



# COMPU-AIRE INC.

*Specialized Environmental Air Conditioning Systems*

## MAXI-KOOL

Ceiling and Roof Mounted  
Self contained and Split Systems  
2 to 12 Tons



# Maxi-Kool

## Cooling Solutions For Hot Situations

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Compu-Aire Inc. understands the special environmental control (temperature, humidity, air filtration) needs for both main frame and main computer rooms, and is able to offer the Compu-Aire Maxi-Kool unit.

ETL listed, the Compu-Aire Inc. Maxi-Kool is installed in the ceiling or roof and is available in over 5 capacities and cooling methods.

The Compu-Aire Inc. Maxi-Kool offers a space saving compact design with many flexible configuration options. This allows the system to be tailored to the needs of the user's application. Users prefer the Compu-Aire Maxi-Kool for its ability to draw through design for the maximum heat transfer efficiency.

The Compu-Aire Inc. Maxi-Kool's unique ceiling and roof mounted feature not only keeps pace with rapidly changing computer technology, but also offers the highest degree of reliability in component and system operation.

## Standard Features

The Compu-Aire Maxi-Kool is a self-contained unit with a ceiling/rood mounted closed loop system. It is available in an air, water, glycol, or chilled water configuration.

A high efficiency coil provides maximum air draw through to meet space capacity

A thermally insulated galvanized steel pan is provided for the evaporator coil to prevent any water from reaching the floor

Fully insulated cabinet

Side access is made easy for servicing via a well insulated access panel

Single point electrical connection

### System 2000 Microprocessor Controls

- Dual display, digitally operated, remote controller for precise temperature and humidity control
- 16 character LCD display with six push button switches
- Displays current room temperature, unit status, and alarm messages
- 5 year battery backup for volatile memory

### Belt Drive Fan Assembly

- Belt driven motors for field adjustment to match external static pressure requirement
- The blowers are DWDI, centrifugal with forward curved blades and both are dynamically and statically balanced

### Scroll Compressor

High efficiency scroll compressor with built in thermal overload protection, pressure relief valve, and current overload protection.

## Refrigerant Circuits

- Thermal expansion valve
- Filter drier
- Sight glass
- High and low pressure switch
- Schrader fittings

## Electric Reheat

The electric heating coil is a low watt density stainless steel fin tubular construction

## Disposable Cylinder Humidifier

Prewired, pre-piped, and maintenance free, this is a steam generating humidifier. The humidifier is equipped with disposable cylinder.

## Water Regulating Valve

**(Water/Glycol Cooled Units Only)**

2way, 150 psig head pressure actuated valve

## Water Cooled Condenser

**(Water Cooled Units Only)**

Heavy duty, counter flow coaxial condensers

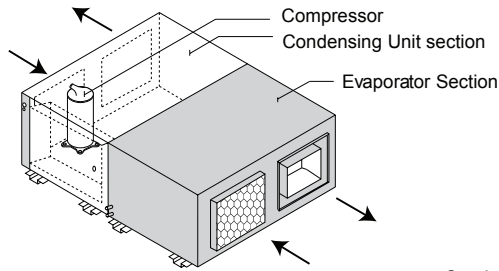
## Chilled Water Valve

**(Chilled Water Units Only)**

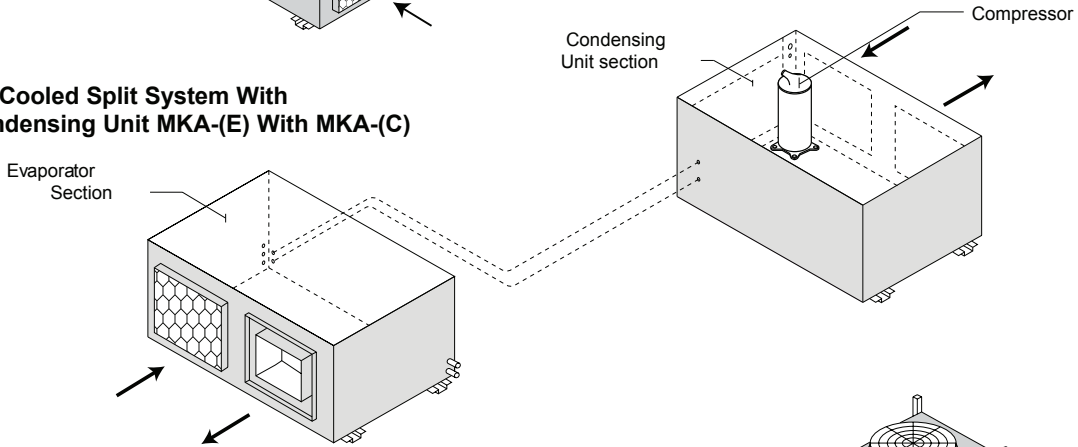
2way, 2 positions chilled water valve

# AVAILABLE SYSTEMS

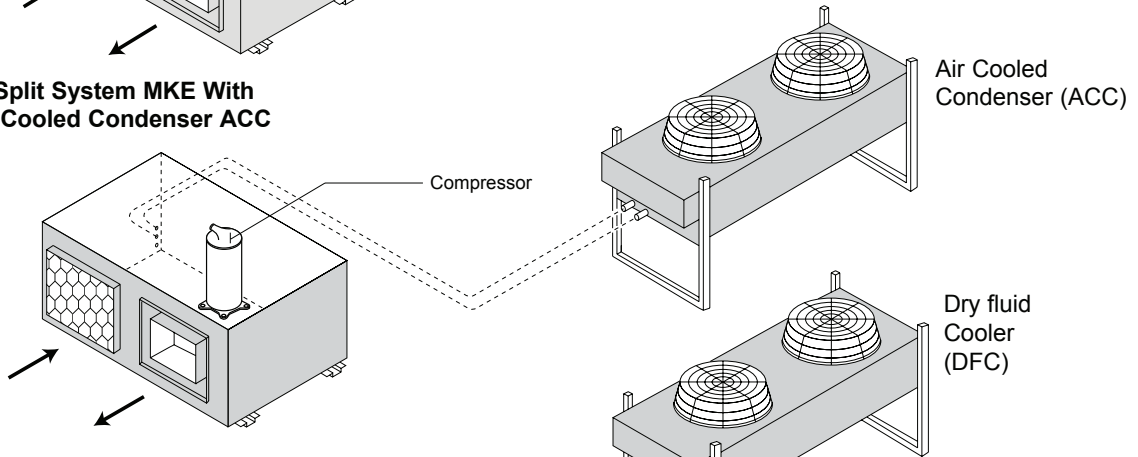
## Air Cooled Package Unit (MKA)



