



COMPU-AIRE INC.

Specialized Environmental Air Conditioning Systems



CHILLED WATER

SYSTEM 2000

FLOOR MOUNT SYSTEMS

6 THRU 70 TONS

**TOTAL CONDITIONING OF AIR ENVIRONMENT FOR MISSION CRITICAL FACILITIES,
COMPUTER ROOMS, DATA CENTERS, AND TELECOMMUNICAITON FACILITIES**

SYSTEM 2000-CHILLED WATER

All computers are highly sensitive to their environment. To function efficiently they require specific temperature, humidity and filtration conditions. Whether your data center is large or small, the precise control of temperature, humidity and particulate contamination is critical. Failure to meet these specified conditions can result in distorted or lost data, even complete shutdown computer services.

To protect the total computer investment, it is essential to select air conditioning equipment specifically designed for computer room conditions. Your environmental control system must be reliable, energy efficient and easy to service. **Compu-Aire** understands the special environment control needs and has designed a system which will meet these needs with continuous reliable operation...**System 2000**. When a central water chiller is available, the **System 2000** environmental control system can provide reliable means of year round control of temperature and humidity.

Representing the culmination of over two decades of technical innovation, performance enhancement, practical design improvements, and field tested reliability, the **System 2000** line of precision cooling and environmental control systems offers the highest levels of quality and performance in the industry.

Ranging from 6-70 ton capacities, **ETL Listed** the **System 2000** line offers the system specify greater design flexibility, unequalled ease of service, and practical design features to provide an ideal operating environment for systems ranging from minicomputer rooms to major data center installations.

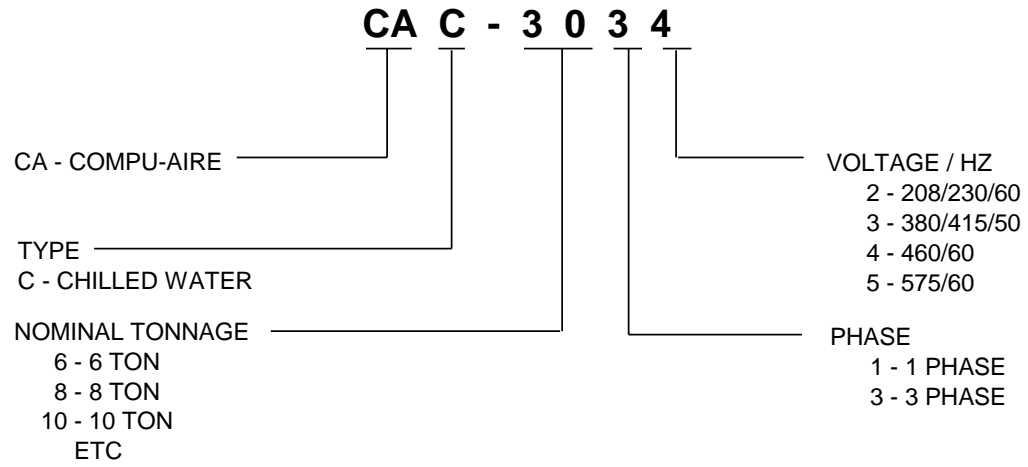
System 2000 design provides safe and reliable support for a broad variety of operating environments, in addition to computer rooms. Typical applications include, but are not limited to:

- Telecommunication Rooms
- Networks and Switching Centers
- Hospital diagnostic stations
- Clean Rooms
- Museums and Archives
- Audio/Video control rooms
- Industrial Process
- Control Rooms
- Labs
- Sensitive chemical processing areas

System 2000 reputation for reliability is legendary-units installed over a decade ago continue to provide safe, predictable protection. **System 2000** not only keeps pace with rapidly changing computer technology, but also offers the highest degree of reliability in component and system operation, for year after year, 24-hours per day, 365 days performance.

System 2000 offers you total environmental air protection for your sizable computer investment providing you complete control of critical environment

MODEL DESIGNATION



SYSTEM 2000

Standard Features

Chilled Water (CAC)

ADVANCED-MICROPROCESSOR CONTROL-SYSTEM 2200

SYSTEM 2200 MICROPROCESSOR BASED CONTROL PANEL: The SYSTEM 2200 MICROPROCESSOR BASED CONTROL PANEL (MCP) is a microprocessor-based controller with a front monitor, 4 rows X 40 character, back lit, super-twist liquid crystal display (LCD) panel and control keys for user inputs. The MCP is **MENU DRIVEN** with user-friendly prompts for easy operation.

The **SYSTEM 2200 MCP** allows user review and programming of temperature and humidity set points, setup selections and alarm parameters.

A password is required to make system changes and **SYSTEM 2200 MCP** is provided with internal-diagnostics. Microprocessor controller board(s) is diagnosed and analysis displays the component failure.

Inputs for temperature, humidity and time delay are displayed on the LCD. The MCP provides monitoring of room conditions, operational status, component run times, date and time, and 2 analog inputs from field sensors provided by others.



System 2200 MCP control system allows programming of:

Temperature Set point (40°F to 85°F),

Temperature Sensitivity (+1°F to 9.9°F in 0.1°F increments),

Humidity Set point (20% to 80% RH),

Humidity Sensitivity (+1% to 30% RH).

All set points are adjustable from the unit front panel. Temperature and Humidity Sensors are capable of being calibrated from the front panel.

System 2200 Microprocessor provides the user with two control types: Proportional (P) and Proportional Integral (PI). Proportional uses set points and band to control the system and Proportional Integral is time selective.

