

ABOUT NOZZLE CONTENTS

最新產品-自動迴轉噴霧器

因應農業正面臨勞動力流失問題，當豐近日推出的智慧霧化噴霧系統，可實現園區無人灑藥的全面自動化，其系統搭配使用的迴轉噴頭經高壓水泵驅動噴頭旋轉360° 廣泛造霧，霧化分子介於5 μ - 20 μ 能維持藥液或液態肥

New Product - Rotary Fogging nozzle

In response to the problem of labor loss in agriculture, Fufong recently launched a smart fogging spraying system, which can achieve full automation of unmanned spraying in orchid or greenhouse. The system uses a rotary nozzle driven by high-pressure water pump to create a wide range of fog at 360°. The atomized molecules are between 5 μ - 20 μ, which can maintain the stability of the pesticide or liquid fertilizer. The accurate diffusion over the target plants effectively prevents pests and diseases. Saves water and pesticide or fertilizer costs.

功能用途

果園、茶園、溫室、菇園、花園等農場自動噴藥，病蟲害防治，噴施液肥，溫濕度調節穩定微氣候變化，使作物更健壯。

Functional use

Farms such as orchards, tea gardens, greenhouses, mushrooms, gardens, etc. can automatically spray pesticides, control pests and diseases, spray liquid fertilizer, and regulate temperature and humidity to stabilize microclimate changes and make crops more robust."

自動迴轉式造霧系統-有效解決

Automatic Rotary Fogging System Effectively Solves:

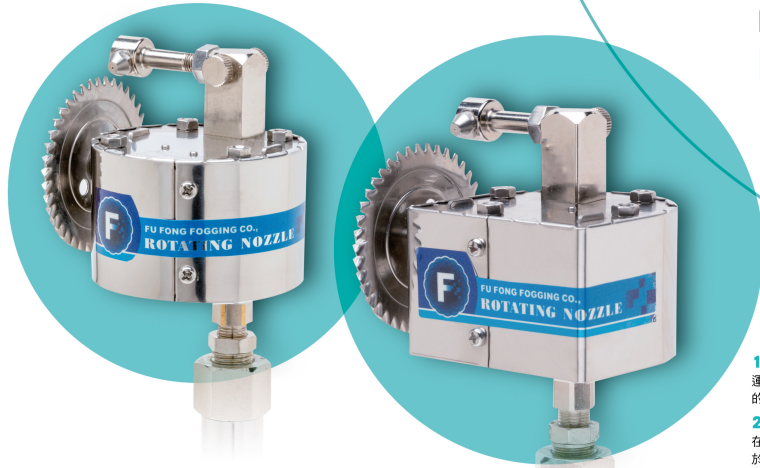
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|--------------------|---|
| 1 農業勞動力短缺 | 1 Agricultural labor shortage |
| 2 掌握病蟲害防治的最佳時機。 | 2 Grasp the best time for pest control. |
| 3 節省用水、藥品或液態肥料的成本。 | 3 Saved water, pesticide or liquid fertilizer costs |
| 4 實現園區噴霧管理全面自動化。 | 4 Achieve comprehensive automation of spray management in the orchard and greenhouse. |

自動迴轉式造霧系統-原理特性

Rotary Fogging System - Theory and Featuring

- 1 以水壓為動力，驅動減速齒輪箱帶動噴霧旋轉
- 2 採用當豐研發專利不鏽鋼霧化噴盤，使驅動端達微霧狀
- 3 整組噴頭輕量化設計，安裝容易
- 4 可搭載各種規格噴頭適用於各類產業噴霧用途提供完美解決方案

- 1 Using water pressure as power, it drives the gearbox to drive the nozzle to rotate.
- 2 It also employs a patented stainless steel atomization spray plate developed by Fufong, which achieves fine mist.
- 3 The entire set of nozzles is lightweight and easy to install.
- 4 It can be equipped with various specifications of nozzles, suitable for various industrial spray applications to provide perfect solutions.



