

PreciseAIR

7.5 to 60 tons

Series PPW

Packaged Water Cooled DX Unit

Series PCA

Split System Air Cooled DX Unit

Series PPA

Packaged Air Cooled DX Unit

Series PHW

Chilled Water Air Handling Unit



Table of Contents

General.....	3
Introduction	3
Does Humidity Matter in a Corrosive Environment?	4
PreciseAIR Features	9
AIR Industrial A/C Products Comparison	11
Resources.....	12
Series PPW – Packaged Water Cooled DX Unit.....	14
Series PPW – Unit Capacities	14
Series PPW – Dimensional Info	15
Series PCA and PPA – Split System and Packaged Air Cooled DX Units.....	16
Series PCA and PPA – Unit Capacities	16
Series PCA – Dimensional Info (AHU).....	17
Series PCA – Dimensional Info (Air Cooled Condenser)	18
Series PHW – Chilled Water Air Handling Unit	19
Series PHW – Unit Capacities.....	19
Series PHW – Dimensional Info.....	20

GENERAL

Advance Industrial Refrigeration, Inc. reserves the right to make changes and/or improvements in designs, features, options, and procedures without notice or obligation.

Introduction

PreciseAIR air conditioning units are designed to maintain room conditions as low as 72°F at 40% RH, as recommended to maintain electrical spaces at an ISA G1 (mild) environment, thereby minimizing component failures, operating costs, and electrical/control system downtime.

Units are available in a range of 7.5 to 60 tons of cooling capacity.



Series PPW

Series PPW is a vertical, water cooled package DX air conditioning unit. The unit has a fan section (top) and compressor/condenser section (bottom).

Series PCA

Series PCA is an air cooled split system DX air conditioning unit with vertical air handling unit section and remote air cooled condenser. The air handling unit has a fan section (top) and compressor section (bottom).

Series PPA

Series PPA is an air cooled packaged system DX air conditioning unit.

Series PHW

Series PHW is a vertical, chilled water air handling unit.

Does Humidity Matter in a Corrosive Environment?

ANSI/ISA-S71.04-2013 establishes airborne contaminant classes for industrial process measurement and control equipment in many industrial markets. Since the initial release in 1985, the standard defines the path to maintaining electrical room environments at a G1 (mild) environment, such that corrosion is not a factor in determining equipment reliability.

History of Electrical Room Air Quality (ERAQ) Standards

1985 – ISA-S71.04-1985

- Established room classifications based on reactivity levels and contaminants

2006 – RoHS (Restriction of Hazardous Substances) Directive

- Restricted use of lead and other hazardous materials in electronics, leading to increased component failures

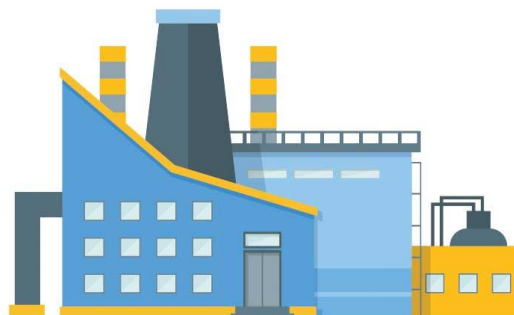
2013 – ANSI/ISA-S71.04-2013

- Standard revised to include silver in response to the impact of the RoHS Directive



Industries Impacted by ANSI/ISA-S71.04-2013

- Pulp and Paper
- Waste Water Treatment
- Fertilizer Manufacturing
- Oil and Gas Refining
- Ore Smelting
- Steel Manufacturing
- Aluminum Manufacturing
- Chemical Industry
- Processes with Fossil Fuel Combustion



Per the standard:

- High temperature impacts rates of corrosion linearly.
- High relative humidity impacts rates of corrosion exponentially.
- Electrically charged particles result in short circuiting.
- Allowable airborne contaminant (H₂S, SO₂, Cl₂, NO_x, HF, NH₃, etc.) levels are defined for each classification (G1, G2, etc.).



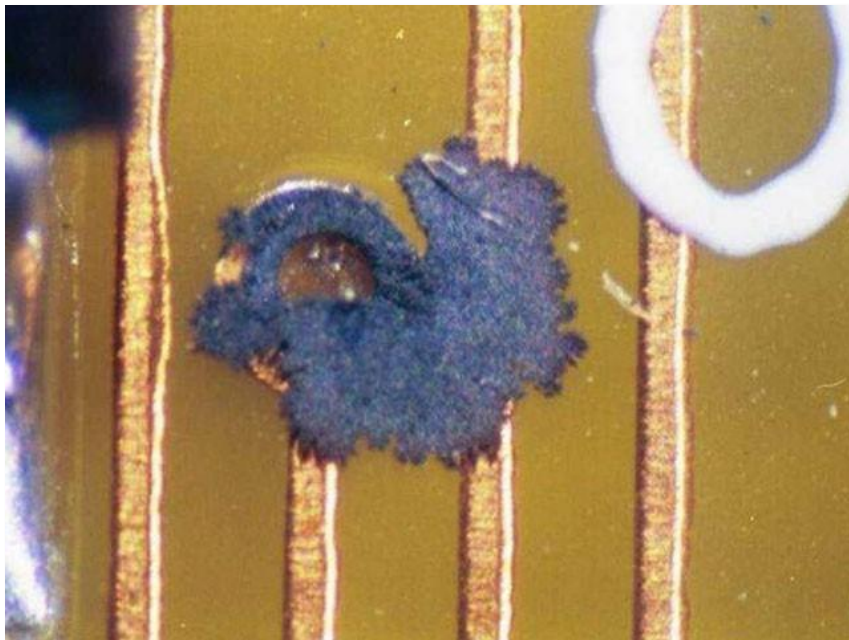
The standard establishes airborne contaminant classes for normal operating conditions of industrial process measurement and control equipment, with the following reactivity levels:

- G1 (Mild) - corrosion is not a factor in determining equipment reliability
- G2 (Moderate) – the effects of corrosion are measurable and may be a factor in determining equipment reliability
- G3 (Harsh) – there is a high probability that corrosive attack will occur
- GX (Severe) – only specially designed and packaged equipment would be expected to survive

Regarding the corrosion contributors:

- The need to control temperature within electrical spaces is generally not debated.
- Electrically charged particulate is addressed by filtration of recirculated air, air locks, dedicated recirculation units (in very dusty areas), and good housekeeping address accumulation of electrically charged particles.
- Most customers with corrosive environments pressurize the spaces with air scrubbed by activated carbon media units to reduce the airborne contaminants.

