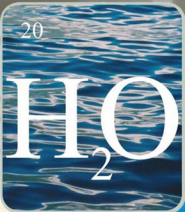
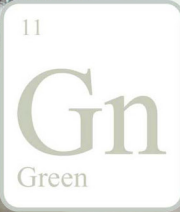
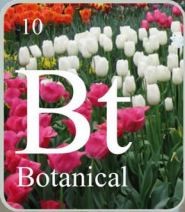


# Elements of Mist

ENERGY EFFICIENT SOLUTIONS FOR A GREENER FUTURE

CATALOG



2009

cloudburst<sup>®</sup>  
MISTING SYSTEMS



QUALITY • EXPERIENCE • SERVICE • VALUE • MADE IN USA

## COMPLETE MIST FAN KITS

### CB381 Puremist (1 Fan Kit)

Mid pressure pump (model CB380) with 8-nozzle stainless steel mist ring and 10' of high pressure feed line.

### CB382 Puremist (2 Fan Kit)

Same as model CB381, except has dual manifold and (2) 6-nozzle mist rings with 10' and 20' of pressure feed line.

### CB500 Coldblast (1 Fan Kit)

High pressure pump (model CB400-25) with 8-nozzle stainless steel mist ring and 10' of high pressure feed line.

### CB502 Coldblast (2 Fan Kit)

Same as model CB500, except has dual manifold and (2) 6-nozzle mist rings with 10' and 20' of pressure feed line.



Model CB381



Model CB502

### Which system is the best choice for me?

#### Low-Pressure Misting Systems

These systems normally operate on hose pressure, which varies from 40 to 90 psi. Normally built with PVC Pipe or Poly Tubing and are connected to a hose. These systems are very inexpensive and in most areas create some cooling but will also get you wet.

#### Mid-Pressure Misting Systems

These systems employ a booster pump to raise hose pressure up to as much as 200psi and provide an excellent economical alternative to high pressure systems. These systems provide excellent cooling in hot and dry climates.

#### High Pressure Misting Systems

High Pressure Misting or fogging systems operate at pressures starting at 800 psi going as high as 1200 psi. At these pressures, we are able to create a super fine fog / mist that quickly and efficiently flash evaporates absorbing huge amounts of heat quickly and effectively cooling the environment.

#### I live in a humid climate.

#### Will a misting system work for me?

Yes. The evaporative cooling concept will work any time you are able to achieve evaporation (See "How does it work?"). The more complete the evaporation, the more effective the system will work. For areas with humidity above 80%, temperature reductions will be as high as 10 degrees. For humidity levels between 40% and 80%, temperature reductions will be as high as 20 degrees. Below 40% humidity, the temperature reductions may be as much as 35 degrees.

#### Will the Mist get me wet?

You will only get wet if you are standing within 6' of the misting nozzle.



## COMPLETE FIXED LINE MISTING KITS

### 1/4" Stainless Steel Tubing with Push Lock Fittings



#### CB564 12 Nozzle System (High Pressure)

(1) CB405 Pump, (12) CB250P Misting Tee  
(1) CB250P End Plug, (11) CB224-2 2' Tubing  
(1) CB223.250 Hangers, (1) 40' Nylon Tubing  
(2) CB255 Elbow, (1) CB250B Misting Tee  
(1) CB130-10 Drain Valve  
(expandable to 44' with 22 - .008" nozzles)



Model CB564

#### CB566 30 Nozzle System (High Pressure)

(1) CB410 Pump, (30) CB250P Misting Tee  
(2) CB250P End Plug, (29) CB224-2 2' Tubing  
(1) CB223.250 Hangers, (1) 20' Nylon Tubing  
(2) CB255 Elbows, (1) CB250B Misting Tee  
(1) CB130-10 Drain Valve  
(expandable to 124' with 62 - .008" nozzles)



Model CB566

#### CB560 10 Nozzle System (Mid pressure)

(1) CB380 Pump, (10) CB250P Misting Tee  
(2) CB250P End Plug, (9) CB224-2 2' Tubing  
(1) CB223.250 Hangers, (1) 20' Nylon Tubing  
(1) CB250B Mist Tee, (1) CB130 Drain Valve  
(expandable to 48' with 24 - .008" nozzles)

#### CB562 10 Nozzle System (High Pressure)

(1) CB400 Pump, (10) CB250P Misting Tee  
(1) CB250P End Plug, (9) CB224-2 2' Tubing  
(1) CB223.250 Hangers, (1) 20' Nylon Tubing  
(1) CB250B Mist Tee, (1) CB130 Drain Valve  
(expandable to 44' with 22 - .008" nozzles)

### 3/8" TIG Welded Stainless Steel Mist Line



#### CB550 Commercial System

High pressure pump (model CB410) coupled with 20' of flexible feed line. 50' of 3/8" TIG welded stainless steel mist line (25 nozzles) brass fittings and stainless steel hangers. (expandable to 124' with 64 - .008" nozzles)

#### CB510 Patio System

High pressure pump (model CB400) coupled with 20' of flexible feed line, 30' of 3/8" TIG welded stainless steel mist line (15 nozzles) brass fittings and stainless steel hangers. (expandable to 44' with 22 - .008" nozzles)

# PRESSURE PUMP MODULES

## CB380 0.5 GPM Mid Pressure Pump (160 PSI)

Continuous duty booster pump. Powder coated steel enclosure. Supports up to 24 - .008" nozzles .