▲ 180° Rotary Nozzle
(180° 半迴轉噴頭)

▲ 360° Rotary Nozzle
(360° 迴轉噴頭)

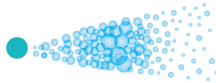
New Design

傳統單向造霧系統

水分子容易結合，擴散範圍單一

Traditional fix fogging system

The fog particles combine easily. Single diffusion range

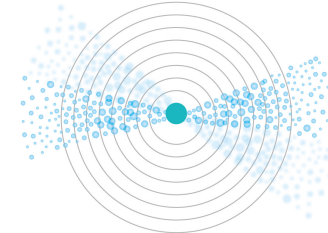


自動迴轉式造霧系統

霧化粒子擴散勻稱且迅速，擴散範圍大

Rotary fogging system

The fog particles spread evenly and rapidly, with a wide diffusion range



自動迴轉式造霧系統-應用

ROTARY FOGGING SYSTEM APPLICATION



1. 病蟲害防治

運用細霧霧化迴轉噴頭，以高壓系統形成霧化立體水分子，均勻散佈於目標作物，搭配智慧環境監測及電控使病蟲害防治的噴灑藥物達到真正實現自動化，提升工作效率、節省用藥且有效減少農業環境人力缺乏的問題。

2. 葉面施肥

在植物葉片上噴灑水溶性肥料的方法，可以提高作物的生長和品質。迴轉式造霧系統噴灑的霧化粒子均勻，可有效滲透於作物並覆改植作葉面及葉背。葉面施肥效果顯著其必要條件為葉肥需覆蓋於嫩葉上並形成液膜，停留數小時。迴轉造霧系統之霧化顆粒細緻，可有效吸附於葉片，迴轉噴頭之動能轉速為 60-120 秒/週圍之慢速迴轉，可以有效帶動霧化粒子，減少霧化粒子重組形成水珠。

3. 微氣候調節

微氣候管理的方式主要的概念，促進蒸散作用降溫，或是加熱空氣和土壤。迴轉式造霧系統所需水量，就以等量水而言經高壓水泵及迴轉式造霧噴嘴將水霧化為小分子，霧化粒子可達 5-20 μm，因霧化後水分子小的顆粒總表面積較大顆粒總表面積多，半徑縮小一半，表面積增為 4 倍。故其霧粒愈小其霧粒表面積愈大，與乾燥空氣接觸面積愈大，加濕效果愈好。當迴轉噴頭之迴轉動能，使霧粒充分勻稱的散佈於空間並與乾燥空氣碰撞，使霧粒超微化，造霧系統使用地區可有效降低溫度 2-3°C，來創造更有利於植物生存環境。透過微氣候管理有助於創造「新的氣候」，為植栽氣候治理創造更有利的條件。

1. Pest and Disease Prevention

Using atomization rotary nozzle making fine fog, this device forms a three-dimensional mist of water molecules work with high-pressure water pump, which evenly disperses over the target crops. It also integrates smart environmental monitoring and electric control to achieve automatic spraying of pesticides for pest and disease prevention, improving work efficiency, saving pesticide use, and effectively reducing the problem of agricultural labor shortage.

2. Foliar Fertilization

This is a method of spraying water-soluble fertilizers on plant leaves, which can improve crop growth and quality. The rotary fogging system sprays uniform atomized particles, which can effectively diffuse over the crops and cover the leaf surface and back. The necessary condition for the significant effect of foliar fertilization is that the leaf fertilizer must cover on tender leaves and form a liquid film, which stays for several hours. The fog particles of the rotary fogging system is fine, which can effectively adhere to the leaves. The kinetic speed of the rotary nozzle is 60-120 seconds/cycle of slow rotation which can effectively drive the atomized particles and reduce the recombination of atomized particles into water droplets.

3. Microclimate Adjustment

The main concept of microclimate management is to promote evapotranspiration cooling or heating the air and soil. The rotary fogging system uses a small amount of water, which is atomized into small molecules by high-pressure water pump and rotary fogging nozzle. The fog particles can reach 5-20 μm, and the total surface area of the small water molecules is larger than that of the large ones. When the radius is halved, the surface area increases by four times. Therefore, the smaller fog particles get larger surface area, the greater their contact area with dry air can get better humidification effect. When the rotary nozzle's rotational kinetic energy makes the fog particles evenly distributed in the space and collide with dry air, the fog particles become ultra-fine. The fogging system can effectively reduce the temperature by 2-3°C in the area of use, creating a more favorable environment for plant survival. Through microclimate management, it helps to create a 'new climate' and create more favorable conditions for plant climate governance.