

# The Nebula Cooling Network



Innovative Cooling | Wetting Solutions



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# Nebula Cooling - How Cool Can It Be?



⇒ grams of Water Vapour / kg Air

	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
16	62%	70%	79%	88%	97%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	54%	62%	70%	77%	85%	93%	-	-	-	-	-	-	-	-	-	-	-	-	-
20	48%	54%	61%	68%	75%	82%	88%	95%	-	-	-	-	-	-	-	-	-	-	-
22	42%	48%	54%	60%	66%	72%	78%	84%	90%	96%	-	-	-	-	-	-	-	-	-
24	37%	42%	48%	53%	58%	64%	69%	74%	79%	85%	90%	95%	-	-	-	-	-	-	-
26	33%	37%	42%	47%	52%	56%	61%	66%	70%	75%	80%	84%	89%	94%	98%	-	-	-	-
28	29%	33%	37%	41%	46%	50%	54%	58%	62%	66%	70%	75%	79%	83%	87%	91%	95%	99%	-
30	26%	29%	33%	37%	40%	44%	48%	51%	55%	59%	63%	66%	70%	74%	77%	81%	85%	88%	92%
32	23%	26%	29%	33%	36%	39%	42%	46%	49%	52%	55%	59%	62%	65%	69%	72%	75%	78%	82%
34	20%	23%	26%	29%	32%	35%	38%	41%	43%	46%	49%	52%	55%	58%	61%	64%	67%	70%	72%
36	18%	21%	23%	26%	28%	31%	34%	36%	39%	41%	44%	46%	49%	52%	54%	57%	59%	62%	64%
38	16%	18%	21%	23%	25%	28%	30%	32%	34%	37%	39%	41%	44%	46%	48%	51%	53%	55%	57%
40	14%	16%	18%	20%	23%	25%	27%	29%	31%	33%	35%	37%	39%	41%	43%	45%	47%	49%	51%
42	13%	15%	16%	18%	20%	22%	24%	26%	27%	29%	31%	33%	35%	36%	38%	40%	42%	44%	46%
44	11%	13%	15%	16%	18%	20%	21%	23%	24%	26%	28%	29%	31%	33%	34%	36%	37%	39%	41%
46	10%	12%	13%	15%	16%	17%	19%	20%	22%	23%	25%	26%	28%	29%	31%	32%	33%	35%	36%
48	9%	10%	12%	13%	14%	16%	17%	18%	19%	21%	22%	23%	25%	26%	27%	29%	30%	31%	32%
50	8%	9%	10%	12%	13%	14%	15%	16%	17%	19%	20%	21%	22%	23%	24%	25%	27%	28%	29%

Relative humidity (RH%)

⇒ Temperature (in ° Celsius)

