	597218	583316	568456	550760
	70	Total	660464	631554	600668	570998	539142	701142	668598	634784	601416	566508
		Sensible	446440	435548	421090	409664	396318	474536	460894	445232	429540	417222
57	75	Total	672976	647254	620082	591612	562072	705960	677880	648490	617806	586010
		Sensible	672976	647254	620082	591612	562072	705960	677880	648490	617806	586010
	70	Total	635098	607642	579376	551696	522664	670746	641254	610508	580484	548552
		Sensible	572304	555554	541676	527638	512148	616092	600438	584204	568946	548552

			STANDARD EVAPORATOR @ 20,000 CFM					6 ROW EVAPORATOR @ 20,000 CFM				
72	90	Total	792242	760682	728050	693834	657708	836220	801006	764712	726686	687142
		Sensible	619946	607006	591694	579064	563110	651550	640884	626946	614416	599316
	85	Total	767152	735830	702270	666656	635184	813090	777538	740166	701118	665558
		Sensible	512668	502408	489368	476868	468720	534336	521826	508430	496908	484806
	80	Total	762176	729718	696574	659874	623522	808734	772478	735296	694976	654386
		Sensible	406296	394948	383760	370448	359388	424196	411304	397332	384778	370994
	75	Total	757138	724226	690448	654782	618750	804154	767814	729756	690520	650056
		Sensible	295260	284656	273040	261494	250562	312056	300056	286794	273830	261256
67	90	Total	762718	734876	704340	679104	647518	805082	773282	740052	707400	673368
		Sensible	724816	713896	696318	679104	647518	775868	763782	740052	707400	673368
	85	Total	739016	709614	678810	646268	612912	778972	746820	712936	677996	642012
		Sensible	625176	609516	594982	581996	568560	663242	649424	634052	623042	609136
	80	Total	709966	680204	655292	624670	592104	752430	718818	690502	656248	620676
		Sensible	519542	508798	499022	484358	467522	544210	531276	519654	505960	492638
	75	Total	703742	673608	641466	608892	574928	746908	713346	677240	641200	603680
		Sensible	413186	401298	390036	377604	364634	433090	419654	406676	392842	378386
	70	Total	698148	668272	636754	604162	570886	741492	708362	673260	637024	600142
		Sensible	304382	291150	281136	269236	255866	321726	306998	295430	281948	267040
62	90	Total	764750	737638	708610	679096	647060	799744	770578	739556	707426	673038
		Sensible	764750	737638	708610	679096	647060	799744	770578	739556	707426	673038
	85	Total	724406	698056	670324	641846	611782	757622	729320	699814	668722	636426
		Sensible	724406	698056	670324	641846	611782	757622	729320	699814	668722	636426
	80	Total	687764	660218	631478	602274	572066	724774	694692	663858	632244	599890
		Sensible	629678	615382	600520	584780	566660	671036	656180	639388	624114	599890
	75	Total	663506	636624	609086	579844	549680	701784	672210	641276	608824	575458
		Sensible	528758	513144	499500	485924	468880	554808	541254	527420	514248	496084
	70	Total	647778	619350	590334	559572	528390	687032	656040	623918	589462	555414
		Sensible	418910	404804	392276	380854	365844	438710	425028	411028	396982	381272
57	75	Total	639968	620724	595686	568860	541650	675540	648636	621536	592750	563498
		Sensible	627738	620724	595686	568860	541650	672540	648636	621536	592750	563498
	70	Total	615946	589948	563894	536818	508460	650324	621984	592802	563568	532614
		Sensible	528284	513454	500704	485772	471244	559468	546418	532236	517874	502248

mechanical cooling capacities • 50 ton

TEMP. ENT. EVAP.		GROSS COOLING	STD. EVAP. @ 15,000 CFM • Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 15,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
80	90	Total	835516	801500	764910	726136	687270	885142	846856	806340	763866	720660
		Sensible	382560	371924	362236	349466	339466	398442	386194	375110	360976	349498
	85	Total	829772	797064	760824	723026	684012	879246	842840	802742	761434	717808
		Sensible	308688	289502	278944	267324	255314	324670	303892	291924	278986	265408
72	90	Total	745192	715386	689652	658956	627216	787990	755052	726254	691796	656304
		Sensible	531872	520406	510016	496480	483218	548594	535686	524584	512074	498510
	85	Total	738918	707860	675204	641846	608936	782428	748190	712544	675606	639126
		Sensible	447572	436128	424276	410884	399252	464484	451584	438368	423396	410270
	80	Total	736348	705352	672446	639880	605176	780196	745976	710092	673926	635510
		Sensible	364402	352706	341216	328684	316804	381398	368230	355386	341292	327848
	75	Total	728576	698422	666230	633962	599660	772030	738750	703672	667662	629846
		Sensible	293150	281118	268880	255632	244080	310206	296692	283124	268224	255190
67	90	Total	719286	692518	663938	634254	602636	756462	726188	695458	663244	629228
		Sensible	619982	608662	596714	582294	567394	650322	637340	626046	611510	595936
	85	Total	696346	670446	642370	613918	583532	735652	706274	675170	643176	609660
		Sensible	539988	528708	514116	501374	488012	560296	548378	535440	521478	508664
	80	Total	678752	651782	623124	593234	561272	719136	689236	657146	624338	589144
		Sensible	453252	441660	431550	419188	406962	470658	457592	445848	432052	418332
	75	Total	676750	648598	619578	588680	556864	717322	686228	653962	619944	585022
		Sensible	371382	358918	346652	335784	322880	388864	374892	361040	348686	334316
	70	Total	670120	642392	613832	583174	551978	710406	679766	648058	614352	580128
		Sensible	298820	286554	273000	260456	248712	316340	302570	287430	273422	260230
62	90	Total	703182	679294	654622	628658	601158	731310	706130	679942	652012	622758
		Sensible	703182	679294	654622	628658	601158	731310	706130	679942	652012	622758
	85	Total	668428	643224	618496	591234	568934	702390	675118	647256	618450	589360
		Sensible	627094	613682	601024	583476	568934	660014	646036	631664	614968	589360
	80	Total	647654	623234	597472	569802	542122	682552	655506	626648	596192	566232
		Sensible	543164	530160	519020	505546	490436	568484	555446	543292	529770	514292
	75	Total	625458	599976	573784	549870	522410	661912	633472	604786	578174	547812
		Sensible	459872	448928	435934	426126	410156	477740	464674	450806	439738	424836
	70	Total	620988	595038	568022	539898	510620	657888	629034	599412	568608	536726
		Sensible	376134	364506	352020	339246	327524	393580	380370	36647	352274	339212

			STANDARD EVAPORATOR @ 10,000 CFM					6 ROW EVAPORATOR @ 10,000 CFM				
80	100	Total	784190	753048	721210	687964	653870	827596	793568	758646	722224	684864
		Sensible	446394	435470	424488	413690	403458	462860	450538	438082	425848	414240
	90	Total	779678	749712	717744	684102	649302	822872	790168	755122	718314	680336
		Sensible	340982	329416	317774	306010	295142	357476	344494	331378	318180	305912
	85	Total	776448	746252	714612	681034	645928	819642	786646	751934	715196	676922
		Sensible	287286	276406	265296	253834	242138	303780	291494	278912	266014	252920
72	100	Total	709558	685452	660596	634300	605412	745542	718940	691246	661964	630634
		Sensible	549576	539072	527806	516230	503154	565938	554038	542242	529492	516956
	90	Total	687002	661442	632402	605284	575676	724748	697034	664876	635704	603378
		Sensible	430716	419154	413374	396590	384238	447610	434744	427462	409410	395636
	85	Total	684454	657832	630048	600616	570502	721706	692896	662582	630700	597918
		Sensible	382402	369804	358116	345946	334756	399202	385284	372204	358702	346128
	80	Total	681246	654766	627578	598430	568356	718354	689632	659994	628462	595772
		Sensible	330106	318384	306452	293320	280984	346902	333862	320540	306078	292356
	75	Total	678100	651792	624084	595040	565236	715278	686724	656500	625018	592606
		Sensible	275388	264032	252356	240376	228130	292186	279510	266444	253136	239506
67	90	Total	642546	620930	598006	573726	547590	675574	651634	626410	599668	570942
		Sensible	496788	486268	474926	463520	451052	513144	501226	488514	475992	463762
	85	Total	632062	607882	582520	556574	529058	666024	639690	612098	583934	553994
		Sensible	435956	425832	414312	402018	389844	452608	441184	428336	414730	401204
	80	Total	625642	601762	576244	549382	521862	659078	633290	605700	576636	546734
		Sensible	386362	374718	362926	350640	339236	402866	389992	376940	363366	350632
	75	Total	624578	600216	575190	548498	520866	658014	631614	604646	575752	545738
		Sensible	332748	322146	308940	296808	285192	349252	337406	322954	309534	296588
	70	Total	620650	596952	571418	544990	517634	653942	628350	600756	572138	542456
		Sensible	280246	268748	256892	244836	232420	296730	284008	270896	257556	243812
62	90	Total	614338	593550	571282	547966	525110	641176	618350	594468	569858	544126
		Sensible	563552	553210	541226	528120	514664	581994	570304	557902	544640	531846
	85	Total	597556	576962	555232	532084	507758	625680	603264	579604	554652	528094
		Sensible	504114	492580	480832	467562	455194	519272	506970	494956	482130	469386
	80	Total	579128	557370	537558	515764	492332	609014	585548	563822	539826	514072
		Sensible	439932	428246	419582	407586	396996	455840	442996	433164	419810	407854

60 ton • mechanical cooling capacities

TEMP. ENT. EVAP.		GROSS COOLING	STD EVAP @ 24,000 CFM • Air Temp. Ent. Cond.°F					6 ROW EVAP.@ 24,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb	CAPACITY	75	85	95	105	115	75	85	95	105	115
72	90	Total						886990	844750	801920	756008	708354
		Sensible						738024	724826	709430	695170	674254
	85	Total						857824	815176	770714	732158	685794
		Sensible						602506	586136	569976	557332	543498
	80	Total						852026	808016	763228	716216	668024
		Sensible						467598	454244	436922	422070	408584
	75	Total						845294	801898	757166	710994	662818
		Sensible						333394	319612	304674	289898	274024
67	90	Total						862328	826350	787892	747324	704046
		Sensible						862328	826350	787892	747324	704046
	85	Total						828022	789196	749480	708472	665992
		Sensible						747616	731946	714112	695462	665992
	80	Total						802268	764190	724598	682810	638876
		Sensible						612756	599472	583830	567878	550384
	75	Total						785938	746184	705162	661980	617494
		Sensible						476526	461698	445266	429810	413834
	70	Total						780462	741162	699412	657424	613270
		Sensible						344044	326976	314226	296262	282512
62	90	Total						862326	825846	787428	746906	703666
		Sensible						862326	825846	787428	746906	703666
	85	Total						815904	781390	745078	706362	665588
		Sensible						815904	781390	745078	706362	665588
	80	Total						772226	738390	703012	666500	627768
		Sensible						755378	735708	703012	666500	627768
	75	Total						745072	709554	672932	634508	594570
		Sensible						621016	604786	587978	570462	550926
	70	Total						722598	686188	649134	609766	569986
		Sensible						481502	466074	452030	434616	418580
57	75	Total						724494	693784	660618	626356	589396
		Sensible						724494	693784	660618	626356	589396
	70	Total						688648	656428	622908	588134	551912
		Sensible						624768	610308	593532	572856	551912