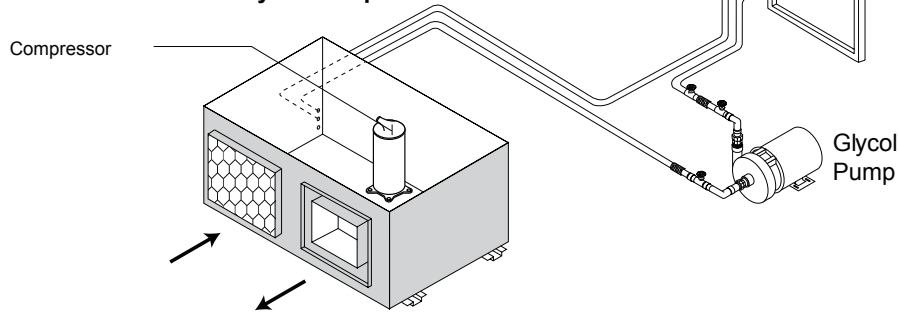
## \* Air Cooled Split System With Condensing Unit MKA-(E) With MKA-(C)



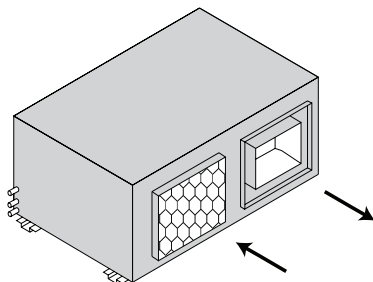
## \* Air Cooled Split System MKE With Remote Air Cooled Condenser ACC



## Water/glycol Cooled System Mkw/mkg With Remote Dfc & Glycol Pump



## Chilled Water System MKC



\* See page 5 for options.

## OPTIONAL FEATURES

### Split System

This option facilitates split system installations. The air cooled condensing section, including the compressor, can be separate from the evaporator air handling section and factory supplied with stub connections. It is factory pressure tested, sealed, and shipped with a holding charge.

### Weatherizing For Outdoor Installation

This can be applied to complete standard package unit, or to the condenser section only. Hood and bird screen is installed on the condenser supply and discharge.

### Condensate Pump

Plenum rated condensate pump is provided for field installation. A separate power is required.

### Low Ambient Control (Air Cooled Units Only)

#### Low Ambient Control To -30°F

Flooded type low ambient control with head pressure valve, insulated, and heated liquid receiver.

#### Low Ambient Control To 0°F (Air Cooled Units Only)

Pneumatic Type-Damper good down to 0°F. Damper on condensing side of the unit.

### Energy Miser Unit

The Compu-Aire Energy Miser system is integrated with glycol cooled Compu-Aire Maxi-Kool. At an entering glycol temperature of 45°F and below, the Compu-Aire Energy Miser system can provide total system capacity, thereby resulting in a substantial reduction in operating costs.

### Single Phase

The system can be provided for a single phase power supply, 208 or 230 voltage where available, and for units up to and including 5 tons.

### Hot Gas Bypass

The hot gas bypass valve is factory installed in the compressor discharge for precise capacity control in the cooling mode and for protection against coil freeze up during partial or low load conditions. For air cooled split systems, a hot gas bypass line needs to be field installed between the evaporator and condenser section.

### Special Water Valve For MKW/MKG Systems

The following alternate water valves are available:

- 3 way head pressure regulating valve rated at 150 psig
- 2 way head pressure regulating valve rated at 300 psig
- 3 way head pressure regulating valve rated at 300 psig

### Alternate Reheat

- Steam reheat – the coil is factory piped with a 2 way on/off control valve
- Hot water reheat – the coil is factory piped with a 2 way on/off control valve
- Hot gas reheat – the coil is factory piped with a 3 way solenoid valve and refrigerant check valve

### Alternate Humidifier

The steam humidifier provides a dry steam, double jacketed type, piped with a solenoid valve. The steam trap and Y-strainer are factory provided and are to be field installed outside of the unit.

## **Disconnect Switch**

### **Fused Disconnect Switch**

A fused disconnect switch can be supplied with the indoor unit for field installation. The fuses are to be field supplied and installed.

### **Rain Tight Disconnect**

A rain tight, fused disconnect switch can be supplied with the outdoor unit for field installation. The fuses are to be field supplied and installed.

### **HACR Circuit Breaker**

A HACR approved circuit breaker can be supplied (factory installed) with the unit.

## **Remote Air Cooled Condenser**

The remote air cooled condenser is a low profile design constructed of copper tube and high efficiency aluminum fin coil. A factory wired control panel is provided for field installation in weather proof housing on the condenser.

## **Dry Fluid Cooler And Pump Package**

A DFC matching the water cooled condenser capacity, at design elevation, glycol solution percentage and ambient temperature, can be provided for remote installation and field piped for the water/glycol solution, and interconnected to the indoor air conditioner.

A close coupled centrifugal pump and motor for circulating glycol solution can be provided for field mounting, with a pump motor weather shield.

## **Four Year Compressor Warranty**

There is an initial 1 year warranty and an additional 4 year warranty can be purchased.

## **Special Industrial Applications**

The Compu-Aire Maxi-Kool can be provided with a variety of special application options such as

- Stainless steel cabinet for corrosion resistance
- Double wall construction for noise reduction
- Epoxy/phenolic coated/copper coils for corrosion resistance
- Internally isolated blowers for vibration reduction
- TEFC motors
- High efficiency motors

## **Advanced Technology Controls System 2200**

The remote wall mounted, microprocessor based, solid state controls has 4 rows, 40 characters, is back lit, and supertwist liquid crystal display (LCD). The information is displayed and presented in a format that is easily viewed and understood.

## **Standard Features**

- Standalone panel
- Smooth keyboard type switches with tactile feedback
- 2 analog inputs
- Non volatile memory
- Data of unit and room conditions
- System trending
- Forward and backward menu access
- Programmable automatic restart

## **Protective And Safety Features**

Multi-level password access

- Watch dog timer
- Alarm displayed in order of occurrence
- Start time delay
- Compressor short cycle control

## Optional Features

- Remote dial up and communications
- RS-422/485 network capabilities
- Auto changeover and/or auto rotation for operational redundancy or allow switching of units to maximize component life
- 7 day time clock
- P-lan network capability
- Effective zone control
- Full graphic display
- EMS/BMS capabilities
- Foreign language capability
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**MKA: Air Cooled**

