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· Dallas Convention Center ·

Roof Mister

Overview

- What is Roof Mister?
- What can it do for me?
- Where should it be used?
- Where should it ***not*** be used?
- Photos
- Contact Information

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What is a Roof Mister System?

- The Roof Mister System periodically mists small amounts of water onto the roof of buildings utilizing a controller that can take into account all environmental impacts including roof temperature, humidity, wind speed, time of day, and numerous other factors.

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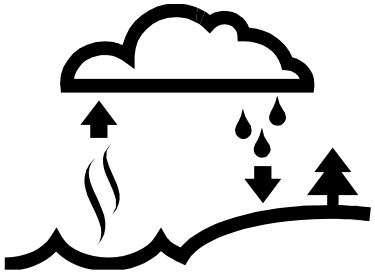
What is a Roof Mister System?

- Weather data is taken at the rate of 10 times per second to ensure a completely controlled atmosphere.
- The evaporation process of the water cools the roof, significantly reducing the transfer of heat from the roof to the interior of the building.



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What is a Roof Mister System?

- Heat that doesn't come in doesn't have to be removed.
- The cost of maintaining the building's interior space's cooling temperature and comfort is appreciably reduced.

What can a Roof Mister System do for me?

- The cost to buy and operate a Roof Mister System is significantly less than the cost of air conditioning equipment that would be required to deliver the equivalent in cooling tonnage. Roof Mister Systems can be used to:

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Roof Mister Systems can be used to:

1. **Reduce the cooling** load and electrical power costs of adequately air-conditioned facilities,
2. **Supplement** aged and marginally performing air-conditioning equipment,
3. **Reduce the temperature** in buildings without air-conditioning, and
4. **Reduce the cooling load** in new construction so that smaller, more economical air-conditioning equipment can be specified and installed.

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When should a Roof Mister system be considered?

1. Marginally air conditioned buildings
2. Air conditioned buildings
3. New construction
4. Non-air conditioned buildings
5. Prior to purchasing additional ventilating equipment

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Marginally air conditioned buildings

- In buildings where additional air conditioning capacity is required to meet internal design temperatures, the Roof Mister system frequently eliminates, or greatly reduces, the cost of new or additional mechanical A/C equipment.
- The Roof Mister system can often remove enough heat to provide sufficient additional cooling to bring the internal temperature down to an acceptable level.

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Air conditioned buildings:

- Reducing the solar heat load from the roof translates into a smaller heat load problem for existing air conditioners.

- As the work required by the A/C diminishes:
  - The electrical power demand also diminishes and correspondingly
  - The operating/maintenance costs are less

Air conditioned buildings:

- The cost savings vary with:
  - The usage cost (kWh),
  - the demand cost (kW),
  - the EER (Energy Efficiency Rating) of the air conditioning unit or system
  - the cost of water to operate the roof cooling system.

Typically, the Roof Mister system will provide a simple payback in 3-4 years.

New construction:

- In new construction, the cooling load due to the roof can be drastically reduced and nearly eliminated from the overall cooling load calculations.
- Using the Roof Mister roof cooling system in conjunction with smaller tonnage mechanical air conditioning equipment means that:
  - Air conditioning will cost fewer dollars per ton both to buy and to operate
  - Resulting in both energy savings and a lower initial equipment investment.

Non-air conditioned buildings:

- In the typical building (warehouse and light manufacturing) most of the heat entering comes through the roof.
- Consequently, when the roof is cooled with the Roof Mister system and the heat entering eliminated, the temperature of the interior of an non air conditioned building can be reduced 8º - 12ºF or more.

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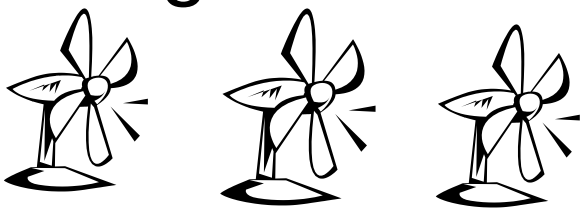
Prior to purchasing additional ventilation equipment:

- While proper ventilation of a building is important, its sole purpose is to exchange and move air.
- A fan alone does not and cannot cool air. However, a Roof Mister roof cooling system can lower the temperature within non air conditioned buildings as much as 8º - 12ºF during the hottest part of the day.