Model CB380

## CB390-OF 0.5 GPM - Open Frame High Pressure Pump

## CB391-OF 1.0 GPM - Open Frame High Pressure Pump

## CB392-OF 2.0 GPM - Open Frame High Pressure Pump

Solid Brass and Ceramic Pump with integrated by-pass. The pump comes with a H Class Motor ( higher temp. rating ) and pressure regulator up to 1500 PSI.



Model CB390

## CB400-25 0.25 GPM High Pressure Pump (800 PSI)

## CB400 0.5 GPM High Pressure Pump (1000 PSI)

## CB402 Same as model 400, except has dual manifold.

High efficiency Pump Module with Solenoid Valve, Filtration and pressure switch. Powder coated steel Enclosure with Pressure Gauge.



Model CB400

## CB405 0.5 GPM - High Pressure Pump (1200 PSI)

## CB410 1.3 GPM - High Pressure Pump (1200 PSI)

## CB420 2.2 GPM - High Pressure Pump (1200 PSI)

Tri-Plex Plunger Pump Module complete with Solenoid Valve and Filtration. Powder coated Steel Enclosure.



Model CB420

**We build High Pressure Belt Driven Pumps up to 72 GPM and Direct Driven Pumps up to 12 GPM.**

*Whatever your project requires we can make it happen: Whether it's Cooling a Giraffe in St. Louis, an athlete at the Olympics, a Steel Mill in Mexico or creating a Cooling Tornado in Dubai.*



\*\* Pumps available w/ stainless steel case

## AMPERAGE CHART - USA (60Hz)

Pump Model	HP	Flow	Pressure	FLA* 115Volt	FLA* 220Vplt
CB380	0.1 HP	0.50 GPM	160 PSI	1.0 Amps	N/A
CB400-25	0.2 HP	0.25 GPM	800 PSI	4.0 Amps	2.0 Amps
CB400	0.5 HP	0.50 GPM	1000 PSI	7.2 Amps	3.6 Amps
CB405	0.5 HP	0.50 GPM	1200 PSI	7.4 Amps	3.7 Amps
CB410	1.0 HP	1.35 GPM	1200 PSI	12.8 Amps	6.5 Amps
CB420	1.5 HP	2.20 GPM	1200 PSI	18.0 Amps	9.0 Amps
CB390-OF	0.33 HP	0.50 GPM	0-1500 PSI	4.2 Amps	N/A
CB391-OF	1 HP	1.00 GPM	0-1500 PSI	7.4 Amps	N/A
CB392-OF	2 HP	2.00 GPM	0-1500 PSI	10.2 Amps	N/A

## AMPERAGE CHART - INTERNATIONAL (230Volt 50Hz)

Pump Model	HP	Flow	Pressure	Full Load Amperage 115Volt
CB380-50	0.1 HP	0.44 GPM	160 PSI	0.5 Amps
CB400-25-50	0.2 HP	0.22 GPM	800 PSI	1.0 Amps
CB400-50	0.5 HP	0.44 GPM	1000 PSI	3.4 Amps
CB405-50	0.5 HP	0.50 GPM	1200 PSI	3.4 Amps
CB410-50	1.0 HP	1.18 GPM	1200 PSI	6.0 Amps
CB420-50	1.5 HP	1.92 GPM	1200 PSI	7.8 Amps

\*\* FLA = Full Load Amperage \*\* Convert to Liter per minute: Multiply by 3.79

## How does Misting Work

When ultra fine water droplets (mist/fog) are introduced into the atmosphere, they quickly absorb the energy (HEAT) present in the environment and boil off (evaporate). The energy (HEAT) is used to produce a state change from a liquid to a gas is eliminated from the atmosphere. The air is cooled by a natural process commonly known as **evaporative cooling**.

CLOUDBURST high pressure misting fans and misting line systems are designed to efficiently introduce a super fine mist into the area to be cooled which almost instantly evaporates (flash evaporative cooling). In the case of our misting fans. CLOUDBURST combines evaporative and convective cooling (wind chill factor) to achieve spectacular results.

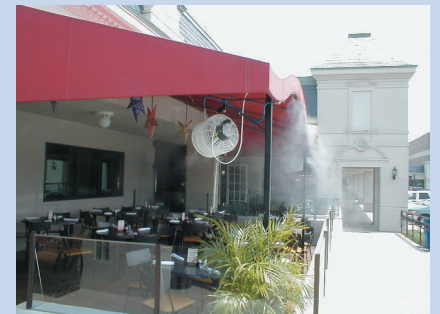
## How much can I cool down an area?

It depends on both the initial ambient temperature and relative humidity. The evaporative cooling process has the capacity to cool the air down to the dew point or fully saturated level. Our highest measured temperature decrease ever was **53F° / 29.6C°** in a copper smelting plant where workers were working in the most extreme environment.

The chart below shows the maximum amount of cooling that can occur at different temperatures and relative humidity levels. Depending on the environment, we can expect to get 60% to 90% of the maximum cooling potential. At high temperatures and low humidity levels temperature decreases of 30 F° are not uncommon.

