dutchbeek

Quality misting for horticulture

misting systems

dutchbeek

At Dutchbeek we understand that reliability and quality are essential for your business. As a leading supplier with more than 30 years of experience, we offer a wide range of high-quality products. Our expertise extends to the greenhouse horticulture sector where we strive for perfect solutions for your specific needs. Choose Dutchbeek and experience fast delivery, expert advice, and top-quality products that minimize disruptions and maximize your production.

Dutchbeek - Your partner

Evaporative cooling offers an energy-efficient solution for cooling your greenhouse. This technology uses the natural evaporation process to cool air without opening windows, resulting in significant energy savings and lower CO_2 emissions.

Evaporative cooling helps optimize humidity, which is crucial for crop health. At a time when sustainability is becoming increasingly important, evaporative cooling is an essential tool for companies that want to reduce their environmental footprint.

dutchbeek

Warm summers seem to be becoming a trend, causing a lot of interest in methods to control the greenhouse temperature.

Adiabatic cooling is a physical process in which no heat is supplied or removed. Droplets of water evaporate and the required evaporation heat is extracted from the greenhouse air.

The air therefore cools and is also humidified. The operation of evaporative cooling depends on the relative humidity. If this increases, the cooling capacity decreases.

Advantages: In contrast to mechanical cooling, this is a relatively cheap way of cooling. The required electrical power for pressure atomization is limited, which also applies to water consumption.

Disadvantages: A disadvantage may be that the relative humidity in the greenhouse space increases (too) much by spraying water. This can lead to problems for the plant (including fungi).

Droplet size is crucial for the cooling effect of misting

Efficiency of Cooling

Smaller droplets evaporate more efficiently than larger droplets. In a greenhouse, this means that more water evaporates faster, leading to a greater cooling effect. The air in the greenhouse is therefore cooled more effectively.

By pumping water at high pressure (usually between 50 and 100 bar), the water can be forced through very small openings in special nozzles or nozzles. The high pressure causes the water to disperse into very fine mist or mist, resulting in small droplets. The higher the pressure, the smaller the drop.

Choosing the right type and design of nozzles is crucial. Our nozzles are specially designed to create ultra-fine droplets under high pressure, often with an optimized design that reduces turbulence and promotes uniform droplet size.

COOLING | SUMMER

dutchbeek

dutchbeek.com

“When I founded Dutchbeek, I had one goal in mind: to provide greenhouse horticulture with products that really help them move forward. Quality and reliability are our top priority, because we know how important these values are to our customers. I strongly believe in the power of personal service, and that is what sets Dutchbeek apart. We listen to our customers, understand their challenges, and deliver solutions that help them grow.”

Hans Weisbeek, Founder of Dutchbeek