SIX ROW EVAPORATOR
STANDARD
FOR 60 TON UNIT

			STANDARD EVAPORATOR @ 18,000 CFM					6 ROW EVAPORATOR @ 18,000 CFM				
72	90	Total						844508	806600	766844	723854	679568
		Sensible						619848	607286	591220	578048	561398
	85	Total						827140	786912	745440	702858	657070
		Sensible						514832	500896	487156	471136	454784
	80	Total						824496	784850	741858	697672	651742
		Sensible						415848	400806	386192	371056	354956
	75	Total						816758	779052	737532	693190	647976
		Sensible						325372	300608	286638	271424	254434
67	90	Total						809148	774504	737062	698524	658618
		Sensible						738344	722954	707148	687380	658618
	85	Total						786732	751400	713968	675292	634062
		Sensible						631882	618056	602432	586590	572278
	80	Total						763212	727086	689594	649458	613830
		Sensible						524232	509570	494114	478162	465612
	75	Total						759276	721814	684406	643910	602062
		Sensible						424502	409928	394128	378398	362246
	70	Total						754658	717712	680232	639530	597894
		Sensible						323728	309272	292912	278828	262064
62	90	Total						795016	764026	731158	695846	658672
		Sensible						795016	764026	731158	695846	658672
	85	Total						754388	723668	692126	658706	622964
		Sensible						745414	723668	692126	658706	622964
	80	Total						729950	696486	663022	627240	589830
		Sensible						639810	625722	608536	592102	573364
	75	Total						702168	675760	641620	606758	569778
		Sensible						530010	517372	503044	486430	472630
	70	Total						696268	662222	627580	591172	552534
		Sensible						429218	414770	399182	382682	366798
57	75	Total						675312	646196	615836	584674	552412
		Sensible						644288	629508	611140	584674	552412
	70	Total						652250	623514	592510	559796	525812
		Sensible						538438	523614	509208	493554	475166

mechanical cooling capacities • 60 ton

TEMP. ENT. EVAP.		GROSS COOLING CAPACITY	STD. EVAP. @ 12,000 CFM •Air Temp. Ent. Cond.•°F					6 ROW EVAP. @ 12,000 CFM•Air Temp. Ent. Cond.•°F				
WetBulb	DryBulb		75	85	95	105	115	75	85	95	105	115
80	90	Total						879734	839184	798444	752524	702968
		Sensible						381954	368738	347146	332474	324172
	85	Total						873604	833550	791352	746278	699326
		Sensible						322512	308050	292250	277982	261886
72	90	Total						777492	743054	706398	668700	627528
		Sensible						496886	482424	468646	452958	436660
	85	Total						774718	739370	701814	663276	622076
		Sensible						430300	415924	401010	385380	369714
	80	Total						772090	735142	698564	661784	620674
		Sensible						363610	355740	340648	319524	303560
	75	Total						763462	729238	692978	654620	613910
		Sensible						309144	294956	280044	264668	248452
67	90	Total						731268	702196	671052	637182	601306
		Sensible						577652	563630	549634	535626	519966
	85	Total						713200	682450	649820	620408	585610
		Sensible						503070	489954	475104	461082	446586
	80	Total						708914	676380	643044	608238	572076
		Sensible						434980	420768	405700	390020	375586
	75	Total						707166	675504	642752	607284	570372
		Sensible						369130	354884	339600	324534	309278
	70	Total						698580	668228	634858	600706	564298
		Sensible						314084	300224	285338	269600	252586
62	90	Total						694994	667358	639586	610218	581328
		Sensible						659914	646404	630434	610218	581328
	85	Total						676492	649680	620964	590392	557920
		Sensible						584642	570374	556166	541944	526550
	80	Total						658658	632452	603882	573590	542048
		Sensible						509748	496166	482710	467780	453462
	75	Total						645994	617682	588660	558076	524926
		Sensible						437826	423536	410142	394984	378928
	70	Total						644790	616108	586646	554896	521476
		Sensible						372198	357920	343010	327592	312082

SIX ROW EVAPORATOR

STANDARD

FOR 60 TON UNIT

gas heating capacities

TABLE 68 - 1

CABINET	UNIT SIZE	Designation (1 • 2)*	HEATING INPUT (MBH)	OUTPUT CAPACITY (MBH)	TEMPERATURE RISE RANGE (°F)
D	25	(1)	456.0	369.36	(3 hp) 20 - 50 (5 & 7.5 hp) 15 - 45
		(2)	570.0	461.70	(3 hp) 25 - 55 (5 & 7.5 hp) 20 - 50
	30	(1)	456.0	369.36	(3 hp) 15 - 45 (5 & 7.5 hp) 05 - 35
		(2)	570.0	461.70	(3 hp) 20 - 50 (5 & 7.5 hp) 15 - 45
	40	(2)	570.0	461.70	10 - 40
E	50	(2)	570.0	461.70	05 - 35
	60	(2)	570.0	461.70	05 - 35

* **AAON HEAT RANGE DESIGNATIONS** **(1) = LOW HEAT**
(2) = MEDIUM HEAT

NOTES: **1)** To calculate air temperature rise: ΔT = Output capacity / (CFM x 1.085)
2) Use tabulated ratings for elevations to 2000 FT.
3) For elevations above 2000 FT. derate 4% for each 1000 FT. above sea level and use the following formula:
ΔT = Output capacity / (.24 x 60 x specific WT of air x CFM)(Refer to Table 80-2 for information about Specific Weight of Air)
4) Gas pressure supply range (inches of water guage): Natural 6 - 10.5 ; Propane 11 - 13.
5) Gas manifold pressure (inches of water guage): Natural 3.5; Propane 10.5.
6) Above 2000FT.; Specify "HI ALTITUDE KIT".

CAUTION: FOR APPLICATIONS OUTSIDE THE TEMPERATURE RANGE SHOWN, CONTACT THE FACTORY.

electric heating capacities

TABLE 68 - 2

THREE PHASE

Heating Designation and Unit Availability		No. of Strips	208 / 60 / 3			240 / 60 / 3			480 / 60 / 3			575 / 60 / 3		
25	30 • 40 • 50 • 60		MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS	MBH	KW	AMPS
D	D	4	102.4	30.0	83.28	136.6	40.0	96.4	136.6	40.0	48.0	136.6	40.0	40.0
F	F	8	205.2	60.1	166.56	273.2	80.0	192.8	273.2	80.0	96.0	273.2	80.0	80.0
H	H	12	307.7	90.1	249.84	410.1	120.0	289.2	410.1	120.0	144.0	410.1	120.0	120.0
J	J	16	410.1	120.1	333.12	546.4	160.0	385.6	546.4	160.0	192.0	546.4	160.0	160.0
	K	20	512.2	150.2	416.40	683.0	200.0	482.0	683.0	200.0	240.0	683.0	200.0	200.0

steam heating data

TABLE 69 - 1 • FACE VELOCITY vs. SELECTION FACTOR • 14.5 SQ. FT. FACE AREA

FV (fpm)	SF	FV (fpm)	SF	FV (fpm)	SF
200	.707	475	.541	750	.454
225	.684	500	.531	775	.448
250	.664	525	.522	800	.442
275	.646	550	.513	825	.437
300	.629	575	.504	850	.431
325	.613	600	.496	875	.425
350	.599	625	.489	900	.420
375	.586	650	.481	925	.415
400	.574	675	.474	950	.410
425	.562	700	.467	975	.406
450	.551	725	.461	1000	.401

TABLE 69- 2

SATURATED STEAM PROPERTIES		
PSIG	TEMPERATURE	LATENT HEAT
2	218	966
5	227	961
7	233	958
10	239	953
15	250	946

TABLE 69- 3

PRESSURE DROP AIR SIDE			
FV (FPM)	ΔP AIR (in. WC)	FV (FPM)	ΔP AIR (in. WC)
200	.027	700	.248
300	.055	800	.314
400	.092	900	.386
500	.136	1000	.466
600	.188		

EXAMPLE: What is the Expected Leaving Air Temperature with 2 PSIG Saturated Steam and 10,000 cfm entering at 60°F ?
The coil face velocity is 10,000 ÷ 14.5 = 690 FPM.

FROM TABLE 69-1: SF = .470 (by interpolation)
FROM TABLE 69-2: SST = 218°F.

TEMPERATURE RISE = SF (SST - EAT) = .470 (218 - 60) = 74.3°F.

CONDENSATE GENERATED

BTUH = 1.085 x CFM x ΔT.
FROM TABLE 69-2: LATENT HEAT = 966.
FROM TABLE 69-3: AIR SIDE PRESSURE DROP = .242 (by interpolation)

CONDENSATE LOAD = BTUH ÷ LATENT HEAT @ OPERATING PSIG.
CONDENSATE LOAD = (1.085 x 74.3 x 10,000) ÷ 966 = 834.5 lbs. / hr.

hot water coil performance data

TABLE 69 - 4 • 'D' & 'E' CABINET • 180° F EWT , 60° F EAT • 14.5 SQ. FT. FACE AREA

C.F.M	ΔP AIR	50 GPM (.6 ft. ΔP)			75 GPM (1.3 ft. ΔP)			100 GPM (2.2 ft. ΔP)		
		ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH	ΔT AIR	ΔT H_2O	MBH
8000	.29	49.9	17.4	436.2	53.3	12.4	466.0	55.2	9.7	482.7
10000	.43	44.2	19.3	483.5	47.6	13.9	520.6	49.5	10.8	541.6
12000	.59	39.8	20.9	522.7	43.2	15.1	566.6	45.1	11.8	591.7
14000	.78	36.3	22.2	566.1	39.6	16.2	606.2	41.5	12.7	635.1
16000	.98	33.4	23.4	585.0	36.6	17.1	640.9	38.5	13.5	673.4
18000	1.21	31.0	24.4	610.4	34.1	17.9	671.7	35.9	14.2	707.6
20000	1.45	28.9	25.3	633.0	32.0	18.6	699.3	33.8	14.8	738.3

EXAMPLE: "D" Cabinet with 14,000 cfm, 180°F EWT, 60°F EAT, and 75 GPM has a capacity of 606.2 MBH from Table 69-4.
For 190°F EWT and 60°F EAT, the correction factor is 1.08. Actual capacity = 1.08 x 606.2 = 654.7 MBH.

$$\text{NEW } \Delta T\ H_2O = \frac{654{,}700}{(500)\ (GPM)} = \frac{654{,}700}{(500)\ (75)} = 17.5°\ F$$

$$\text{NEW } \Delta T\ AIR = \frac{654{,}700}{(1.08)\ (CFM)} = \frac{654{,}700}{(1.08)\ (14{,}000)} = 43.3°\ F$$

CORRECTION FACTORS	FOR OTHER THAN 180°F HW ENT. AND 60°F AIR						
AIR TEMP.	WATER TEMP.						
	210	200	190	180	170	160	150
50°	1.38	1.28	1.18	1.08	1.00	0.90	0.82
60°	1.28	1.18	1.08	1.00	0.90	0.82	0.72
70°	1.18	1.08	1.00	0.90	0.82	0.72	0.64

coil static pressure drops (in. wg.)

TABLE 70 - 1 • 'D' & 'E' CABINET

• INDOOR COIL •																		
CFM	25 TON				30 TON				40 TON				50 TON				60 TON	
	STANDARD		6 ROW		STANDARD		6 ROW		STANDARD		6 ROW		STANDARD		6 ROW		6 ROW	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY
8000	.20	.14	.37	.24	.20	.14	.37	.24	.19	.15	.37	.24						
9000	.24	.16	.45	.29	.24	.16	.45	.29	.24	.18	.45	.29						
10000	.29	.19	.53	.34	.29	.19	.53	.34	.29	.22	.53	.34						
11000	.34	.21	.61	.40	.34	.21	.61	.40	.34	.26	.61	.40						
12000	.39	.24	.70	.46	.39	.24	.70	.46	.40	.30	.70	.46						
13000	.44	.28	.80	.52	.44	.28	.80	.52	.45	.35	.80	.52						
14000					.50	.32	.90	.56	.50	.40	.90	.56						
15000					.56	.36	1.0	.65	.57	.45	1.0	.65	.44	.29	.68	.44	.68	.44
16000					.62	.40	1.1	.72	.64	.50	1.1	.72	.49	.32	.75	.49	.75	.49
17000									.71	.55	1.2	.79	.54	.35	.83	.54	.83	.54
18000									.79	.61	1.3	.87	.59	.39	.91	.59	.91	.59
19000													.65	.43	.99	.64	.99	.64
20000													.70	.46	1.1	.70	1.1	.70
21000													.76	.50	1.16	.75	1.16	.75
22000													.82	.54	1.25	.81	1.25	.81
23000													.88	.58	1.34	.86	1.34	.86
24000													.95	.62	1.43	.92	1.43	.92

component static pressure drops (in. wg.)

TABLE 70 - 2 • 'D' & 'E' CABINET

C.F.M	HEATING SECTION							FILTERS				ECON	Acoustical
	GAS HEAT		ELECTRIC HEAT					2" Pleated		4" Pleated		100% R/A	CURB
	MEDIUM	* LOW	D	F	H	J	K						
25 TON													
8000	.30	.24	.19	.25	.29	.30		.10		.05		.05	.05
9000	.33	.27	.21	.28	.33	.34		.12		.07		.06	.06
10000	.37	.30	.24	.31	.36	.38		.13		.10		.06	.06
11000	.41	.33	.26	.34	.40	.41		.15		.12		.07	.07
12000	.44	.36	.29	.37	.43	.45		.17		.14		.08	.08
13000	.48	.39	.31	.40	.47	.49		.19		.16		.09	.09
30 - 60								30 • 40	50 • 60	30 • 40	50 • 60		
10000	.12	.08	.08	.10	.14	.17	.19	.13		.12			.06
11000	.13	.09	.09	.11	.15	.19	.21	.15		.14			.07
12000	.15	.10	.10	.12	.17	.21	.23	.17		.16			.08
13000	.16	.10	.10	.13	.18	.22	.25	.19		.18			.09
14000	.17	.11	.11	.14	.19	.24	.27	.22	.15	.22	.14	.10	.10
15000	.18	.12	.12	.15	.21	.26	.29	.24	.17	.23	.16	.11	.11
16000	.19	.13	.13	.16	.22	.27	.31	.27	.19	.26	.18	.12	.12
17000	.21	.13	.13	.17	.23	.29	.33		.21		.20	.13	.13
18000	.22		.14	.18	.25	.31	.35		.22		.21	.14	.14
19000	.23		.15	.19	.26	.32	.36		.24		.23	.15	.15
20000	.24		.16	.20	.28	.34	.38		.25		.24	.16	.16
21000	.25		.17	.21	.29	.36	.40		.27		.26	.18	.18
22000	.27		.17	.22	.30	.38	.42		.29		.28	.19	.19
23000	.28		.18	.23	.32	.39	.44		.31		.30	.20	.20
24000	.29		.19	.24	.33	.41	.46		.33		.32	.21	.21

* 25 & 30 TON ONLY

motor input rpm and kw (total for two motors) blower performance

two motors of the 'hp' shown are used.