## Potential Cooling

Humidity	Starting Air Temperature (F°) / (C°)		
	85 / 29	95 / 35	105 / 41
10%	55 / 13	61 / 16	66 / 19
30%	64 / 18	71 / 22	78 / 26
50%	71 / 22	79 / 26	86 / 30
70%	77 / 25	86 / 30	93 / 34
90%	83 / 28	91 / 33	99 / 37



# MISTING NOZZLES



<b>CB106</b>	.006" Brass/Stainless Steel (Ultra Low Water Usage)
<b>CB108</b>	.008" Brass/Stainless Steel (Low Water Usage)
<b>CB112</b>	.012" Brass/Stainless Steel (Medium Water Usage)
<b>CB115</b>	.015" Brass/Stainless Steel (Medium High Water Usage)
<b>CB120</b>	.020" Brass/Stainless Steel (High Water Usage)

\*\* Specify 10/24 or 12/24 threads when ordering (example: CB108-10 or CB128-12)






## NOZZLE FLOW RATES

Nozzle	O'Ring	Orifice		10 bar	25 bar	45 bar	70 bar	105 bar
		Orifice	Flow	150 PSI	350 PSI	650 PSI	1000 PSI	1500 PSI
CB106	Yellow	.006"	GPM	0.006	0.008	0.011	0.013	0.02
		0.15 mm	LPM	0.023	0.033	0.043	0.05	0.076
CB108	Red	.008"	GPM	0.007	0.012	0.015	0.018	0.021
		0.2 mm	LPM	0.028	0.046	0.056	0.070	0.081
CB112	Black	.012"	GPM	0.012	0.016	0.020	0.026	0.030
		0.3 mm	LPM	0.045	0.063	0.078	0.093	0.116
CB115	Brown	.015"	GPM	0.018	0.028	0.033	0.040	0.043
		0.4 mm	LPM	0.070	0.108	0.126	0.150	0.165
CB120	Green	.020"	GPM	0.021	0.030	0.040	0.043	0.045
		0.5 mm	LPM	0.083	0.113	0.15	0.165	0.166

## PUMP NOZZLE CAPACITY (minimum & maximum)

Pump	Power	Application	Flow		106		108		112		115		120	
			US GPM	Liter / Min	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
CB380	60hz	US	0.46	1.74	n/a	n/a	9	34	7	28	6	23	5	23
CB380-50	50hz	International	0.46	1.74	n/a	n/a	9	34	7	28	6	23	5	23
CB400.25	60hz	US	0.25	0.95	6	16	3	10	2	6	2	5	2	4
CB400.25-50	50hz	International	0.22	0.83	5	15	3	9	2	5	2	5	1	4
CB400	60hz	US	0.46	1.74	10	30	6	18	4	11	3	10	3	8
CB400-50	50hz	International	0.41	1.55	9	27	6	16	1	3	3	9	2	7
CL405	60hz	US	0.5	1.89	11	33	7	20	4	12	4	11	3	9
CB405-50	50hz	International	0.44	1.67	10	29	6	18	3	10	3	9	3	8
CL410	60hz	US	1.35	5.11	30	89	18	54	11	31	10	29	8	24
CB410-50	50hz	International	1.18	4.47	26	78	16	47	9	27	9	25	7	21
CB420	60hz	US	2.2	8.33	49	145	30	88	17	51	16	47	13	39
CB420-50	50hz	International	1.92	7.27	43	127	26	77	15	44	14	41	12	34
CB390-OF	60hz	US	0.50	1.89	8	33	5	20	3	12	3	11	2	9
CB391-OF	60hz	US	1.00	3.79	16	66	10	40	6	23	5	21	4	18
CB392-OF	60hz	US	2.00	7.57	33	132	20	80	12	46	11	43	9	35

## PLUGS, DRAIN & EXTENSIONS

<p><b>CB100 Plugs</b></p> <p>Use these to block off orifices</p> 	<p><b>CB130 Drain Valve</b></p> <p>Drains excess water from Mist Line when Pump turns off. Helps minimize clogging by reducing mineral build up inside of Nozzle.</p> 
<p><b>CB105 Anti Drip</b></p> <p>Brass Body with Stainless Steel spring and Rubber Stopper</p> 	<p><b>CB126-# Flexible Nozzle Extensions</b></p> <p>4" &amp; 6" (Stock) Custom lengths available.</p> 
<p><b>CB128 5 Nozzle Cluster</b></p> <p>Stainless Steel. Comes without Nozzles.</p> 	

\*\* All Nozzle, Anti Drips & Extensions available in 10/24 and 12/24 Thread Sizes

Precision engineered Misting Nozzles. Designed with optimum spray pattern and robust performance. All stainless steel orifices and pins. Bodies in brass, stainless steel or nickel plated brass. MADE in the USA.

### Which nozzle is the right one?

The **.006"** nozzle is the smallest standard nozzle orifice available. This nozzle is ideal for applications requiring extremely low flow with small droplet size, minimal moisture and complete evaporation. This nozzle is most commonly used on fans in areas with high humidity. The nozzle should be not used at pressures below 500 PSI.

The **.008"** nozzle is ideal for applications requiring less flow with small droplet size, minimal moisture, and complete evaporation. It can be used for indoor humidification or outdoor cooling, depending on the circumstances. The nozzle should be not used at pressure below 140 PSI. This is by far our most popular nozzle for cooling people.

The **.012"** nozzle is the most commonly used for people cooling in areas with extreme heat and low humidity or where the nozzles are placed high above the area to be cooled. It provides comparable results to the **.008"** nozzle with an increased flow rate. It can be used both indoors and outdoors with complete evaporation. This nozzle will work at pressures of 50 PSI and above.