AIR's AdsorbAIR (pressurization air unit) and RecircAIR (recirculation air unit) products address the issue of airborne contaminants through activated carbon media.

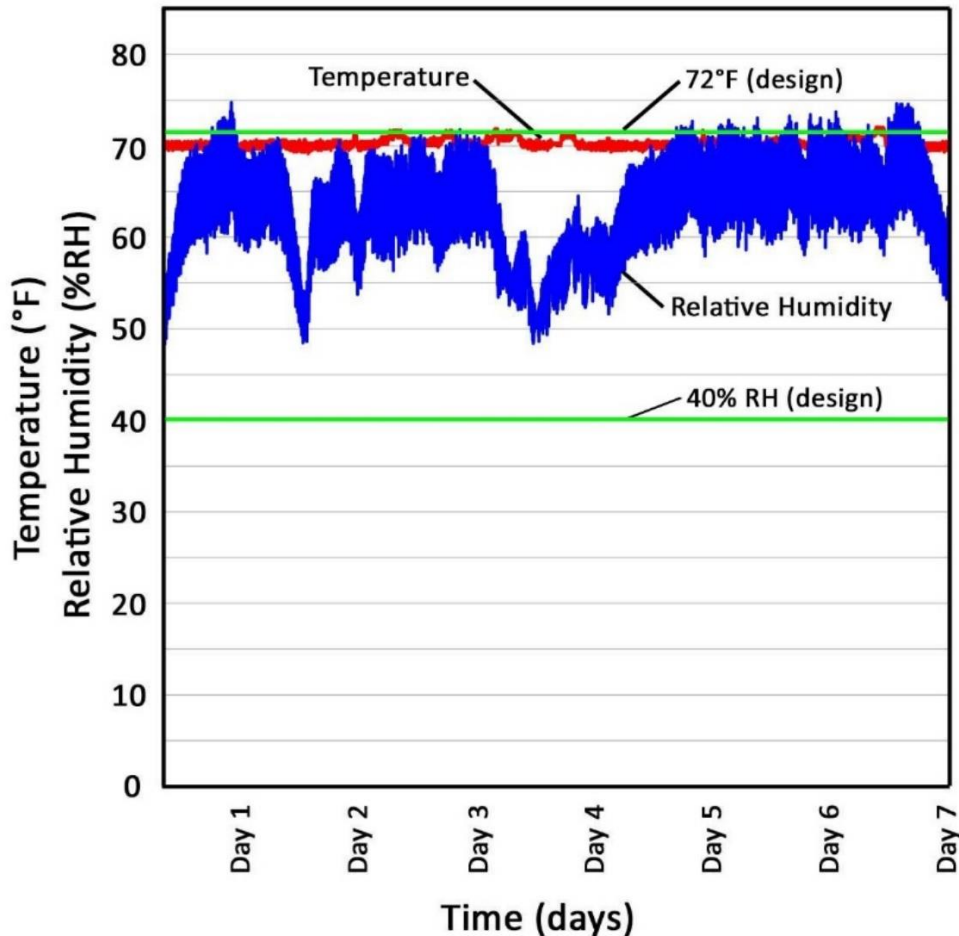


Creep Corrosion

This brings us to the control of relative humidity. The standard expands on humidity impacts as follows:

- Allowable airborne contaminant levels in the standard for a G1 environment assumes the space is maintained below 50% relative humidity. Lower relative humidity will reduce corrosion further.
- Copper reactivity increases one level (e.g., from G1 to G2) for every 10% increase in relative humidity above 50%.
- Copper reactivity increases one level with a relative humidity change above 6% per hour.

Corporate standards developed in response to the standard have typically established the room design condition as 72°F and 40 to 42% relative humidity. This is a challenging condition beyond the capabilities of commercial units, but achievable with proper coil selection, usually 5 to 6 rows.

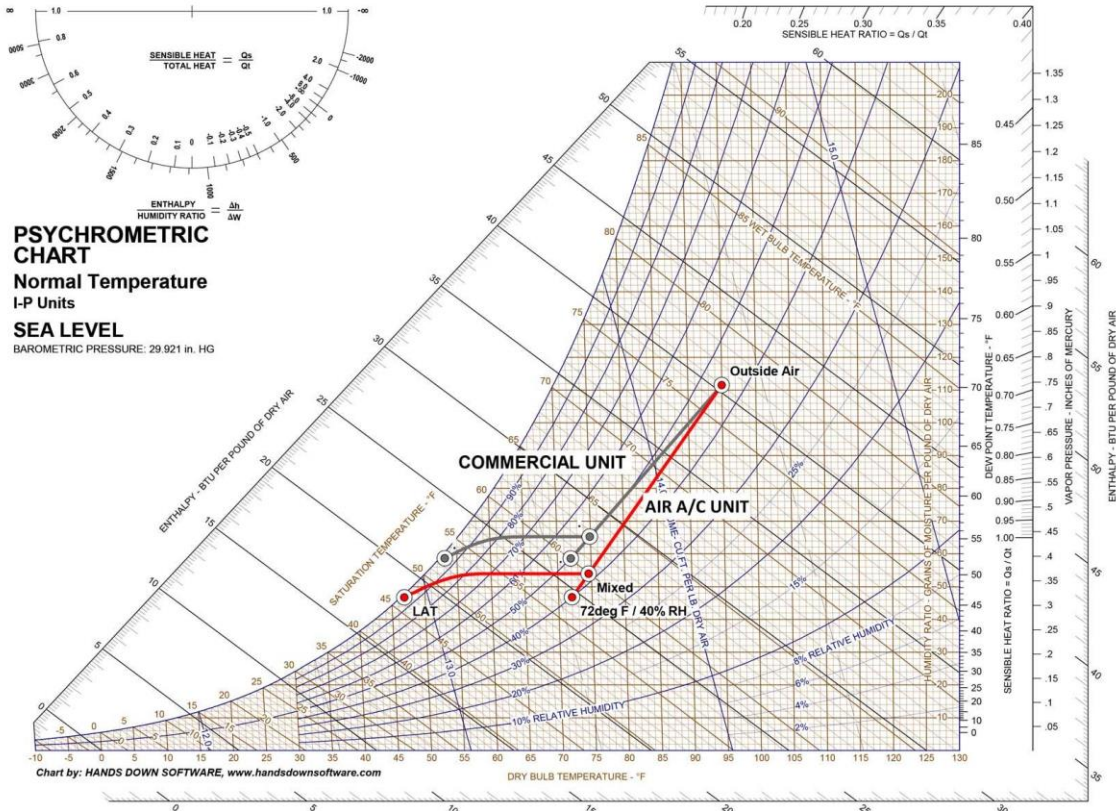


The chart above is from an electrical room with no humidity control. Note the following:

- The air conditioning unit has scroll compressors, which have no capacity modulation.
- The compressors are cycled (on/off) to maintain room temperature.
- Room relative humidity is not being controlled and varies between 60 and 70% as the compressors cycle.
- Room relative humidity swings over 10% per compressor cycle, occurring multiple times per hour.
- Due to high humidity and swings in humidity, this room is predicted to be a **G3 (Harsh) or GX (Severe) environment per the standard**. This is true even if the airborne contaminants have been maintained at the proper levels with carbon filtration.

Maintaining a G1 environment requires:

- Proper coil selection for the required coil leaving condition, usually 46.4°F apparatus dew point temperature.
- Compressor designs with capacity modulation running closer to actual capacity required instead of repeated on/off cycling. Coil leaving air is maintained at the desired room dew point to stabilize room conditions. This requires reciprocating compressors with cylinder unloading, scroll compressors with VFD, or digital scroll compressors.
- Supply fans furnished with VFD's to vary airflow to the room based on room dry bulb temperature to minimize required reheat due to overcooling.
- Reheat with fine temperature control, such as SCR control for electric reheat.



So, to answer the initial question, humidity control is a vital, but often overlooked, factor in the control of corrosion within electrical rooms exposed to airborne contaminants. The challenges of this application cannot be met by applying conventional HVAC equipment not designed for these leaving conditions and control sequences.

The ControlAIR unit was designed specifically for this application and is the industry standard for Customers committed to protecting the reliability of their electrical and control rooms.

PreciseAIR Features

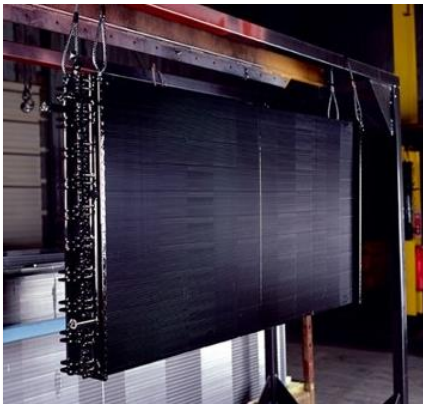
Fans

Supply fans are constant speed, DWDI, forward curved centrifugal design, balanced per ANSI/AMCA 204-05, G6.3 level. Bearings are pillow block design. Units above 15 tons are provided with dual blowers and a single TEFC motor.



Coils

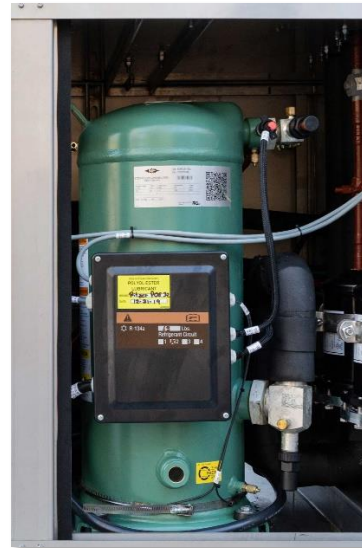
DX and chilled water cooling coils are furnished with copper tubes and aluminum fins. Maximum fin spacing is 12 fins/inch. Options for 90/10 cupro-nickel tubes and coil protective coatings are available upon request.



Compressors

Compressors are scroll design, with oil sight glass, crank case heater, and high/low pressure switches. The lead compressor is provided with a VFD for capacity modulation

Refrigerant is R-410a.



Condensers

Condensers are furnished with 0.035" thick copper tubes with removable heads for tube cleaning. Option for 90/10 cupro-nickel tubes are available upon request.



Filter Driers

Each refrigerant circuit is equipped with suction and discharge service valves, liquid line filter drier with removable cores, liquid sight glass moisture indicator, liquid line solenoid valve, and thermostatic expansion valve.



Water Regulating Valves

Condenser water regulating valves are pressure actuated type with capillary tube to modulate water flow and maintain system head pressure. Valves are shipped loose for field installation.



Control Panel

Unit control panel is NEMA 12 rated and mounted on the unit casing or remotely. Unit power supply may be 480v/3ph/60hz, or 575v/3ph/60hz.



Unit Casings

Casings are fabricated from 18 gauge 304 stainless steel with fasteners and toolless compression latches that allow for easy removal. Fan sections panels and gasketed doors are insulated with 1" thick closed cell elastomeric foam.



AIR Industrial A/C Products Comparison

	CoolAIR	PreciseAIR	ControlAIR	Commercial
Humidity Control to 72°F/40% RH	No	Yes	Yes	No
Unit Casing and Frame	Single Wall 18 ga Stainless Steel	Single Wall 18 ga Stainless Steel	Double Wall 18 ga Stainless Steel	Varies
Air Handler Panel Insulation	1" Thick Elastomeric Foam	1" Thick Elastomeric Foam	1" Thick Elastomeric Foam	Varies
Access Doors on Each Side	Yes Removable Panels	Yes Removable Panels	Yes Hinged Doors	No
Supply Outlet Backdraft Dampers	Not Required (1 Motor)	Not Required (1 Motor)	Yes	Not Required (1 Motor)
Drain Pan	Double Slope Stainless Steel	Double Slope Stainless Steel	Double Slope Stainless Steel	Varies
Fan Wheel Design	Forward Curved	Forward Curved	Backward Inclined above 20 tons	Forward Curved
Number of Fan Motors (for units with 2 fans)	Dual Fans with 1 TEFC Motor	Dual Fans with 1 TEFC Motor	Independent TEFC Motor for Each Fan	Dual Fans with 1 ODP Motor
Fan Motor Control	Starter	Starter (standard) VFD (option)	VFD	Starter (standard) VFD (option)
Pillow Block Fan Bearings	Standard	Standard	Standard	No
Compressor Design/Modulation	Scroll On/Off	Scroll w/VFD	Reciprocating Cylinder Unloading	Scroll On/Off
Shell and Tube Condensers	Standard	Standard	Standard	Varies
90/10 Cupro-Nickel Condenser Tubes	Option	Option	Option	Varies
Water Regulating Valves (DX)	Capillary (Pressure Actuated)	Capillary (Pressure Actuated)	Electronic	Capillary (Pressure Actuated)
Expansion Valves (DX)	Thermostatic	Thermostatic	Electronic	Thermostatic
Serviceable Filter/Drier	Standard	Standard	Standard	No
Heater Location	Duct Mounted as Specified	Duct Mounted as Specified	Unit Mounted	Varies
Remote Control Panel	No	Option	Option	No
NEMA 4X Control Panel	No	Option	Option	No
Unit Controller	Room Thermostat	Carel PLC (standard) CompactLogix (option)	Carel PLC (standard) CompactLogix (option)	Varies
Ethernet Communications	No	Option	Option	No
Locking Non-Fused Disconnect Switch	No	Option	Option	No