NOMINAL TONS	2	3	4	5	8	10	12
<b>DESCRIPTION/MODEL/MKA</b>							
208/1/60	212	312	412	512	N/A	N/A	N/A
208-230/3/60	232	332	432	532	832	1032	1232
460/3/60	234	334	434	534	834	1034	1234
<b>COOLING CAPACITY</b>							
<b>Entering air 80°F DB, 67°F WB, 95°F Ambient</b>							
Total BTU/HR	29800	42150	55400	63500	110100	134500	146500
Sensible BTU/HR	22100	33720	46170	54100	97320	101950	115600
EER	10.2	10.2	10.3	10.1	10.2	10.3	10.1
<b>Entering air 72°F DB, 60°F WB, 95°F Ambient</b>							
Total BTU/HR	21200	31200	41200	51500	83100	106350	116100
Sensible BTU/HR	17500	25800	36400	44500	75600	92500	105250
<b>EVAPORATOR SECTION</b>							
<b>AIR FLOW DATA</b>							
CFM – Based on 0.5" ESP	900	1500	2000	2500	3350	4000	4800
Fan Motor HP	0.75	1.0	1.0	1.5	2.0	3.0	3.0
<b>EVAPORATOR COIL – Copper tubing, aluminum fins</b>							
Face Area – Square feet	1.75	3.6	5.0	5.0	7.5	12.8	12.8
Rows	5	4	5	5	5	4	5
<b>CONDENSER SECTION</b>							
<b>AIR FLOW DATA</b>							
CFM – Based on 0.5" ESP	1600	2250	2750	3250	5000	7000	8000
Fan Motor HP	0.75	1.0	1.0	1.5	2.0	5.0	5.0
<b>CONDENSER COIL – Copper tubing, aluminum fins</b>							
Face Area – Square feet	4.5	4.5	6.75	6.75	6.75	12.85	14.45
Rows	4	4	5	5	6	6	6
<b>COMPRESSOR DATA – High efficiency scroll R-407C</b>							
Tonnage	2.0	3.0	4.0	5.0	4.0	5.0	6.0
Quantity	1	1	1	1	2	2	2
<b>REHEAT (Electric)</b>							
kW/Stages	7.5/1	7.5/1	7.5/1	7.5/1	15/2	15/2	15/2
BTU/HR (Includes fan motor)	27522	28160	28160	29433	57245	57245	59793
<b>HUMIDIFIER – Self generating type with disposable cylinder</b>							
kW	3.4	3.4	3.4	3.4	3.4	6.8	6.8
Lbs/Hr	10	10	10	10	10	17.5	17.5
<b>PIPING DATA</b>							
Condensate drain – O.D.	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
Liquid line – O.D.	3/8"	1/2"	5/8"	5/8"	(2) 5/8"	(2) 5/8"	(2) 5/8"
Suction – O.D.	1/2"	5/8"	7/8"	7/8"	(2) 5/8"	(2) 5/8"	(2) 7/8"
Humidifier Supply	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"



**MKW: Water Cooled/MKW: Glycol CooledMKC – Chilled Water**

NOMINAL TONS	2	3	4	5	8	10	12
<b>DESCRIPTION/MODEL/MKA</b>							
208/1/60	212	312	412	512	N/A	N/A	N/A
208-230/3/60	232	332	432	532	832	1032	1232
460/3/60	234	334	434	534	834	1034	1234
<b>COOLING CAPACITY</b>							
<b>Entering air 80°F DB, 67°F WB, 95°F Ambient</b>							
Total BTU/HR	26200	38900	58300	64600	91400	134500	146500
Sensible BTU/HR	22000	32600	48900	54300	76800	101950	115600
EER	10.4	10.9	12.8	11.2	11.1	12.4	11.4
<b>Entering air 72°F DB, 60°F WB, 95°F Ambient</b>							
Total BTU/HR	21800	32100	42400	53000	78800	106350	116100
Sensible BTU/HR	18100	26600	37300	45800	65400	92500	105250
<b>WATER FLOW DATA</b>							
GPM 85°F entering water	6.0	9.0	12.0	15.0	24.0	30.0	36.0
Pressure drop psig	8.5	9.5	13.1	10.2	13.4	10.6	11.6
<b>AIR FLOW DATA</b>							
CFM – Based on 0.5" ESP	900	1500	2000	2500	3350	4000	4800
Fan Motor HP	0.75	1.0	1.0	1.5	2.0	3.0	3.0
<b>EVAPORATOR COIL – Copper tubing, aluminum fins</b>							
Face Area – Square feet	1.75	3.6	5.0	5.0	7.5	12.8	12.8
Rows	5	4	5	5	5	4	5
<b>COMPRESSOR DATA – High efficiency scroll R-407C</b>							
Tonnage	2.0	3.0	4.0	5.0	4.0	5.0	6.0
Quantity	1	1	1	1	2	2	2
<b>REHEAT (Electric)</b>							
kW/Stages	7.5/1	7.5/1	7.5/1	7.5/1	15/2	15/2	15/2
BTU/HR includes fan motor	27522	28160	28160	29433	57245	57245	59793
<b>HUMIDIFIER – Steam Generating with disposable cylinder</b>							
kW	3.4	3.4	3.4	3.4	3.4	6.8	6.8
Lbs/Hr	10	10	10	10	10	17.5	17.5
<b>PIPING DATA</b>							
Condensate Drain – O.D.	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
Water Supply – O.D.	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 5/8"	1 5/8"
Water Return – O.D.	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 5/8"	1 5/8"
Humidifier water supply	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"

## MKC – Chilled Water

NOMINAL TONS	2	3	4	5	8	10	12
<b>DESCRIPTION/MODEL/MKA</b>							
208/1/60	212	312	412	512	N/A	N/A	N/A
208-230/3/60	232	332	432	532	832	1032	1232
460/3/60	234	334	434	534	834	1034	1234
<b>COOLING CAPACITY</b>							
<b>BASED ON 45°F ENTERING WATER AND 10°F TEMPERATURE DIFFERENCE</b>							
<b>Entering air 80°F DB, 67° WB</b>							
Total BTU/HR	25500	39800	52200	64700	93200	193719	224000
Sensible BTU/HR	18300	32700	42300	53700	77400	128191	149876
<b>Entering air 80°F DB, 67° WB</b>							
Total BTU/HR	16100	30400	39200	47100	75200	96831	112166
Sensible BTU/HR	15000	29300	38600	46700	74400	96831	112166
<b>AIR FLOW DATA</b>							
CFM – Based on 0.5” ESP	900	1500	2000	2500	3350	4500	5400
Fan motor HP	0.75	1.0	1.0	1.5	2.0	3.0	3.0
<b>COOLING COIL DATA – Copper tubing, Aluminum fins</b>							
Face Area – Square feet	1.75	3.6	5.2	5.2	7.6	12.8	12.8
Rows	4	4	4	4	4	4	4
GPM	4.3	6.5	8.9	11.1	16.0	38.5	44.8
Pressure drop FT of water	16.8	15.4	14.7	15.5	17.1	25.1	37.7
<b>REHEAT (ELECTRIC)</b>							
kW/Stages	7.5/1	7.5/1	7.5/1	7.5/1	15/2	15/2	15/2
BTU/HR includes fan motor	27522	28160	28160	29433	57245	59793	59793
<b>HUMIDIFIER – Self generating type with disposable cylinder</b>							
kW	3.4	3.4	3.4	3.4	3.4	6.8	6.8
Lbs/Hr	10	10	10	10	10	17.5	17.5
<b>PIPING DATA</b>							
Condensate Drain – O.D.	1 1/8”	1 1/8”	1 1/8”	1 1/8”	1 1/8”	1 1/8”	1 1/8”
Water Supply – O.D.	5/8”	5/8”	7/8”	7/8”	1 1/8”	1 5/8”	1 5/8”
Water Return – O.D.	5/8”	5/8”	7/8”	7/8”	1 1/8”	1 5/8”	1 5/8”
Humidifier Water Supply	¼”	¼”	¼”	¼”	¼”	¼”	¼”