The **.015"** nozzle is mostly used for outdoor applications where sufficient airflow and clearance allow for complete evaporation and where higher flows are required.

The **.020"** nozzle is primarily used for outdoor applications requiring extreme flow with less need for complete evaporation. This is a great nozzle for special effects and process cooling requiring high volume.



- ( Yellow ) O-Ring = 0.006" Orifice
- ( Red ) O-Ring = 0.008" Orifice
- ( Black ) O-Ring = 0.012" Orifice
- ( Brown ) O-Ring = 0.015" Orifice
- ( Green ) O-Ring = 0.020" Orifice

## 3/8" MISTING LINE COMPONENTS

### Misting Lines, Tubings, Hoses & Hangers

#### CB220-#

3/8" Stainless Steel Mist Line  
Available with :  
12" / 15" / 18" 24" / 36" / 48"  
Spacing between nozzles.  
Available in 10' and 20' Lengths



#### CB221-#

3/8" Stainless Steel Tubing  
Available in:  
10" and 20' Lengths



For Custom Lengths Please Call

#### CB222

Flexible Mist Line  
1500 PSI Pressure Hose



#### CB239

1/2" Feed Line  
1500 PSI Pressure Hose  
Order by the foot  
(1/4" brass female swivels included)



#### CB223-.375

Mounting Clamps  
Stainless Steel and Rubber  
(Bag of 20) for 3/8"



*" We're sure we have the right system for you ,,"*

### Fittings

#### CB224

3/8" Brass Compression  
**UNION**



#### CB231

Re-usable 1/2" O.D. Hose  
x 1/4" male NPT



#### CB225

3/8" Brass Compression  
**ELBOW**



#### CB230

1/4" Quick Disconnect  
male and female



#### CB226

3/8" Brass Compression  
**TEE**



#### CB232

Re-usable 1/2" O.D. Hose  
x 1/4" female NPT swivel



#### CB227

3/8" Brass Compression  
**END PLUG**



#### CB235

1/4" Quick Disconnect  
male and female



(shuts off when disconnected)

#### CB226M

3/8" Brass Compression x  
1/4" NPT male thread  
x Compression x 3/8"  
Brass Compression



#### CB233

1/4" female pipe thread x  
Drain Valve x 1/4" male pipe  
thread. Attach to Pump outlet.



#### CB228

3/8" Brass Compression  
x 1/4" NPT male thread



#### CB229

3/8" Brass Compression  
Elbow x 1/4" NPT male thread



#### CB236

Brass Compression  
x 1/2" Female Nozzle  
Thread (w/o Nozzle)



### Commercial Cooling

When temperatures rise into the 90's and above, patio dining and outside bar areas become uninhabitable money losers. A CLOUDBURST system can turn that space into a comfortable and profitable retreat.

### Industrial / Process Cooling

Create a safer and more productive working environment. Cooling employees, equipment and processes can lead to happier employees and big profits. Cooler workers are safer and more productive. Cooler machines last longer and can produce more. Many processes that need cooling can be speeded up using mist cooling.

### AC Condenser Cooling

Decrease electrical usage and costs by up to 30% using our exclusive condenser cooling units. This is a simple and cost effective way to save money and the environment.

### Animal Cooling

Keeping livestock and pets is cool is big business. Cool cows produce more milk and eat more. Cool Chickens eat more and are healthier.

### Humidity and Control

CLOUDBURST misting systems are a cost effective solution to humidifying a wide array of applications including: warehouses, factories, greenhouses, wine barrels and Lumber and paper storage.

### Dust & Odor Control

CLOUDBURST's proven technology generates 10 micron water droplets which attract and suppress PM 10 and smaller dust particles. Our systems offer a solution that can help eliminate both the fugitive dust problem and unwanted odors.

### Special Effects

To create "smoke" or "fog" theme parks and studios have often had to resort to chemicals or oils to produce the required special effect.

The CLOUDBURST fog system offers a safe alternative to these methods. Using only high-pressure water, our systems create the required atmosphere with no discomfort or possible injury to spectators or actors.



# 1/4" PUSH LOCK MIST LINE COMPONENTS ( Designed for runs up to 150' from the Pump )

## Tubings & Hangers

### CB26#W/B

1/4" Flexible – 1000PSI  
Nylon Tubing



Black and Light Cream

### CB224-#

Blank Stainless Steel Tubing  
2', 3', 4' Lengths



For Custom Lengths Please Call

### CB223-.250

Mounting Clamps  
Stainless Steel and Rubber  
(Bag of 20) for 1/4"



*" We always help you to design  
the right misting system ,,"*

## Fittings

### CB250

1/4" Misting Tee  
Incl. Nozzle & Anti Drip  
*\*\* Specify Nozzle Size*



### CB250B

1/4" Misting Tee  
w/o Nozzle & Anti Drip



### CB250D

Drain Valve Tee



### CB251

Straight Nozzle Adapter  
w/ 10/24 Tread (w/o Nozzle)



### CB251-45

45° Nozzle Adapter  
w/ 10/24 Tread (w/o Nozzle)



### CB250P

Plug to End Line



### CB253

10" Riser Assembly w/ Nozzle & 18" Stake



### CB257

1/4" Coupling Union



### CB256

1/4" Coupling Tee



### CB256-M

1/4" Coupling Tee  
(1/4" Push Lock x 1/4" MPT  
x 1/4" Push Lock)



### CB255

1/4" Coupling Elbow



### CB258F

1/4" Fan Adapter  
(1/4" Push Lock x 1/8" FPT)  
Adapts Mist Rings for 1/4" Tubing



### CB258P

1/4" Pump Adapter  
(1/4" Push Lock x 1/4" FPT)  
Adapts Pumps for 1/4" Tubing



### CB259

1/4" In-Line Shut Off Valve



## Residential Cooling

As patios and backyards have turned into well equipped outdoor living spaces, high pressure misting systems are providing more than just cooling. They create a comfortable oasis on even the hottest days.

