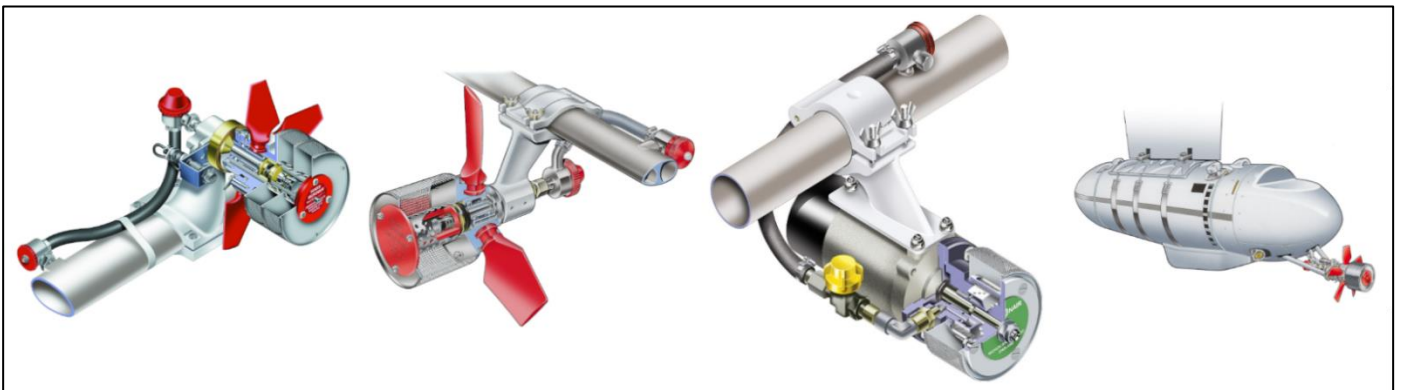




# *Rotary Atomisers*

Precision aerial application



**Precision with Every Drop**

# Applications



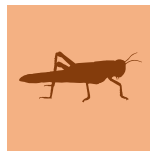
Agriculture



Forestry



Public Health



Migrant Pest



Plantation

## Agriculture

Micronair atomisers are used worldwide for aerial spraying in agriculture. Renowned for their reliability, high-quality engineering, and durability, Micronair equipment is the first choice for professional aerial operators and are routinely used for treatment of pests, weeds and diseases in a range of crops such as cereals, cotton, soya and rice.

Spray volumes are typically in the range 5- 20 l/ha (~0.5-2 US gal/acre) affording aerial operators significant operational gains through increased productivity.



Natural Resources Canada,  
Canadian Forest Service

## Pioneers of low volume application

Micron Sprayers Ltd, based in the UK, have been manufacturing precision spraying equipment for over 60 years. The company pioneered the use of rotary atomiser technology, with controlled droplet size to reduce application spray volumes and improve accuracy in the delivery of plant protection products at minimal dose rates. The company's products are synonymous with innovation and quality throughout the world.

The Micronair range of aerial application equipment enables the use of Low Volume (LV) and Ultra Low Volume (ULV) spraying, improving productivity and efficacy while minimising off target drift and environmental impact. Our range of accessories and specialist equipment integrate with existing aircraft configurations backed by unrivalled service and support capability from our experienced distributors and technical personnel.

Using Controlled Droplet Application (CDA), Micronair's rotary atomisers are suitable for a variety of aircraft- both fixed and rotary wing. Spray droplet size can be selected to optimise delivery at the biological target, independent of flow rate.



## Forestry

Micronair atomisers are widely used for aerial spray applications in forestry in North America, Europe and elsewhere to control insect pests and diseases. Vast areas can be treated quickly at low spray volumes to apply products at the optimal time for maximum biological efficacy.

The droplet spectrum produced by Micronair atomisers is ideal for foliar penetration and Micronair atomisers are recommended for applications of biological products (*Bacillus thuringiensis*) and insect growth regulators commonly used in forestry applications.



## Public health and Vector Control

Micron Sprayers pioneered the use of ultra-low volume aerial application with rotary atomisers to target flying insects such as mosquitoes or tsetse flies. By using minute quantities of insecticide applied in very small droplets, vast areas can be treated rapidly to prevent vector borne disease transmission to humans and animals – a technique known as aerial adulticiding or sequential space spraying. Typical application volumes can be as low as 0.05 l/ha (< 1fl oz / acre). Precise control of drop size ensures minimal off target waste to the ground or water surfaces. Similarly, by selecting much larger droplets, Micronair atomisers can be used to apply larvicides to treat mosquito breeding sites in slow moving and stagnant water surfaces.



Image courtesy of Mark Latham



## Locust and migratory pest control

Locust control operations are generally carried out in hot dry desert conditions, often where water is unavailable. ULV application is therefore the preferred method to control migratory pests such as locusts, grasshoppers, migratory bugs, and caterpillars that invade crops in vast numbers. The high productivity and timeliness of application by ULV techniques again requires precise control of droplet size as spray volumes are often as low as 1l/ha (0.1 US gal/acre). The ULV aerial technique with Micronair rotary atomisers is the preferred method of application for many invasive agricultural pests worldwide and supported by governments and international institutions such as the UN Food and Agricultural Organisation (FAO).