UNIT MODEL	VOLTAGE/PHASE/HERTZ								
	208-230/1/60			208-230/3/60			460/3/60		
	FLA	MCA	MFS	FLA	MCA	MFA	FLA	MCA	MFS
<b>Air cooled packaged unit</b>									
<b>Without reheat and humidifier</b>									
MKA-2	24.8	28.2	40	14.5	16.6	25	7.5	8.6	15
MKA-3	31.5	36.0	50	19.4	22.3	35	9.9	11.3	15
MKA-4	40.0	46.6	70	23.0	26.8	40	12.2	14.4	25
MKA-5	50.7	58.7	90	30.7	35.5	60	15.2	17.7	30
MKA-8	N/A	N/A	N/A	45.0	48.8	60	24.0	26.2	35
MKA-10	N/A	N/A	N/A	65.8	70.6	90	32.6	34.9	40
MKA-12	N/A	N/A	N/A	68.6	73.8	100	32.6	34.9	40
<b>Air cooled packaged unit</b>									
<b>With reheat and humidifier</b>									
MKA-2	60.9	73.3	90	35.3	42.6	50	16.9	20.4	25
MKA-3	67.6	81.0	100	40.2	48.3	60	19.7	23.8	30
MKA-4	76.1	91.7	125	43.8	52.8	70	21.6	26.1	35
MKA-5	86.8	103.8	150	51.5	61.5	80	24.6	29.5	40
MKA-8	N/A	N/A	N/A	71.7	85.9	100	34.2	41.1	50
MKA-10	N/A	N/A	N/A	88.2	103.5	125	41.8	48.4	60
MKA-12	N/A	N/A	N/A	89.6	105.2	125	41.8	48.4	60

UNIT MODEL	VOLTAGE/PHASE/HERTZ								
	208-230/1/60			208-230/3/60			460/3/60		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
<b>MKA-2 (E)</b>	5.6	7.0	15	3.0	3.8	15	1.5	1.9	15
<b>MKA-3 (E)</b>	6.8	8.5	15	3.9	4.9	15	1.8	2.3	15
<b>MKA-4 (E)</b>	6.8	8.5	15	3.9	4.9	15	1.8	2.3	15
<b>MKA-5 (E)</b>	9.3	11.6	20	5.7	7.1	15	2.4	3.0	15
<b>MKA-8 (E)</b>	N/A	N/A	N/A	7.5	9.4	15	3.4	4.3	15
<b>MKA-10 (E)</b>	N/A	N/A	N/A	10.5	13.1	20	4.8	6.0	15
<b>MKA-12 (E)</b>	N/A	N/A	N/A	10.5	13.1	20	4.8	6.0	15
<b>Air cooled split unit – Evaporator section with reheat and humidifier</b>									
<b>MKA-2 (E)</b>	41.7	52.1	60	23.8	29.8	30	10.9	13.6	15
<b>MKA-3 (E)</b>	42.8	53.5	60	24.7	30.9	35	11.2	14.0	15
<b>MKA-4 (E)</b>	42.8	53.5	60	24.7	30.9	35	11.2	14.0	15
<b>MKA-5 (E)</b>	45.4	56.7	60	26.5	33.1	40	11.8	14.8	20
<b>MKA-8 (E)</b>	N/A	N/A	N/A	49.2	61.5	70	22.2	27.8	30
<b>MKA-10 (E)</b>	N/A	N/A	N/A	52.2	65.2	70	23.6	29.5	30
<b>MKA-12 (E)</b>	N/A	N/A	N/A	52.2	65.2	70	23.6	29.5	30
<b>Air cooled split unit – Condensing section</b>									
<b>MKA-2 (C)</b>	19.2	22.6	35	11.5	13.6	20	6.0	7.1	15
<b>MKA-3 (C)</b>	24.7	29.2	45	15.4	18.3	30	8.5	10.2	15
<b>MKA-4 (C)</b>	33.2	39.8	70	19.0	22.8	40	10.4	12.6	20
<b>MKA-5 (C)</b>	41.4	49.4	80	25.0	29.8	50	12.6	15.1	25
<b>MKA-8 (C)</b>	N/A	N/A	N/A	37.5	41.3	60	20.6	22.8	30
<b>MKA-10 (C)</b>	N/A	N/A	N/A	55.3	60.1	80	27.6	30.1	40
<b>MKA-12 (C)</b>	N/A	N/A	N/A	59.1	63.3	90	27.6	30.1	40
<b>Water cooled unit without reheat and humidifier</b>									
<b>MKW-2</b>	19.2	22.6	35	11.5	13.6	20	3.0	7.1	15
<b>MKW-3</b>	24.7	29.2	45	15.4	18.3	30	8.5	10.2	15
<b>MKW-4</b>	33.2	39.8	70	19.0	22.8	40	10.4	12.6	20
<b>MKW-5</b>	41.4	49.4	80	25.0	29.8	50	12.6	15.1	25
<b>MKW-8</b>	N/A	N/A	N/A	37.5	41.3	60	19.8	21.9	30
<b>MKW-10</b>	N/A	N/A	N/A	49.1	53.9	70	24.8	27.3	40
<b>MKW-12</b>	N/A	N/A	N/A	51.9	57.1	80	24.8	27.3	40
<b>Water cooled unit with reheat and humidifier</b>									
<b>MKW-2</b>	55.3	67.7	80	32.3	39.6	50	15.4	18.9	25
<b>MKW-3</b>	60.8	74.2	90	36.2	44.3	60	17.9	21.9	30
<b>MKW-4</b>	69.3	84.9	110	39.8	48.8	70	19.8	24.3	35
<b>MKW-5</b>	77.5	94.5	125	45.8	55.5	80	22.0	26.9	35
<b>MKW-8</b>	N/A	N/A	N/A	64.2	78.4	90	30.4	37.2	45
<b>MKW-10</b>	N/A	N/A	N/A	71.5	86.8	110	33.6	40.8	50
<b>MKW-12</b>	N/A	N/A	N/A	72.9	88.5	110	33.6	40.8	50
<b>Chilled water unit without reheat and humidifier</b>									
<b>MKC-2</b>	5.6	7.0	15	3.0	3.8	15	1.5	1.9	15
<b>MKC-3</b>	6.8	8.5	15	3.9	4.9	15	1.8	2.3	15
<b>MKC-4</b>	6.8	8.5	15	3.9	4.9	15	1.8	2.3	15
<b>MKC-5</b>	9.3	11.6	20	5.7	7.1	15	2.4	3.0	15
<b>MKC-8</b>	N/A	N/A	N/A	7.5	9.4	15	3.4	4.3	15
<b>MKC-10</b>	N/A	N/A	N/A	10.5	13.1	20	4.8	6.0	15
<b>MKC-12</b>	N/A	N/A	N/A	10.5	13.1	20	4.8	6.0	15
<b>Chilled water unit with reheat and humidifier</b>									
<b>MKC-2</b>	41.7	52.1	60	23.8	29.8	30	10.9	13.6	15
<b>MKC-3</b>	42.8	53.5	60	24.7	30.9	35	11.2	14.0	15
<b>MKC-4</b>	42.8	53.5	60	24.7	30.9	35	11.2	14.0	15
<b>MKC-5</b>	45.4	56.7	60	26.5	33.1	40	11.8	14.8	20
<b>MKC-8</b>	N/A	N/A	N/A	49.2	61.5	70	22.2	27.8	30
<b>MKC-10</b>	N/A	N/A	N/A	52.2	65.2	70	23.6	29.5	30
<b>MKC-12</b>	N/A	N/A	N/A	52.2	65.2	70	23.6	29.5	30