Customers say their lifestyles have been changed completely by outdoor cooling (misting system). Some used to leave the desert in the summer or be trapped inside their homes. Pets and plants are healthier. Now you can enjoy the outdoors year round.

### Where to place the misting system?

Proper installation of your new misting system requires mounting the misting line 8' to 10' above the ground on the bottom outside edge of the fascia, header or beam of patio perimeters. This idea is to create a mist curtain (a cooling barrier) between your protected area and the outside heat.

Fans can also be used to provide spot cooling. Garden risers can provide effects and great cooling for sun bathers and jacuzzi goers. Pool and waterfall misters can provide spectacular effects and cool water temperatures in desert climates.

### Where should I place the pump?

High pressure pumps are not silent! When possible the pump should be placed away from the area to be misted. The pump needs a water and electrical hook up and can be placed away from the mist line.

Choose a spot that is relatively easy to access for filter changes.

### Maximum Run Lengths of Systems without significant pressure loss:

3/8" Stainless Steel Tubing - up to 600 ft  
1/4" Tubing - up to 150 ft



## 3/8" PUSH LOCK MIST LINE COMPONENTS

### CB267B

3/8" - Flexible Nylon Tubing  
Black - up to 1000PSI



### CB282

Reducer  
3/8" Tube x 1/4" Push Lock



### CB286

3/8" Coupling Tee



### CB287

3/8" Coupling Union



### CB285

3/8" Coupling Elbow



### CB280B

3/8" Misting Tee  
w/o Nozzle & Anti Drip



### CB288

3/8" Pump Adapter  
(1/4" Push Lock x 1/4" FPT)



*Using 3/8" Feed Line greatly extends  
System Length when combined with  
1/4" Push Lock components.*

## SIDE LINE & DUGOUT SYSTEMS

### CB2000 Economy Mid Pressure

Includes (2) 24" Oscillating Misting Fan with Poly Styrene Shroud and wheels, #CB380 160PSI Booster Pump Module and mid pressure feed lines.

### CB2002 Professional High Pressure

Includes (2) 24" Oscillating Misting Fan w/ Poly Styrene Shroud and Turf Tires, #CB400 Coldblast 1000PSI Pump Module and high pressure feed lines with quick disconnects.

### CB2004 Professional High Pressure

Includes (4) 24" Oscillating Misting Fan w/ Poly Styrene Shroud and Turf Tires, #CB410 Commercial 1200PSI Pump Module and high pressure feed lines w/ quick disconnects.



## WINDCHILL

### CB824

Portable 24" high velocity multiple speed oscillating fan with high aspect shroud, directional veins and an 8-nozzle stainless steel misting ring. Integral 1000 PSI high pressure, misting pump with filtration. The WindChill has been engineered to withstand the harshest industrial applications with minimal maintenance requirements.

- \* Durable and sleek stainless steel construction
- \* Exclusive NEMA rated, 1700 RPM, adjustable speed fan motor
- \* 0°, 45° and 90° oscillation with adjustable tilt positions
- \* Whisper quiet fan blade design for minimal operating noise
- \* 6000 CFM – wind tunnel tested
- \* Uses standard garden hose water connection for easy hook up
- \* Pressure safety switch built in for automatic shut-off
- \* Inlet water solenoid prevents overflow



## Indoor Cooling

### How Many Fans Do I Need?

Each Model 624 High Efficiency Portable Cooler moves approximately 7500 cubic feet (230 cubic meters) of air per minute; this number can be greatly increased where positive pressure ventilation techniques can be employed. Generally speaking, to achieve maximum cooling in indoor or protected areas you will want to transfer the total volume of air in the space being cooled every 2 to 3 minutes.

The appropriate transfer time will depend on the space's insulation, how closed in it is (is it a warehouse or a canopy), prevailing humidity, acceptable humidity increase and the total temperature drop desired.

When cooling indoor areas, it is important to remember that you will need to take advantage of any natural flow of air. You can check for existing ventilation by turning on the mist without the fan on and watch where the mist goes. You will also need to determine your source of outside air and where your outlet for the air is. Very often the outlet will be a door or a window on the opposite side of the structure from the inlet air.

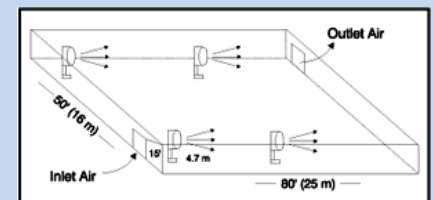
### Example:

Factory 50' length x 80' width x 15' ceilings. Totally enclosed structure with fairly good insulation. Complete air transfer every 2 minutes

Calculation of Volume  
Length x Width x Ceiling Height  
50' x 80' x 15' = 60,000 cubic feet

Volume / (Fan Volume x Transfer Time)  
60,000 / (7500 cf x 2 minutes) = 4 fans

Four fans will completely transfer the air in this structure every two minutes and should effectively cool this factory. The fans should be placed in the oscillation mode to spread the mist throughout the factory and should be pointed in a direction that keeps the air flow moving in the desired direction.



## PEDESTAL COOLERS

### CB724 24" Industrial Cooler

24" 3-speed Industrial Pedestal Fan with OSHA guard and wheels. 8 nozzle stainless mist ring powered by .5 GPM 1000 PSI misting pump module with integral filtration.

### CB724MID 24" Mid Pressure Cooler

Same as model CB724, except has a .5 GPM 160 PSI misting pump module.

### CB730 30" Industrial Cooler

30" 3-speed Industrial Pedestal Fan with OSHA guard and wheels. 10 nozzle stainless steel mist ring powered by .5 GPM 1000 PSI misting pump module with filtration.



\*\* Available in both Oscillating and Non-Oscillating versions.  
\*\* For Oscillating Fans add -OSC to the part number (example: CB724-OSC)

## ROLLING CART COOLERS

### CB736 High Velocity 36" Industrial Cooler

High Velocity 36" Fan mounted on rolling base. Dual 10/8 nozzle stainless steel Misting Rings powered by Coldblast® continuous duty .5 GPM 1000 PSI misting pump.

### CB736-OSC High Velocity 36" OSC Industrial Cooler

High Velocity 36" Oscillating Fan mounted on rolling base. Dual 10/8 nozzle stainless steel Misting Rings powered by Coldblast® continuous duty .5 GPM 1000 PSI misting pump.

### CB724L 24" Industrial Cooler

24" oscillating 3-speed Industrial Fan mounted to sturdy rolling cart with 8 nozzle stainless steel mist ring powered by .5 GPM 1000 PSI misting pump module with integral filtration.

### CB730L 30" Industrial Cooler

30" non-oscillating 3-speed Industrial Fan mounted to sturdy rolling cart with 10 nozzle stainless steel mist ring powered by .5 GPM 1000 PSI misting pump with integral filtration.



Model CB736



Model CB730L

## DUGOUT SYSTEMS

### CB718-2

Two 18" Wall or Ceiling mounted 3-speed Fans CB618 with 4-Nozzle Stainless Steel Misting Rings and 40' 1/4" High Pressure Nylon Tubing. 800 PSI Misting Pump Module CB400-25 with Filtration and Dual Manifold.



### Helpful Hints

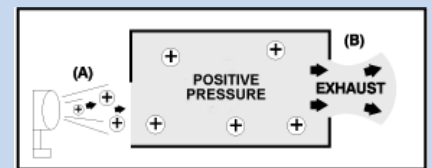
Whenever possible use any natural breeze or air flow to your advantage (point the fan the same way the air is moving)

- Use Positive Pressure Ventilation techniques wherever applicable (See discussion of Positive Pressure Ventilation techniques below)
- In places where it is either impossible or un-economical to cool the whole structure set up smaller cool areas. In most applications mist should be directed slightly above head level.

### Positive Pressure Ventilation Technique

The CLOUDBURST High Efficiency Portable Cooler is placed on the outside of the structure so that the „air cone“ completely seals the opening (A). When this seal is achieved, the air pressure is increased equally at all points inside the structure. When an exhaust opening is created (B), all of the interior air moves in one mass. This results in faster, more efficient ventilation of the entire structure.

In a large space, additional misting fans should be placed within the structure to achieve maximum cooling. By using this technique, it would be possible to use only 3 fans, with larger orifice nozzles.





## PORTABLE COOLERS w/ TANK

### CB848 Fan(s) with Tank

2 Oscillating Fans w/ 50 Gallon Tank on Cart w/ 1/2 GPM 1200PSI Pump Module and integral Filtration. (Can be built in numerous Fan configurations)



Model CB848

### CB836 36" Fan with Tank

36" Fan w/ 50 Gallon Tank on Cart w/ 1/2 GPM 1000PSI Pump Module and integral Filtration. (can be made with any Satellite Fan)

### CB836-OSC 36" Fan with Tank

Same as model CB836 except has Oscillating Fan

### CB850 Tank with Pump

50 Gallon Tank on Cart (24" x 48" - fits through any door) w/ 1/2 GPM 1000PSI Pump. The Tank and Pump can support up to 4 Fans with 6 Nozzle Mist Rings for 2 hours or a single Fan for over 8 hours.



Model CB850

## SMALL PORTABLE COOLERS w/ TANK

### CB818 Sport Fan ( Only 120 Volt )

### CB812-12V Sport Fan ( 12 Volt )

### CB12VB Re-chargeable Battery Pack for 812-12V

18" portable, three-speed, self-contained Misting Fan designed for commercial and industrial use. The Sport Fan can cool an area up to 200 Square Feet for approximately five hours. It has a 10 Gallon Water Reservoir Tank and includes a Outdoor-Rated Power Cord with integrated GFCI. The patented Hub increases the Air Flow from the Fan and releases Mist in the „Sweet Spot“ of the Fans Air Stream.