TABLE 71 - 1 • 'D' CABINET • BELT DRIVE

C.F.M	TOTAL STATIC PRESSURE									
	0.5		1.5		2.5		3.5		4.5	
	RPM	KW	RPM	KW	RPM	KW	RPM	KW	RPM	KW
25 TON										
8000	660	2.38	930	3.72	1150	5.33	1350	7.27	NOT AVAILABLE	
9000	730	2.95	980	4.50	1180	6.84	1360	7.93	1540	10.48
10000	800	3.72	1010	5.33	1210	7.27	1380	9.55	1550	11.11
11000	850	4.50	1050	6.84	1230	8.33	1400	10.79	1560	12.68
12000	900	5.54	1090	7.71	1270	9.55	1425	12.05	1580	13.63
13000	960	7.05	1130	9.907	1300	12.05	1450	13.63	NOT AVAILABLE	
30-40 TON										
10000	220	1.39	660	4.18	1040	6.98	NOT AVAILABLE			
11000	220	1.51	670	4.59	1050	7.64				
12000	230	1.70	690	5.11	1060	8.46	1230	11.47		
13000	240	1.92	710	5.67	1070	8.68	1230	11.64		
14000	250	2.15	740	6.37	1080	10.16	1240	13.25	1400	16.34
15000	260	2.41	780	7.23	1090	11.09	1250	14.32	1410	17.64
16000	270	2.69	820	8.18	1110	12.29	1270	15.67	1420	19.02
17000	290	3.10	880	9.42	1130	13.57	1280	16.88	1430	20.45
18000	320	3.67	970	11.14	1150	14.94	1300	16.92	1440	21.96

TABLE 71 - 2 • 'E' CABINET • BELT DRIVE

C.F.M 50-60 TON	TOTAL STATIC PRESSURE									
	1.0		2.0		3.0		5.0		7.0	
	RPM	KW	RPM	KW	RPM	KW	RPM	KW	RPM	KW
15000	520	4.82	1010	9.47	1170	12.70	1480	19.70	NOT AVAILABLE	
16000	550	5.48	1030	10.60	1190	13.98	1480	20.81		
17000	590	6.31	1050	11.80	1200	15.12	1490	22.28	1740	29.91
18000	650	7.46	1070	13.10	1220	16.56	1500	23.83	1750	31.64
19000	730	8.96	1100	14.69	1250	18.31	1520	25.79	1760	33.50
20000	860	11.29	1120	16.15	1270	19.93	1530	27.51	1770	35.47
21000	1010	14.28	1150	17.96	1300	21.90	1550	29.68	1780	39.84
22000	1050	16.31	1190	20.14	1320	23.70	1560	31.61	1790	33.50
23000	1100	18.75	1220	22.18	1350	25.88	1580	34.04	1810	42.80
24000	1140	21.06	1260	24.63	1370	27.89	1600	36.63	1820	45.56

NOTE: TOTAL STATIC = INTERNAL STATIC + EXTERNAL STATIC

BLOWER PERFORMANCE TABLES INCLUDE INTERNAL RESISTANCE OF CABINET ONLY. FOR TOTAL STATIC PRESSURE DETERMINATION, SYSTEM EXTERNAL STATIC PRESSUREMUST BE ADDED TO THE APPROPRIATE COMPONENT STATIC PRESSURE DROPS.
SEE TABLES
70-1, 70-2, 69-3 AND 69-4 FOR COMPONENT STATIC PRESSURE DROPS.

REFER TO TABLE FOR 'KW' TO 'HP' CONVERSION.
NOTE: UNITS 25 - 60 TON • Blower performace charts show Total (KW) for (2) motors; to use table multiply by 2.

INDOOR BLOWER MOTOR DATA			
NOMINAL MOTOR H.P.	PERCENT EFFICIENCY	MAXIMUM KW	SERVICE FACTOR
5	85	5.05	1.15
7.5	83	7.75	
10	86	9.98	
15	88	14.62	
20	88	19.50	
25	88	24.38	

$$BHP = \frac{KW \times EFF}{0.746}$$

power exhaust performance

TABLE 72 - 1 • 'D' & 'E' CABINET • DIRECT DRIVE PROPELLER EXHAUST FAN(S)

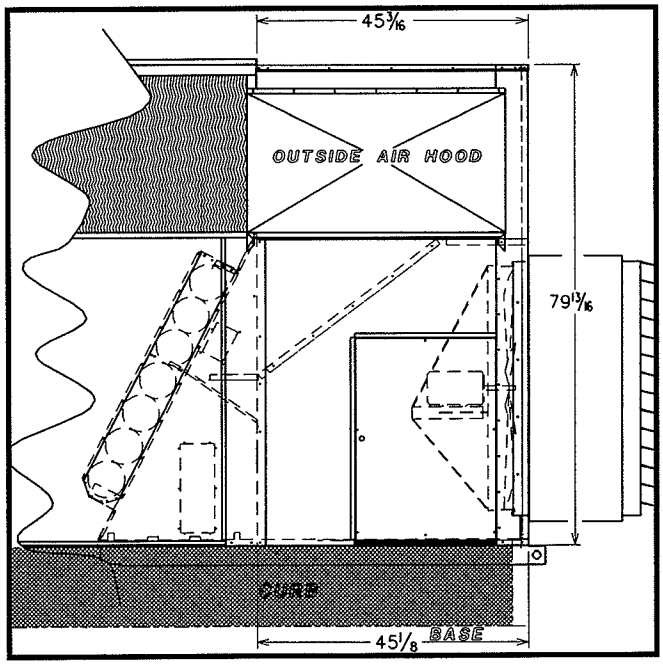
25 - 60 TON Direct Drive Propeller	TOTAL STATIC PRESSURE				
	0.1	0.2	0.3	0.4	0.5
	CFM	CFM	CFM	CFM	CFM
STANDARD (1) @ 3 HP 1140 RPM • (1) FAN	18,900	17,700	16,100	14,000	11,000
OVERSIZE (2) @ 3 HP 1140 RPM EA. • (2) FANS	37,800	35,400	32,200	28,000	22,000

TABLE 72 - 2 • 'D' & 'E' CABINET • BELT DRIVE CENTRIFUGAL FORWARD CURVED FANS

25 - 60 TON Belt Drive	TOTAL STATIC PRESSURE									
	0.2		0.4		0.6		0.8		1.0	
C.F.M	RPM	HP ①	RPM	HP ①	RPM	HP ①	RPM	HP ①	RPM	HP ①
6000	500	3	610	3	740	3	850	3	950	3
8000	580	3	680	3	780	3	880	3	970	3
10000	660	3	750	3	820	3	910	3	980	3
12000	760	5	820	5	900	5	950	5	1000	5
14000	880	5	920	5	960	5	1000	5	1080	5
16000	980	5	1010	5	1050	5	1100	5	1150	7.5
18000	1080	5	1110	7.5	1160	7.5	1200	7.5	1240	7.5
20000	1200	7.5	1220	7.5	1250	7.5	NOT AVAILABLE			

① (2) MOTORS OF THE HP SHOWN ARE USED.

DIRECT DRIVE PROPELLER EXHAUST FAN(S)
Note: Extended Curb Required



BELT DRIVE FORWARD CURVED FANS

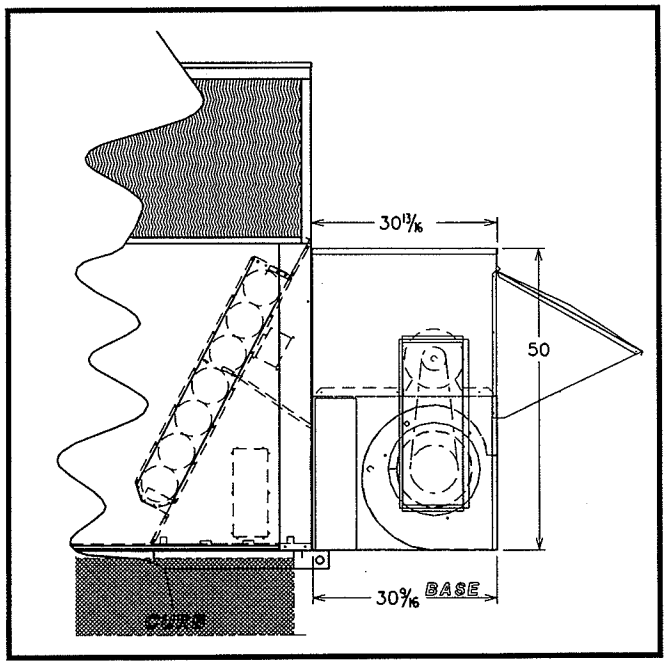


TABLE 73 - 1 • 'D' & 'E' CABINET

208 - 240 / 3 / 60

UNIT SIZE		25			30			40			50			60		
BLOWER Mtr 1 & 2	(HP)	3.0	5.0	7.5	3.0	5.0	7.5	5.0	7.5	10.0	10.0	15.0	20.0	15.0	20.0	25.0
	F.L.A (ea)	9.6	15.2	22.0	9.6	15.2	22.0	15.2	22.0	28.0	28.0	42.0	54.0	42.0	54.0	68.0
COMPRESSOR 1 • 2 • 3 • 4	F.L.A (ea)	18.2			24.7			27.9			40.7			51.0		
	L.R.A (ea)	156			185			205			269			234		
CONDENSER FAN MOTOR	F.L.A (ea)	(2) 4.2			(2) 7.4						(2) 10.8					
COMBUSTION BLOWER MOTOR	F.L.A total	1.8 (1/16 Hp mtr) or 2.6 (1/4 Hp mtr)						2.6 (1/4 Hp mtr)								
PROPELLER EXH. DIRECT DRIVE	F.L.A (HP)	9.6 (3 Hp mtr) each														
CENTRIFUGAL P.E BELT DRIVE	F.L.A (HP)	10.8 (3 Hp Std. mtr) ea. or 15.2 (5 Hp Oversize mtr) ea.									15.2 (5Hp Std. mtr) ea. or 22.0 (7.5 Hp Oversize mtr) ea.					
COOLING	F.L.A	104	112	125	133	144	158	157	170	182	240	268	292	310	334	362
	M.C.A	105	116	130	139	150	164	164	177	189	251	279	306	322	347	379
Max. Overcurrent Protection		110	125		150		175		200		300		350		400	
ELEC. HEAT Designation • D •	F.L.A	115	127	140	133	144	158	157	170	182	240	268	292	310	334	362
	M.C.A	144	158	175	144	158	175	164	177	190	251	279	306	322	347	379
Max. Overcurrent Protection		150	175		150		175		200		300		350		400	
ELEC. HEAT Designation • F •	F.L.A	211	222	236	211	222	236	223	236	248	248	276	300	310	334	362
	M.C.A	216	230	247	216	230	247	230	247	262	262	297	327	322	347	379
Max. Overcurrent Protection		225	250		225		250				300		350		400	
ELEC. HEAT Designation • H •	F.L.A	308	319	333	308	319	333	319	333	345	345	373	397	373	397	425
	M.C.A	313	327	344	313	327	344	327	344	359	359	394	424	394	424	459
Max. Overcurrent Protection		350									400		450	400	450	500
ELEC. HEAT Designation • J •	F.L.A	404	415	429	404	415	429	415	429	441	441	469	493	469	493	521
	M.C.A	409	423	440	409	423	440	423	440	455	455	490	520	490	520	555
Max. Overcurrent Protection		450									500		600	500	600	
ELEC. HEAT Designation • K •	F.L.A	n/a			500	512	525	512	525	537	537	565	589	565	589	617
	M.C.A				505	519	536	519	536	551	551	586	616	586	616	651
Max. Overcurrent Protection					600								700	600	700	