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What type of water can be used?

- Any type of water----really
  - Potable water
    - Treated water
    - Well water
  - Non-potable water
    - Water from a nearby pond
    - Water from a nearby stream or river
    - Gray water

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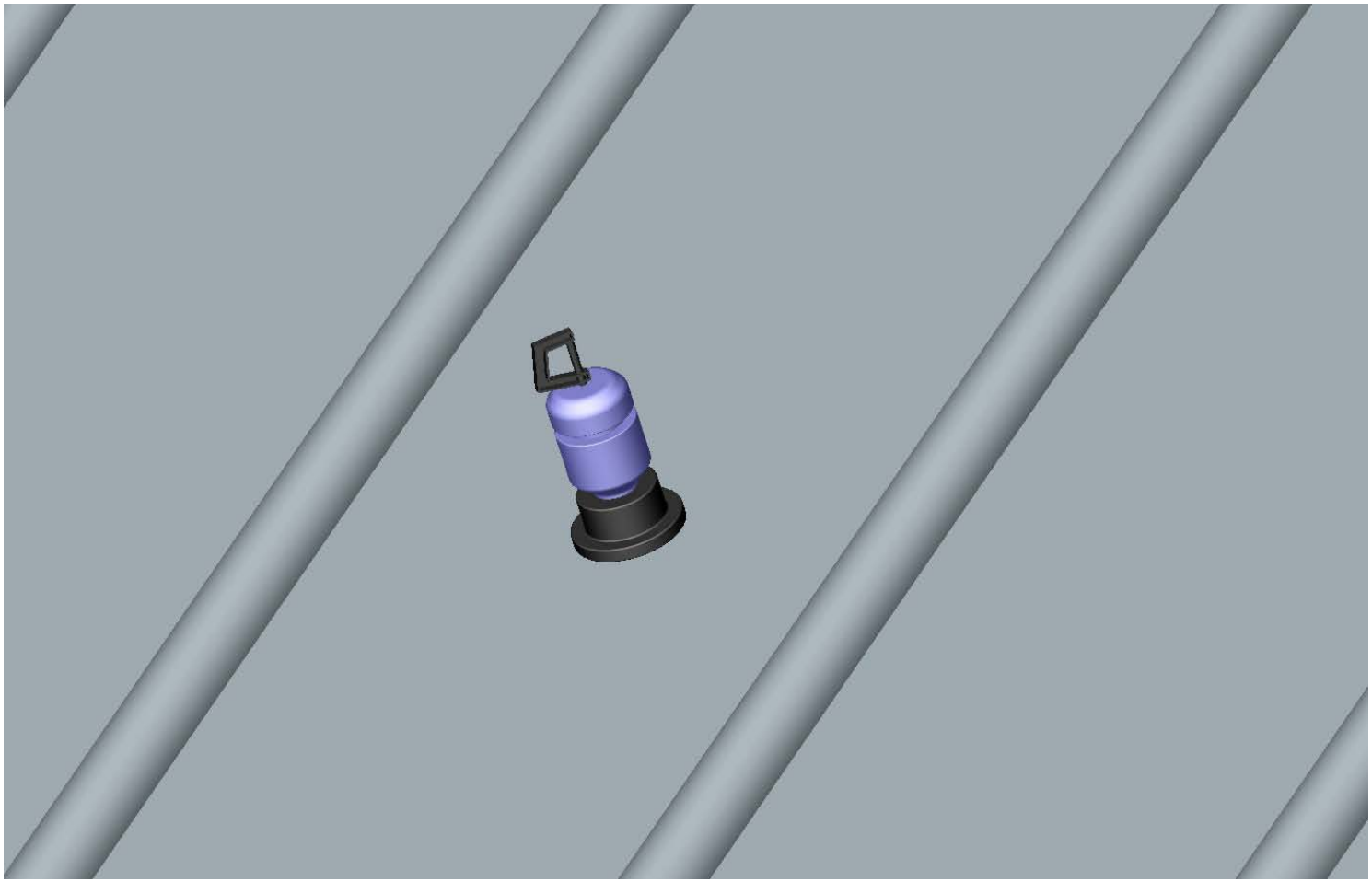
Where should Roof Mister ***not*** be Used

