



ADVANCED
INTEGRATED
CONTROLLED

CELMIST
EVAPORATIVE MIST COOLING



CELMIST

Evaporative Mist Cooling

Celmist is an evaporative cooling system designed to be integrated with Heatray umbrella structures, conventional and industrial applications. The system creates a cool and comfortable outdoor environment by generating an ultra fine mist of filtered water, which reduces the ambient temperature by up to 9°K through a process of absorption into the airstream followed by instant evaporation.

Modular in design, the *Celmist* system comprises a high-pressure pump station, serving a multitude of umbrellas, catering for small to large installations.

Celmist can be applied to indoor and outdoor settings with the flexibility to be customized and tailored to existing structures - suitable for hospitality, commercial and industrial applications. ie. restaurants, nurseries, factory work-stations, and pre-cooling of refrigeration equipment to save energy,

Efficiency

Precisely engineered for optimal performance, the system is equipped with humidity control and temperature sensors with auto and manual operation modes. With a primary focus on an efficient control system, operational costs are reduced and water usage is minimised. Additionally, the control function ensures that no wetting of the area will occur at any time.

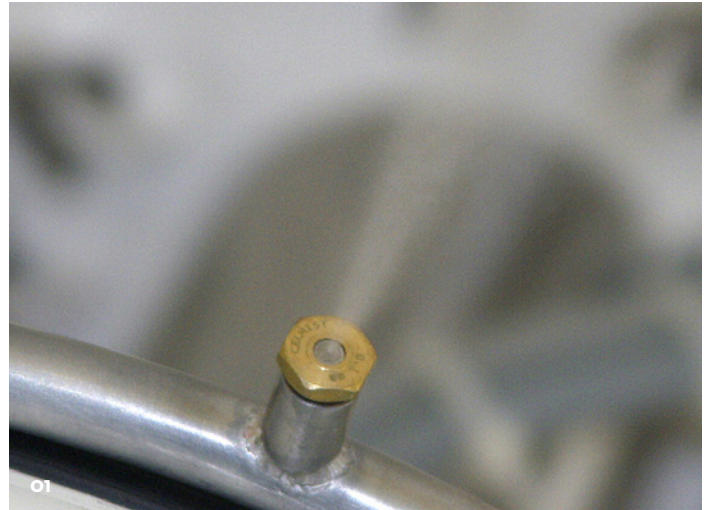
Celmist umbrella systems provide shade with the optional addition of a full range of weather protection accessories including wind protection, designed for ultimate performance, comfort and energy savings.

Application

- Indoor/outdoor wind protected undercover areas
- *Celmist*/Heatray umbrellas
- Adequately ventilated areas
- Mounting height 3.0m - 3.5m (misting nozzles)
- Area coverage 20m² - 100m²
- Pre-cooling HVAC refrigeration systems

Key Features

- Humidity and temperature control automatically adjusts misting output for optimal comfort
- Engineered control to prevent wetting of areas
- Controlled intermittent or continuous operation with auto/manual modes
- Purpose designed umbrellas, misting rings and small-bore high-pressure flexible tubing (120 bar)
- Thermal overload & interruption to water supply pump protection
- Flexibility to be tailored to existing structures and industrial applications such as factories, stadiums, atriums as well as industrial cooling, pollution, dust and odour control
- Able to be integrated with Heatray umbrella systems to provide heating and cooling
- *Celmist* umbrellas are available in a wide range of tensile grade PVC fabric and steel powdercoated colours





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- 01 Misting nozzle detail
- 02 Post mounted misting rings, Federation Square
- 03 Arintji, Federation Square, Melbourne
- 04 River Terrace, Crown Casino, Melbourne
- 05 1 McNab Avenue, Footscray, Melbourne

Technical Specifications

- **Application:** Indoor / outdoor undercover wind-protected areas
 - **Dimensions:** 1000L/1300L x 500H x 500D, single/dual pump unit
 - **Weight:** 40kg/60kg, single/dual pump unit
 - **Finish:** Pump enclosure, galvanized or powdercoated
 - **Components:** High-pressure flexible tubing (120 bar), copper quick-connect fittings filtered S/S misting nozzles
 - **Mounting height:** Nozzle location 3000 - 3500mm
 - **Capacity:** 1.3LPM (1L/min), 2LPM (2L/min) @ 70 Bar pump output
 - **Power:** 1.3LPM - 0.88kW, 2LPM - 0.88kW / 1Ph / 50Hz / 220-240V
 - **Control:** Humidity and ambient temperature governed. Auto/manual modes and remote On/Off switch facility
 - **Operation:** Intermittent in 'Auto' mode, continuous in 'manual'
 - **Connection:** Hard-wired power supply, Mains water supply 250kPa (min) - 500kPa (max)
 - **Protection:** Thermal overload & water supply pump protection.
- **Clearances (min)**
 - 550mm above pump enclosure
 - 300mm each side of pump enclosure
 - 600mm forward of pump enclosure
 - **Control module**
 - 285W x 230H x 115Dmm
 - Zone control of up to 100m² floor area
 - On/Off system switch (illuminates red in 'on' position)
 - Auto/Manual operation switch (illuminates green in 'manual')
 - Overload protection
 - 10Amp - 1Ph / 50Hz / 220-240V
 - **Celmist Umbrella Systems (refer table below)**
 - Umbrellas available in a range of shapes, sizes and colours
 - Celmist can be integrated with heatray heating systems
 - Customised systems available upon request



Anti-drip nozzle detail



Celmist control module



Celmist nozzle ring



Water-filter set



Pump detail & water connection

SU - Small Umbrellas		Model	Size	Overall Height
		CS32	3180 x 3180	3350
		CS38	3725 x 3725	3350
LU - Large Umbrellas		Model	Size	Overall Height
		CTS43	4295 x 4295	3360
		CS45	4580 x 4580	3420
		CS50	5055 x 5055	3660

System SU	No. Umbrellas	No. Nozzles	Pump size LPM	Area Coverage m ²
2SU	2	8	1	20
3SU	3	12	1	30
4SU	4	16	1	40
5SU	5	20	1	50
6SU	6	24	2	60
7SU	7	28	2	70
8SU	8	32	2	80
9SU	9	36	2	90
10SU	10	40	2	100
System LU				
1LU	1	8	1	20
2LU	2	16	1	40
3LU	3	24	2	60
4LU	4	32	2	80
5LU	5	40	2	100

* Celmist umbrellas are purpose built by MakMax



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