ADVANCED MICROPROCESSOR-SYSTEM 2200 PLUS WITH GRAPHICAL DISPLAY: Unit shall be provided with state of art user interface, featuring 5.7" touch screen display with ¼ VGA resolution, and a 32-bit microprocessor that provide up to 320X240 pixels in size and up to 256 colors, various animated icons, non-proportional fonts in Unicode format and trend graphs. Touch screen functions makes it easier for the user to understand and set the control parameters on System 2200+ series controller.

Automatic control functions

- Compressor Short Cycle Control
- System Auto or Manual Restart
- Sequential Load Activation
- Common Alarm Relay
- Manual Diagnostics

Programmable Functions

- Temperature Set Point (65°-85° F/18.9°-29.4° C)
- Temperature Sensitivity (1°-5° F, C in 0.1° Increments)
- Humidity Set Point (40-60%)
- Humidity Sensitivity (1-10% RH in 0.1% Increments)
- Temperature Alarm Points
- Humidity Alarm Points
- Unit Stage Time Delay
- Inter-stage Time Delay
- Audio Alarm
- Restart Mode
 - Fire-stat Tripped

Monitored and displayed Functions

- Current Temperature (deg. F/C)
- Current Humidity (% RH)
- Cooling 1, 2
- Heating Stages 1, 2
- Humidification
- Dehumidification
- Run Times for Blower, Compressors, Reheat Elements,
- Humidifier, Dehumidification
- 2 Analog Inputs for Customer Supplied Sensors

Switch Functions

- System On/Off Switch
- Menu Select Button
- Alarm Silence/Program Button

Standard Alarms

- Room Over Temperature
- Room Under Temperature
- Room Over Humidity
- Room Under Humidity
- No Air Flow
- Change Filters
- Humidifier Problem
- Fire-stat Tripped
- Low Voltage Alarm
- Temperature Sensor Failure
- Humidity Sensor Failure
- Power Failure Restart
- Compressor Short Cycle
- Compressor High Pressure 1
- Selectable Alarm Outputs
- Compressor Low Pressure 1

Optional Alarms

- Under Floor Leak Detected
- Smoke Alarm

Automatic restart of unit after power loss is a standard feature of the microprocessor system 2200.

FIRESTAT: Is an internal part of the microprocessor panel with the sensing element in the Return Air. Upon activation the Fire-stat WILL IMMEDIATELY SHUT DOWN THE ENTIRE UNIT.

AUXILIARY CONTACTS FOR REMOTE ALARM: A relay with set of dry contacts shall be provided for remote alarm (common) or connection to ECMS system (By others).

SYSTEM 2200 TIME-CLOCK: Microprocessor System 2200 with Time Clock gives capability of Set Back Control for all the units.

CABINET & FRAME:

System 2000 frame is constructed of heavy gauge 1.5 square inch heliarc-welded tubular steel for strength and protection. Exterior cabinet front and side access panels are constructed of heavy gauge cold-rolled steel manufactured in the USA. Access is made easy for servicing, as the cabinet is fitted with captive ¼” fasteners which allow controlled access for service and are positioned to enhance cabinet appearance.

Access panels are well insulated with NFPA 90A rated 1” thick 1.5 lbs. density fiberglass insulation.

The cabinet has decorative front and side panels, which are color coordinated with the decor of the computer room. Standard colors available for the **System 2000** are Sky Blue Black or Cloud White.



"A" FRAME COIL

System 2000 has two Chilled Water coils provided with high efficiency fins and larger coil face area. The "A" Frame coil is designed to provide the maximum sensible heat ratio required by the application in which the system is used for. The larger coil face area and optimized circuiting arrangement not only minimize the energy consumption but also provides precise control of temperature and humidity. **Air bypass is provided to prevent saturated air from being introduced into the space in which is being controlled.** Air is drawn thorough both circuits of the coil at low velocity providing effective surface exposure with minimum turbulence.

Every **System 2000** is equipped with two drain pans. The primary drain pan is stainless steel and is provided under each coil. A secondary drain pan is provided at the base of the unit. This provides **double** protection against any water reaching the sub floor and affecting the computer cables. Each drain pan is piped with a condensate drain outlet.

AIR BYPASS

Unit is equipped with built-in air bypass (adjustable) to control the maximum relative humidity and limit the temperature variation of the discharge air. Discharge air will not exceed 80% R.H. under all normal computer room operating

CHILLED WATER CONTROL VALVE

A three (3) way modulating Chilled Water control valve is factory installed. Valves accurately control the flow as per the cooling requirement.

NOTE: CHILLED WATER PIPING IS TERMINATED FROM BOTTOM LEFT HAND SIDE

DEHUMIDIFICATION CYCLE

When **System 2000** is switched to the dehumidification mode, a call for cooling is energized by microprocessor and moisture is condensed on the cooling coil. The condensate is then discharged through the primary condensate drain. The reheat provided offsets sensible cooling during dehumidification and has sufficient capacity to maintain computer room dry bulb conditions.

