



youmist

Outdoor Cooling, Humidification,
Special Effects, Odour
& Dust Control Solutions.



YOUMIST specialises in the design, supply & installation of outdoor cooling systems.

These include fog systems for cooling, humidification, special effects, dust control, and odour neutralisation; we supply residential, commercial, industrial and agricultural fields.

All of Youmist's products are created to meet the highest quality standards. Many customers have chosen Youmist due to its commitment to delivering superior products and services at the best competitive price.

Vision

As a capable and dependable partner, Youmist takes an interest in its customer's ideas, understanding their needs and requirements. On this basis Youmist can then work with its customers to come up with comprehensive, innovative solutions.

Quality

Youmist is committed to providing customers with the best quality products (misting pumps, nozzles, fittings, fans, control devices, portable misting systems), for the most competitive price without sacrificing quality. Youmist uses the best materials, equipment and proven quality control methods to produce the finest pumps and parts found in the market today.

Project Design & Automation Systems

Project design is one of the services that Youmist offers to all customers. Design plans to help projects get done quickly, efficiently, and safely. Thanks to Youmist's experience in automation systems it's possible to personalize all misting system applications.

How do Misting Systems Work?

By forcing the water, using a high-pressure pump, through our specially designed misting nozzles, we create a fog of ultra-fine water droplets with an average size of fewer than 10 microns.

These tiny water droplets quickly absorb the energy (heat) present in the environment and evaporate, becoming water vapour (gas). The energy (heat) used to change the water to gas is eliminated from the environment, hence the air is cooled. When connected to a special high-pressure pump, water is forced

through our nozzles and quickly atomised to droplets as small as 5-10 millionths of a meter (5-10 microns). Misting systems will produce billions of tiny droplets that quickly evaporate. This process of evaporation requires energy, taken from the air in the form of heat. The result is a temperature reduction of up to 18°C, depending on the ambient temperature and humidity levels. This is the most common use for misting systems.

How much Water will it use?

The number and size of nozzles are the primary factors in determining how much water your misting system will use.



How A Youmist System Keeps You Cool

The secret to our outdoor comfort lies in the science behind evaporative cooling. A youmist system usually consists of a series of nozzles placed around the perimeter of an outdoor space, connected through a series of stainless steel pipes. For larger outdoor and open spaces, fans, catenary lines & custom designed sculptures are introduced to cover the area, which requires cooling.

A high-pressure pump is connected to the water source, which increases the water pressure by up to 15x its normal flow rate. By increasing the water pressure above 1000 psi, the water molecules are atomized, pushing the smallest possible droplets through the nozzles.

As the water droplets are introduced to the hot outside air, they flash evaporate. The process of evaporation requires a source of energy: in this case, the hot air molecules. When the air molecules disburse energy to evaporate the water droplets they begin to cool.

This process is repeated for each droplet and, as the misting system continues to spray, the surrounding air can be cooled by more than 18 degrees Celsius.



APPLICATIONS

Residential

- Alfresco, terraces and gardens

Commercial

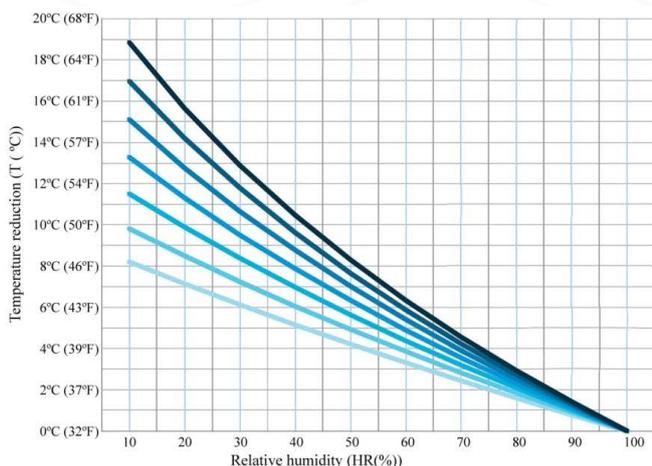
- Alfresco, terraces, restaurant, hotel
- Resorts, villages
- Sporting centres
- In-house with big and large areas

Industrial

- Warehouses
- Precooling HVAC
- Workshops
- Greenhouses
- Livestock (buffalos, horses, poultry, and so on)

Benefits

- Reduced investment level
- Low maintenance costs
- Low energy consumption
- Improvement of air quality
- Temperatures reduced up to 18°C
- Improvement of work quality
- Increase productivity



Evaporative cooling performance

45°C	113°F
40°C	104°F
35°C	95°F
30°C	86°F
25°C	77°F
20°C	68°F
15°C	59°F

Temperature (dry-bulb)

For significant improvements in the performance of any climate control system, contact the Youmist Customer Service Department for system consultation and design assistance.

Additional Applications for Misting Systems

HUMIDIFICATION

When misting systems are placed inside an enclosed area (such as a factory or a greenhouse), where the air exchange is limited, the misting system will continue to increase the humidity level within the environment. Humidity levels as high as 90+% are possible. This makes misting systems the ideal solution for humidification.