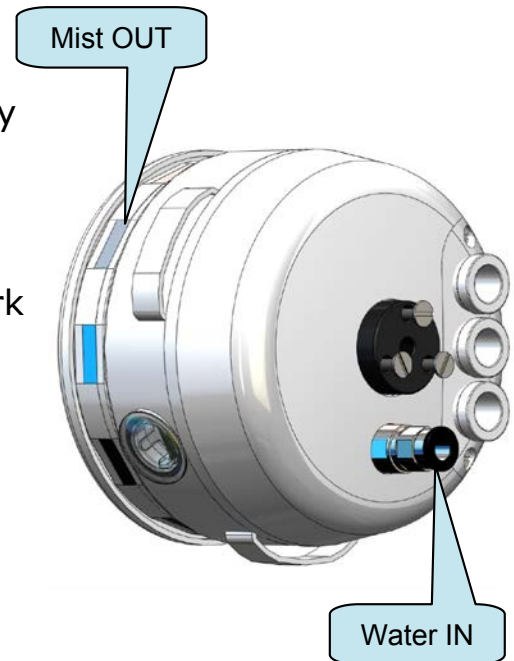
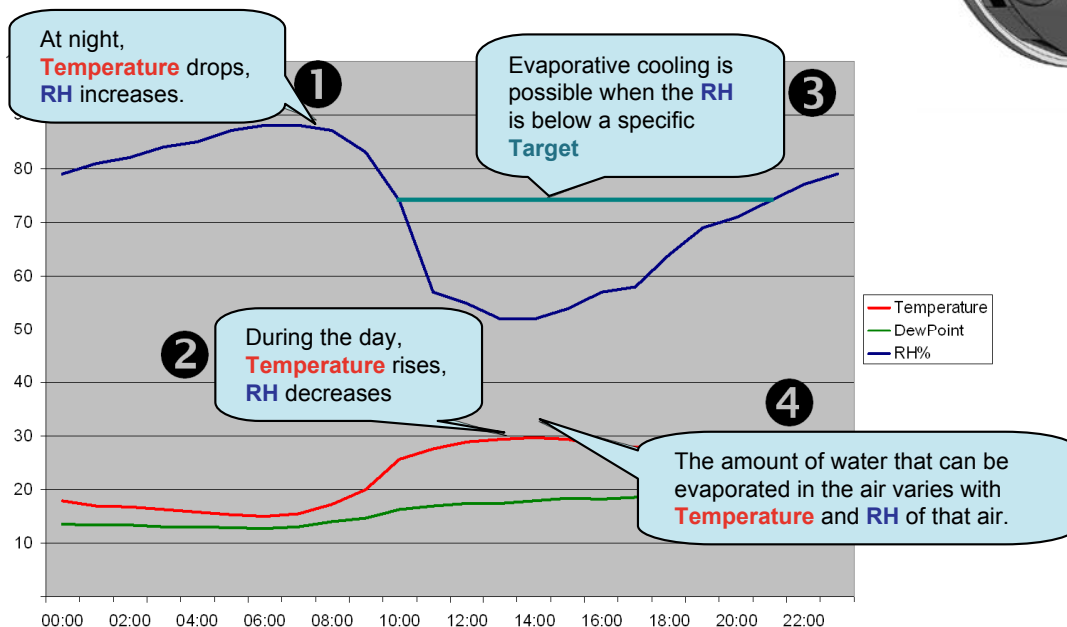
## What it is

A Nebula is a rotary Atomiser, 'turning' a fluid into a mist of droplets

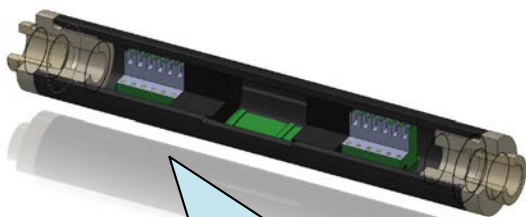
A Nebula Cooling Network consists of

- Individual Nebulas with water and power supply
- Temperature and Humidity Sensors
- Network Controller
- Cabling – up to 1,500m CAT5 cable
- Up to 255 units (Nebulas / sensors) per network

## When it works



## How it works



The Nebula Sensor is part of the Nebula Network, and senses the ambient Temperature and Humidity.

The Target Humidity level can be set per zone

The Network Controller reads the humidity sensors to know the actual humidity per zone.

The Controller calculates the exact amount of water to be evaporated in the air, in order to reach the set Target Humidity level

This calculation is done per Nebula in the network, and the Controller sets the Nebula valve to deliver that amount of water

## Why it works

Huge Cooling Capacity

“Green” (50 W Input gives up to 20 kW Cooling)