ELECTRIC REHEAT

System 2000 standard reheat is provided in multi-stage two, three or four stages. The low-watt density, electrically enclosed elements are surrounded by 304 stainless steel tube and fins, thus extending the life of the elements, reducing sheath temperatures and eliminating ionization. Reheat operation is protected by dual temperature limit controls. In the dehumidification mode the system selected has ample reheat capacity to maintain dry-bulb conditions. **(See technical data for reheat information on system selected)**

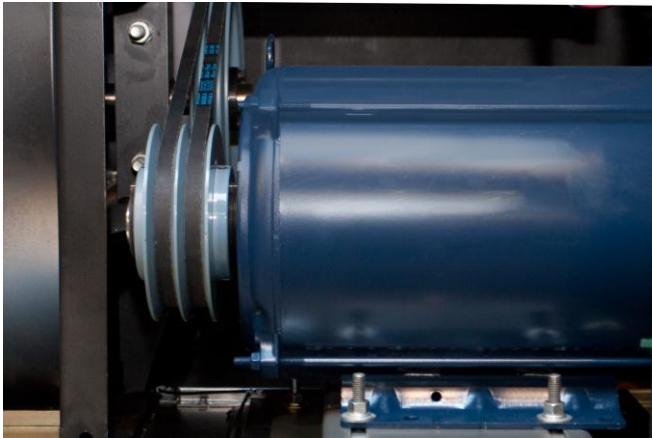
HIGH VOLTAGE CONTROL PANEL

System 2000 is equipped with a high voltage panel, which is easily accessible from the front of the unit and can be accessed for full service without disrupting the air flow. All wiring conforms to National Electrical Code (NEC) and UL 1995 requirements. Electrical components utilized in the control panel are UL Listed and Recognized. Each AC power circuit is individually branch circuit protected on all three phases. Each component (**humidifier, motor, electric reheat stage**)(if applicable) is provided with a factory mounted and wired definite purpose contactor. The control wiring is 24 VAC low voltage.

The control panel has the following components:

- * Power block or Disconnect Switch *
- * Relays
- * Fuse blocks
- * Fuses
- * Control Transformers
- * Microprocessor controller
- * Terminal blocks

System 2000 requires a single point main power supply connection.



FAN/MOTOR SECTION

System 2000 features double width, double inlet (DWDI), centrifugal, forward curved blower configuration mounted on a fan deck. The air conditioner is configured for draw-thru air pattern to provide uniform airflow over the entire face area of the coil. Each fan is the centrifugal type with forward curved blades, both dynamically and statically balanced to minimize vibration. The blower(s) operates in the Class-I range, is belt driven, and rated in accordance with AMCA Standard 210.

The speed of the blowers is adjustable by means of a variable pitch motor pulley. Belts are sized for 200% of the motor horsepower rating, and are oil and heat resistant and static conducting.

The blower has permanently lubricated ball bearings, with an average life span of 100,000 hours. The blower shaft is cold finished center-less ground heavy-duty steel, treated for rust protection. The shaft conforms to ASTM A-108 specifications.

The fan section features the following:

- * Permanently lubricated, self-aligning ball bearings
- * Dual belt variable pitch drive-Providing adjustable air flow capability to match the load requirements.
- * Fan deck to minimize vibrations.
- * Draw through airflow for even air distribution over "A" Frame Coil, static sealing of the filter section and low internal cabinet pressure losses.
- * Low noise level fan-designed for quite reliable operation

Motors are high efficiency open drip proof(ODP) type. Motors are mounted on an adjustable slide base with a locking assembly to prevent motor play and have internal overload protection. The motor is **1725 RPM** and has copper windings, phase isolation and shall be UL component recognized. The motors have a minimum NEMA service factor of 1.15.

AIR FLOW SWITCH

System 2000 is equipped with airflow switches that continuously monitor the supply airflow and turn the unit off with alarm in case of loss of airflow. The unit also monitors pressure drop across the air filters and provide dirty filter alarm (indication only). Field calibration is required for dirty filter alarm.

FILTER SECTION

System 2000 has standard 2 inch deep, 30% pleated media high efficiency filters,(based on ASHRAE Std. 52-76) Filter section is serviceable from the top or either side on down-flow units and from the front or right-hand side on up-flow units.

OPTIONAL FEATURES

CABINET OPTIONS

Upflow with Plenum & Front Supply Grille and Front Return

Up-flow version of the unit is available for installations where computer floors are not required and/or not available. The unit is provided with an air distribution discharge plenum Designed for in-the-space applications, where utilizing ductwork is not practical.

Plenum is constructed of heavy gauge reinforced furniture grade steel panels and is insulated with 1", 1-1/2lb., density insulation. It is painted to match the unit color. Plenum height shall be 20" or as required. Supply Air Grilles on Front. Optional left and/or right side(s) are available.

System 2000 can be provided with chilled water valve piping section on the right hand side of the cabinet as oppose to the standard left hand side. Allowing easier access from the right hand side of the unit and enabling two units to sit side by side, with one unit having access from the left-hand side and the other from the right-hand side. Piping connection will be from bottom right-hand side or optional top right-hand side. Consult Factory for full details

Piping Configuration

Piping connection can be terminated from top left-hand side

Double Wall Construction

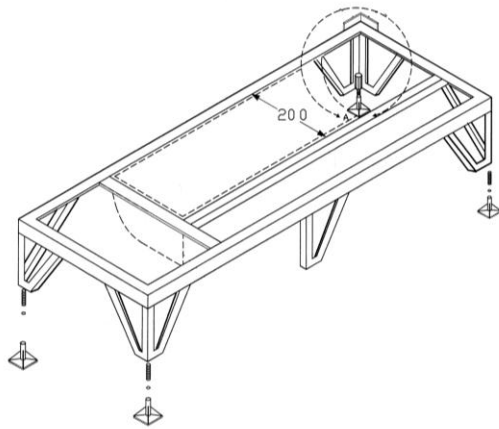
Cabinet exterior access panels are constructed of double wall construction. Each access panel is reinforced with additional heavy gauge metal with insulation on both panels. Allowing a maximum vibration, noise and thermal insulation (attenuation) during system operation.

High Density Grade Insulation

Access panels are well insulated with NFPA rated 1" thick 3 lbs. density fiberglass type insulation.