- Buildings with well insulated roofs
- Where utility costs are very low
- Where water costs are very high or water is in very limited supply
- Where there is no water of any type available

Spray Head on Metal Roof



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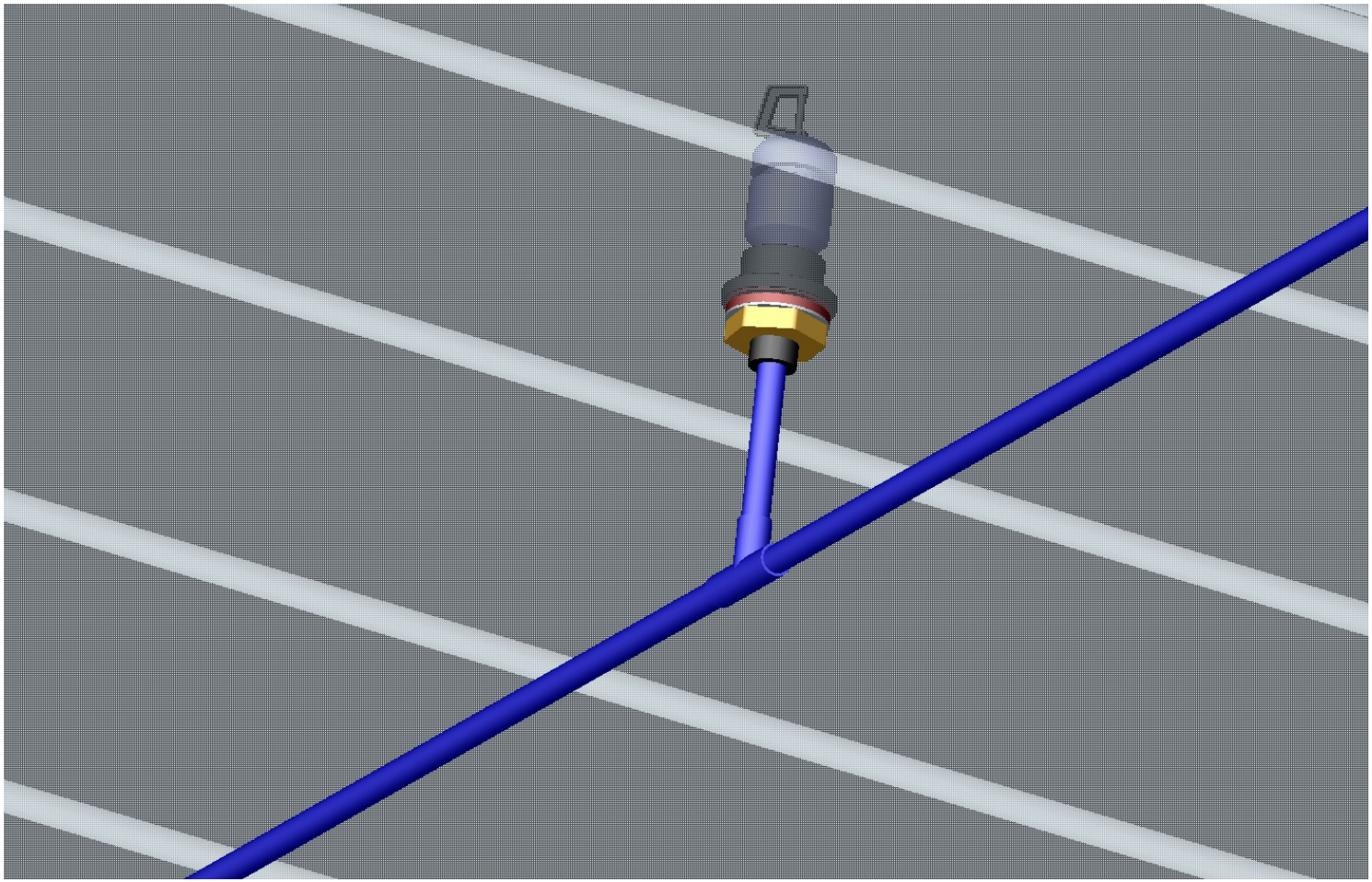
Spray Head and Water Piping



