



**COMPU-AIRE INC.**

*Specialized Environmental Air Conditioning Systems*



**AYAN IV™**

In Row Cooling System

# AYAN IV

## In Row Cooling System 60 kW Capacity Chilled Water

The Compu-Aire Inc. Ayan IV In Row Unit is the latest addition to the Compu-Kool line. This new unit is designed to create an efficient and modern cooling system, without sacrificing space and specifications. This unit has been designed to be green friendly, by using EC fans, making it the latest innovation for the customer's specific cooling needs.

This unit has been designed to provide cooling in a horizontal direction, creating a new way to position the unit. The individual unit can be positioned between the racks, creating a more even dissipation of extreme heat from the servers.

We have compiled data from various case studies of data centers that enabled us to design an efficient and modern cooling system.

### KEY CONSIDERATIONS

- Elimination of hot spots
- Ensure stable inlet temperatures at servers
- Eliminate air short cycling
- Higher heat ratio

### WHY AYAN IV?

- Reliability
- Performance
- Advanced temperature control
- Remote monitoring Modbus/SNMP

### FLEXIBILITY

By creating a unit with horizontal cooling, this prevents the mixing of hot and cold air, creating a more efficient cooling unit.

This allows the unit to run to its best capabilities, allowing for improved air conduction, since the cold air is transported through the side outlets, and throughout the entire facility.

### FEATURES

- Reheat and Humidify
- Sight glass
- Filter/dryer
- 2-way modulating water Valve (NC/FC)

### IDEALLY SUITED FOR

- Data centers
- Telecommunications facilities
- Industrial process control centers
- And many sensitive electronic applications

Scan QR with  
your smartphone  
Need the APP? Get it at [getscanlife.com](http://getscanlife.com)



# Features

## CABINET

All exterior panels are constructed of reinforced furniture grade steel and shall be insulated with 1", 1.5 lbs. density insulation.

The decorative panels are also painted. Front access is made easy for servicing via well insulated access panels.

The cabinet has decorative front and side panels, which can be color coordinated with the décor of the computer room data center.

## COIL

The cooling coil is provided with high efficiency fins and a larger coil face area. The coil has been designed to provide the maximum sensible heat ratio required by data centers and, at the same time, minimizing energy used in air circulation. The flow of refrigerant is controlled by an externally equalized valve.

## FULLY INSULATED CABINET AND PIPES

The Compu-Aire Ayan IV cabinet is constructed of 14 gauge heliarc welded tubular steel for strength and protection. A 1" thick, 1.5lb density insulation is utilized.



## EC FAN TECHNOLOGY

The evaporator sections are configured for draw-thru air pattern to provide uniform Air Flow over the coil face area. Each fan is a 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.

## FILTERS

A filter rack is an integral part of the unit, and is located within the cabinet. The filters are serviceable from the top and front. The filters are 30% efficiency based on ASHRAE standard 52-76 MERV 08.

## LOW AMBIENT OPERATION

### FAN CONTROL

Fan control will automatically be cycling fans in sequence to maintain operable head pressure, as ambient temperatures lower.

## TOUCH SCREEN GRAPHICAL DISPLAY

The System 2500 Advanced Microprocessor is the latest state of the art user interface, featuring a 5.7" touch screen display with 1/4 VGA resolution, and a 32-bit microprocessor that allows the management of complex graphic images up to 320x240 pixels in size and, with up to 256 colors, various animated icons, non-proportional fonts in Unicode format, trend graphs of alarms, temperature, humidity, pressure values, and air speed.



## STANDARD FEATURES

- Stand alone panel
- Graphical color touch screen display
- Smooth keypad type with tactile feedback
- 10 analog inputs & 18 digital outputs
- 4 modulating analog outputs
- N.C & N.O relay for common or selectable alarm output
- Adjustable alarm delay
- 7-day time clock with night setback schedule
- Nonvolatile storage memory for setup information
- DIN rail compatible for easy installation
- Auto restart on power lost
- Anti-compressor short cycling logic
- Alarm and trend logs with time stamp

## OPTIONAL FEATURES

- Remote start/stop
- P-LAN network lead/lag, redundancy and auto changeover
- Customized user monitoring sensor
- Pressure transducers
- Leak detection & pump fail alarms
- Smoke alarm
- Dual input.

## Technical Data

Adaptable  
Dependable  
Reliable

<b>Model</b>	<b>CKC-832-IR</b>
Operation Voltaje	208/3P/60
Capacity Data	60 KW
<b>COOLING CAPACITY: At 100°F DB, 71.8°F WB – Entering Air Temperature @25% RH</b>	
Total - BTU/HR	<b>229,692</b>
Sensible - BTU/HR	203,216
Calculated Off Coil Leaving Air Temperature:	59.4 °F; 56.6 °F
<b>CHILLED WATER COIL DATA-Aluminum Fins, 3/8" OD Copper Tubing</b>	
Face Area-Sq. Ft	8.25
Rows/FPI	4/12
<b>CHILLED WATER DATA-At 45°F Entering Water Temperature; 55°F Leaving Water Temperature</b>	
GPM	45.8
Fluid Concentration	100%Water
Pressure Drop: Ft of Water (coil only)	24.7
<b>BACKWARD INCLINED DIRECT DRIVE PLENUM FANS</b>	
CFM	4,600
External Static Pressure (Inch of Water)	0.2"
<b>E.C MOTOR</b>	
kW/Fan	1.7
<b>ELECTRICAL DATA 208V/3Ph/60Hz</b>	
Full Load Amps (FLA)	26.63
Min. Circuit Ampacity (MCA)	34
Max. Recommended Fuse Size (MFS)	35 A
<b>PIPING DATA – All Connections are Copper O.D.</b>	
Condensate Drain	3/4"
Humidifier Supply	1/4"
Chilled Water Return	1-1/8"
Chilled Water Supply	1-1/8"
<b>PHYSICAL DATA-Inches</b>	
Length	47.25"
Width	24.00"
Height	78.50"
Unit Weight (Lbs.)	950