DUST CONTROL

Youmist Misting systems create a high concentration of ultra-thin water droplets with an average diameter of 10 microns (with the possibility to add surfactants in some cases), having the ability to capture and suppress PM10 and smaller particles. Water droplets instantly blanket suspended dust particles, increasing their weight and driving them to the ground.

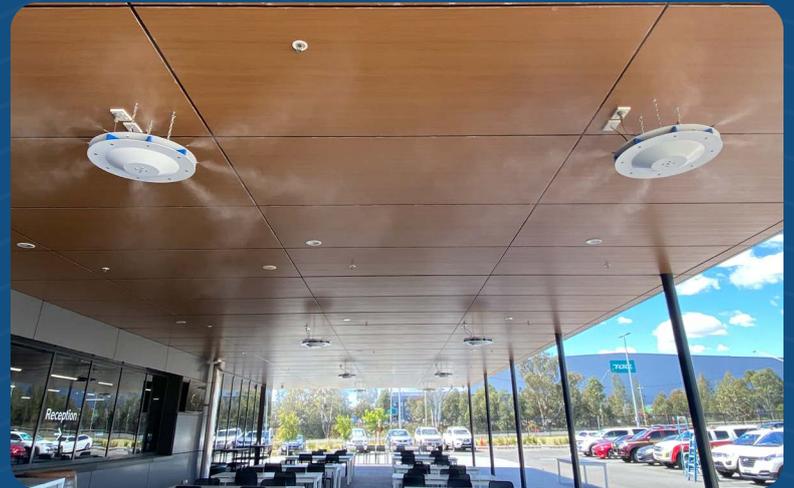
ODOUR CONTROL

Our systems are effective on both solid and liquid waste and the process involves the atomization of neutralising chemicals (to block the odour perception), odour absorbers (which modify the compounds that cause odours) or completely natural bio-neutralisers that modify the natural decomposition and prevent the formation of odour through biodegrading action.



SPECIAL EFFECTS

Introducing our system into landscaped areas creates a heavy fog effect created from the floor surface, providing special effects features for landscape and garden areas.



Moore Plains Shire Council

Background:

The Town centre of Moore is filled with trellises' to provide a covered area for the community to rest in a shaded space throughout the warm months of the year.

Challenges:

Youmist were engaged by council to provide a design and solution to overcome the following challenges.

- Reduce heat temperatures throughout the public trellises space
- Prevention of any theft or damage
- Automated system to eliminate manual operation
- Installation accessibility
- Improve the air quality due to the dry heat conditions

Solution:

Youmist Polaris Series Cooling System

The Youmist Polaris Series System was installed to automatically operate when temperatures reach 32 degrees.

Designed to blend with the structure using stainless steel tubing and lock bolts to prevent any theft or damage to our system, increasing the humidification levels directly in the public space, we were able to successfully meet the clients brief.

The 6 large spaces are powered by 4 separated single-phase high-pressure pumping units; with ultra mist nozzles and anti-drip features.

The design consists of a static misting line, which is inconspicuous and not noticed until the mist is in operation.

The Polaris Series misting system installed is very efficient and economical as utility costs under \$3.50 p/day in power and water. Our Youmist Cooling System has proven to be an effective solution for cooling public spaces across Australia.

The key reasons for which Youmist suggested the Polaris System:

- Durable construction and high quality components for reliable continuous operation over an 8 hour period, 7 days per week during the summer months
- Ease of operation and programmable digital cyclic timer allows automatic misting intervals for efficient and effective cooling
- Integrated system allowing automatic operation with set temperature controls

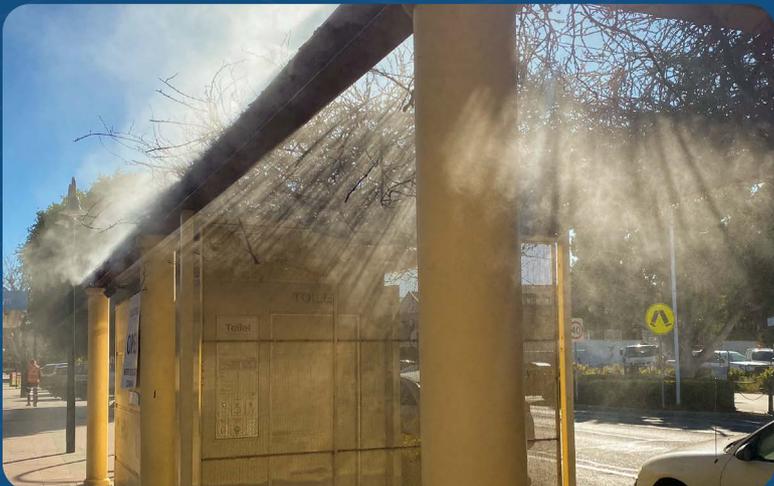
Outcome:

The result was a considerable reduction in temperature during the hot summer months providing a comfortable environment for the community. As a consequence businesses utilise the outdoor area extending trade and providing a steady revenue base.

