MeeFog™ Systems
Stability and Energy Efficiency for Cooling Data Centers

TECHNOLOGY BENEFITS

- Reduced Buildup of Electrostatic Discharge
- Highly Stable Temperature and Humidity Control
- Improved Equipment Reliability
- Reduced Maintenance Costs
- Improved Data Center Performance
- Significant Energy Savings
- Reduced Production of CO₂
- Bring in Fresh Air to Harness Free Cooling

Mee Industries uses the proven technology of high-pressure fog. With 40 years of experience in a variety of industrial applications, Mee’s technology delivers the most cost-effective, stable and energy efficient way to cool large volumes of air in a data center; while meeting or exceeding the most stringent of indoor air quality standards. For example, a MeeFog system can cool 100,000 cfm of air by 20°F with less than 3hp of energy. The MeeFog nozzle produces a spray with 90% of the water flow in droplets that are 20 microns or smaller.

A typical fog system uses one horsepower for every 500lbs. of water, which is 3% of the energy usage of compressed air-type systems and about 1% of the energy usage of steam systems.

ENERGY COST COMPARISON CHART

<table>
<thead>
<tr>
<th>System</th>
<th>Cost</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MeeFog™ System</td>
<td>$700</td>
<td>.4%</td>
</tr>
<tr>
<td>Centrifugal</td>
<td>$3,430</td>
<td>3%</td>
</tr>
<tr>
<td>Ultrasonic</td>
<td>$5,950</td>
<td>5%</td>
</tr>
<tr>
<td>Compressed Air</td>
<td>$14,350</td>
<td>11%</td>
</tr>
<tr>
<td>Steam to Steam</td>
<td>$68,950</td>
<td>54%</td>
</tr>
<tr>
<td>Gas to Steam</td>
<td>$86,188</td>
<td>67%</td>
</tr>
<tr>
<td>Electric Steam</td>
<td>$128,800</td>
<td>100%</td>
</tr>
</tbody>
</table>

Assumptions: $.065 per kWh, 3500 hours operation, 1000 lbs. per hour moisture output.

The Evaporative Process
The Most Stable and Energy Efficient Way to Cool

Mee’s fogging systems* use the adiabatic process, meaning no energy is added to the air for the vapor change, so evaporation actually removes energy, significantly cooling the air. Mee applies this adiabatic cooling process to existing or new air handling systems by spraying a fine fog of water into the air stream, where it evaporates, lowering the temperature and raising the humidity of the air that is used to cool the data center.

A typical fog system uses about 1 horsepower for every 700 lbs. of water/Hour. The evaporation of 1 lb. of water at room temperature removes 1100 BTU’s. For each unit of horsepower, fog removes about 770,000 BTU’s/Hour, which equates to more than 64 tons of cooling. Thus a fogging system with a 7.5 Horsepower motor could potentially replace a 500 ton chiller.

* Fogging systems can be a part of a new data center design or can be installed in existing data centers, often without requiring a shutdown of the air handling equipment.

The MeeFog™ Difference

What sets the Mee fogging system apart from other solutions is our uniquely designed impaction-pin nozzle, which outperforms the rest. Our impaction-pin nozzle, as part of a custom-designed and expertly installed in-duct fogging solution, is engineered and manufactured to offer the best in results and reliability. The amazingly small and incredibly precise nozzle atomizes water into billions of ultra-fine droplets, offering maximum energy and evaporative efficiency without wetting. Mee’s small nozzle is proven to make a huge impact not only on improving energy costs and air quality, but also in enhancing data center operations and uptime. And as importantly, a Mee system can be installed while your data center remains in operation.