Resources

The following information is available for download: <https://www.air-eng.com/resources>

Product Catalog and IOM Manual

- Catalog-PreciseAIR, “Product Catalog - PreciseAIR”.
- IOM-PreciseAIR, “Installation, Operation, and Maintenance Manual - PreciseAIR”.

Drawings

- PreciseAIR Dimensional Drawings

Model Designations

- Series PPW
- Series PCA
- Series PPA
- Series PHW

Guide Specifications

- Series PPW
- Series PCA
- Series PPA
- Series PHW

Technical Bulletins

- TB-14, “Piping Recommendation for Refrigerant Systems” (Series PCA only).
- TB-15, “Condensate Trapping”.
- TB-33, “Blowers Maintenance”.
- TB-60, “Mechanical Water Regulating Valve Hose Installation”.
- TB-52, “A0002238 Installation Instructions (Wall Mounted Temp/RH Sensor)”.
- TB-54, “A0007416 Installation Instructions (Temp/RH Sensor)”.
- TB-60, “Mechanical Water Regulating Valve Hose Installation”.
- TB-61, “A0003701 Installation Instructions (Temp/RH Sensor)”.
- TB-64, “Torque Bolts Generic Assembly”.

Technical Reports

- TR-01, “Pre-startup Checklist”.
- TR-02, “A/C Unit Start-up Report”.

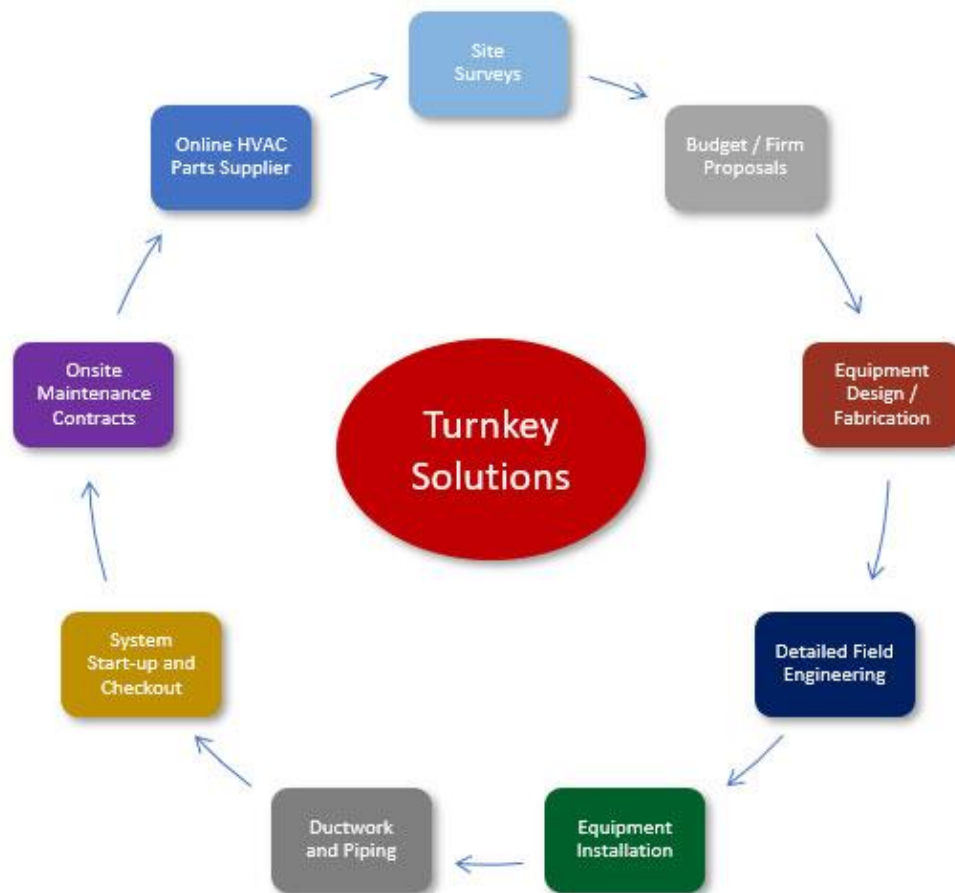
Miscellaneous

- AIR Standard Warranty Policy.

Additional Services

AIR offers additional services to provide a full turnkey mechanical solution for our customers. These include:

- Startup and commissioning support for all AIR equipment by a factory certified technician.
- Detailed mechanical engineering, including design of ductwork, piping, etc.
- Demolition of existing equipment, ductwork, and piping.
- Rental equipment for temporary cooling.
- Furnish and installation of new AIR equipment, including chillers, pump packages, air conditioning units, carbon filtration units, recirculation units, etc.
- Furnish and installation of additional equipment not manufactured by AIR, required for a complete system.
- Fabrication and installation of new ductwork and piping.
- Architectural/structural modifications, as related to the HVAC installation.
- Web based parts supplier for all AIR and other HVAC equipment.
- Permanent on-site maintenance contracts offering continuous support for AIR and other HVAC equipment.



