SPRAY TYPE AIR COOLER

Air Cleaning
Humidification
Air Conditioning
Dehumidification
Evaporative Cooling
The spray type air cooler is an enclosure containing three elements: a spray bank consisting of nozzles for producing a fine spray from water supplied to them under pressure, an eliminator for removing water from air passing through the air cooler, and a basin for collecting the used water to be returned to the pump for recirculation.

This single device is capable of performing several functions depending upon how the thermodynamic condition of the water is controlled. If we recirculate water and pass outside air through the air cooler we have an evaporative cooler. The recirculated water will stabilize at near the wet bulb temperature, and the temperature difference between the entering and leaving air will approach the wet bulb depression. The evaporative cooler may be used effectively in almost all areas of the United States for spot cooling of personnel working in high-heat producing operations, for general cooling of whole areas of hot operation where large air volumes can be used.

This same cooler can work as a highly efficient heat absorber when provided with chilled water from a mechanically refrigerated chiller or from a well (well water temperature 55°F or lower).

**Features**

- All air coolers feature two spray banks, one concurrent with and one opposed to the air flow.
- Saturation efficiency is maintained at 90% across the performance range by varying the spray density between 6 and 8 gallons per square foot per minute.
- The assembly is constructed of galvanized steel as standard. A stainless steel housing and/or eliminators are available at additional cost.
- Spray nozzles are polypropylene. Headers and risers are constructed of Schedule 40 PVC.
- Air coolers are equipped with suction screens, sump level monitor, bronze float valve for automatic water level control, and interior vapor-proof marine light fixture with exterior junction box.
## Performance Data

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<tr>
<th>MODEL</th>
<th>FACE AREA (FT²)</th>
<th>CFM</th>
<th>NOMINAL FACE VELOCITY</th>
<th>STATIC PRESSURE LOSS</th>
<th>SPRAY VOLUME GPM</th>
<th>PSI</th>
<th>PUMP HP</th>
<th>SATURATION EFFICIENCY %</th>
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For evaporative cooling application:

Leaving Dry Bulb Temperature = Entering Dry Bulb – Saturation Efficiency x (Entering Dry Bulb – Entering Wet Bulb)

Contact your Aerovent representative for special applications.

## Design Temperature Conditions

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<th>CITY</th>
<th>MAX. DESIGN TEMP.</th>
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These values will be met or exceeded 1% of the summer months June through September.
NOTES:
1. Overflow, drain, suction, and make-up piping available on either side.
2. Suction screens provided.
3. (E) 7/16" diameter holes spaced at 8 5/8" to C from C (typ. each end).
4. (F) 7/16" diameter holes spaced at 8 5/8" to C from C (typ. each end).
5. Pump and motors are available, but not provided as standard equipment. Location is also optional.
6. Lifting lugs (4) are provided (welded to basin).
7. Specify location of door, pump, motor, and piping by LH or RH when facing discharge side of unit. LH shown (standard).

Dimensions are not to be used for construction.