One network covers a large Area, in any number of Zones

Target Humidity can be set per Zone

Precise control of Actual vs Target humidity level

Easy Installation - No high pressure tubing, valves or compressors

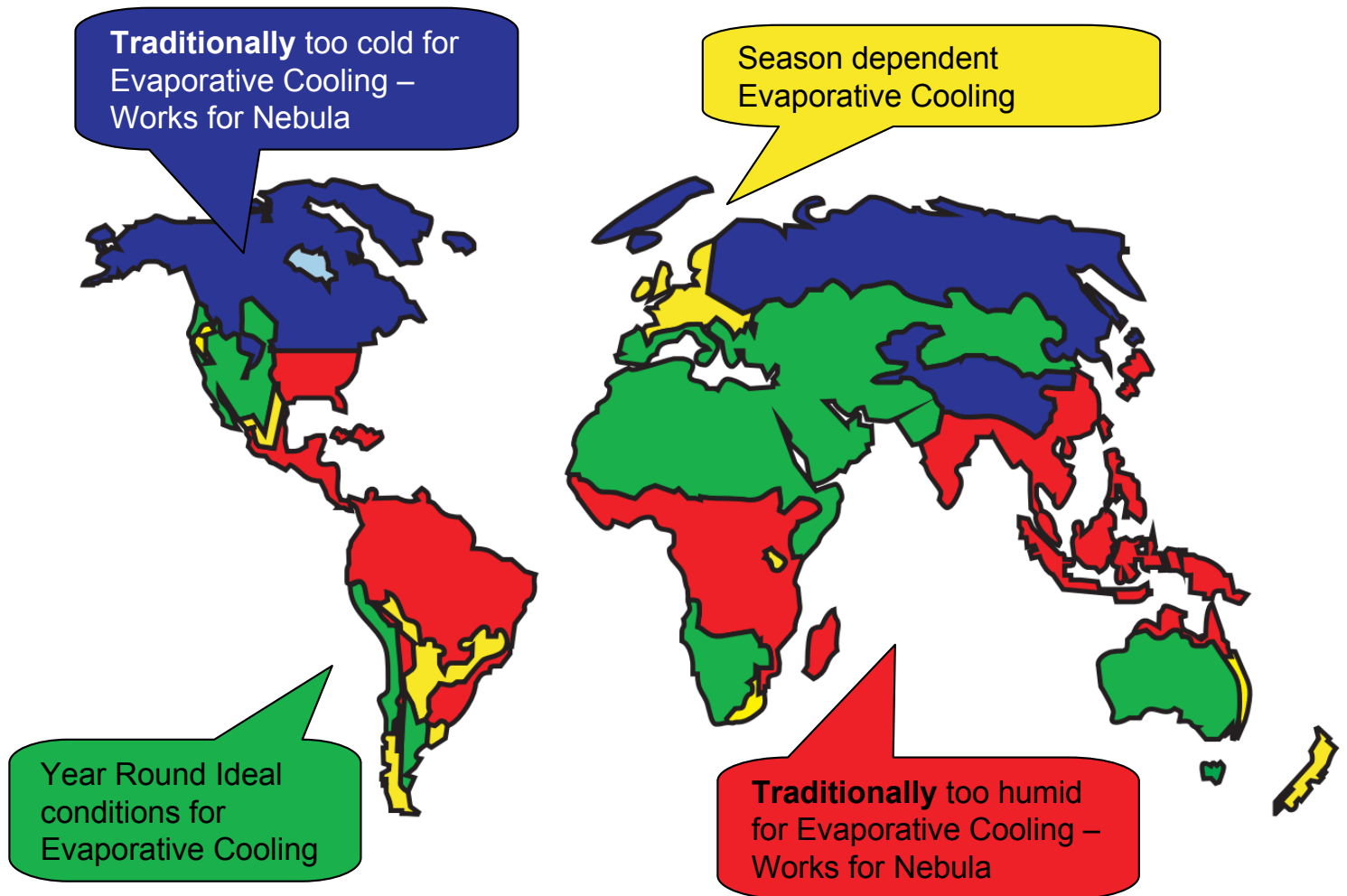
Little Maintenance – Nebula doesn’t clog

Low Electricity & Water consumption

Great value for money

Technical data	
Dimension	diameter 100mm x 75 mm depth
Weight	400 grams
Life Time	3+ years
Power supply	Input AC 110 - 220V, 50 ~ 60Hz, Output 24 V DC, 50 Watt
Cooling Output	Up to 20 kW
Water usage	0 to 30 liters / hour / Nebula
Cooling Technique	Evaporative Cooling
Water pressure input	Regular mains pressure

## Where it works



A Nebula Cooling Network allows the user to set the required target humidity level, no matter where the system is located.

The Nebula Cooling Network calculates and regulates the precise amount of water to be evaporated in order to reach the target humidity level.

The Nebula Cooling Network works everywhere, as it uses closed loop control to make sure that the actual humidity does not exceed the target humidity level.