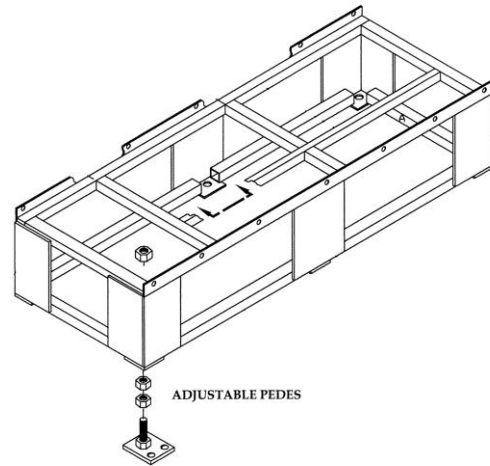
Rear Decorative Panels

Rear panel(s) of the system, normally black, is specified to match the selected cabinet color, especially if the unit it to be positioned in such a way that it is centrally located in the room.



Floor-Stand-ZONE II

Floor-Stand is constructed of heliarc welded **angle steel** and is 8"-24" in height and has adjustable legs for height adjustability (+/- 2"). The floor stand allows the ease for installation and connection of the system prior to the installation of the raised floor. Adjustable floor stand raises the system above the subfloor to match the height of the raised floor. **Note: Floor stand height is fixed once selected. Height adjustability of +/- 2" shall be based on selected floor-stand height only.**



Seismic Base Zone IV Floor Stand

Compu-Aire can provide seismic rated floor stands. In areas where seismic bracing is a concern, the floor-stand is constructed of heliarc welded **tubular steel** and is 8"-24" high and has adjustable legs for height adjustability (+/- 2"). Floor stand is rated for **Seismic Zone II or Zone IV** application.

Note: Floor stand height is fixed once selected. Height adjustability of +/- 2" is based on selected floor-stand height only.

Turning Vane (Scoop Only)

Heavy gauge, factory installed turning vane (scoop only) provided with floor stand. Utilized to direct airflow. (Consult factory on specifications for vane assemblies)

Back Draft Damper

An **automatic** back-draft damper is provided at the outlet of the discharge elbow to prevent back flow of air. Motorized damper is available, consult factory.

Vibration Isolation Pad(s)

Ribbed Neoprene and cork sandwich pads are provided for field installation under mounting pedestals.

Vibration Isolator(s) (Spring type)

Vibration Isolators are equipped with isolation pedestals for ease of installation of sub floor and to prevent any vibration being directly transmitted to the access floor.

Filter Options

High Efficiency Filters(MERV-8)

High efficiency filters for various requirements are available in lieu of standard 2" 30% efficient filter. High efficiency filters available in **Downflow or Upflow** models. These optional filters are 2" to 4" thick deep pleated filters, 30% to 80% efficient. High efficiency filters allow optimal air filtering for even the strictest air quality requirements.

Pre-Filters

In addition to the standard or optional high efficiency filters selected for the system, 2" 20% pre filters can be provided to allow for additional filtering of return air. **Note:**

Upgraded motors may be required for additional air pressure drop across filter section.

Magnehelic Pressure Gauge

Unit is provided with Magnehelic Pressure Gauge in front of the unit to constantly read pressure drop across the filter.

Water Side Options

Condensate Pump

The Condensate Pump is available for factory installed and wired unit mounted or shipped loose for field installation by others. Condensate Pump is complete with integral float switch, sump, motor, pump and automatic control. Check valve shall be field provided and installed by others. Condensate Pump is available in 115V, 208V or 460V. Primary drain and humidifier drain shall be piped to condensate pump for removal of condensate. Unit mount condensate pumps shall be wired to main control panel on unit. Condensate Pumps for field installations require a separate power source. **Condensate Pump rated for 355 GPH @ 20' of head and high condensate temperatures caused by humidifier flush and drain cycle.**

Motor Options

Upgraded Motor/Blower Package

System 2000 up-flow units are provided with upgraded motor/blower package to accommodate for high external static pressures requirements, special filters or increased CFM. (Consult factory for application requirements).

High Efficiency Motors

Premium efficiency motors are available as open-drip proof (ODP) or totally enclosed fan cooled (TEFC). Available on down flow or up flow models.

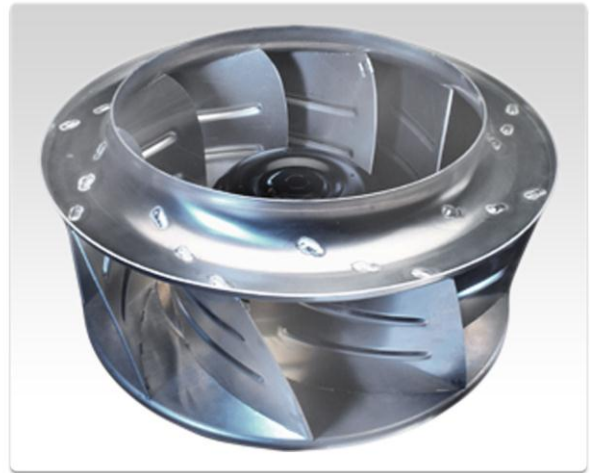
Variable Speed Drive-"Energy Saver"

Variable Speed Drive is available for capacity control. The advance microprocessor synchronizes the blower speed with the Chilled Water valve opening and consequently the cooling demand of the room.