480 / 3 / 60

UNIT SIZE		25			30			40			50			60		
	(HP)	3.0	5.0	7.5	3.0	5.0	7.5	5.0	7.5	10.0	10.0	15.0	20.0	15.0	20.0	25.0
BLOWER Mtr 1 & 2	F.L.A	4.8	7.6	11.0	4.8	7.6	11.0	7.6	11.0	14.0	14.0	21.0	27.0	21.0	27.0	34.0
COMPRESSOR 1 • 2 • 3 • 4	F.L.A (ea)	9.1			12.3			14.2			20.6			22.0		
	L.R.A (ea)	70			89			104			135			130		
CONDENSER FAN MOTOR	F.L.A (ea)	(2) 2.2			(2) 3.8						(2) 5.5					
COMBUSTION BLOWER MOTOR	F.L.A (ea)	1.0 (1/16 Hp mtr) or 1.4 (1/4 Hp mtr)						1.4 (1/4 Hp mtr)								
PROPELLER EXH. DIRECT DRIVE	F.L.A total	4.8 (3 Hp mtr) each														
CENTRIFUGAL P.E BELT DRIVE	F.L.A (HP)	4.8 (3 Hp Std. mtr) ea. or 7.6 (5 Hp Oversize mtr) ea.									7.6 (5 Hp Std. mtr) ea. or 11.0 (7.5 Hp Oversize mtr) ea.					
COOLING	F.L.A	50	56	63	66	72	79	80	86	92	121	135	147	141	155	167
	M.C.A	53	58	65	69	75	82	83	90	96	127	141	154	147	160	176
Max. Overcurrent Protection		60	65	70	80		90		100	110	150		175	150	175	200
ELEC. HEAT Designation • D •	F.L.A	58	63	70	66	72	79	80	86	92	121	135	147	141	153	167
	M.C.A	72	79	88	72	79	88	83	90	96	127	141	154	147	160	176
Max. Overcurrent Protection		80		90	80		90		100	110	150		175	150	175	200
ELEC. HEAT Designation • F •	F.L.A	106	111	118	106	111	118	111	118	124	124	138	150	141	153	167
	M.C.A	108	115	124	108	115	124	115	124	131	131	149	164	149	164	181
Max. Overcurrent Protection		110	125		110		125				150		175	150	175	200
ELEC. HEAT Designation • H •	F.L.A	154	160	166	154	160	166	160	166	172	172	186	198	186	198	212
	M.C.A	156	163	172	156	163	172	163	172	179	179	197	212	197	212	229
Max. Overcurrent Protection		175									200		225	200	225	250
ELEC. HEAT Designation • J •	F.L.A	202	208	214	202	208	214	208	214	220	220	234	246	234	246	260
	M.C.A	204	211	220	204	211	220	211	220	227	227	245	260	245	260	277
Max. Overcurrent Protection		225									250		300	250	300	
ELEC. HEAT Designation • K •	F.L.A	n/a			250	256	263	256	263	269	269	283	295	283	295	309
	M.C.A				253	260	269	260	269	276	276	294	309	294	309	326
Max. Overcurrent Protection					300								350	300	350	

electrical data

TABLE 74 - 1 • 'D' & 'E' CABINET

575 / 3 / 60															
UNIT SIZE	25			30			40			50			60		
BLOWER Mtr 1 & 2 (HP)	3.0	5.0	7.5	3.0	5.0	7.5	5.0	7.5	10.0	10.0	15.0	20.0	15.0	20.0	25.0
BLOWER Mtr 1 & 2 F.L.A (ea)	3.9	6.1	9.0	3.9	6.1	9.0	6.1	9.0	11.0	11.0	17.0	22.0	17.0	22.0	27.0
COMPRESSOR 1 & 2 F.L.A	6.6			9.8			11.4			16.4			18.4		
COMPRESSOR 1 & 2 L.R.A	56			78			78			111			109		
COMPRESSOR 3 & 4 F.L.A	6.6			9.8			11.4			16.4			18.4		
COMPRESSOR 3 & 4 L.R.A	56			78			78			111			109		
CONDENSER FAN MTR. F.L.A (ea)	(2) 1.6			(2) 3.1						(2) 4.5					
COMBUSTION BLOWER MTR. F.L.A total	0.8 (1/16 Hp mtr) or 1.1 (1/4 Hp mtr)**						1.1 (1/4 Hp mtr)**								
POWER EXH MTR F.L.A (HP)	4.5 (3 Hp mtr) each														
COOLING F.L.A	37	42	48	53	57	63	64	69	74	97	109	119	116	127	137
COOLING M.C.A	39	43	49	56	60	66	67	73	77	101	113	124	121	132	143
Max. Overcurrent Protection	45	50		60	70		80			110	125		150		
ELEC. HEAT F.L.A	48	52	58	53	57	63	64	69	74	97	109	119	116	127	137
Designation • D • M.C.A	59	64	70	59	64	70	67	73	77	101	113	124	130	140	151
Max. Overcurrent Protection	60	70	80	60	70	80	70	80		110	125		150		
ELEC. HEAT F.L.A	88	93	98	88	93	98	93	98	102	102	114	124	116	127	137
Designation • F • M.C.A	89	94	101	89	94	101	94	101	105	105	119	130	119	130	141
Max. Overcurrent Protection	90	100	110	90	100	110	100	110			125	150	125	150	
ELEC. HEAT F.L.A	128	133	138	128	133	138	133	138	142	142	154	164	154	164	174
Designation • H • M.C.A	129	134	141	129	134	141	134	141	145	145	159	170	159	170	181
Max. Overcurrent Protection	175										175				200
ELEC. HEAT F.L.A	168	173	179	168	173	179	173	179	183	183	195	205	195	205	215
Designation • J • M.C.A	169	174	181	169	174	181	174	181	185	185	199	210	199	210	221
Max. Overcurrent Protection	175		200	175		200	175	200				225	200	225	
ELEC. HEAT F.L.A	n/a			209	213	219	213	219	223	223	235	245	235	245	255
Designation • K • M.C.A				210	215	221	215	221	226	226	239	250	239	250	262
Max. Overcurrent Protection				225			250								300

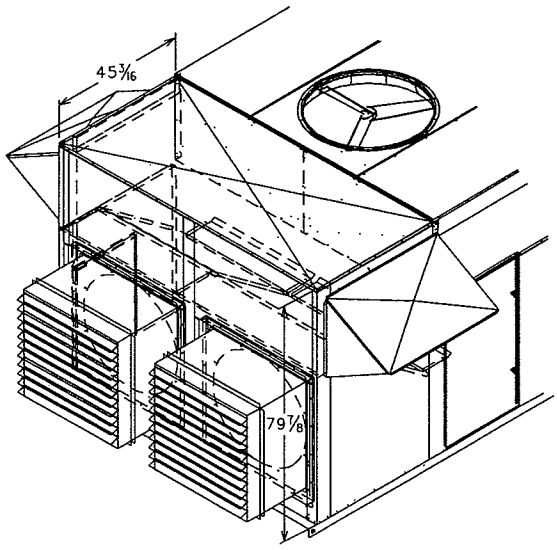
NOTE: ***THE COOLING ELECTRICAL DATA IS FOR COOLING ONLY AND COOLING WITH GAS HEAT PACKAGE UNITS. THE ELECTRIC HEAT ELECTRICAL DATA IS FOR PACKAGED COOLING WITH ELECTRIC HEAT UNITS.***

NOTE: ***SINCE THE POWER EXHAUST FAN OPERATES ONLY DURING ECONOMIZER CYCLE, THE ELECTRICAL DATA IN TABLES 73-1 AND 74-1 DOES NOT CHANGE WITH THE ADDITION OF THE POWER EXHAUST OPTION.***

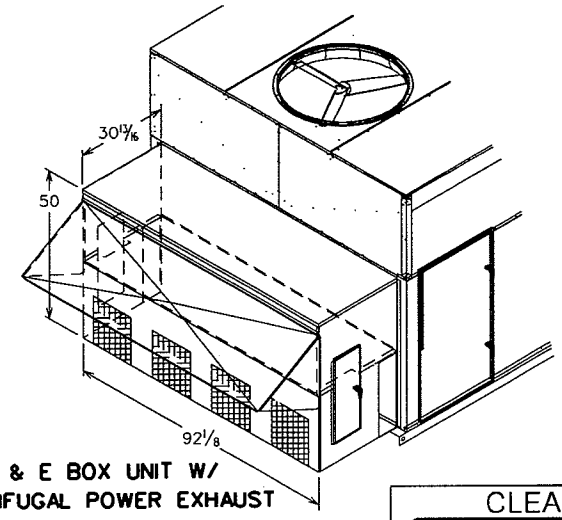
***** THE COMBUSTION BLOWER MOTOR IS USED WITH A STEP DOWN TRANSFORMER. THE INDICATED 575V VALUE ASSUMES NO LOSS THROUGH TRANSFORMER AND 100% POWER FACTOR.***

dimensions • D/E cabinet • 25 - 60 ton

NOTE: For Roof Curb Details, Refer To Page 78



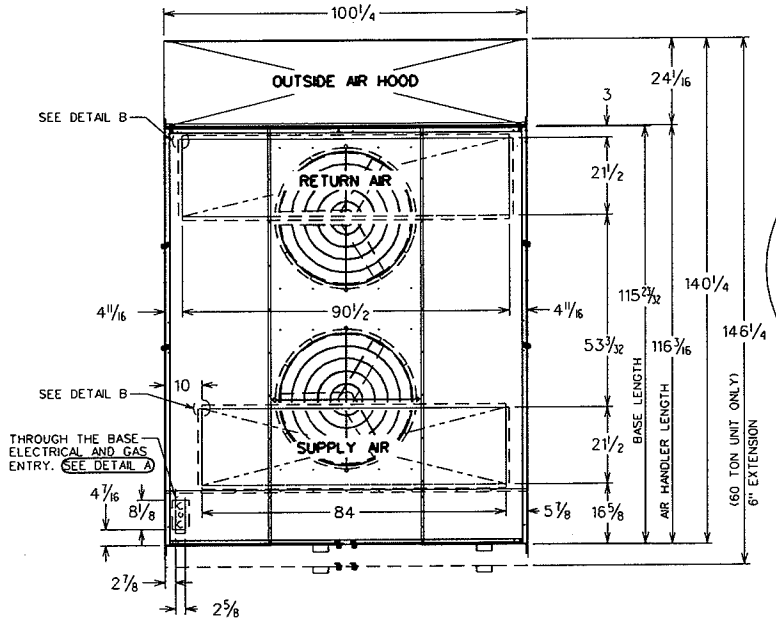
D & E BOX UNIT W/ PROP POWER EXHAUST
WITH EXTENDED CURB

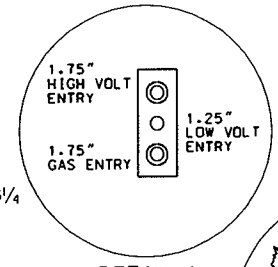


D & E BOX UNIT W/
CENTRIFUGAL POWER EXHAUST
WITHOUT EXTENDED CURB

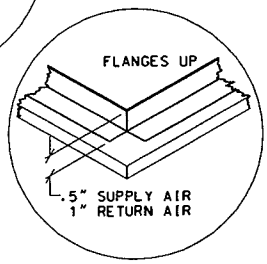
CLEARANCES

LOCATION	•UNIT SIZE• 25 • 30 • 40 • 50 • 60
RETURN AIR (BACK)	60
VENT SIDE (FRONT)	48
LEFT SIDE	60
RIGHT SIDE	60
TOP	UNOBSTRUCTED