# DIMENSIONAL DATA 2 THRU 12 TON

- Water Cooled • Glycol Cooled • Chilled Water Systems
- Air Cooled Split System When Used With Remote Condenser (MKE)

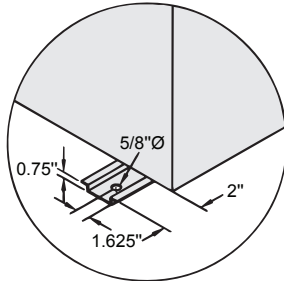
**MKW, MKG  
MKE, MKC**

**Table No. 5**

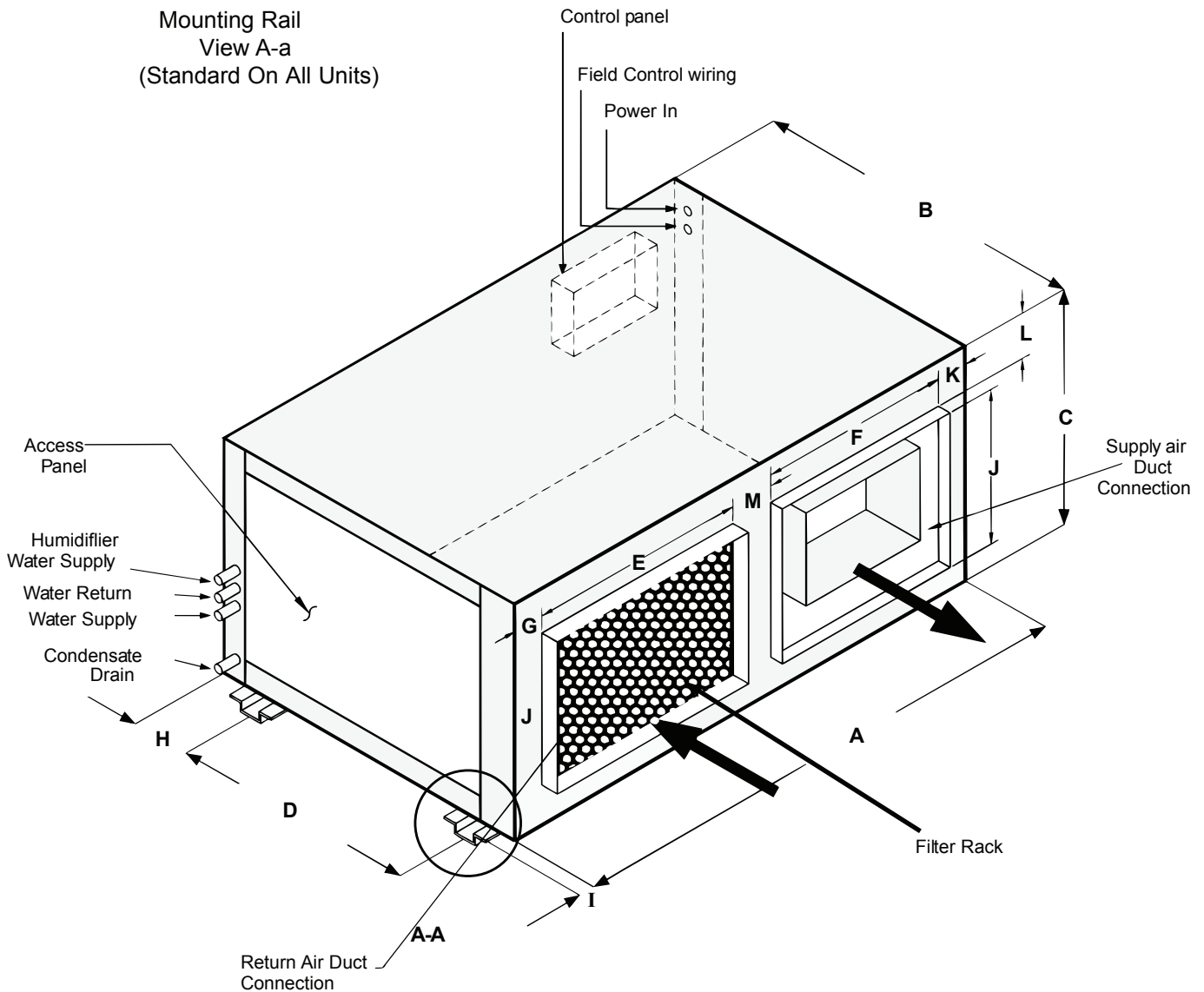
NOM. TONS	A	B	C	D	E	F	G	H	I	J	K	L	M
2 AND 3	45" (1143)	36" (914)	24" (610)	30" (762)	18" (457)	12" (305)	4" (102)	3" (76)	2" (51)	14" (356)	4.5" (114)	2.5" (64)	6.5" (165)
4 AND 5	52" (1321)	42" (1067)	30" (762)	36" (914)	23" (584)	18" (457)	4" (102)	3" (76)	2" (51)	18" (457)	3.5" (89)	4" (102)	3.5" (89)
8	72" (1829)	46" (1168)	30" (762)	40" (1016)	30" (762)	20" (508)	4" (102)	3" (76)	2" (51)	18" (457)	4.5" (114)	4" (102)	14" (356)
10 AND 12	80" (2032)	56" (1422)	50" (1270)	50" (1270)	30" (762)	20" (508)	4" (102)	3" (76)	2" (51)	38" (965)	4" (102)	4" (102)	20" (508)