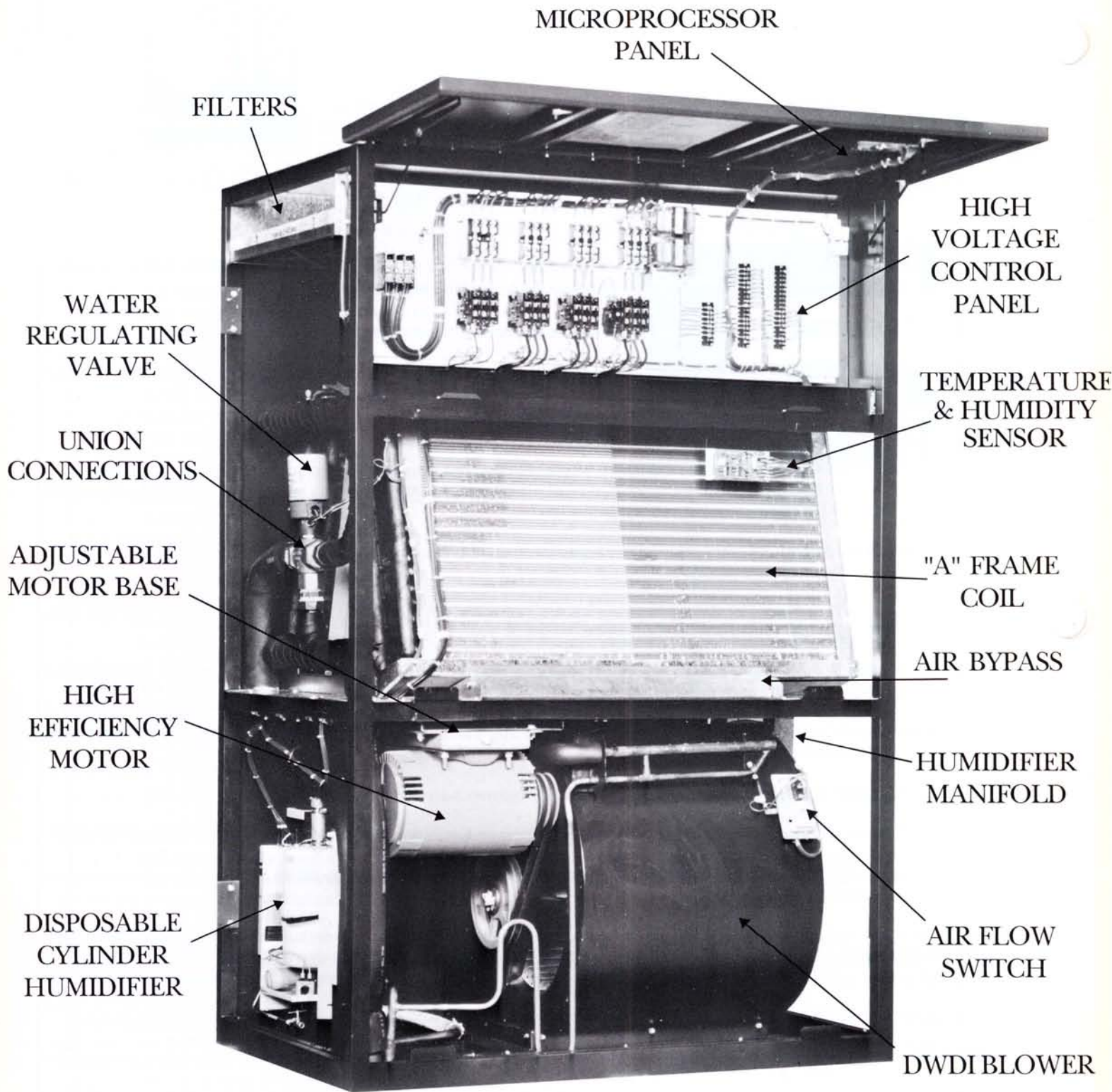
Fan/Motor Isolation

Fan and motor section is isolated from cabinet. Complete motor-blower assembly is mounted on vibration isolators to minimize the vibration transferred to the unit frame.

Plug Fan



Plug Fan: The evaporator sections shall be configured for draw-thru air pattern to provide uniform Air Flow over the coil face area. Each fan shall be cassette type complete with a variable speed high efficiency EC motor directly driven by the controller with, 0-10 VDC output for precise air flow volume control. Plug fans do not require belt replacement or service and are rated for 40,000 hours of operation under full load conditions. The cassette type design provides the user a simple replacement allowing for minimum down time during service.