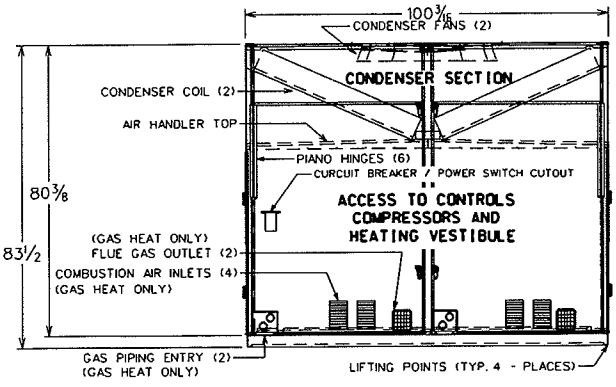


DETAIL A

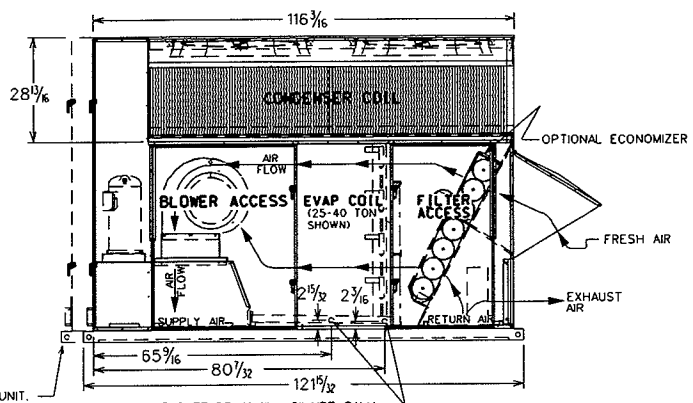


DETAIL B

NUMBER OF CONDENSER FANS
25-60 TON - 2 FANS

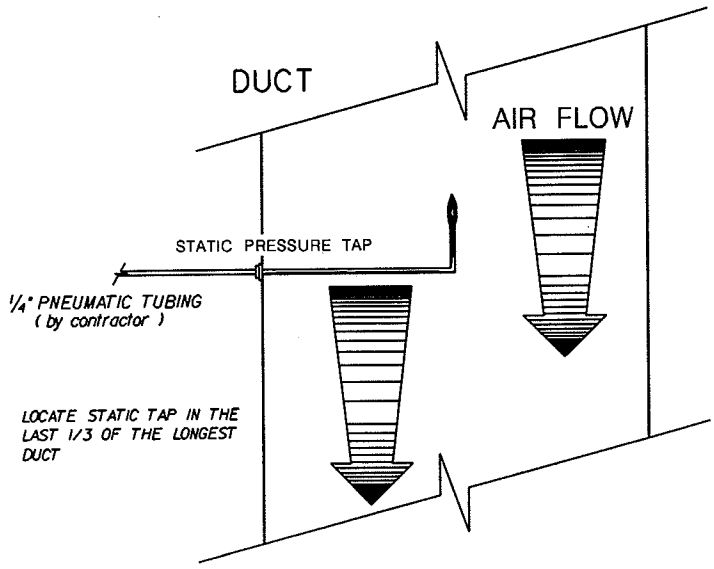


SIX INCHES IS ADDED TO MAKE UP THE 60 TON UNIT.
THIS IS TO ACCOMMODATE THE LARGER COMPRESSOR.

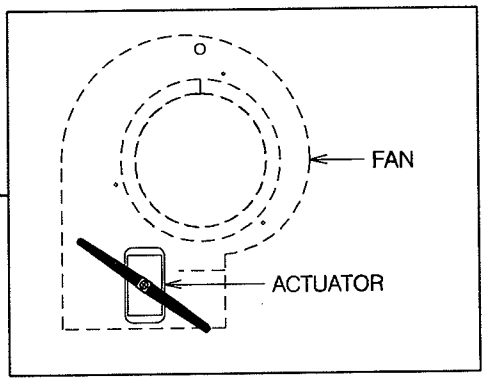


CONDENSATE DRAIN 1" x 2" NPT GALV.
PIPE FTG. NIPPLE WITH AN ABS PLASTIC
1" U - TRAP FTG. AND A 1" 90° PVC ELBOW
SLIP x FPT FTG., A 1" 90° PVC ELBOW
SLIP x SLIP FTG.

vav control

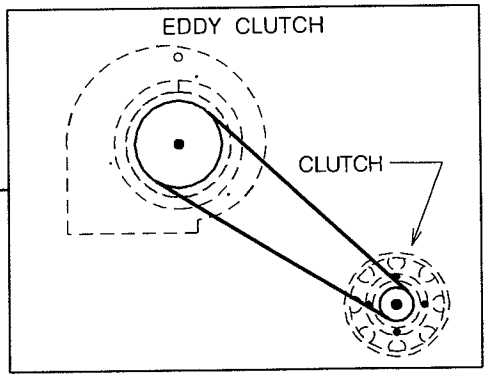


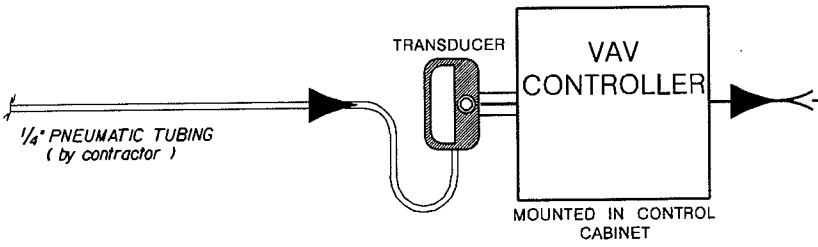
02–60 TON
AILERON CONTROL



OR

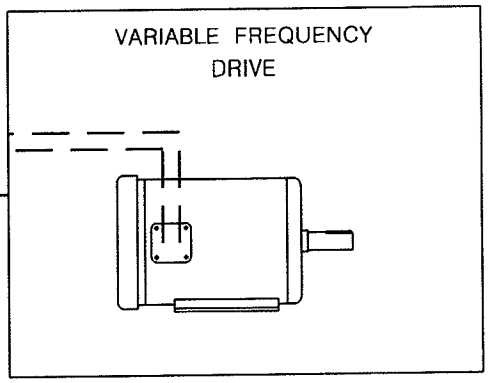
16–60 TON
FAN SPEED CONTROL





OR

02–60 TON VFD
FAN SPEED CONTROL



– AILERON CONTROL –

DAMPER MOUNTED IN FAN DISCHARGE IS MODULATED TO VARY AIR FLOW.

– EDDY CLUTCH –

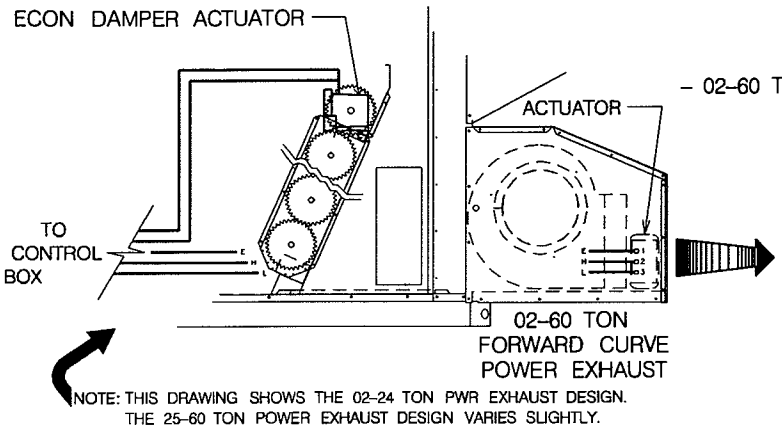
CLUTCH MOUNTED ON DRIVE MOTOR VARIES FAN SPEED AND AIR FLOW.

– VARIABLE FREQUENCY DRIVE –

MOTOR SPEED IS MODULATED TO VARY FAN SPEED AND AIR FLOW.

power exhaust diagram

– POWER EXHAUST SEQUENCE OF OPERATION –



NOTE: THIS DRAWING SHOWS THE 02–24 TON PWR EXHAUST DESIGN. THE 25–60 TON POWER EXHAUST DESIGN VARIES SLIGHTLY.

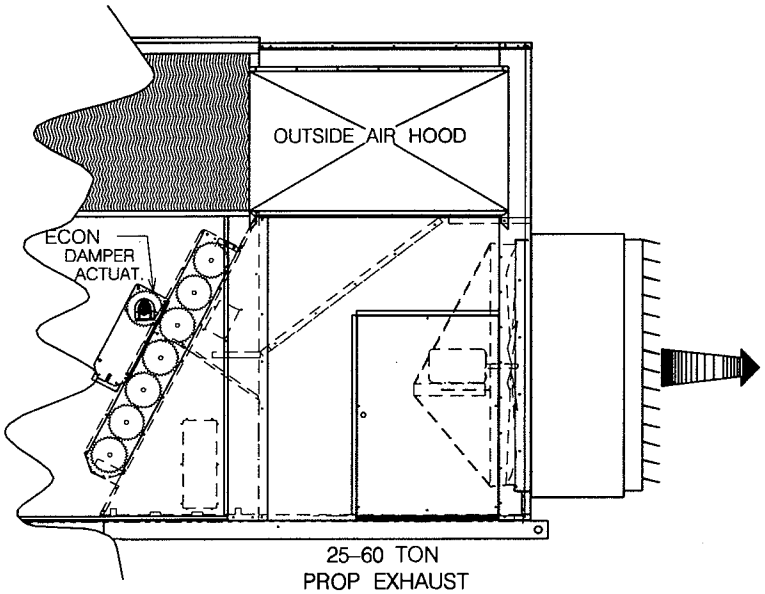
STANDARD CONTROL

– 02–60 TON FORWARD CURVE OR 25–60 TON PROP EXHAUST –

AN END SWITCH IS MOUNTED ON THE ECONOMIZER GEARING AND IT'S POSITION IS FACTORY SET, BUT FIELD AJUSTABLE. WHEN THE END SWITCH MAKES, THE POWER EXHAUST MOTOR IS ENGAGED. THE GRAVITY DAMPER IS FORCED OPEN BY THE EXHAUSTER AIR FLOW.

– 25–60 TON FORWARD CURVE –

AN END SWITCH IS MOUNTED ON THE ECONOMIZER GEARING AND IT'S POSITION IS FACTORY SET, BUT FIELD ADJUSTABLE WHEN THE END SWITCH MAKES, THE POWER EXHAUST MOTOR IS ENGAGED. AT THE SAME TIME A SIGNAL IS SENT TO A TWO POSITION ACTUATOR TO DRIVE THE DAMPERS OPEN. THE AIR FLOW CAN BE BALANCED BY LIMITING THE DAMPER FULL OPEN POSITION.



OPTIONAL CONTROL

– 25–60 TON FORWARD CURVE –

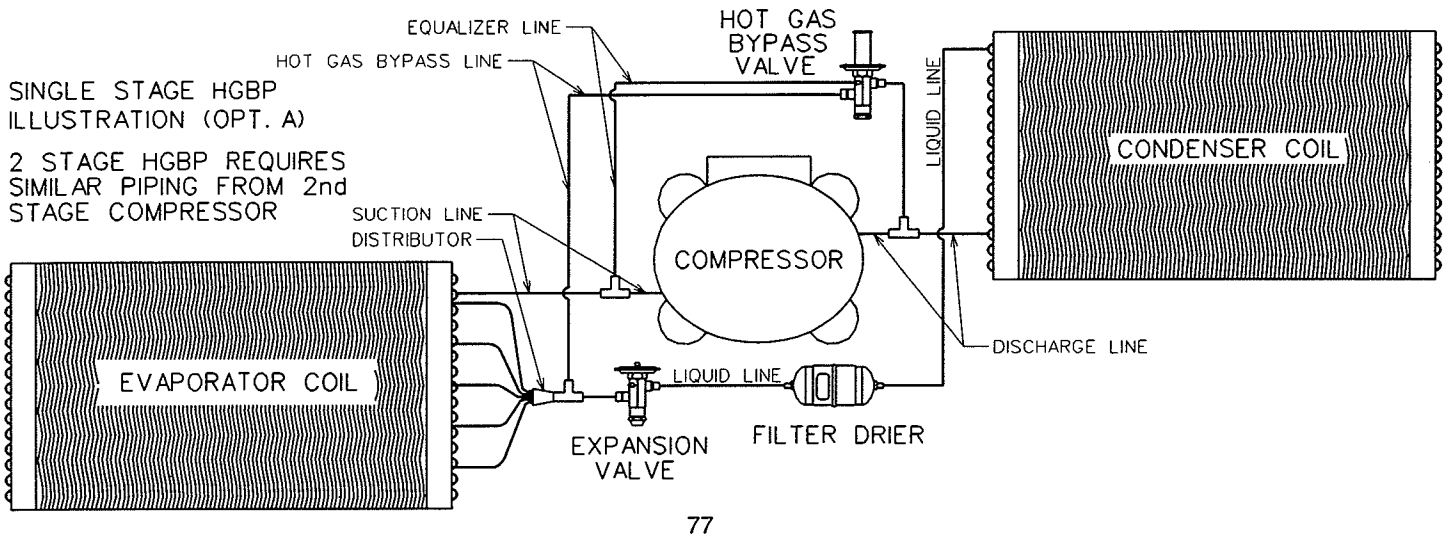
AN END SWITCH IS MOUNTED ON THE ECONOMIZER GEARING AND IT'S POSITION IS FACTORY SET, BUT FIELD ADJUSTABLE WHEN THE END SWITCH MAKES, THE POWER EXHAUST MOTOR IS ENGAGED. A NULL PRESSURE SWITCH, SENSING BUILDING PRESSURE, DRIVES THE POWER EXHAUST DAMPER TO A POSITION WHICH SATISFIES THE ADJUSTABLE PRESSURE SETPOINT.

hot gas by-pass example

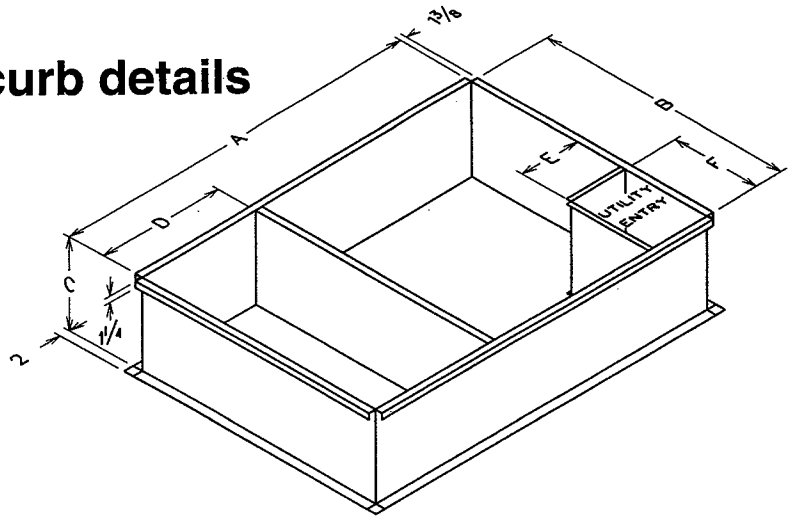
NOTE: HGBP IS REQUIRED ON LEAD COMPRESSOR(S) FOR VAV / VVT AND MAKE UP AIR UNITS.