Figures in ( ) are metric

Weight Lbs (approximate)	
Nom Tons	Water Cooled
2	330
3	410
4	490
5	515
8	800
10	875
12	950

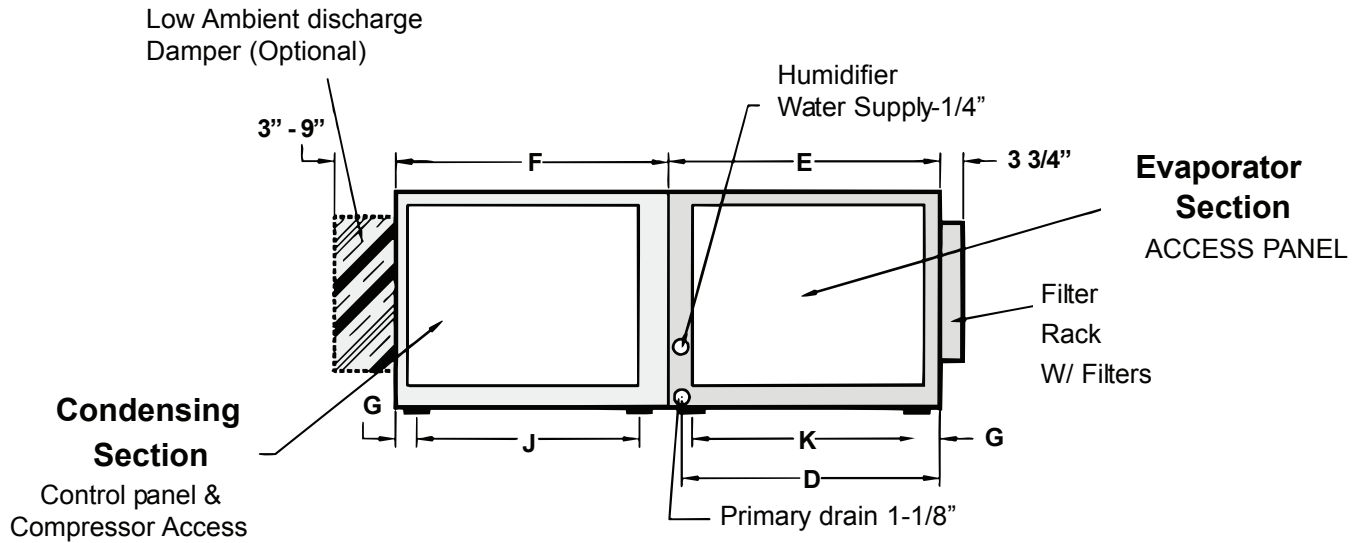


Mounting Rail  
View A-a  
(Standard On All Units)