The mist hub has four .012 nozzles. One extra nozzle and two plugs also included. Designed for sporting, commercial and industrial use. Total required amps for fan and mist pump: 2.15 amps. Cool Draft Blue has an 18 inch fan, pump



### CB828 Coolermax

The Only Cooler Based System Powerful Enough to Run Both a Misting Fan &/or 10 Nozzle Mist Line at up to 180 PSI

- 180 PSI Pump for excellent quality mist
- 10 Nozzle Mist Line Kit w/ Push Lock Fittings & On/Off Valve
- 15 Gallon Cooler on Wheels for up to 6 hours run time
- Brass & StainlessSteel Nozzles for the finest Mist possible
- UL Rated Outdoor Water Proof Fan & Water Tight Switch Box
- Our Patented 6 Nozzle Mist Hub for Cooling Power & Flexibility (adjustable from 3-6 nozzles\*)
- Standard 110 Volt Easily Converts to 12 Volt with Inverter



## Outdoor Cooling

The ability to cool outdoor areas depends on three factors - the wind, temperature and humidity. With either light wind or no wind you can achieve some remarkable results depending on temperature and humidity. In outdoor areas, normally .008" or .012" nozzles are employed. In these areas, the use of misting fans can help move the cooled area to the desired location or spread it over a large location. Fans are especially helpful in areas with high humidity-60% and above.

Cooling outdoor areas is relatively straight forward and can be broken into 2 different types:

### Athletic and Amusement Cooling

In this type of cooling, the people don't mind getting damp, and more often than not prefer it. Generally, fans are placed at head height so people can stand directly in front of the fan.

### Factories/Hospitality

When cooling a large area where the people don't want to notice the moisture. The fan(s) should be set at their highest level with the fan, aimed slightly above the horizon with the oscillation set to match the area being cooled. If possible place the fan 10' to 20' behind the area to be cooled. This will allow the cooled air to settle and keep the units sound from being bothersome.

**Heat Index (HI)** is an index that combines air temperature and relative humidity to determine an apparent temperature how hot it actually feels. The human body normally cools itself by perspiration, or sweating, in which the water in the sweat evaporates and carries heat away from the body. However, when the relative humidity is high, the evaporation rate of water is reduced and removed the heat from the body at a lower rate.

### Is the heat making you sick?

The heat index is the temperature the body feels when humidity is taken into account. The chart shows the heat index that corresponds to the actual air temperature and relative humidity.

		Relative humidity					
		90%	80%	70%	60%	50%	40%
Air temperature	80°	85°	84°	82°	81°	80°	79°
	85°	101°	96°	92°	90°	86°	84°
	90°	121°	113°	105°	99°	94°	90°
	95°		133°	122°	113°	105°	98°
	100°			142°	129°	118°	109°
	105°				148°	133°	121°
	110°						135°

Heat index	Possible heat disorders:
80° F - 90° F	Fatigue possible with prolonged exposure and physical activity
90° F - 105° F	Sunstroke, heat cramps and heat exhaustion possible
105° F - 130° F	Sunstroke, heat cramps and heat exhaustion likely, heat stroke possible
130° or greater	Heat stroke highly likely with continued exposure

Source: National Weather Service

Staff graphic

## SATELLITE MISTING FANS (requires pump module)



CB614



CB618



CB624 / CB630



CB636-OSC

*These fans have been designed for heavy-duty use and will last for years.*

Model	Mist Ring w/	Size	HP	Speed	RPM	CFM
CB614	4 Nozzles	14"	1/8	3	1200/1350 1490	2600/3300 4000
CB618	4 Nozzles	18"	1/4	3	1000/1400 1570	3800/4800 6600
CB624	6 Nozzles	24"	1/3	3	700/900 1100	5200/6200
CB624-OSC	8 Nozzles					7200
CB630	8 Nozzles	30"	1/3	3	700/900 1100	6200/7200
CB630-OSC	10 Nozzles					8200
CB636	10 Nozzles	36"	1/2	1	840	11678
CB636-OSC	12 Nozzles					

\*\* Fan performance quoted for 115Volt / 60HZ. Most fans and all pumps available in 220Volt / 50HZ  
 \*\* For 220V/50Hz: CB624-OSC and CB630-OSC not available. Fan Size CB614 = 12" / CB618 = 20"

## FAN AND PUMP MOUNTING KITS

### CB12PM

**Pole Mounting**  
for model 614 & 618



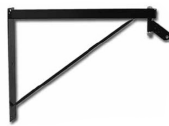
### CB24/30PED

**Pedestal for**  
24" & 30" Fans  
(wheels included)



### CB24/30WM

**Wall Mounting Bracket**  
for 24" & 30" Fans



### CL50M

**Wall or Pedestal Mounting**  
Kit for all Coldblast Pump  
Modules

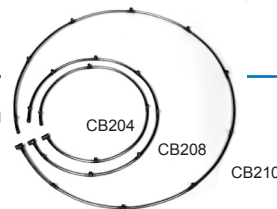


\*\* A wide variety of mounting hardware is available – Contact us for your specific application

## MISTING RINGS

- CB204** 4-nozzle 15" Diameter
- CB206** 6-nozzle 15" Diameter
- CB208** 8-nozzle 15" Diameter
- CB210** 10-nozzle 25" Diameter
- CB212** Dual Ring w/ Shut-off Valve  
15" 8 Nozzle & 12" 4 Nozzles

Stainless Steel



- CB218** Dual Ring w/ Shut-off Valve  
25" 10 Nozzle & 15" 8 Nozzles

## Mist Cooling & Humidity

Many residents & businesses are just now realizing that High Pressure Misting (Fogging) is a very effective & efficient way to cool down large areas even in high humidity climates. In fact, many very humid areas are among our fastest growing areas since 2006.