DOWN FLOW CAC 15 SHOWN

TECHNICAL DATA

MODEL	CAC-10	CAC-15	CAC-20	CAC-25	CAC-30	CAC-35	CAC-40	CAC-50
CAPACITY DATA • Based on 45°F(7.2°C) Entering Water With 10°F(5.6°C) Temperature Rise								
80°F DB, 67°F WB(26.7°C DB, 19.4°C WB), 50% RH Entering Air								
Total BTU/HR(KW)	164,500(48.1)	216,200(63.4)	266,400(78.0)	326,600(95.6)	409,000(119.7)	461,500(135.1)	557,700(163.3)	654,200(191.5)
Sensible BTU/HR(KW)	114,000(33.4)	147,500(43.2)	170,700(50.0)	221,000(64.7)	261,600(76.6)	307,400(90.0)	364,200(106.6)	420,100(123.0)
Flow Rate GPM(L/S)	30(1.9)	40(2.5)	50(3.2)	60(3.8)	75(4.7)	85(5.4)	106(6.7)	125(7.9)
Pressure Drop PSI(kPA)	5.7(39.3)	4.9(33.7)	7.6(52.3)	5.3(36.5)	7.1(48.9)	4.2(28.9)	6.4(44.1)	8.6(59.2)
75°F DB, 62.5°F WB(23.9°C DB, 16.9°C WB), 50% RH Entering Air								
Total BTU/HR(KW)	112,800(33.0)	145,200(42.5)	185,400(54.3)	226,100(66.2)	286,900(84.0)	314,500(92.1)	394,800(115.6)	474,800(139.0)
Sensible BTU/HR(KW)	96,900(28.4)	123,800(36.2)	145,600(42.6)	188,500(55.2)	221,800(64.9)	260,900(76.4)	309,200(90.5)	359,900(105.4)
Flow Rate GPM(L/S)	24(1.5)	30(1.9)	38(2.4)	48(3.0)	60(3.8)	64(4.0)	80(5.1)	105(6.6)
Pressure Drop PSI(kPA)	3.8(26.2)	2.9(19.9)	4.7(32.3)	3.6(24.8)	4.8(33.1)	4.7(32.3)	5.7(39.2)	4.7(32.3)
72°F DB, 60°F WB(22.2°C DB, 15.5°C WB), 50% RH Entering Air								
Total BTU/HR(KW)	90,600(26.5)	124,500(36.5)	152,200(44.6)	185,300(54.3)	230,600(67.5)	256,400(75.1)	323,400(94.7)	358,200(104.0)
Sensible BTU/HR(KW)	86,400(25.3)	113,800(33.3)	134,500(39.4)	185,300(54.3)	201,600(59.0)	256,400(75.1)	278,200(81.5)	312,000(91.4)
Flow Rate GPM(L/S)	18(1.1)	25(1.6)	33(2.1)	37(2.3)	46(2.9)	52(3.3)	66(4.2)	80(5.1)
Pressure Drop PSI(kPA)	6.5(44.7)	5.2(35.8)	5.4(37.2)	3.9(26.8)	9.7(66.8)	4.6(31.6)	8.1(55.8)	7.0(48.3)
72°F DB, 58.6°F WB(22.2°C DB, 14.8°C WB), 45%RH Entering Air								
Total BTU/HR(KW)	85,600(25.1)	114,200(33.4)	139,500(40.9)	173,100(50.7)	209,300(61.2)	237,900(69.7)	292,500(85.6)	321,900(94.0)
Sensible BTU/HR(KW)	85,600(25.1)	114,200(33.4)	139,500(40.9)	173,100(50.7)	204,500(59.9)	237,900(69.7)	284,200(83.2)	321,900(94.0)
Flow Rate GPM(L/S)	17.5(1.1)	23(1.5)	28(1.8)	35(2.2)	42(2.7)	48(3.0)	58.5(3.7)	72(4.5)
Pressure Drop PSI(kPA)	5.9(40.6)	5.4(37.6)	4.3(29.6)	4.7(32.3)	3.6(24.8)	4.1(28.2)	15.7(46.8)	6.1(42.0)
FAN DATA-DWDI FORWARD CURVED CENTRIFUGAL VARIABLE PITCH PULLEY								
CFM (L/S)	5300(2501)	6300(2974)	6000(2832)	9300(4390)	9200(4342)	12700(5994)	12700(5994)	15000(7080)
ESP "WC (Pa)	0.5(125)	0.5(125)	0.5(125)	0.5(125)	0.5(125)	0.5(125)	0.5(125)	0.5(125)
Fan(s)Quantity(Downflow)	1	1	2	2	2	2	2	2
Fan(s)Quantity(Upflow)								
Motor HP	3	3	3	5	5	7.5	7.5	10
CHILLED WATER COIL DATA - "A" Frame 1/2" OD COPPER TUBING, ALUMINUM FINNS, 150 PSIG WORKING PRESSURE								
Face Area FT ² (M ²)	12.5(1.2)	12.5(1.2)	19.1(1.8)	19.1(1.8)	19.1(1.8)	25(2.3)	25(2.3)	30.2(2.8)
Rows	3	3	4	4	5	4	6	6
Valve Configuration	3 way	3 way	3 way	3 way	3 way	3 way	3 way	3 way
ELECTRIC REHEAT-BTU/HR INCLUDES MOTOR HEAT								
KW	12.0	15.0	22.5	22.5	22.5	30.0	30.0	30.0
BTU/HR	46,100	56,250	87,500	97,270	97,270	121,200	121,200	121,200
Stages	2	2	2	3	3	3	4	4
HUMIDIFIER - ELECTRONIC ELECTRODE WITH DISPOSABLE CYLINDER								
KW	6.8	6.8	10.2	10.2	10.2	10.2	10.2	10.2
Capacity LBS/HR	17.5	17.5	30	30	30	30	30	30
FILTER DATA(DOWNFLOW MODEL) DISPOSABLE PLEATED MEDIA 30% EFFICIENCY ASHRAE STANDARD 52-76								
20"X25"X2"	-	-	2	2	2	4	4	3
16"X25"X2"	3	3	2	2	2	1	1	3
Media Area FT ² (M ²)	37.5(3.5)	37.5(3.5)	55.6(5.2)	55.6(5.2)	55.6(5.2)	73.7(6.8)	73.7(5.2)	83.4(7.7)
FILTER DATA(UPFLOW MODEL) DISPOSABLE PLEATED MEDIA 30% EFFICIENCY ASHRAE STANDARD 52-76								
16"X20"X2"	3	3	2	2	2	1	1	3
20"X20"X2"	-	-	2	2	2	4	4	3
Media Area FT ² (M ²)	30.3(2.8)	30.3(2.8)	44.6(4.1)	44.6(4.1)	44.6(4.1)	58.9(5.5)	58.9(5.5)	66.9(6.2)
PIPING DATA - All connections Copper O.D.								
Condensate Drains	(2)3/4"	(2)3/4"	(2)3/4"	(2)3/4"	(2)3/4"	(2)3/4"	(2)3/4"	(2)3/4"
Chilled Water Supply	1 1/8"	1 5/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 5/8"
Chilled Water Return	1 1/8"	1 5/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 5/8"
Humidifier Make-Up	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
WEIGHT LBS (KG)	1050(472)	1300(585)	1780(807)	1850(832)	2100(945)	2200(990)	2310(1039)	2410(1084)

