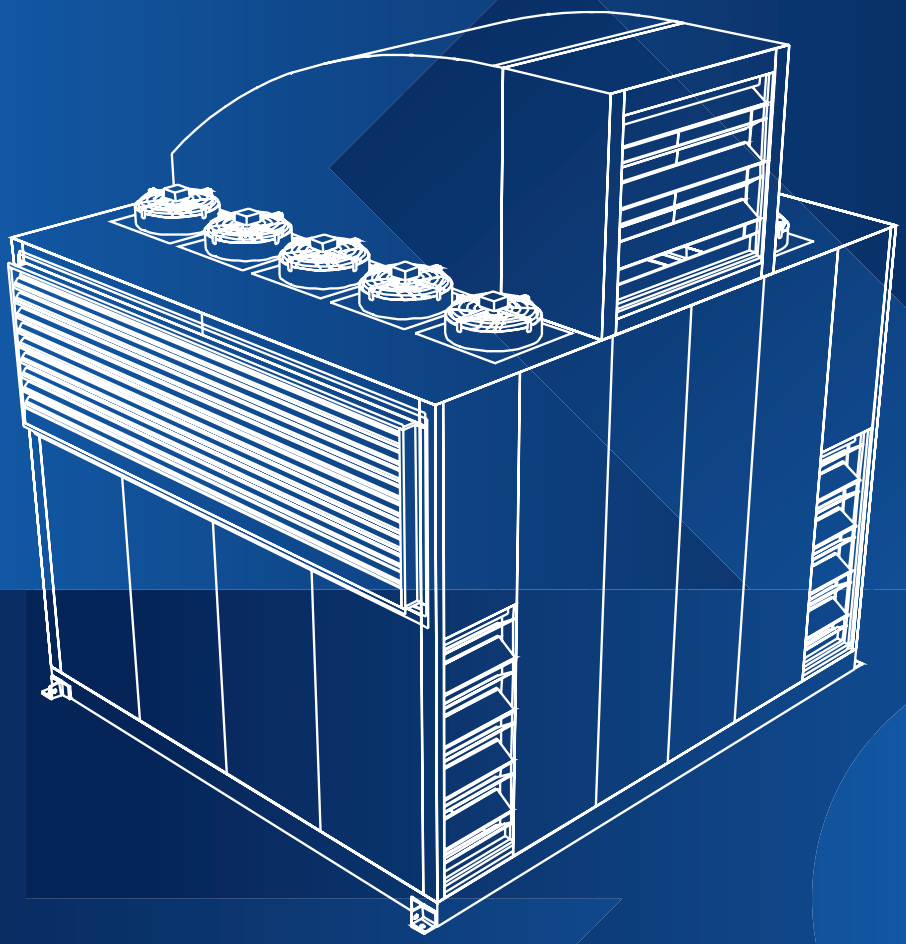
United Metal Products®

DC-IRA™

Indirect Return Air unit



The **DC-IRA ™** has been specifically designed for the higher cold aisle temperatures being applied in today's Data Centers. Applying this technology can provide the power, installation and maintenance cost savings to the owner while lowering dramatically the PUE.

Manufacturer of Quality Air Moving Equipment

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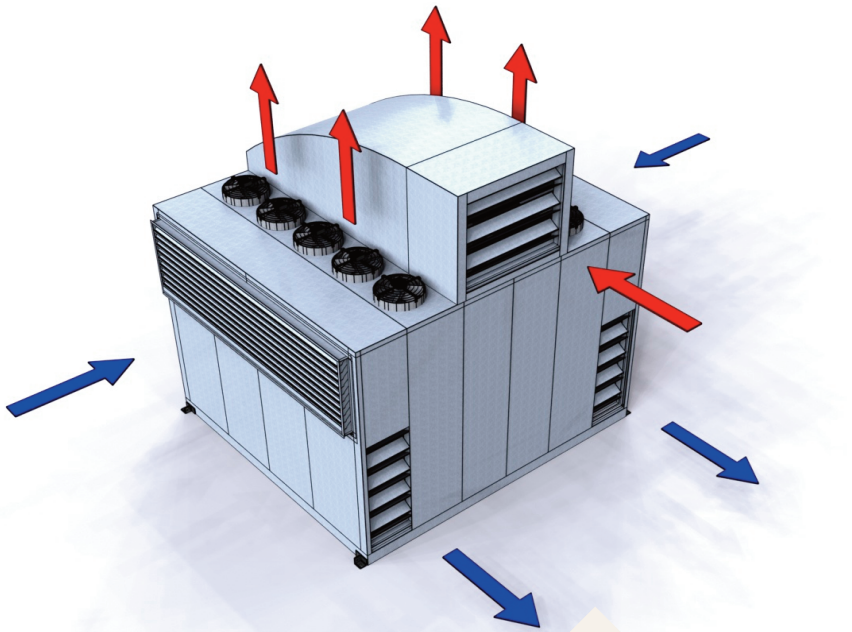