SINGLE STAGE HGBP ILLUSTRATION (OPT. A)

2 STAGE HGBP REQUIRES SIMILAR PIPING FROM 2nd STAGE COMPRESSOR

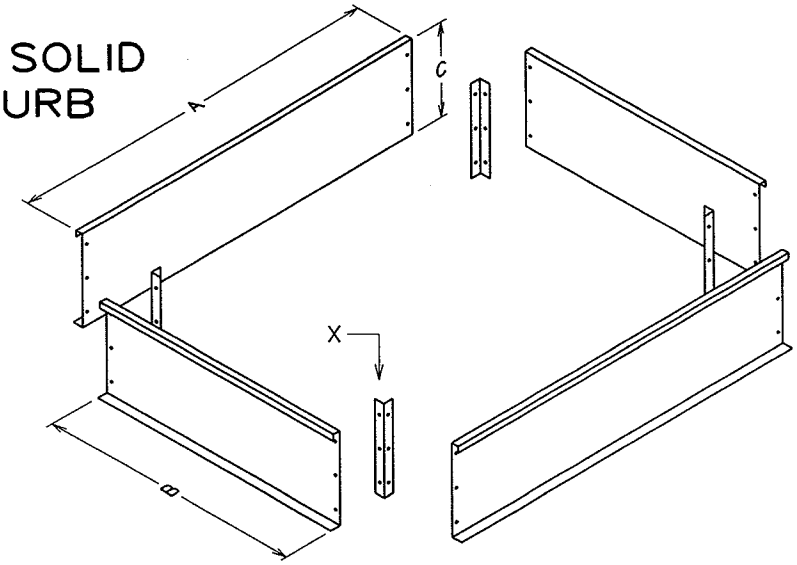


curb details



(6) .375 BOLTS AND NUTS REQ'D PER CONNECTION ANGLE X: (12) REQ'D FOR 24 INCH CURB

ACOUSTICAL SOLID BOTTOM CURB

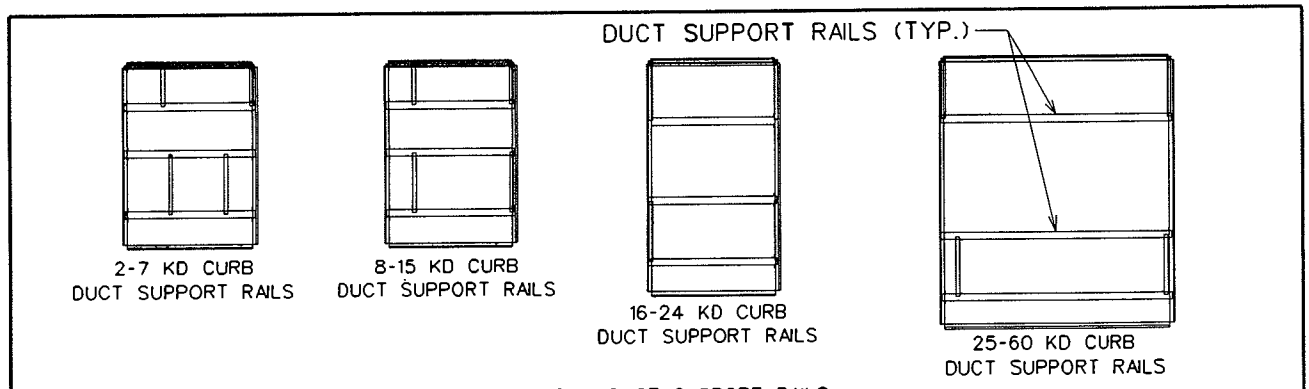


KNOCK DOWN CURB

DIMENSIONS:

UNITS	CURB TYPE								
	KNOCK DOWN			ACOUSTICAL SOLID BOTTOM CURB					
	A	B	C	A	B	C	D	E	F
A CABINET (2-7 TON)	73 1/8	51 15/32	14/24	73 1/8	51 15/32	14/24	25	12	18
B CABINET (8-15 TON)	73 1/8	51 15/32	14/24	73 1/8	51 15/32	14/24	25	12	18
C CABINET (16-24 TON)	94 1/8	51 1/4	14/24	94 1/8	51 1/4	14/24	35	12	10
D CABINET (25-40 TON)	108 23/32 ◎	93 3/8	14/24	108 23/32 ◎	93 3/8	14/24	35	12	10
E CABINET (50-60 TON)	108 23/32 ◎	93 3/8	14/24	108 23/32 ◎	93 3/8	14/24	35	12	10

◎ WITH PROP EXHAUST: CURB DIM (A) IS 153 3/4".



NOTE: THIS IS A DETAIL OF THE KNOCK DOWN CURBS W/DUCT SUPPORT RAILS.
THESE DUCT SUPPORT RAILS ARE OPTIONAL AND NEED TO BE ORDERED BY KIT NUMBER.

UNIT SELECTION PROCEDURE

Step-By-Step Procedure For Unit Selection Using Blower/Cooling Performance Tables To Select An AAON Rooftop Unit. The Sample Selection Is Based On The Following Conditions:

UNIT WITH STANDARD EVAPORATOR

SUMMER DESIGN DATA:

- OUTDOOR DESIGN CONDITIONS = **95° DB / 76° WB**
- TOTAL COOLING LOAD = **180,000 Btuh**
- SENSIBLE COOLING LOAD = **156,000 Btuh**
- OUTDOOR AIR VENTILATION LOAD = **27,000 Btuh**
- RETURN AIR TEMPERATURE = **80° DB / 65° WB**

AIR DELIVERY DATA:

- SUPPLY AIR VOLUME = **7,500 CFM**
- EXTERNAL STATIC PRESSURE = **1.2 Inches WG**
- MINIMUM OUTDOOR VENTILATION = **750 CFM (10%)**

UNIT ACCESSORIES:

- GAS HEAT SECTION - **HIGH HEAT CAPACITY**
- 2 INCH THROW AWAY AIR FILTERS
- ECONOMIZER

STEP 1 - NOMINAL UNIT SIZE SELECTION

A Summation of the peak cooling load and the outside air ventilation load shows:
180,000 Btuh + 27,000 Btuh = 207,000 Btuh required unit capacity. From the Cooling Capacity Table (Pg.46) for the 20 ton unit with Standard Evaporator at 80° DB / 65° WB return air, 95° DB outdoor ambient, and 7,500 cfm supply air - total cooling capacity is 243,365 Btuh. Therefore; a nominal **20 Ton unit with Standard Evaporator** is selected.

STEP 2 - EVAPORATOR COIL ENTERING CONDITIONS

Mixed air dry bulb temperature determination:

Using minimum outdoor air ventilation of 750 cfm (10%), the mixed air dry bulb temperature entering the evaporator = 80° DB + 0.10 x (95° DB - 80° DB) = 80 + 1.5 = **81.5° DB.**

Approximate mixed air wet bulb temperature determination:

Mixed air wet bulb temperature entering evaporator = 65° WB + 0.10 x (76° WB - 65° WB) = 65 + 1.1 = **66.1° WB.**

A psychrometric chart can be used to more accurately determine the mixed air conditions entering the evaporator coil.

STEP 3 - BLOWER MOTOR HEAT GAIN

Having selected a nominal 20 Ton unit, the blower motor kw can be calculated. The motor size must be selected and the motor heat gain considered in final determination of unit capacity.

Determine unit total static pressure at design blower cfm from Air Delivery Data (above) and 'C' Cabinet Component Static Pressure Drop Tables (pg 52):

- EXTERNAL STATIC PRESSURE = **1.2 IN. WG**
- DX STANDARD EVAPORATOR COIL STATIC PRESSURE DROP = **0.53 in.wg.**
- GAS HEAT EXCHANGER STATIC PRESSURE DROP = **0.21 in. wg.**
- 2 INCH THROW AWAY FILTER STATIC PRESSURE DROP = **0.20 in. wg.**
- ECONOMIZER STATIC PRESSURE DROP = **0.12 in. wg.**
- BASE CURB STATIC PRESSURE DROP = **0.10 in. wg.**
- ***UNIT TOTAL STATIC PRESSURE = 2.36 INCHES WG***

Blower Motor Heat Gain & Size Determination:

Using supply air of 7,500 cfm and unit total static pressure of 2.36 in. wg. enter the 'C' Cabinet Blower Performance Table (Pg. 53), which shows a blower speed of 1170 rpm, and a Motor Input of 6.24 kw is required. Therefore, motor heat gain = 6.24 x 3,414 = **21,300 Btuh.**

From the Indoor Blower Motor Data Table (Pg. 53); for motor input of 6.24 kw a **7 1/2 hp blower motor** is selected.

STEP 4 - TOTAL REQUIRED COOLING CAPACITY

Req. Capacity = Total Peak Load + Ventilation Load + Blower Mtr Heat = 180,000 + 27,000 + 21,300 = **228,300 Btuh.**

STEP 5 - UNIT GROSS TOTAL CAPACITY

From the Cooling Capacity Tables (Pg. 46) at 81.5° DB / 66.1° WB entering the evaporator, 7,500 supply air cfm, and 95°DB outdoor ambient; total capacity for a 20 Ton unit with Standard Evaporator = **246,500 Btuh.**

unit selection procedure • *con't.*

STEP 6 - UNIT GROSS SENSIBLE CAPACITY

Similar to step 5; at 81.5° DB / 66.1° WB entering the evaporator, 7,500 supply air cfm, and 95°DB outdoor ambient; sensible capacity for the 20 Ton unit with Standard Evaporator **= 211,200 Btuh.**

Design Sensible / Total (S/T) ratio = 156,000 / 180,000 = 0.87, and unit S/T ratio = **211,200 / 246,500 = 0.86.** Therefore; a 20 Ton unit with Standard Evaporator remains the selection.

STEP 7 - SUPPLY AIR TEMPERATURE

Unit sensible capacity corrected for blower heat = 211,200 - 21,300 **= 189,900 Btuh.**
Supply air dry bulb temperature difference = (Corrected Sensible Capacity) / (1.085 x Supply Cfm) = 161,700 / (1.085 x 7,500) **= 23.3°F.**
Supply air dry bulb temperature = 81.5 - 23.3 **= 58.2° DB.**

UNIT NET TOTAL CAPACITY = Unit Gross Total Capacity - Blower Motor Heat = 246,500 - 21,300 **= 225,200 Btuh.**
Unit enthalpy difference = (Unit Net Total Capacity) / (4.5 x Supply Cfm) = 225,200 / (4.5 x 7,500) **= 6.67 Btu/lb.**
Supply Enthalpy =Entering Enthalpy(66.1° WB) - Unit Enthalpy Difference =30.91 Btu/lb - 6.67 Btu/lb **= 24.2 Btu/lb.**
Supply air wet bulb temperature **= 56.6° F.**

TABLE 80-1 BTU CONTENT OF 1 LB. OF DRY AIR WITH WATER VAPOR TO SATURATE IT (Standard Atmospheric Pressure 29.921" W.G.)

