

# HIGH-CAPACITY INDUSTRIAL EVAPORATIVE FAN COOLER

## with Symphony Premium Media



### MODELS CFD 4200/4800

Symphony's Premium Industrial Fan Cooler has been meticulously designed for installations where the air from the cooler is to be discharged directly into a space through a straight plenum without ancillary ductwork. This makes this cooler ideal for factories, warehouses and agriculture buildings requiring a high volume of cool, clean air.

Energy efficient high capacity fan design that uses less horsepower than comparable sized blower wheel (squirrel cage) models. The pitch of the fan blades is adjusted for each specific model, *one more reason why Symphony Premium Industrial units are beyond cool.*

### FEATURES

- **DUAL INLET**
- **SEPARATE WET AND DRY MODULES** - Wet module at each air inlet allows all water distribution components to be physically separated from the dry air-handling.
- **FAN BLADES SPECIFICALLY DESIGNED FOR EACH INDIVIDUAL MODEL**
- **SUPERIOR EFFICIENCY** - Reduces energy cost by as much as 65% compared to blower wheels.
- **DURABLE CONSTRUCTION**
- **GALVANIZED STEEL WITH OUR POLYBOND® POLYESTER EPOXY POWDER**
- **COATING** - Insures years of dependable service.
- **EVAPORATIVE MEDIA** - Symphony evaporative media out performs aspen media.

natural cooling

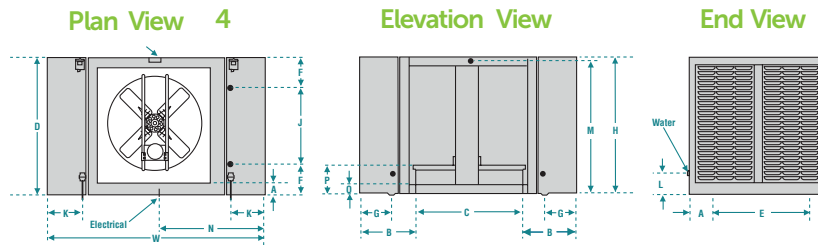
**Symphony**

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- 1 Drains are 3/4" Male hose thread.
- 2 Water connection is 1/4" O. D.
- 3 Electric service entrance is 7/8" I. D.
- 4 GFCI receptacle box for pumps.



## Dimensional Data

Model Series	Cabinet			Duct Location Opening Location				Drain 1 Locations			Water 2 Service Location		Electric 3 Service Location		Bottom Pan Depth	Riser	Media Dimensions		Effective Pad Area	Approx. Total Cap. of Both Sumps	Approximate Weights (lbs.)	
	H	W	D	A	B	C	E	F	G	J	K	L	M	N	O	P	Qty.	Size	Sq. Ft.	Sumps	Ship.	Oper.
CFD4200	39	96.25	62	7	25.12	46	46	13.15	13.50	35.70	12.00	4.75	38.00	46.12	3.25	12.12	10	12x8x34.5	28.75	24 gal.	630	780
CFD4800*	49	96.25	62	5	22.12	52	52	13.15	13.50	35.70	12.00	4.75	48.00	46.12	3.25	12.12	10	12x8x44.5	37.10	24 gal.	700	850

\* Unit must be centered on roof curb. Must measure no less than 54" and no more than 60" square.

## COMPLETE PACKAGED SYSTEMS

### Licensed Air Delivery CFM At Various External Static Pressures

Model	Nameplate HP	Bhp	Fan RPM	Voltage (60Hz)	Phase	1 Motor Amperage	120 V/60 Hz/ 1 Ph Total Pump Amperage 2	Inches Water Gauge AMCA Licensed Ratings		
								0.0"	0.1"	0.2"
CFD4200 D110E	1	1.10	435	120	1	15.1	2.4	14,500	12,300	9,000
CFD4200 D210E	1	1.10	435	240	1	7.5	2.4			
CFD4200 D230E	1	1.10	435	208/240	3	3.6	2.4			
CFD4200 D430E	1	1.10	435	480	3	1.7	2.4			
CFD4200 F110E	2	2.05	545	120	1	19.0	2.4	17,250	15,800	13,200
CFD4200 F210E	2	2.05	545	240	1	8.5	2.4			
CFD4200 F230E	2	2.05	545	208/240	3	7.1	2.4			
CFD4200 F430E	2	2.05	545	480	3	3.3	2.4			
CFD4800 F110E	2	2.10	550	120	1	19.0	2.4	21,900	20,200	18,400
CFD4800 F210E	2	2.10	550	240	1	8.5	2.4			
CFD4800 F230E	2	2.10	550	208/240	3	7.1	2.4			
CFD4800 F430E	2	2.10	550	480	3	3.3	2.4			

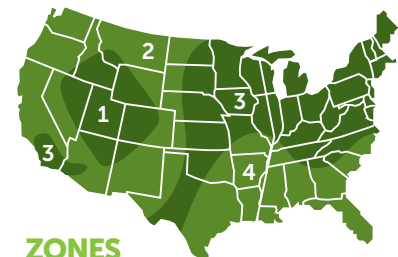
- Performance shown is for installation type B: Free inlet Ducted outlet.
- Performance ratings include the effect of evaporative media in the airstream.
- Power rating (BHP) does not include drive losses.

- 1 All external wiring and components such as disconnects, motor starters, and over-current protection are to be field supplied and are not included as part of the evaporative cooler from the factory.
- 2 A separate 120 Volt, 60 Hz, 1-phase pump electrical circuit is required to maintain the integrity of the GFCI pump protection and to maintain the U.L. listing of the evaporative cooler. Pump amperage shown is total for 2 pumps per evaporative cooler.

## Sizing Instructions

The most accurate sizing is accomplished through the use of KoolKalk ([www.impcollc.com](http://www.impcollc.com)), our software program, when you have already calculated the sensible cooling load of the building. KoolKalk combines ASHREA design day conditions, the principles of psychometrics and hourly weather data of typical meteorological years for key cities around the world. Although not the preferred method, alternate sizing by considering only air changes in the building, may be adequate for some warehouse and other industrial applications. To select a cooler or coolers based on air changes only, follow these simple steps:

1. Determine the size (in cubic feet) of the space to be cooled (length x width x height). Remember that in most cases, a height from 10-12 feet is all that needs to be considered since these are only the typical measures to which cooling is required.
2. Determine how frequently the air needs to be changed in the building (minutes per air change) by referring to the chart and map to the right. As an example, a warehouse in El Paso, Texas (zone 2) with an average interior load and exposed exterior heat load needs an air change at least every 3 minutes as a rule of thumb.
3. Determine the total CFM required for the building by dividing the cubic feet of the space to be cooled by the number of minutes for each air change.  
**Example:** Building size = 200' long x 100' wide x 12' height to be cooled = 240,000 cubic feet to be cooled. Air needs to be changed every 3 minutes (El Paso, Texas example from #2 above) 240,000 / 3 = 80,000 cfm total delivered air required from coolers. Select coolers delivering a combined total of 80,000 cfm.



### ZONES

HEAT LOAD		ZONES			
Exterior	Interior	2	3	4	
Exposed	High	3	2	2	1
Insulated	High	4	3	2.5	1.5
Exposed	Average	4	3	2	1.5
Insulated	Average	5	4	2.5	2