## Plantations

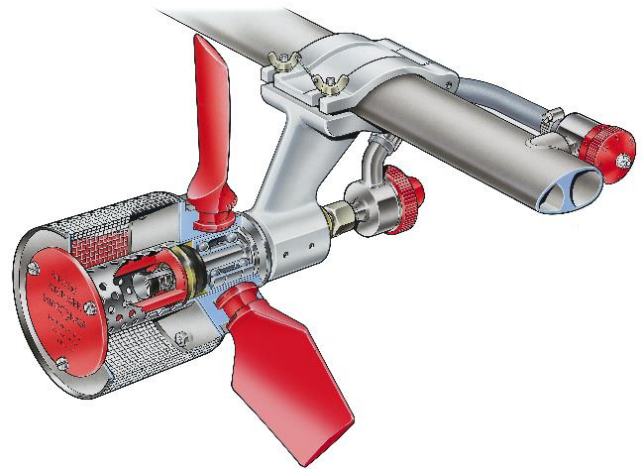
Micronair atomisers installed on fixed wing aircraft and helicopters are routinely used in plantation pest and disease management where often the vast areas to be treated, the height of plants and the frequency of applications require use of aircraft applying low or ultra-low volume sprays. Aerial application is used for a variety of plantation crops. Some examples include control of sigatoka disease in bananas, application of ripener in sugar cane, pest, and disease control in a variety of crops such as citrus and other orchard crops, as well as date and oil palm. Precise control of spray droplet sizes ensures accurate spray coverage with minimal environmental impact and off target spray drift.



# Atomisers

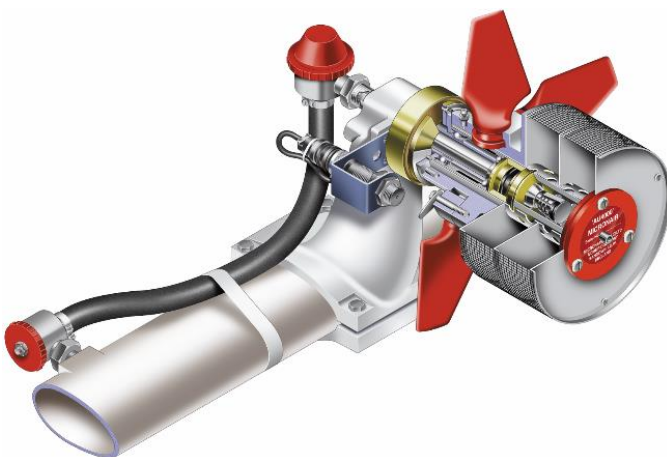
## Micronair AU5000

A lightweight wind driven atomiser suitable for fixed wing aircraft and faster helicopters with three adjustable fan blades offering a flow capacity of 23 l/min (~6 USG/min) with operating air speeds between 145 – 320 kph (90 – 200 mph). Suitable for Ultra Low Volume (ULV) application at less than 5 l / ha (~0.5 US Gal /acre) to Low Volumes typically 5-30 l/ha (~0.5-3.0 US Gal /acre). The AU5000 atomiser is the workhorse of the industry providing precise droplet size control over a wide range of flowrates. Supplied with Diaphragm Check Valve (DCV), Variable Restrictor Unit (VRU) for flow selection and a range of round and streamline boom clamp sizes for easy installation.



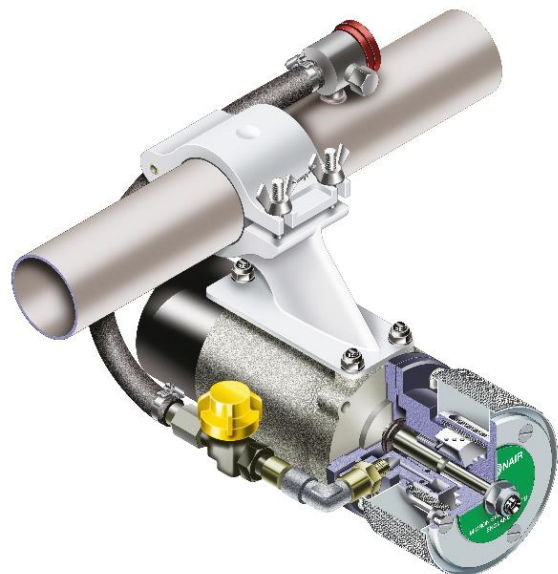
## Micronair AU4000

A high flow capacity atomiser with integral electronic brake to prevent rotation during ferry flight, the AU4000 atomiser is used mainly in forestry, public health and other applications treating very large areas that require long ferry times. A precision engineered rotary atomiser specifically designed for Ultra Low Volume (ULV) and Low Volume applications, the large diameter gauze increases flow capacity up to 30 l/min (8 US gal/min). Equipped with DCV, VRU, electronic brake and various boom clamp sizes to fit larger aircraft, the AU4000 offers the same precision in droplet size control as the smaller Micronair atomiser models.