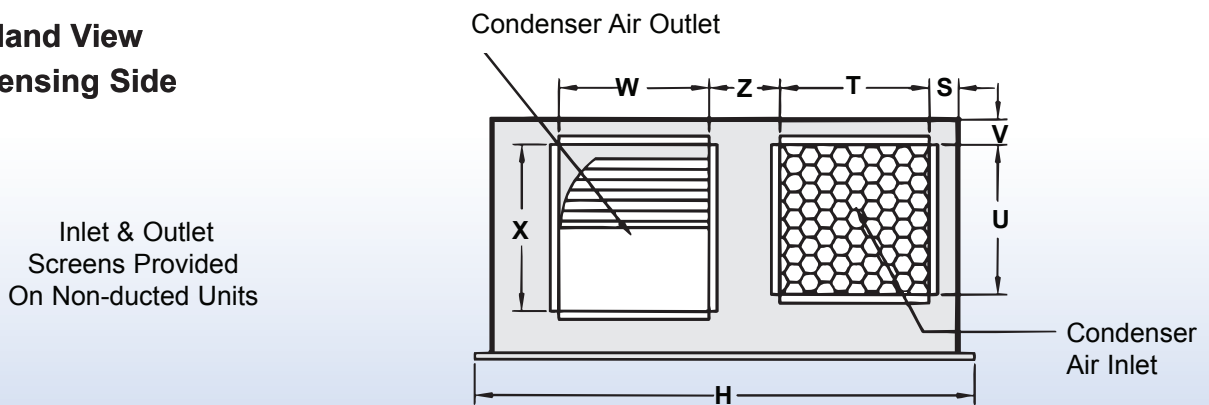


**DIMENSIONAL DETAILS FOR 2 THRU 12 TON  
AIR COOLED PACKAGED UNIT**

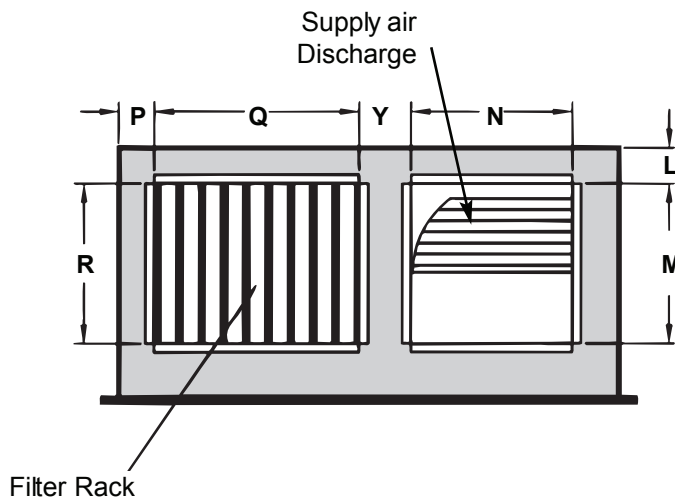
**Front View - Packaged Unit**



**Left Hand View  
Condensing Side**



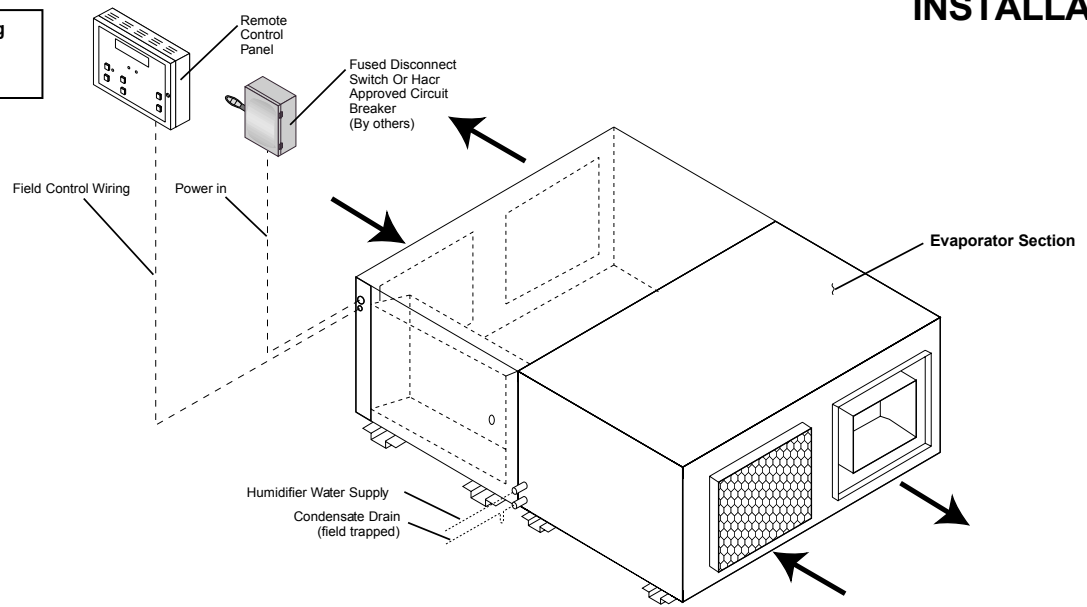
**Right Hand View  
Evaporator Side**



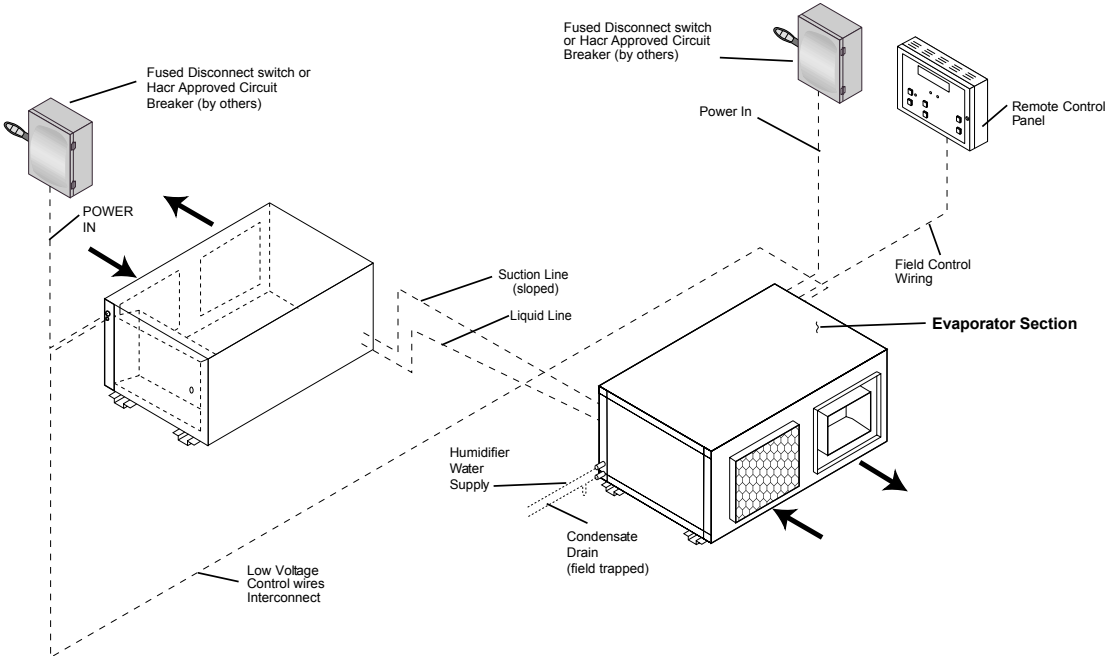
Note: drawing not to scale

# INSTALLATION

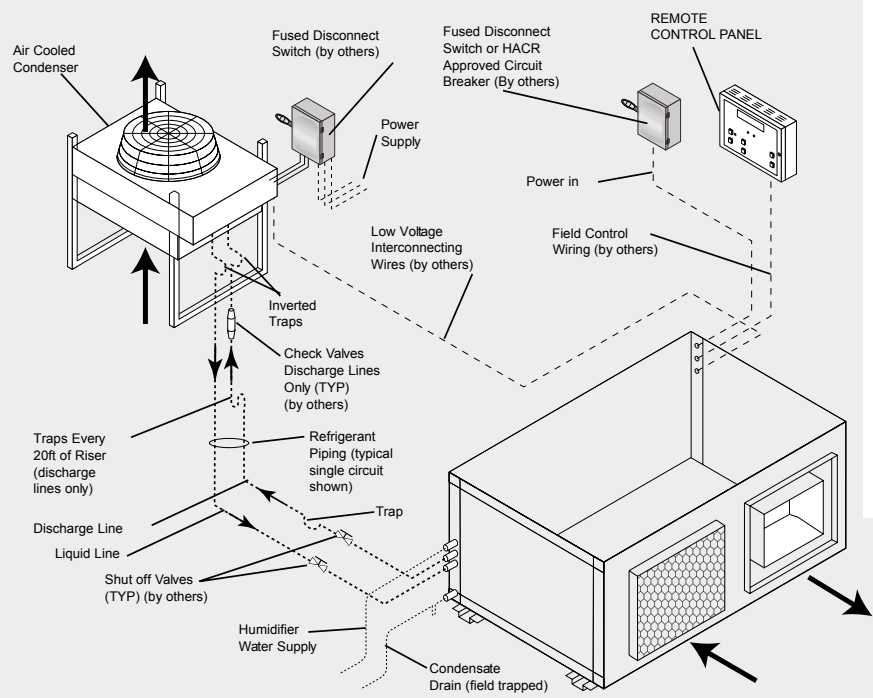
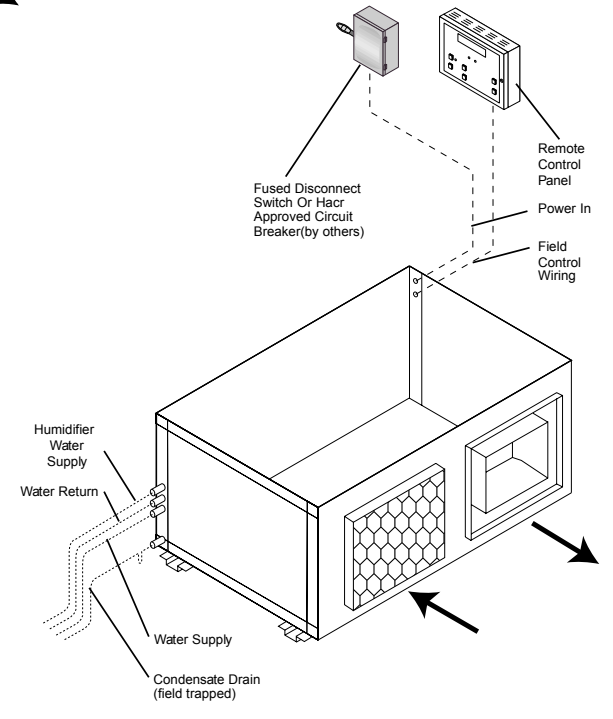
**Typical Field Piping & Wiring  
Packaged Air Cooled (MKA)  
Packaged Heat Pump (MKH)**