ELECTRICAL DATA

TABLE 2 • CHILLED WATER SYSTEMS - CAC

VOLTAGE @ 3Ph, 60Hz	MODEL							
	CAC - 10	CAC - 15	CAC - 20	CAC - 25	CAC - 30	CAC - 35	CAC - 40	CAC - 50
<u>208</u> FLA MCA MFS	43.8 54.8 60A	52.2 65.2 70A	73.0 91.3 100A	79.2 99.0 110A	79.2 99.0 110A	107.6 134.5 150A	107.6 134.5 150A	114.2 142.8 175A
<u>460</u> FLA MCA MFS	19.9 24.9 25A	23.6 29.5 30A	33.1 41.4 45A	35.9 44.9 50A	35.9 44.9 50A	48.7 60.8 70A	48.7 60.8 70A	51.7 64.6 70A
<u>575</u> FLA MCA MFS	16.0 20.0 20A	18.9 23.6 25A	26.4 33.0 35A	28.6 35.8 45A	28.6 35.8 45A	39.0 48.7 55A	39.0 48.7 55A	41.0 51.3 60A

FLA - Full Load Amp • MCA - Minimum Circuit Ampacity • MFS - Maximum Fuse Size

TABLE 3 • FAN MOTOR AND PUMP MOTOR

HORSEPOWER	VOLTAGE @ 3 Ph, 60 HZ							
	208		230		460		575	
	FLA	LRA	FLA	RLA	FLA	RLA	FLA	RLA
1.0	3.9	23.1	3.6	21.0	1.8	10.8	1.4	8.4
1.5	5.7	33.0	5.2	30.0	2.6	15.0	2.1	12.6
2.0	7.5	42.9	6.8	39.0	3.4	19.8	2.7	16.2
3.0	10.5	59.4	9.6	54.0	4.8	27.0	3.9	23.4
5.0	16.7	99.0	15.2	90.0	7.6	45.0	6.1	36.6
7.5	24.2	145.2	22.0	132.0	11.0	66.0	9.0	54.0
10.0	30.8	193.0	28.0	168.0	14.0	84.0	11.0	66.0

RLA - Rated Loaded Amps • LRA - Locked Rotor Amps

TABLE 4 • REHEAT

VOLTAGE @ 3 Ph, 60 HZ	KILOWATTS					
	7.5	12.0	15.0	22.5	30.0	37.5
208	20.8	33.3	41.7	62.5	83.4	104.2
230	18.0	28.9	36.1	54.2	72.3	94.2
460	9.4	15.1	18.8	28.3	37.7	47.1
575	7.0	12.1	15.0	22.5	30.0	37.7

TABLE 5 • HUMIDIFIER

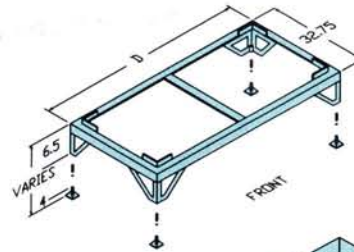
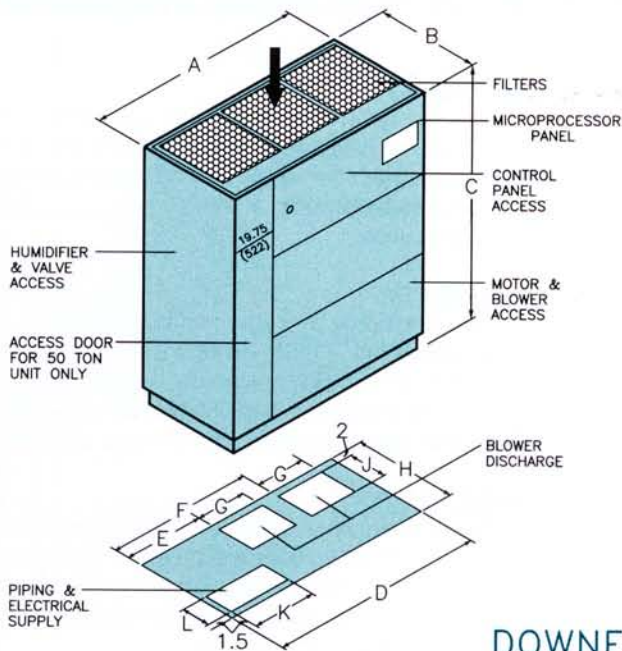
VOLTAGE @ 3 Ph, 60 Hz	KILOWATTS								
	INFRA-RED			ELECTRIC IMMERSION	ELECTRIC SELF GENERATING STEAM				
	4.8	6.4	7.5	5.4	3.4*	5.4	6.8	8.5	10.2
208	13.3	17.8	N/A	15.0	16.4	15.0	19.0	23.6	28.4
460	6.0	8.0	N/A	6.8	7.4	6.8	8.5	10.7	12.8
575	N/A	N/A	7.5	5.4	6.0	5.4	6.9	8.6	10.2