This is in a large part because people are finally being educated to the fact that high pressure mist systems can cool down any area in any climate as long as they are installed properly.

With the use of the appropriate size mist nozzles, proper nozzle & mist line placement, pump size and the correct use of misting fans, we can cool down almost any area as much as 30 degrees with out getting anyone wet.

This is because we have the capability of producing such a fine mist droplet that it evaporates almost instantly even in the most humid conditions.






So whether you live in the dry or humid area, we can keep you cool & dry with the correct use of the best misting equipment.

## Cool Water vs. Hot Water

Water temperature does not have a great effect upon the cooling produced through evaporation. At 90° F (32° C) it takes 9,000 BTUs (2.268 kilocalories) to evaporate a gallon of 50° F (10° C) water and 8,700 BTU (2.192 kilocalories) to evaporate a gallon of 90° F. water. In this example, the water is 180% warmer and results in only a 3% reduction in the amount of heat absorbed.



## FAN & PUMP CONTROLS

<p><b>CB940</b></p> <p><b>Remote Control</b> available for pumps w/ 1hp or less</p> 	<p><i>A wide variety of controls is available Contact us for your specific application</i></p>
<p><b>CB900</b></p> <p><b>Digital Thermostat</b> w/ 30 Amp Relay</p> 	<p><b>CB920</b></p> <p><b>Timer</b> Up to 24 On/Off 1/2 Hour Minimum</p> 
<p><b>CB910</b></p> <p><b>Fan Speed control</b> Solide State 10 Amp Rating</p> 	<p><b>CB930</b></p> <p><b>Interval Timer</b> 0 to 60 Minutes 30 Amp Relay</p> 

## WATER FILTRATION & TREATMENT

<p><b>CB121</b></p> <p><b>10" Spun Poly Filter</b> 5 Micron cartridge (To remove dust, mud, sand etc.)</p> 	<p><b>CB141</b></p> <p><b>10" Filter Housing</b> add-on to existing filtration for all pumps</p> 
<p><b>CB124</b></p> <p><b>5" Spun Poly Filter</b> 5 micron cartridge (To remove dust, mud, sand etc.)</p> 	<p><b>CB140</b></p> <p><b>5" Filter Housing</b> add-on to existing filtration for all pumps</p> 
<p><b>CB125</b></p> <p><b>Three Stage Filter</b> Replacement filter for models 400, 401, 500, 502, 510, 550 (Custom designed to keep nozzles performing at their best)</p> 	<p><b>CB601</b></p> <p><b>In-Line Filter</b> 6" Hexa Phosphate Filter 3/4" Male and Female - Garden Hose Fittings</p> 

## CUSTOM SYSTEMS

**Experience \* Experience \* Experience**

**For 13 years, CLOUDBURST has designed and fabricated thousands of misting / fogging installations on every continent on the globe except Antarctica. We take great pride in being able to take any challenge where misting is applicable and solving that challenge in an affective, robust and cost efficient manner.**

**Contact us today with your challenge - we are looking forward to it.**

### AC Pre-Cooling System



#### How does it work?

The Cool-N-Save® Commercial AC pre-cooler is an amazing new system that has taken the known benefit of evaporative AC pre-cooling (more efficient cooling) and combined it with "state of the art" technology to create the first economical & effective AC Pre-Cooling system that **DOESN'T SCALE** or interfere with airflow.

It uses a low flow / mid pressure mist that is activated only when the AC unit turns on. When the ultra-fine mist is released into the air, it evaporates almost instantly. This flash evaporation literally sucks heat out of the air, as the water absorbs the energy it needs to evaporate.

The result of this immediate evaporation is a drop in ambient temperature of as much as 30 degrees Fahrenheit surrounding the condenser. This allows the coils to transfer heat much more effectively which in turn lowers the amperage draw, output temperature, cycle time & head pressure, all adding up to a 25% or more reduction in energy use. Plus, because it allows the unit to run more efficiently it can greatly extend the life of the condenser too.



#### How much can I save ?

Below is a link to the results of two tests done by an independent engineering firm at different sites in different states. You will notice an average of 22.8% reduction in amp draw between the 2 tests.

This along with a significant drop in head pressure & output temperature brings us to approximately a 32% reduction in energy use. These are typical results but may vary depending on the size & type of AC unit plus a combination of climate & use.

**More info: [www.acprecooling.com](http://www.acprecooling.com)**



## Limited Warranty

CLOUDBURST® Misting Systems warrants its products to be free of defects in material and workmanship for a period of:

### Two Years Guarantee

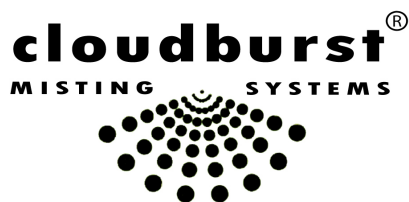
**On all Pumps, Misting Fan Kits and High Efficiency Coolers**

### Lifetime Guarantee

**On all Stainless Steel Mist Rings, Stainless Steel Mist Lines  
All Brass Fittings & High Pressure Hoses**

No merchantability or other warranty, expressed or implied is made within the warranty period. CLOUDBURST® Misting Systems is not liable for damages or any expenses incurred through the use of its products. The warranty will be considered violated if the products are used for other than the criteria described in each product's guidelines for use.

Nozzles and Filters are excluded from this warranty.



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