WET BULB °F	TENTHS OF DEGREES									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
50	20.30	20.36	20.41	20.47	20.52	20.58	20.64	20.69	20.75	20.81
51	20.86	20.92	20.98	21.03	21.09	21.15	21.21	21.26	21.32	21.38
52	21.44	21.49	21.55	21.61	21.67	21.73	21.79	21.84	21.90	21.96
53	22.02	22.08	22.14	22.20	22.26	22.32	22.38	22.44	22.50	22.56
54	22.61	22.68	22.74	22.80	22.86	22.92	22.98	23.04	23.10	23.16
55	23.22	23.28	23.34	23.41	23.47	23.53	23.59	23.65	23.72	23.78
56	23.84	23.90	23.97	24.03	24.10	24.16	24.22	24.29	24.35	24.42
57	24.48	24.54	24.61	24.67	24.74	24.80	24.86	24.93	24.99	25.06
58	25.12	25.19	25.25	25.32	25.38	25.45	25.52	25.58	25.65	25.71
59	25.78	25.85	25.92	25.98	26.05	26.12	26.19	26.26	26.32	26.39
60	26.46	26.53	26.60	26.67	26.74	26.80	26.87	26.94	27.01	27.08
61	27.15	27.22	27.29	27.36	27.43	27.50	27.57	27.64	27.71	27.78
62	27.85	27.92	27.99	28.07	28.14	28.21	28.28	28.35	28.43	28.50
63	28.57	28.64	28.72	28.79	28.87	28.94	29.01	29.09	29.16	29.24
64	29.31	29.38	29.46	29.53	29.61	29.68	29.76	29.83	29.91	29.98
65	30.06	30.14	30.21	30.29	30.37	30.44	30.52	30.60	30.68	30.75
66	30.83	30.91	30.99	31.07	31.15	31.22	31.30	31.38	31.46	31.54
67	31.62	31.70	31.78	31.86	31.94	32.02	32.10	32.18	32.26	32.34
68	32.42	32.50	32.59	32.67	32.75	32.83	32.92	33.00	33.08	33.17
69	33.25	33.33	33.42	33.50	33.59	33.67	33.75	33.84	33.92	34.00
70	34.09	34.18	34.26	34.35	34.43	34.52	34.61	34.69	34.79	34.86
71	34.95	35.13	35.13	35.21	35.30	35.39	35.48	35.57	35.65	35.74
72	35.83	35.92	36.01	36.10	36.19	36.28	36.38	36.47	36.56	36.65
73	36.74	36.83	36.92	37.02	37.11	37.20	37.29	37.38	37.48	37.57
74	37.66	37.75	37.85	37.94	38.04	38.13	38.23	38.32	38.42	38.51
75	38.61	38.71	38.80	38.90	39.00	39.09	39.19	39.28	39.38	39.47
76	39.57	39.67	39.77	39.87	39.98	40.07	40.17	40.27	40.37	40.47
77	40.57	40.67	40.77	40.87	40.97	41.07	41.18	41.28	41.38	41.48
78	41.58	41.68	41.79	41.89	42.00	42.10	42.20	42.31	42.41	42.52
79	42.62	42.73	42.83	42.94	43.05	43.15	43.26	43.37	43.48	43.58

TABLE 80-2 SPECIFIC WT. OF AIR AT ALTITUDE (At Standard Conditions)

ALTITUDE	BAROMETRIC PRESSURE (In. HG)	SPECIFIC WT. OF AIR
- 0 -	29.92	0.0752
1000	28.86	0.0723
2000	27.82	0.0697
3000	26.81	0.0672
4000	25.84	0.0648
5000	24.89	0.0624
6000	23.98	0.0601
7000	23.09	0.0579
8000	22.20	0.0537

In some cases, it possible that the determined **MAXIMUM OVERCURRENT PROTECTION** is less than the **MINIMUM CIRCUIT AMPACITY**. In such a case, increase the Maximum Overcurrent Protection to equal the Minimum Circuit Ampacity. If this value does not correspond to a standard fuse size, further increase the Maximum Overcurrent Protection to the closest (but larger) standard size. (SEE NEC 240-6 for a list of standard sizes.)

COOLING & COOLING WITH GAS HEAT (Standard sequence of operation)

Minimum Circuit Ampacity
MCA = 1.25 (Full Load (Rated Load) of the Largest Load [Motor or Compressor]) + Remaining Compressor Rated Load Amps + Supply Fan Full Load Amps + Condenser Fan Full Load Amps + (Exhaust Fan Full Load Amps**).

Maximum Overcurrent Protection
MOP = 2.25 (Full Load (Rated Load) of the Largest Load [Motor or Compressor]) + Remaining Compressor Rated Load Amps + Remaining Supply Fan Full Load Amps + Condenser Fan Full Load Amps + (Exhaust Fan Full Load Amps**).

Select the standard fuse rating (SEE NEC 240-6) equal to the calculated Maximum Overcurrent value. If the MOP value does not equal a standard rating, select the next LOWER rating.

Recommended Dual Element Fuse Size
RFS = 1.5 (Full Load (Rated Load) of the Largest Load [Motor or Compressor]) + Remaining Compressor Rated Load Amps + Remaining Supply Fan Full Load Amps + Condenser Fan Full Load Amps + (Exhaust Fan Full Load Amps**).

Select the standard fuse rating equal to the calculated Recommended Fuse Size value. If the RFS value does not equal a standard rating, select the next HIGHER rating.

Disconnect (Power) Switch Size
DSS = 1.15 (Rated Load Amps of the Compressor(s) + Full Load Amps of the Supply Fan(s) + Condenser Fan Full Load Amps + (Exhaust Fan Full Load Amps**).

Select the standard switch size rating equal to the calculated Disconnect Switch Size value. If this value does not equal a standard size, select the next LARGEST size.

** This value should be added only to 7 ton and smaller units. Do not add the exhaust fan ampacity to 8 through 60 ton units with the standard exhaust sequence of operation which will not allow the exhaust fan(s) and the second stage compressor to operate simultaneously.

ELECTRIC HEATING

The following equations provide data for **AIR HANDLING UNITS WITH ELECTRIC HEATING**. To determine values for compressorized cooling units with electric heat, calculate the cooling only values as indicated above and also calculate the heating only values as indicated below. The total unit values will be equal to the largest value from each calculation.

Electric Heat Full Load Ampacities

$$\text{3 Phase FLA} = \frac{\text{KW}}{\left(\text{240 or 480 VAC} \sqrt{3}\right)} \qquad \text{1 Phase FLA} = \frac{\text{KW}}{\text{240 or 480 VAC}}$$

Minimum Circuit Ampacity
For 40KW and smaller Electric Heat configurations:
MCA = 1.25 (Full Load Amps of Electric Heat + Full Load Amps of Supply Fan(s)). • **i.e. 1.25 x (FLA Elect.Ht. + FLA Supply Fan(s))**
For 50KW and larger Electric Heat configurations:
MCA = 1.25 (Full Load Amps of Supply Fan(s)) + Full Load Amps of Electric Heat. • **i.e. 1.25 x (FLA Supply Fan(s)) + FLA Elect.Ht.**

Maximum Overcurrent Protection
MOP = 2.25 (Full Load Amps of 1 Supply Fan) + Remaining Supply Fan Full Load Amps + Full Load Amps of Electric Heat.

As with Cooling, select the standard fuse rating equal to the calculated Maximum Overcurrent value. If the MOP value does not equal a standard rating, select the next LOWER rating.

Disconnect (Power) Switch Size
DSS = 1.15 (Full Load Amps of Electric Heat + Full Load Amps of Supply Fan(s)).

Select the standard switch size equal to the calculated Disconnect Switch Size value. If this value is not a standard size, select the next LARGEST size.

mechanical cooling capacities formulas

Cooling Capacities are Gross Capacities and do not account for indoor fan motor heat.
Determine Net Capacity using the following formula:
Net Total Capacity = Gross Capacity - In Door (ID) Fan Motor Heat = Gross Capacity - (KW x 3.414)

For Net Sensible Capacitiy, deduct same ID Fan Motor Heat from Gross Sensible.

$$TLDB = TEDB - \frac{\text{NET SENSIBLE CAPACITY (BTUH)}}{1.085 \times CFM}$$

$$HLWB = HEWB - \frac{\text{NET TOTAL CAPACITY (BTUH)}}{4.5 \times CFM}$$

WHERE: TLDB and TEDB = Dry Bulb Temperature Leaving and Entering Evaporator Coil.

HLWB and HEWB = Enthalpy of air corresponding to Wet Bulb Temperature Leaving and Entering Evap. Coil.

FAN LAWS

$$HP = \frac{\text{CFM x Static Pressure, Ins. } H_2O}{\text{6350 x Efficiency}}$$

CFM = varies directly as the speed ratio.

$$CFM_2 = CFM_1 \left(\frac{RPM_2}{RPM_1} \right)$$

Static Pressure varies as the sq. of the speed ratio.

$$SP_2 = SP_1 \left(\frac{RPM_2}{RPM_1} \right)^2$$

H.P. varies as the cube of the speed ratio.

$$HP_2 = HP_1 \left(\frac{RPM_2}{RPM_1} \right)^3$$

INDOOR BLOWER MOTOR DATA

NOMINAL MOTOR H.P.	% EFFICIENCY	MAXIMUM kw	SERVICE FACTOR
1/3	62	.39	1.00
1/2	68	.55	
1	81	1.06	1.15
2	83	2.07	
3	84	3.06	
5	85	5.05	
7 1/2	83	7.75	
10	86	9.98	
15	88	14.62	
20	88	19.50	
25	88	24.38	

$$BHP = \frac{KW \times EFF}{0.746}$$

NOTE: UNITS 30 - 60 TON Blower Performance Charts Show Total (KW) for (2) Motors; To Use Above Table Multiply By 2 .

NOTES

'RH' ROOFTOP HVAC UNIT SPECIFICATIONS

Rooftop units shall be accordance with the following specifications and capacities as shown on the plans.

UNIT PERFORMANCE

- Unit cooling capacities shall be in accordance with and tested to ARI standard 210/240-89 or 360-85.
- Units up to 20 tons shall carry the ARI compliance sticker.
- Unit **MINIMUM** cooling efficiency, including the standard supply air blower motor shall be as shown on the plans.
- Unit shall have a minimum heating system efficiency of 80%.
- Units shall be safety certified in accordance with UL Standard UL465, and ANSI Standard Z21.47.
- Unit shall be safety certified by an accredited testing laboratory.
- Unit nameplate shall carry the sticker of the certification agency.
- Unit shall be shipped completely assembled by the manufacturer including all standard items and optional items.
- Unit shall be 100% run tested by the manufacturer with a copy of the run test report shipped with the unit.

UNIT CONSTRUCTION

- Unit shall be completely factory assembled, piped, wired and shipped in one piece.
- Unit shall be specifically designed for outdoor rooftop application with a fully weatherproof cabinet.
- Unit design shall be dedicated bottom supply / return air style system for mounting on a roof curb.
- Cabinet shall be constructed entirely of G90 wt. galvanized metal with the exterior constructed of 18 gauge or heavier material.
- The unit roof shall be cross broken and / or sloped to assure drainage.
- Access to compressor(s), controls, filters, blower, heating section, and other items needing periodic checking or maintenance shall be through hinged access doors with a quarter turn latch (door fastening screws are not acceptable).
- Air side service access doors shall be fully gasketed with rain break overhangs.
- Air side access doors will have an internal metal liner to protect the door insulation.
- Unit exterior shall be painted with acrylic-epoxy paint over a wash primer and a paint lock type galvanized steel.
- Wiring shall be color coded and marked with a three digit identification on each end.
- The interior air side of the cabinet shall be entirely insulated on all exterior panels with 1" thick, one pound density, neoprene coated, fiberglass insulation.
- To guarantee no leakage of conditioned air from the cabinet all of the cabinet under positive pressure, downstream from the supply air blower, shall have a separate internal cabinet contained within, and separate from, the exterior cabinet by an air gap. The internal cabinet shall be guaranteed to hold a static pressure of up to 12 inches water column.
- All openings through the base pan of the unit shall have upturned flanges of at least 1/2" in height around the opening through the base pan.
- Unit shall have decals and tags to indicate unit lifting - rigging, service areas and caution areas.
- Wiring diagrams shall be in color and marked to match the color and markings of the wires and shall be both "point-to-point" and "ladder" diagrams.
- Diagrams shall also be laminated in plastic and permanently fixed to the control compartment door.
- Installation and maintenance manuals shall be supplied with each unit, located in a metal pocket in the control access compartment.
- Unit exterior to be "Grey" in color.

OPTION

- Special coatings shall be on all coils and cabinet surfaces.
- Unit exterior to be "Tan" in color.
- Double wall interior insulation liners.