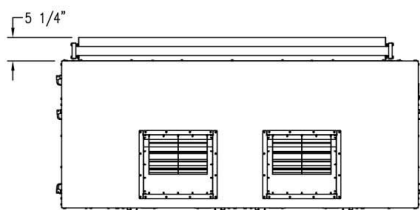
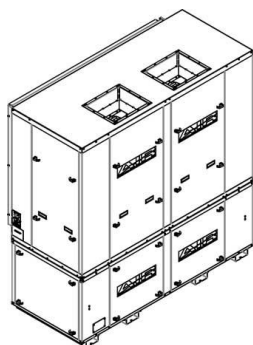
SERIES PPW – PACKAGED WATER COOLED DX UNIT

Series PPW – Unit Capacities

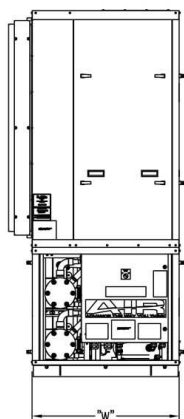
SERIES PPW PERFORMANCE										
Unit Size	PPW-090	PPW-120	PPW-180	PPW-240	PPW-300	PPW-360	PPW-480	PPW-600	PPW-720	
Nominal Tons	7.5	10	15	20	25	30	40	50	60	
Humidity Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
COMPRESSORS										
# of Ref. Circuits/Compressors	1	1	1	2	2	2	2	2	2	
Compressor Design	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	
Refrigerant Type	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	
EVAPORATOR COILS										
Number of Rows	6	6	6	6	6	6	6	6	6	
Fins per Inch	10	10	10	10	10	10	10	10	10	
Face area (ft ²)	7.5	10.0	15.0	20.0	24.0	30.0	35.0	48.0	54.0	
SUPPLY FANS										
Nominal CFM (total)	3,000	4,000	6,000	8,000	10,000	12,000	16,000	20,000	24,000	
Blower Quantity	1	1	1	2	2	2	2	2	2	
Blower Motor HP	3.0	3.0	7.5	7.5	10.0	15.0	15.0	25.0	25.0	
ENT. AIR	COOLING CAPACITY									
80°F DB 67°F WB	Total (btuh)	102,030	136,596	203,995	271,248	329,785	403,837	519,959	671,379	848,229
	Sensible (btuh)	76,680	102,596	153,335	204,155	251,279	305,046	397,911	507,156	624,119
	Flow (gpm)	25.3	23.8	41.9	25.4	29.0	29.2	39.8	72.5	66.0
75°F DB 62.5°F WB	Total (btuh)	95,385	127,247	189,692	250,507	306,141	374,336	479,721	617,902	797,095
	Sensible (btuh)	75,978	101,332	151,493	200,956	247,928	300,826	391,296	498,248	620,665
	Flow (gpm)	21.7	26.6	39.5	23.6	24.8	29.7	33.9	60.6	66.5
72°F DB 60°F WB	Total (btuh)	85,848	116,901	175,122	228,699	283,257	342,651	421,918	562,073	725,969
	Sensible (btuh)	82,995	111,814	167,611	221,211	274,942	331,629	421,918	547,792	680,434
	Flow (gpm)	17.7	24.0	40.4	19.7	28.0	26.0	29.1	50.1	61.1
POWER REQUIREMENTS (amps)										
MCA/MOP (460v/3ph/60hz)	24.8/35.0	32.9/50.0	46.3/70.0	60.2/80.0	70.4/90.0	83.2/110.0	94.7/125.0	127.2/165.0	155.1/205.0	
MCA/MOP (575v/3ph/60hz)	19.9/30.0	24.4/35.0	37.2/50.0	44.9/60.0	51.4/60.0	66.8/80.0	80.8/105.0	101.6/130.0	123.9/165.0	

- Condenser water flow based on entering at 90°F, leaving 100°F.
- Contact AIR's sales staff at info@air-eng.com for a detailed proposal based on your actual design conditions.

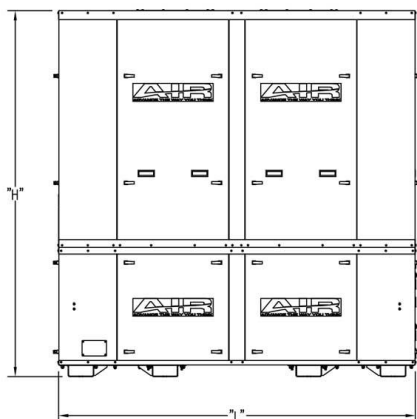
Series PPW – Dimensional Info



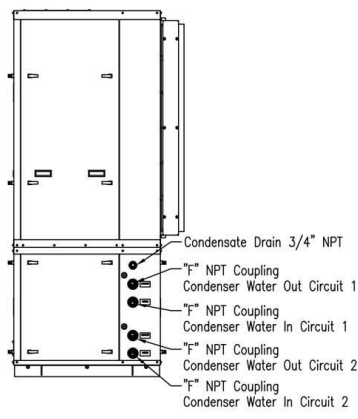
TOP VIEW



LEFT VIEW



FRONT VIEW



RIGHT VIEW

- Condensate Drain 3/4" NPT
- 1" NPT Coupling
- Condenser Water Out Circuit 1
- 1" NPT Coupling
- Condenser Water In Circuit 1
- 1" NPT Coupling
- Condenser Water Out Circuit 2
- 1" NPT Coupling
- Condenser Water In Circuit 2

SERIES PPW DIMENSIONS

UNIT SIZE	W	L	H	# of Circuits	F	SHIPPING WEIGHT
PPW-090	33"	48"	74-5/8"	1	1-1/4" NPT	1,100 LBS
PPW-120	33"	55"	74-5/8"	1	1-1/4" NPT	1,200 LBS
PPW-180	33"	69"	86-5/8"	1	1-1/2" NPT	1,300 LBS
PPW-240	33"	69"	86-5/8"	2	1-1/4" NPT	1,600 LBS
PPW-300	33"	80"	86-5/8"	2	1-1/4" NPT	1,800 LBS
PPW-360	33"	80"	98-5/8"	2	1-1/2" NPT	2,000 LBS
PPW-480	40"	92"	105-5/8"	2	2" NPT	2,400LBS
PPW-600	40"	106"	117-5/8"	2	2" NPT	2,700 LBS
PPW-720	45"	118"	117-5/8"	2	2-1/2" NPT	3,000 LBS