**Typical Field Piping & Wiring  
Split Air Cooled  
MKA-(E) & MKA-(C)**



**Typical Field Piping & Wiring  
Split Air Cooled (Mke)  
Water Cooled (Mkw)  
Chilled Water (Mkc)**



**Typical Field Piping & Wiring  
Split Air Cooled Evap. With  
Remote Air Cooled  
Condenser**

## MECHANICAL SPECIFICATIONS

### GENERAL

The Compu-Aire Maxi-Kool Inc. is an air conditioner that is:

- air cooled self-contained
- split system air cooled
- water cooled
- glycol cooled
- chilled water

All units are factory assembled, internally wired, piped, factory tested, and fully charged with **R-407C**. The split air cooled systems are run tested, and sealed with a holding charge for shipment. All units have a horizontal supply and return air, and horizontal condenser air intake and discharge. DX systems include evaporator, condenser, compressor, reheat, humidifier, belt driven blowers, and motors with variable pitch drives. The chilled water system includes chilled water coil control valve, reheat, humidifier, belt driven blower, and motor with variable pitch drive. The unit is furnished with a remote control panel (MCP System 2000).

Air cooled units operating range is from 95°F to 50°F ambient as standard from the factory with no additional accessories. The cooling performance is rated in accordance with A.R.I. Standard #410. The internal wiring for the unit is numbered for simplified identification. All units are ETL listed and labeled.

### Cabinet

The cabinet is constructed of heavy gauge galvanized steel. The access panels are removable for ease of servicing. The evaporator section is insulated with 1" 1.5 lb density insulation. The base of the cabinet forms an emergency condensate pan. The galvanized steel condensate pan is coated with mastic epoxy coating, EC1000, and is provided with a moisture sensor for connection to the alarm for remote monitoring. The base of the unit has channel supports that have built-in lifting and suspension holes.

### Evaporator Fan

The evaporator fan is a DWDI centrifugal type. Each fan assembly is dynamically and statically balanced and utilizes a heavy duty steel shaft with permanently lubricated bearings, and is rated in accordance with AMCA Standard #210.

The fan motor is an open drip proof and is mounted on an adjustable base with 1750 RPM and is protected by an internal overload protection.

### Electrical Circuit

All electrical components are factory mounted in a control panel box within the unit, and are easily accessible via a removable panel on the unit. The terminal points are provided for remote shut down.

Each electrical component, such as the fan motor, compressor, reheat, and humidifier, are individually protected with branch circuit fuses in each leg.

### Remote Microprocessor Control Panel System 2200

#### (For Field Installation)

The control system is microprocessor based. The system has a dual display, digitally operated controller and has the capability of controlling the air conditioning system so that both the room temperature and humidity are maintained within the selected dead bands and set points.

### Filters

The filters are 2" thick and disposable. They are 30% efficient based on ASHRAE Standard 52-76.



### **Air Cooled Condensing Section**

The air cooled condenser has aluminum fin coils that are bonded to the copper tubes and have full collars that completely cover the copper tubes. The coil has a counter flow design for maximum heat transfer efficiency. The head pressure headers and connections are copper. The fan cycling control is provided for mild ambient down to 50°F. The condenser fan is a DWDI centrifugal type. Each fan assembly is dynamically and statically balanced and utilizes a heavy duty stainless steel shaft with permanently lubricated bearings.

The fan motor has an open drip proof, 1750 RPM, and is protected by internal overload protection.

### **Coil**

The coil is constructed of copper tubes and high efficiency aluminum fins. The evaporator coil is provided with an epoxy coated, galvanized steel condensate pan that is directly connected to the drain, and rated in accordance with A.R.I. Standard #410.

### **Compressor**

The compressor is a hermetically sealed, high efficiency scroll type. The compressor has an internal overcurrent and over temperature protection.

### **Refrigerant Circuit**

The refrigerant circuit is provided with an externally equalized expansion valve, filter drier, sight glass, manual reset high pressure cutout, auto reset low pressure cutout, and Schrader fittings. The pump down solenoid valve and liquid receiver are factory installed in air cooled split systems, when ordered split from the factory.

### **Reheat**

The reheat has sufficient capacity to maintain room dry bulb temperatures during the dehumidification cycle. The reheat coil has a low watt density, is a stainless steel fin tubular type, and is equipped with an automatic reset high limit thermal protection that is backed up by a fusible link thermal cutout. The reheat is electrically interlocked to prevent operation when the fan is not running. The reheat is factory installed downstream of the cooling coil.

### **Humidifier**

The humidifier is an electronic, disposable cylinder type that is furnished with a disposable canister, auto flush cycle, solenoid type fill valve, pressure regulating orifice, and an auto adaptive control circuit.

### **WATER/GLYCOL COOLED SYSTEM**

A coaxial tube in tube water/glycol cooled condenser that is factory installed in the air conditioner will have a counter flow design for maximum heat transfer efficiency. The water/glycol path is made of copper. The capacity control is accomplished with a 2way head pressure regulating valve of 150 psig water operating pressure.

### **CHILLED WATER UNIT**

The chilled water unit has a factory piped 2 way, 2 position chilled water control valve in the unit.