BEFORE



AFTER



Frangos Edmondson Park

Background:

A Fast food chain restaurant based in southwest Sydney.

Challenges:

A west facing large open outdoor area was part of the design for the dining restaurant. It was anticipated that the summer temperatures would make the outdoor dining area uncomfortable. The area required an “air-conditioned” feel to attract and keep customers in this part of the restaurant. An energy efficient system for cooling was required and a priority.

Solution:

Youmist Pro Series Cooling System

The Youmist Pro Series System was installed to be operated by management when the outdoor space was uncomfortable for customers.

With exposed sleek stainless steel tubing installed to the facade of the awning. Customers enjoyed a sunny sit in the outdoor space; we were able to successfully meet the clients brief and have installed systems across 3 other restaurants.

This Installation required 1x single-phase high pressure pumping unit; with ultra mist nozzles and anti-drip features. The design consists of a static misting line; the client’s request was to keep the line and nozzles

exposed to encourage customers to enjoy the outdoor seating area.

The Pro Series misting system installed is very efficient and economical as utility costs under \$1.50 p/day in power and water. Our Youmist Cooling System has proven to be an effective solution for cooling hospitality venues across Australia.

The key reasons for which Youmist suggested the Pro System:

- Durable construction and high quality components for reliable continuous operation over an 8 hour period, 7 days per week during the summer months
- Ease of operation and programmable digital cyclic timer allows automatic misting intervals for efficient and effective cooling
- Easy to use operation for management and staff

Outcome:

The result met and exceeded the operator's expectations. A comfortable environment was created; customers and staff are cooler and happier in these areas during the summer season. There was a noticeable reduction in flies making the outdoor dining experience more pleasurable. As a consequence customers utilise the outdoor area extending trade and providing a steady revenue base over the whole venue.

BEFORE



AFTER



Gunnedah Leather Processors

Background:

A Leather processing plant in far west New South Wales

Challenges:

The company's large cowhide processing operation is based in far west NSW, Gunnedah's extreme heat temperatures throughout the year made it an uncomfortable work place for staff with the processing plant covered in flies and insects. The challenge was to provide a cooling solution for staff, and to provide a system to deter flies within the workspace.

Solution:

Youmist Pro Series Cooling System

A series of fans, pumps & nozzles were installed across multiple areas of the warehouse. Targeting (hotspots) of where staff will operate machinery throughout the day.

Installing misting fans throughout the space, this enabled the water droplets to project up to 10 meters, cooling the immediate space of up to 15 degrees Celsius.

A total of 8x Pro Series misting pumps were installed. To be controlled by management via a mobile phone application when the workspace became uncomfortable for staff.

Each zone required 1x single-phase high pressure pumping unit; with ultra mist

nozzles and anti-drip features. The design consists of nylon tubing connected to stainless steel misting rings attached to the fans.

Our Youmist Cooling System has proven to be an effective solution for Industrial warehouses across Australia.

The key reasons for which Youmist suggested the misting fans Pro System:

- Durable construction and high quality components for reliable continuous operation over an 8 hour period, 5 days per week during the summer months
- Ease of operation and programmable digital cyclic timer allows automatic misting intervals for efficient and effective cooling
- Easy to use operation for management and staff
- Instant Cooling of workspace to provide a better work morale for staff.

Outcome:

The result met and exceeded the company's expectations. There was a noticeable reduction in flies and insects within the workspace, providing a cool and comfortable environment for staff members; with our system increasing productivity. Making the indoor workplace more pleasurable. As a consequence staff were able to work for extended hours during the hot summer months providing increased revenue for the company's processing plant.

BEFORE



AFTER



Campbelltown Sports Stadium

Background:

A Large 930 square meter shade clothed area to be constructed for an outdoor playground at the Campbelltown sports stadium.

Challenges:

Youmist were engaged to design a misting solution to cover the large 930 square meter outdoor playground to provide a cooler area and to improve the air quality within the shaded space.

Solution:

Youmist DEX Series Cooling System

This large design consisted of 230 misting nozzles installed across catenary lines spread throughout the space.

This enabled the water droplets to cover the entire area cooling the immediate space of up to 10 degrees Celsius. Improving the air quality by increased humidification.

The space required 1x three-phase high pressure pumping unit; with ultra mist nozzles and anti-drip features. The design consists of nylon tubing attached to catenary wiring with the pump installed in a remote location.

Our Youmist Cooling System has proven to be an effective solution for Outdoor playgrounds in public spaces.

The key reasons for which Youmist suggested the DEX System:

- Durable construction and high quality components for reliable continuous operation during events.
- A single misting pump unit capable of covering the large space saving costs of multiple units installed.
- Ease of operation and programmable digital cyclic timer allows automatic misting intervals for efficient and effective cooling
- Easy to use operation for management and staff
- Instant Cooling of playground area and better air quality.

Outcome:

Providing a cool and comfortable environment for the general public. Our system met the clients concerns with quite a large area to provide cooling for. As a consequence patrons were provided with a cool shaded space making it a safe haven for kids to enjoy the playground in the hot summer.





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