SERIES PCA AND PPA – SPLIT SYSTEM AND PACKAGED AIR COOLED DX UNITS

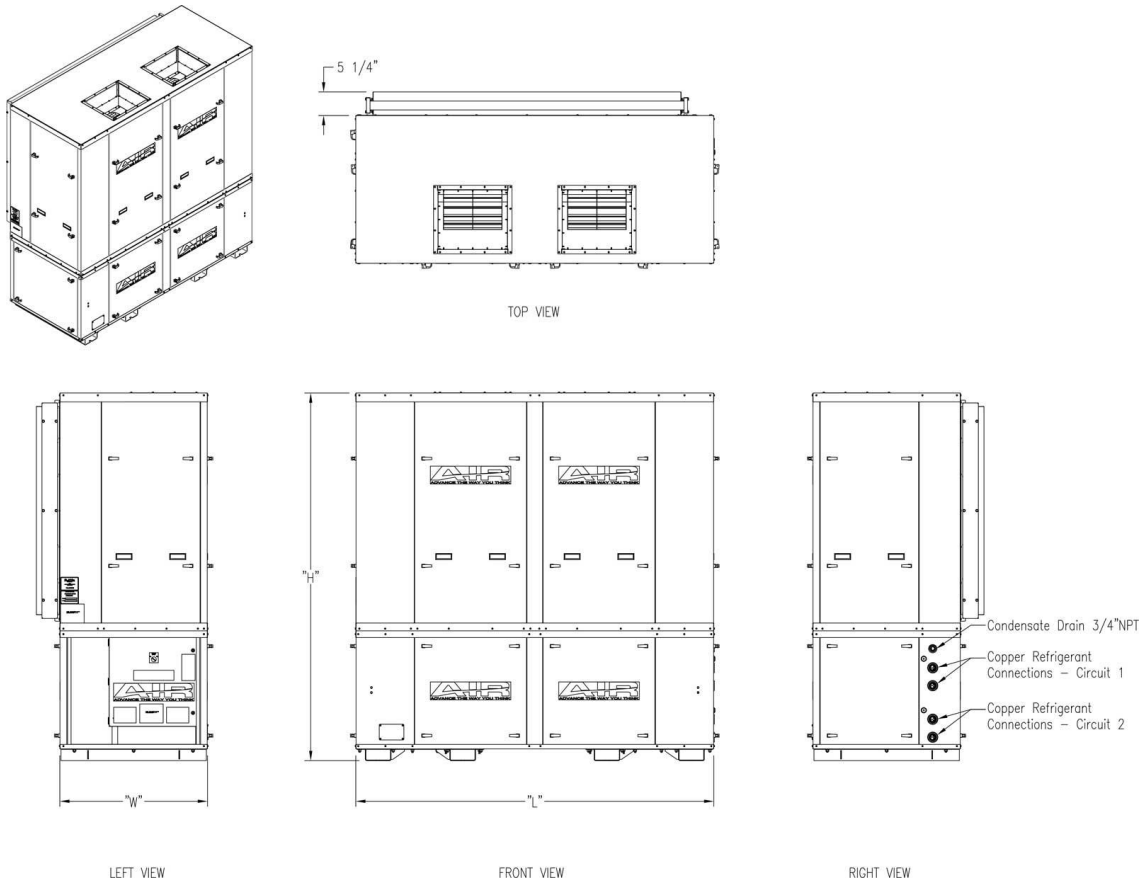
Series PCA and PPA – Unit Capacities

SERIES PCA/PPA PERFORMANCE										
Unit Size	PCA-090 PPA-090	PCA-120 PPA-120	PCA-180 PPA-180	PCA-240 PPA-240	PCA-300 PPA-300	PCA-360 PPA-360	PCA-480 PPA-480	PCA-600 PPA-600	PCA-720 PPA-720	
Nominal Tons	7.5	10	15	20	25	30	40	50	60	
Humidity Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
COMPRESSORS										
# of Ref. Circuits/Compressors	1	1	1	2	2	2	2	2	2	
Compressor Design	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	
Refrigerant Type	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	R-410a	
EVAPORATOR COILS										
Number of Rows	6	6	6	6	6	6	6	6	6	
Fins per Inch	10	10	10	10	10	10	10	10	10	
Face area (ft ²)	7.5	10.0	15.0	20.0	24.0	30.0	35.0	48.0	54.0	
SUPPLY FANS										
Nominal CFM (total)	3,000	4,000	6,000	8,000	10,000	12,000	16,000	20,000	24,000	
Blower Quantity	1	1	1	2	2	2	2	2	2	
Blower Motor HP	3.0	3.0	7.5	7.5	10.0	15.0	15.0	25.0	25.0	
ENT. AIR	COOLING CAPACITY									
80°F DB 67°F WB	Total (btuh)	102,339	132,647	191,652	275,496	339,238	405,601	535,350	667,407	830,638
	Sensible (btuh)	76,801	100,916	148,538	205,813	254,965	305,735	403,894	505,607	617,188
75°F DB 62.5°F WB	Total (btuh)	93,142	122,320	176,112	254,521	314,800	378,760	499,805	621,602	771,262
	Sensible (btuh)	75,018	99,228	145,721	202,676	251,622	302,718	399,839	499,826	609,513
72°F DB 60°F WB	Total (btuh)	85,890	112,248	163,673	233,608	287,985	350,818	459,500	572,340	710,477
	Sensible (btuh)	83,015	109,615	162,223	223,535	277,175	335,495	441,578	552,633	673,043
POWER REQUIREMENTS (amps) - Air Handling Unit										
MCA/MOP (460v/3ph/60hz)	24.8/35.0	32.9/50.0	46.3/70.0	60.2/80.0	70.4/90.0	83.2/110.0	94.7/125.0	127.2/165.0	155.1/205.0	
MCA/MOP (575v/3ph/60hz)	19.9/30.0	24.4/35.0	37.2/50.0	44.9/60.0	51.4/60.0	66.8/80.0	80.8/105.0	101.6/130.0	123.9/165.0	
AIR COOLED CONDENSER										
Blower Quantity	1	2	2	2	2	2	2	4	4	
Blower Motor HP (standard)	3.7	3.7	3.7	4.2	4.2	4.2	4.2	3.7	4.2	
POWER REQUIREMENTS (amps) - Air Cooled Condensing Unit										
MCA/MOP (460v/3ph/60hz)	5.0/15.0	9.0/15.0	9.0/15.0	10.1/15.0	10.1/15.0	10.1/15.0	10.1/15.0	19.1/25.0	19.1/25.0	
MCA/MOP (575v/3ph/60hz)	4.6/15.0	8.3/15.0	8.3/15.0	9.3/15.0	9.3/15.0	9.3/15.0	9.3/15.0	17.6/25.0	17.6/25.0	

- Capacities based on the air cooled condenser location 95°F condensing temperature.

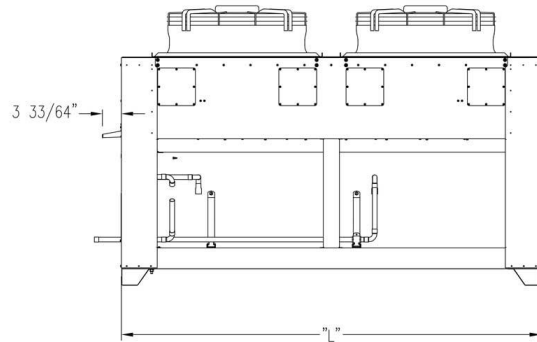
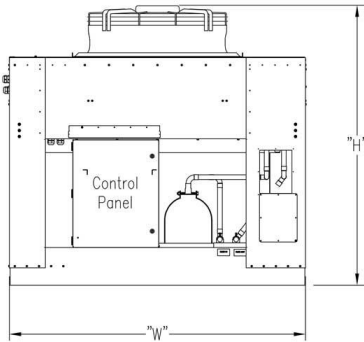
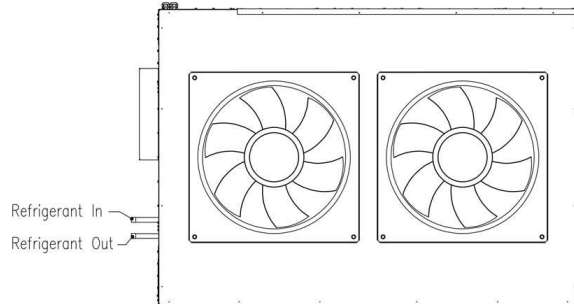
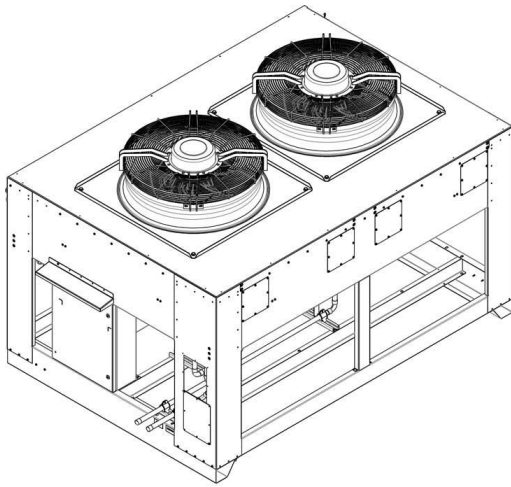
- Contact AIR's sales staff at info@air-eng.com for a detailed proposal based on your design conditions.

Series PCA – Dimensional Info (AHU)



SERIES PCA AHU DIMENSIONS					
UNIT SIZE	W	L	H	# OF CIRCUITS	SHIPPING WEIGHT
PCA-090	33"	48"	74-5/8"	1	1,000 LBS
PCA-120	33"	55"	74-5/8"	1	1,100 LBS
PCA-180	33"	69"	86-5/8"	1	1,200 LBS
PCA-240	33"	69"	86-5/8"	2	1,400 LBS
PCA-300	33"	80"	86-5/8"	2	1,600 LBS
PCA-360	33"	80"	98-5/8"	2	1,800 LBS
PCA-480	40"	92"	105-5/8"	2	2,100 LBS
PCA-600	40"	106"	117-5/8"	2	2,400 LBS
PCA-720	45	118"	117-5/8"	2	2,700 LBS

Series PCA – Dimensional Info (Air Cooled Condenser)



SERIES PCA AIR COOLED CONDENSER DIMENSIONS

UNIT SIZE	W	L	H	SHIPPING WEIGHT
PCA-090	42"	58"	52"	500 LBS
PCA-120	42"	74-1/2"	52"	720 LBS
PCA-180	44"	84-1/2"	54"	850 LBS
PCA-240	57"	90"	59"	1,380 LBS
PCA-300	57"	90"	59"	1,380 LBS
PCA-360	59"	92"	63"	1,750 LBS
PCA-480	59"	92"	63"	1,850 LBS
PCA-600	93"	104"	63"	2,150 LBS
PCA-720	97"	104"	71"	2,300 LBS

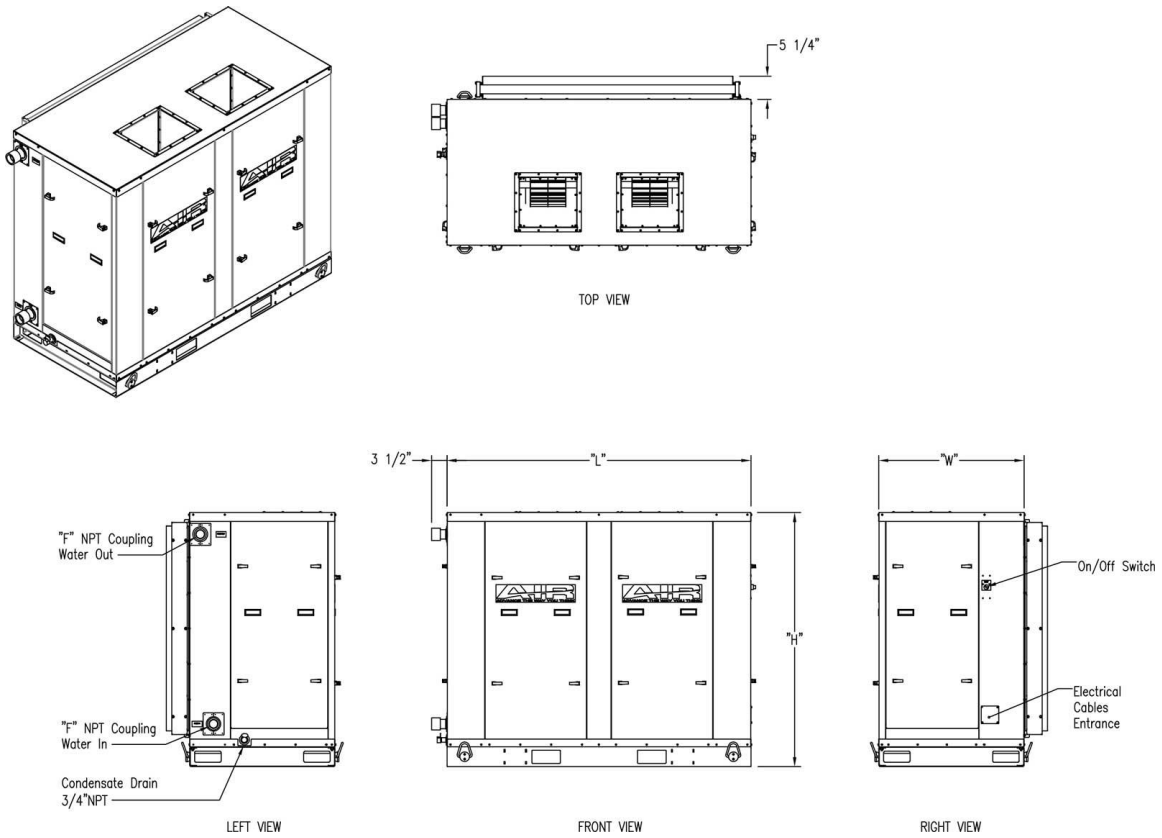
SERIES PHW – CHILLED WATER AIR HANDLING UNIT