BLOWERS

- Blower(s) shall be entirely self contained on a slide deck for service and removal from the cabinet.
- Adjustable V-belt drive shall be provided with a minimum rating of 140% of the motor nameplate brake horsepower when the adjustable pulley is at the minimum RPM.
- Blowers, drives and motors shall be dynamically balanced.

OUTSIDE AIR: (Select One)

1) Shall be 0-25% with a manually adjustable damper.
2) Shall be 0-50% with an adjustable, motor operated outside air damper constructed of extruded aluminum, hollow core, air foil blades with rubber edge seals and aluminum end seals. Damper blades shall be gear driven and designed to have no more than 25 CFM of leakage per square foot of damper area when subjected to 2" WG air pressure differential across the damper. Damper motor shall be spring return to insure closing of outdoor air damper during periods of unit shut down or power failure.
3) Shall be 0-100% with a motor operated outside air damper constructed of extruded aluminum, hollow core, air foil blade with rubber edge seals and aluminum end seals. Damper blades shall be gear driven and designed to have no more than 25 CFM of leakage per square foot of damper area when subjected to 2" WG air pressure differential across the damper. Damper motor shall be spring return to insure closing of outdoor air damper during periods of unit shut down or power failure.
4) Shall be 3-position dry bulb activated economizer with multi-stage integrated economizer and compressor operation controlled by the conditioned space controller for maximum benefit. The economizer shall consist of a motor operated outdoor air damper and return air damper constructed of extruded aluminum, hollow core, air foil blades with rubber edge seals and aluminum end seals. Damper blades shall be gear driven and designed to have no more than 25 CFM of leakage per square foot of damper area when subjected to 2" WG air pressure differential across the damper. A pressure relief damper sized for 100% relief air shall be provided as part of the economizer. Damper motor shall be spring return to insure closing of outdoor air damper during periods of unit shut down or power failure.
5) Shall be 3-position enthalpy activated economizer with multi-stage integrated economizer and compressor operation controlled by the conditioned space controller for maximum benefit. The economizer shall consist of a motor operated outdoor air damper and return air damper constructed of extruded aluminum, hollow core, air foil blades with rubber edge seals and aluminum end seals. Damper blades shall be gear driven and designed to have no more than 25 CFM of leakage per square foot of damper area when subjected to 2" WG air pressure differential across the damper. Damper motor shall be spring return to insure closing of outdoor air damper during periods of unit shut down or power failure. A pressure relief damper sized for 100% relief air shall be provided as part of the economizer.
6) Shall be a modulating enthalpy controlled economizer with multi-stage integrated economizer and compressor operation for maximum benefit. The economizer shall consist of a motor operated outdoor air damper and return air damper constructed of extruded aluminum, hollow core, air foil blades with rubber edge seals and aluminum end seals. Damper blades shall be gear driven and designed to have no more than 25 CFM of leakage per square foot of damper area when subjected to 2" WG air pressure differential across the damper. Damper motor shall be spring return to insure closing of outdoor air damper during periods of unit shut down or power failure. A pressure relief damper sized for 100% relief air shall be provided as part of the economizer.

POWER EXHAUST

- The control shall be on-off (optional modulating damper controlled by building pressure) and all controls shall be factory installed.

CONDENSING SECTION

- The condensing section shall be equipped with direct drive, vertical discharge condenser fan(s). The condenser coil shall be sloped at least 30 degrees from horizontal to protect the coil from damage.

EVAPORATOR COIL

- Evaporator coil(s) shall be copper tube with aluminum fins mechanically bonded to the tubes.
- Evaporator coils to have galvanized steel end casings.
- Evaporator coils to have equalizing type vertical tube distributors with a top suction connection.
- Evaporator coils for multi-compressor units shall be circuited with one circuit and expansion valve per compressor.

OPTIONS: (Select One)

1) Evaporator coil(s) shall be copper tube with aluminum fins mechanically bonded to the tubes and with a baked-on corrosion resistant coating.
2) Evaporator coil(s) shall be a six row copper tube coil with aluminum fins mechanically bonded to the tubes.
3) Evaporator coil(s) shall be a six row copper tube coil with aluminum fins mechanically bonded to the tubes, with a baked-on corrosion resistant coating.

'RH' ROOFTOP HVAC UNIT SPECIFICATIONS (Continued)

CONDENSER COIL

- Condenser coil(s) shall be copper tube with aluminum fins mechanically bonded to the tubes.
- Condenser coil(s) to be sized for a minimum of 10 degrees sub-cooling.

OPTIONS: (Select One)

1) Condenser coil(s) shall be copper tube aluminum fins mechanically bonded to the tubes and with a baked-on corrosion resistant coating.

REFRIGERATION SYSTEM

- Compressor(s) shall be of the hermetic reciprocating type with internal thermal overload protection, internal spring isolators and mounted on the compressor manufacturer recommended rubber vibration isolators.
- All units over 7 tons shall be multiple stage and shall have a minimum of 2 stages of capacity control.
- Compressor(s) shall be mounted in an isolated compartment to permit operation of the unit without affecting air flow when the compressor compartment is open.
- Compressor(s) shall be isolated from the base pan and supply air to avoid any transmission of noise from the compressor into the building area.
- System shall be equipped with thermostatic expansion valve(s) type refrigerant flow control.
- System shall be equipped with automatic re-set low pressure and manual reset high pressure refrigerant controls.
- Unit shall be equipped with Schrader type service fittings on both the high side and low pressure sides of the system.
- Unit shall be equipped with refrigerant liquid line driers.
- Unit shall be fully factory charged with refrigerant R-22.

OPTIONS: (Multiple selections are permissible)

1) Lead circuit(s) shall be provided with hot gas bypass.
2) Lag circuit(s) shall be provided with hot gas bypass.
3) All circuits shall be provided with hot gas bypass.
4) All circuits shall be equipped with liquid line sight glasses.
5) Unit shall be provided with a hot gas reheat coil piped to the lead refrigerant system.
6) Unit shall be provided with a hot gas reheat coil for field piping to another units refrigerant system.
7) Unit shall be equipped with a 5 minute anti-short cycle delay timer for each compressor.
8) Unit shall be equipped with 20 second between stage delay timer for each compressor.

AIR HANDLING UNIT ONLY (Select One)

1) Units shall be furnished with a DX coil complete with thermostatic expansion valve but with no other cooling side components. See "Evaporator Coil" specifications for coil selection options.
2) Units shall be furnished with a 4 row chilled water coil, copper tube with aluminum fins mechanically bonded to the tubes.
3) Units shall be furnished with a 4 row chilled water coil, copper tube with aluminum fins mechanically bonded to the tubes and with a baked-on corrosion resistant coating.
4) Units shall be furnished with a 6 row chilled water coil, copper tube with aluminum fins mechanically bonded to the tubes.
5) Units shall be furnished with a 6 row chilled water coil, copper tube with aluminum fins mechanically bonded to the tubes and with a baked-on corrosion resistant coating.

GAS HEATING SECTION

- Unit shall heat using natural gas fuel and with one stage of heat capacity.
- Unit shall be provided with a gas heating furnace consisting of an aluminized steel tubular heat exchanger, an induced draft blower and an electric pressure switch to lockout the gas valve until the combustion chamber is purged and combustion air flow is established.
- Unit shall be provided with a gas ignition system consisting of an electronic ignitor to a pilot system, which will be continuous when the heater is operating, but will shut off the pilot when heating is not required.
- Unit shall have gas supply piping entrances in the unit base for through the curb gas piping and in the outside cabinet wall for across the roof gas piping.
- Units tubular gas heat exchanger will carry a 10 year warranty.

'RH' ROOFTOP HVAC UNIT SPECIFICATIONS (Continued)

OPTIONS: (Multiple selections are permissible)

1) Unit shall heat using natural gas fuel and with two stages of heat capacity on each heat exchanger.
2) Unit shall heat using natural gas fuel and two, two stage valves per heat exchanger.
3) Unit shall heat using Liquid Propane gas fuel and with one stage of heat capacity.
4) Unit shall be equipped with a Stainless Steel tubular heat exchanger.

ELECTRIC HEAT

- Unit shall be provided with an electric heating section complete with fuses, a resettable high temperature limit switch and heating capacities as shown on the plans.

HOT WATER COIL

- Unit shall be provided with a 2 Row Hot Water Heating Coil, with copper tubing and aluminum fins mechanically bonded to the tubes.

OPTIONS:

1) Unit shall be provided with a 2 Row Hot Water Heating Coil, with copper tubing and aluminum fins mechanically bonded to the tubes and a baked-on corrosion resistant coating.

STEAM COIL

- Unit shall be provided with a tube-in-tube "non-freeze type" steam coil, 5/8" copper tube with aluminum fins mechanically bonded to the tubes.

OPTIONS:

Unit shall be provided with a tube-in-tube "non-freeze type" steam coil, 5/8" copper tube with aluminum fins mechanically bonded to the tubes and with a baked-on corrosion resistant coating.

FILTERS

- Unit to be furnished with 2" pleated throw away supply air filters.

OPTIONS: (Multiple selections are permissible)

1) Unit to be furnished with 2" permanent frame filter with replaceable media.
2) Unit to be furnished with 2" , 30% efficient, pleated, throw away supply air filters.
3) Unit to be furnished with 4" , 30% efficient, pleated, throw away supply air filters and clogged filter switch.
4) Unit to be provided with a clogged filter switch.
5) Unit to be provided with a direct dial reading magnehelic gauge mounted in the control compartment.

TEMPERATURE CONTROL

- VAV unit control of supply air flow modulation shall be by factory installed: (A) Aileron control; (B) VVC speed control; or (C) VFD speed control; controlled by a field installed duct pressure sensing device.
- Unit shall be equipped with a discharge air temperature controller. Controller to be multi-stage on multi-compressor units. Controller to include compressor anti-short cycle protection for each compressor.

OPTIONS: (Multiple selections are permissible)

1) Unit shall be equipped with hot gas by-pass control on lead refrigeration stage to protect against evaporator frosting at low air flows and suction pressures.
2) Unit to be equipped with an electronic supply air discharge temperature controller. Controller to be multi-stage on multi-compressor units. Controller to include compressor anti-short cycle protection for each compressor.
3) Unit shall be equipped with morning warm up thermostat controller.
4) Unit shall be equipped with morning warm up thermostat controller and a night set back temperature controller with a cooling lock-out function.
5) Unit shall be equipped with morning warm up thermostat controller integrated to the units electric or gas heating section. Units heating section to have supply air flow override/by-pass control to maintain minimum furnace air flow requirements.
6) Unit shall be equipped with morning warm up thermostat controller and a night set back temperature controller with a cooling lock-out function. Controllers to be integrated with the units electric or gas heating section. Units heating section to have supply air flow override/by-pass control to maintain minimum furnace air flow requirements.

'RH' ROOFTOP HVAC UNIT SPECIFICATIONS (Continued)

SMOKE DETECTOR: (Select one each)

1) Unit shall be provided with a smoke detector(s) sensing in the: (A) return air; (B) supply air; or (C) both the return and supply air portion of the unit wired to: (a) shut off the supply fan; or (b) shut off the unit control circuit.
2) Unit shall be provided with terminal strip connections for field supplied supply air smoke detector wired to shut off the unit control circuit.

POWER OPTION: (Multiple selections are permissible)

1) Unit shall be provided with a factory installed and wired internal disconnect switch with fusing.
2) Unit shall be provided with phase and brown-out protection to shut down all motors in the unit if the phases are more than 10% out of balance on voltage, or the voltage is more than 10% under design voltage.
3) Unit shall be provided with a factory installed and wired 115 volt, 13 amp ground fault service receptacle.
4) Unit shall be provided with a factory installed and field wired 115 volt, 13 amp ground fault service receptacle.

OPTIONAL ROOF CURBS

- Roof curbs shall be constructed of galvanized steel. Curbs are to be fully gasketed between the curb top and unit bottom with the curb providing full perimeter support, cross structure support and air seal for the unit.

OPTIONS: (Select one)

1) Unit shall be mounted on a factory furnished, knocked down and field assembled roof curb.
2) Unit shall be mounted on a factory furnished acoustical style solid bottom roof curb, fully lined with 1" of neoprene coated, fiberglass insulation and with a wood nailer strip.

OPTIONAL CONTROLS

A) Single zone standard mechanical, T874 or equivalent.
B) Single zone electronic with night set back, T7300 or equivalent.
C) Single zone electronic with night set back & integrated modulating economizer function, T7400 or equivalent.
D) VAV electronic controller.
E) VVT electronic controller.
F) Night set back, time of day & day of week function other than above electronic thermostats.
G) Remote monitoring and/or control panels, W950 or equivalent.
H) Staging and/or step control for electric heat.
J) Modulating gas heat specifications and control.
K) Low ambient operation option to 45 degrees.

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