- *30 - 600 kW Cooling Capacity*

Super-Efficient Data Center - Indirect Return Air Units 5,000-100,000 cfm and above

Why?

Power: Currently data centers consume over 3% of entire power produced in the U.S. and it is growing. Data Factories of the future must move from old legacy style infrastructures to new process cooling strategies if this challenge is to be met.

- Modularity plus Scalability

Applications?

- Large Data Centers
- Colo-Facilities
- Modular Data Centers
- Containerized Data Centers
- Hi-Density Data Centers
- Upgrades to existing Data Centers

Where?

- Low wet bulb locations have the highest potential of free cooling hours.
- Applications where cold aisle temeratures are allowed above 60 degrees.
- Locations where winter outside air economizer mode is applied.

Features:

- **Indirect Evaporative Cooling** (80% efficient) free cooling strategy
- 5,000-100,000 CFM or Higher
- 30 kW-600 kW of cooling capacity
- Double wall foam filled thermal break construction
- Trim - DX cooling10% -50%
- 100% - DX back up
- EC fan variable speed technology
- Single point power
- ETL Listed and Labeled in accordance with UL1995

Resources Available for This Product

- Catalog By Mail
- Catalog Online

- Patent #5,970,723 and other patents pending

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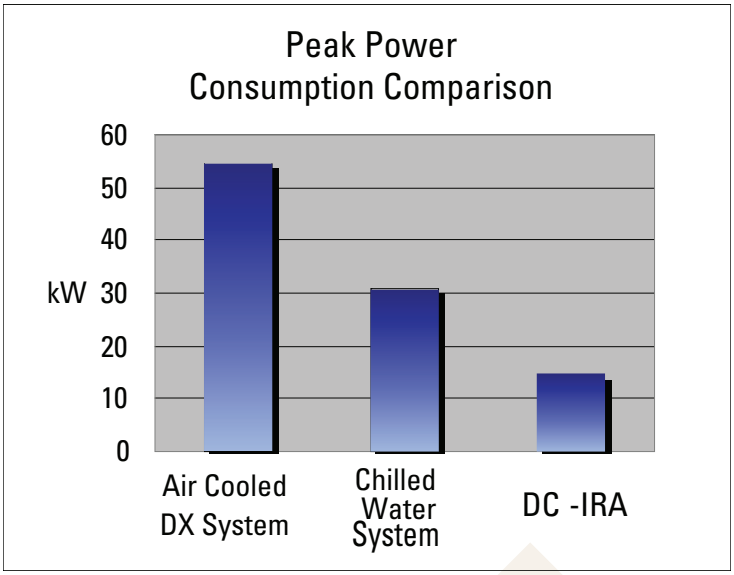
Manufacturer of Quality Air Moving Equipment

MADE in the USA

DC-IRA//PO//Rev1.0 March 2011

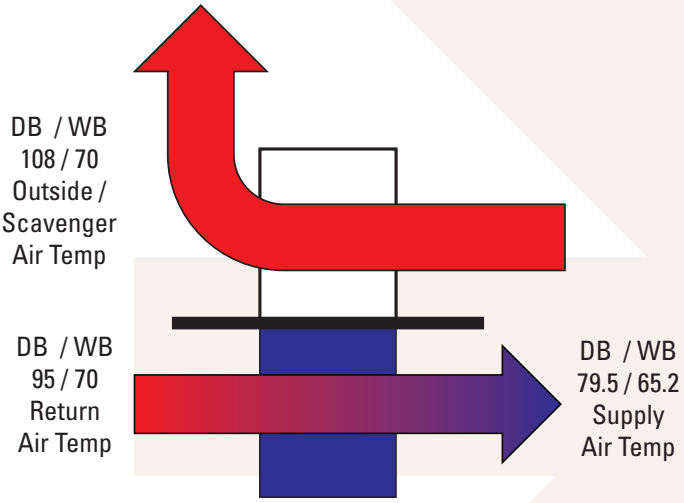
Peak Power Consumption Comparison



Peak power consumption (kW) comparison of typical alternative cooling systems operating in Phoenix Arizona

United Metal Products, the leading manufacturer of industrial and commercial air handling equipment in the Southwest, is introducing a revolutionary new product—DC-IRA™. The key to this breakthrough is as old as the millennium—evaporative cooling. The DC-IRA's unique configuration captures this simple, yet powerful, principle.