Series PHW – Unit Capacities

SERIES PHW PERFORMANCE										
Unit Size	PHW-090	PHW-120	PHW-180	PHW-240	PHW-300	PHW-360	PHW-480	PHW-600	PHW-720	
Nominal Tons	7.5	10	15	20	25	30	40	50	60	
Humidity Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
CHILLED WATER COILS										
Number of Rows	6	6	6	6	6	6	6	6	6	
Fins per Inch	10	10	10	10	10	10	10	10	10	
Face area (ft ²)	7.5	10.0	15.0	20.0	24.0	30.0	35.0	48.0	54.0	
SUPPLY FANS										
Nominal CFM (total)	3,000	4,000	6,000	8,000	10,000	12,000	16,000	20,000	24,000	
Blower Quantity	1	1	1	2	2	2	2	2	2	
Blower Motor HP	3.0	3.0	7.5	7.5	10.0	15.0	15.0	25.0	25.0	
ENT. AIR	COOLING CAPACITY									
80°F DB 67°F WB	Total (btuh)	163,616	220,638	330,957	441,276	558,985	675,534	865,026	1,117,970	1,275,710
	Sensible (btuh)	104,206	140,071	210,107	280,142	353,523	426,446	552,138	707,045	818,428
	Flow (gpm)	33.0	44.0	66.0	88.0	111.0	134.0	172.0	222.0	253.0
75°F DB 62.5°F WB	Total (btuh)	122,145	169,288	256,647	342,196	415,178	498,935	661,090	855,127	993,054
	Sensible (btuh)	89,313	122,063	184,361	245,815	301,377	362,034	480,550	614,289	721,564
	Flow (gpm)	26.0	34.0	51.0	68.0	84.0	99.0	131.0	170.0	197.0
72°F DB 60°F WB	Total (btuh)	90,502	117,494	178,653	238,204	300,255	362,010	462,643	593,749	694,226
	Sensible (btuh)	86,208	113,138	171,101	228,134	286,456	344,833	447,551	569,055	671,697
	Flow (gpm)	18.0	23.5	36.0	48.0	60.0	72.0	92.0	118.0	138.0
POWER REQUIREMENTS (amps)										
MCA/MOP (208-230v/3ph/60hz)	14.5 / 25.0	14.5 / 25.0	31.5 / 55.0	31.5 / 55.0	39.7 / 70.0	59.0 / 105.0	59.0 / 105.0	99.0 / 175.0	99.0 / 175.0	
MCA/MOP (460v/3ph/60hz)	6.5 / 15.0	6.5 / 15.0	14.3 / 25.0	14.3 / 25.0	14.3 / 25.0	26.8 / 45.0	26.8 / 45.0	43.0 / 75.0	43.0 / 75.0	
MCA/MOP (575v/3ph/60hz)	5.3 / 15.0	5.3 / 15.0	11.7 / 20.0	11.7 / 20.0	11.7 / 20.0	21.7 / 35.0	21.7 / 35.0	34.2 / 60.0	34.2 / 60.0	

- Chilled water flow based on entering at 42°F, leaving 52°F.
- Contact AIR's sales staff at info@air-eng.com for a detailed proposal based on your actual design conditions.

Series PHW – Dimensional Info



SERIES PHW DIMENSIONS					
UNIT SIZE	W	L	H	F	SHIPPING WEIGHT
PHW-090	33"	48"	46"	1-1/4" NPT	700 LBS
PHW-120	33"	55"	52"	1-1/4" NPT	850 LBS
PHW-180	33"	69"	52"	1-1/2" NPT	1,000 LBS
PHW-240	33"	69"	58"	1-1/2" NPT	1,250 LBS
PHW-300	33"	80"	58"	2" Flange	1,500 LBS
PHW-360	33"	80"	70"	2" Flange	1,730 LBS
PHW-480	40"	92"	70"	2-1/2" Flange	2,000 LBS
PHW-600	40"	106"	82"	2-1/2" Flange	2,400 LBS
PHW-720	45"	118"	82"	2-1/2" Flange	2,800 LBS

Air Conditioning Products



CoolAIR
Cooling only
7.5 to 60 tons



PreciseAIR
Humidity control
to 72°F/40% RH
7.5 to 60 tons



ControlAIR
Humidity control
to 72°F/40% RH
Highest level of
reliability
3 to 60 tons

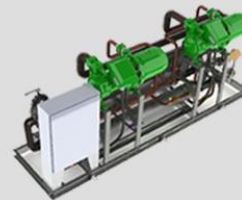
Chiller Products



ModulAIR
Modular chiller
with reciprocating
compressors
8 to 55 tons
per module



ModulAIR
Modular chiller
with reciprocating
compressors
10 to 40 tons
per module

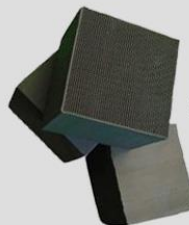


**Rotary Screw
Chiller**
Air or water cooled
chillers with
rotary screw
compressors
Up to 300 tons

Carbon Filtration Products



AdsorbAIR
Vertical upflow tub
vapor adsorber with
pellet media



MatrixAIR
Vapor adsorber with
matrix media



RecircAIR
Room recirculation
unit, pellet or matrix
media designs

Advance Industrial Refrigeration, 1765 Tobacco Rd., Augusta, GA, 30906

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