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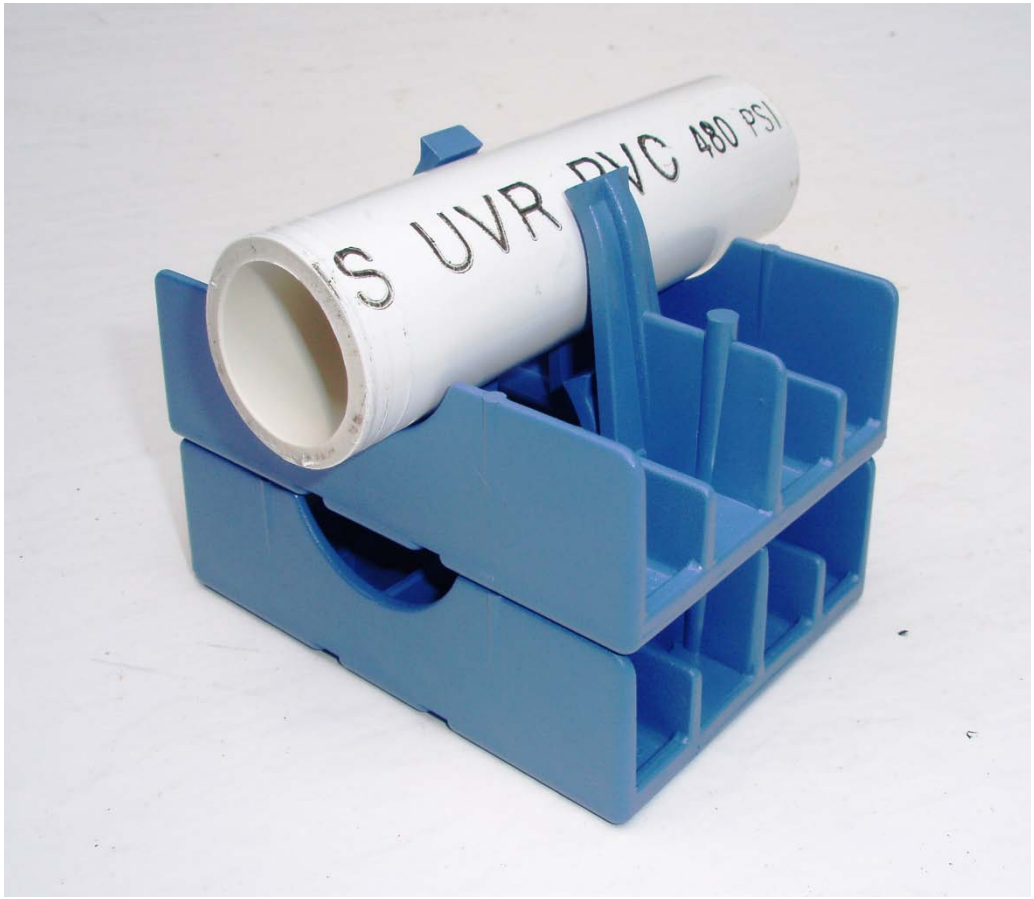
Pipe and Piping support



Spray Head

Piping on Roof for 100,000 sf Building

Contact Information

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