The Wet Bulb Energy Recovery System



Location	1% Coincident		Indirect LAT	
	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb
Albuquerque, NM	93	60	69.6	50.9
Denver, CO	90	59	72.2	50
El Paso, TX	98	64	73.6	56.3
Los Angeles, CA	81	64	74.9	57
Las Vegas, NV	106	66	76.2	59.8
Phoenix, AZ	108	70	79.5	65.2
Sacramento, CA	97	69	78.4	63.9
Salt Lake City, UT	94	62	72	53.5
San Jose, CA	89	66	76.3	59.9

Energy recovery over the past decade has been largely centered around sensible recovery. Although this works well in the colder climatic regions of the world, it has not been as effective in areas where higher dry bulb temperatures exist. The principle is simple—exchanging temperature at the wet bulb level can increase efficiency by more than 50% over a standard dry bulb exchanger. This means big savings for the building owner.

Designed specifically for high outside air capacity requirements and up to 60% savings in cooling cost, ease of maintenance, and quality construction, United Metal Products' DC-IRA is the cool solution.

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DC-IRA™

Indirect Return Air unit

Data Center - Indirect Return Air unit Standard Features

All items listed here are a sample of what is typical. As these systems are custom built to site requirements in construction and performance they will be unique. We can include almost any component items into a unit whether they are listed here or not:

- ☑ 16ga pre-painted steel single skin cooling section casing and double wall thermal break foam filled supply air casing
- ☑ Thermal break 2" foam filled double wall construction
- ☑ Fans can be ordered for up, down or horizontal discharge
- ☑ Fans have fan housing, heavy duty direct drive with quick removal feature
- ☑ 460v/3ph/60Hz ODP super efficiency motors with vfd drives and line protectors
- ☑ Thermal break double-wall hinged lockable access doors
- ☑ Wet sections have fully welded 304 Stainless sump and media support with evaporative cooling media engineered to the capacity of the unit.
- ☑ Heavy duty pumps with adjustable water flow, flush/ bleed lines and pipe work clean-out points
- ☑ ARI certified indirect cooling coils with 5/8" copper tubes and aluminum fins
- ☑ 2" 30% panel filters (front or side access)
- ☑ Scavenger air fans adjustable speed (EC type)
- ☑ Return air recirculation mode for leaving air temperature in winter
- ☑ Pre-wired motors, actuators sensors and pumps to a single external junction box for Brand neutral control installation by control contractor.

Optional Features

- ☐ Split or packaged systems designed and built to customer requirements
- ☐ 16ga G-90 galvanized single skin casing with tough powder coated finish to casing-baked at 375°F
- ☐ HW or steam heating coils
- ☐ CW or DX cooling coils
- ☐ Humidity control
- ☐ Direct evaporative cooling
- ☐ Sound attenuation
- ☐ HEPA filtration
- ☐ Filter pressure differential gauge or switch
- ☐ 90% efficient GLASdek® UL900 Class 2 evaporative media for ETL labeled units per UL 1995 standard
- ☐ Premium efficiency ODP or TEFC motors
- ☐ Extended fan bearing lubrication lines
- ☐ Fan bearings upgraded to L-10 200,000 hours
- ☐ Fan guards
- ☐ 2" deflection spring anti-vibration mounts with seismic restraints
- ☐ Aluminum cabinet (for reduced operating weight)
- ☐ Stainless steel cabinet
- ☐ Single point power connection with electrical transformers & magnetic motor starters
- ☐ Discharge temperature control
- ☐ Building static pressure control
- ☐ Total integration with building management systems
- ☐ Internal lights with weatherproof switch
- ☐ GFI receptacle
- ☐ Fan door safety disconnects switches
- ☐ Automatic flush kit with timer
- ☐ Automatic drain-down with timer
- ☐ Automatic drain-down & freeze protection with timer
- ☐ Roof curb-flat or pitched, insulated or uninsulated