* Nortec 3.4 K.W. HUMIDIFIER is single phase

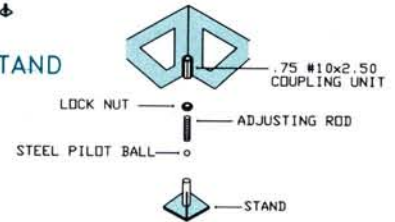
TABLE 6 • CORRECTION FACTORS AT VARIOUS ENTERING WATER TEMPERATURE

ENTERING WATER TEMPERATURE	ENTERING AIR 80° F DB, 67° F WB		ENTERING AIR 75° F DB, 62.5° F WB		ENTERING AIR 72° F DB, 60° F WB	
	TOTAL	SENSIBLE	TOTAL	SENSIBLE	TOTAL	SENSIBLE
42	1.12	1.07	1.13	1.06	1.19	1.10
45	1.00	1.00	1.00	1.00	1.00	1.00
48	0.87	0.92	0.80	0.93	0.81	0.95

CAC SYSTEM 2000 DIMENSIONAL DATA

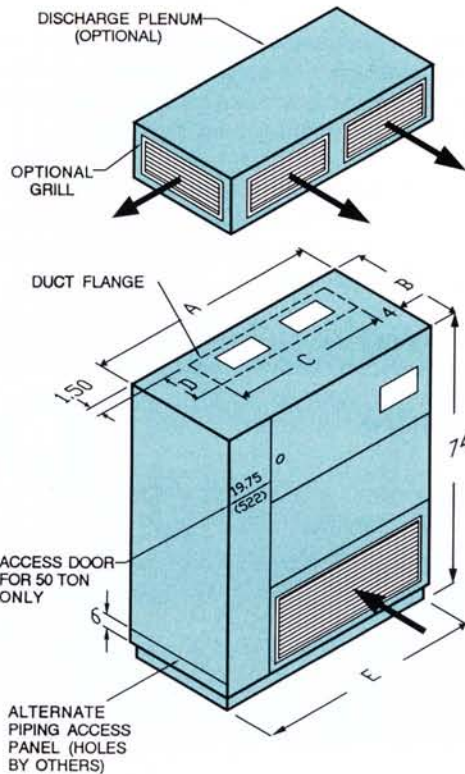


FLOOR STAND



DOWNFLOW MODELS

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	L
10 & 15 TON	50.50 (1283)	34.50 (876)	74 (1880)	48 (1219)	20.25 (514)	OMIT	22 (559)	32.75 (832)	19 (483)	12 (305)	8 (203)
20, 25 & 30 TON	74.50 (1892)	34.50 (876)	74 (1880)	72 (1828)	15.75 (400)	50 (1270)	19 (482)	32.75 (832)	19 (483)	12 (305)	8 (203)
35 & 40 TON	99.50 (2527)	34.50 (876)	74 (1880)	97 (2464)	19.75 (501)	62 (1575)	22 (559)	32.75 (832)	19 (483)	12 (305)	8 (203)
50 TON	110.50 (2807)	34.50 (876)	74 (1880)	108 (2743)	26.5 (673)	62 (1575)	22 (559)	32.75 (832)	19 (483)	12 (305)	8 (203)



UPFLOW MODELS

UNIT SIZE	PLENUM HEIGHT	SUPPLY REGISTERS		RETURN AIR GRILLE
		QUANT	SIZE	
10 & 15 TON	20" (508)	1	46 x 16 (1168x406)	46 x 24 (1168x610)
20, 25 & 30 TON	20" (508)	2	28 x 16 (711x406)	60 x 24 (1524x610)
35 & 40 TON	20" (508)	3	28 x 16 (711x406)	92 x 20 (2337x508)
50 TON	20" (508)	3	32 x 16 (813x406)	96 x 20 (2438x508)

UNIT SIZE	A	B	C	D	E
10, 12 & 15 TON	50.50 (1283)	34.50 (876)	44 (1118)	18 (457)	48 (1219)
20, 25 & 30 TON	74.50 (1892)	34.50 (876)	60 (1518)	18 (457)	72 (1829)
35 & 40 TON	99.50 (2527)	34.50 (876)	80 (2032)	18 (457)	97 (2464)
50 TON	110.50 (2807)	34.50 (876)	90 (2286)	18 (457)	108 (2743)

UNIT MODEL: CAC-7034

COOLING CAPACITY:

At 76°F DB, 61.89°F WB-Entering Air Temp.

Total-BTU/HR	610,918
Sensible-BTU/HR	593,762

**CHILLED WATER COIL DATA-Aluminum Fins, 1/2" OD
Copper tubing**

Face Area-Sq. Ft.	57.3
Rows/FPI	6/12

**CHILLED WATER DATA-At 50°F Entering Water
Temperature**

GPM	122
Pressure Drop: Ft of Water	32.1

FAN-Forward Curved Centrifugal Blower(s) D.W.D.I.

Quantity	3
CFM	25,000
External Static Pressure (Inch of Water)	1.5"

MOTOR-Open Drip Proof, Internally Protected

H.P.	10
Qty.	3

REHEAT-Electric-N/A

HUMIDIFIER

Kw	10.2
Capacity Lbs/Hr	30

FILTERS-Throw Away 30% Efficiency

20 x 25 x 2 (Qty)	6
20 x 20 x 2 (Qty)	6

ELECTRICAL DATA-@ 460V/3Ph/60Hz

Full Load Amps (FLA)	54.8
Min. Circuit Ampacity (MCA)	61.5
Max. Recommended Fuse Size (MFS)	70A

PIPING DATA-All Connections are Copper O.D.

Condensate Drains	(2) 3/4"
Humidifier Make Up	1/4"
Chilled Water Supply	2-5/8"
Chilled Water Return	2-5/8"

PHYSICAL DATA

Length	122.5"
Width	40"
Height	90"
Unit Weight (Lbs)	3550