## Micronair AU6539

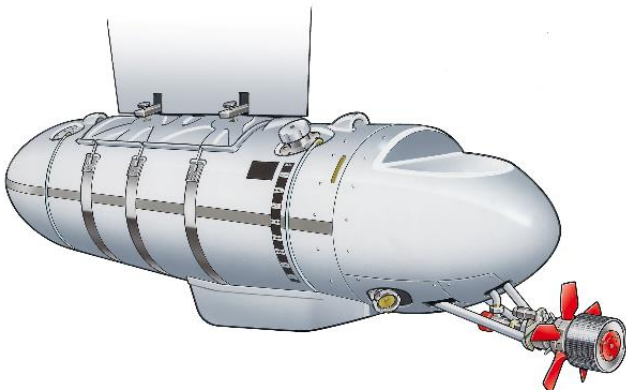
An electrically operated atomiser designed for use on helicopters and other aircraft. Power is provided by the aircraft 24V DC supply. Flow capacity is 3 l/min (0.8 US Gal/min) and the unit is supplied with an electronic speed controller to select the appropriate droplet size for the biological target. Electric atomisers offer more control of rotational speed and hence drop size in undulating terrain where aircraft forward speeds vary. The Micronair AU6539 units are widely used to apply both larvicides and adulticides for public health applications as well as in forest pest control.





## Micronair AU7000

The Micronair AU7000 atomiser is a lightweight unit designed for aircraft with airspeed in the range 65-160 kph (40-100 mph) such as smaller helicopters, light aircraft as well as larger payload fixed wing unmanned aircraft. Lightweight with adjustable fan blades and a flow capacity of up to 10 l/min (2.6 US gal/min), the Micronair AU7000 delivers precise droplet size control in the range 60-300  $\mu\text{m}$  suitable for application of plant protection products, foliar nutrients, and herbicides.



## Micronair SPRAY POD

A self-contained unit with two 190 L (50 USG) tanks, pump, atomiser, and mounting saddle which are secured under-wing on fixed wing multi-role aircraft equipped with suitable mounting points. All controls are mounted in the aircraft cockpit with flow and RPM display. Spray pods are widely used on a variety of aircraft for wide area migratory pest control and mosquito space spraying operations. They Micronair Spray Pods have also been used in oil spill dispersal.

## Accessories

### Flow Control

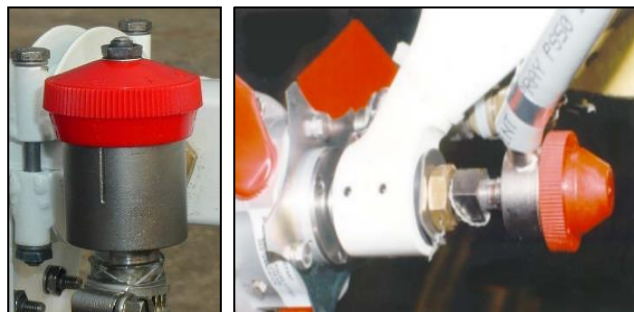
Micronair Variable Restrictor Units (VRU) provide accurate and repeatable liquid flow rates, ensuring precise control of volumes applied. Flow rates can be easily selected by the turn of a dial.

### Check Valve

Micronair Diaphragm Check Valve (DCV) ensures instant shut off for liquid to avoid overspray onto non-target areas. Materials are compatible with all spray products and formulations.

### RPM transducers and GPS Interface

Micronair RPM transducers monitor the rotational speed of the atomisers to determine droplet size and check rotational speeds do not exceed safe operating limits. The Micronair RPM to GPS interface unit allows the atomiser RPM to be displayed and recorded on compatible GPS track guidance systems. This information can also be logged to record spray operations.



# The Company

## Sales and technical support

Micron Sprayers Ltd are the world's leading authority on low volume and ULV aerial application. Pioneers of Controlled Droplet Application (CDA) using rotary atomisers for precise droplet size control, the company have been manufacturing specialist aerial application equipment for over 60 years. The company regularly exports to over 100 countries and has a global distribution network of aerial application specialists covering the Americas, Europe, Australasia, Africa, Central Asia, Middle and Far East. Our sales and technical team have extensive experience within the aerial application industry and are available to provide support and assistance together with our specialist distribution network. Our web site includes full details on our product range, technical manuals, and product selection guides. We also offer users access to online droplet size calculation tools to assist in correct set up.

## Precision Engineering

All manufacture is undertaken in the UK and our production facilities include the latest CAD software 3D modelling tools, CNC machining and rigorous quality control procedures and testing to ISO9001:2015

## Research and Development

Micron has advanced research facilities including laser-based particle size analysis, imaging and laboratory tools for spray deposit analysis and access to wind tunnel facilities.



Micron Sprayers Ltd  
Bromyard  
Herefordshire, HR7 4HS. UK  
T: +44 1885 482397  
E: enquiries@micron.co.uk

Distributed by: