

AU5000

An efficient rotary atomiser for aerial spraying



The AU5000 atomiser has been developed from over 50 years experience in the design and use of rotary atomisers for agricultural aircraft. Micronair atomisers have been supplied to more than 90 countries and fitted to more than 30 types of fixed wing aircraft and helicopters. This unique experience, combined with continuous research and development, has resulted in a truly versatile and reliable atomiser for all agricultural spraying requirements.

The AU5000 atomiser is precision engineered from durable chemical resistant materials and uses a rotating woven wire gauze to produce spray droplets. This technique ensures a narrow controlled spectrum of droplet sizes for efficient and economical application of spray products.

The atomiser is driven by the airflow past the aircraft through three highly efficient fan blades. These are adjustable in pitch, enabling the rotational speed to be varied to produce the required droplet size. Each atomiser can handle a flow

of 0 – 23 litres/minute (0 – 6 USG/min). This enables the same installation to be used for a wide range of output rates from ultra low volume (ULV) to conventional application at 20 – 50 litres/ha (2 – 5 USG/acre). This wide flow range, combined with easily adjustable droplet size, enables an aircraft to be recalibrated for different application techniques in minutes.

- Adjustable droplet size
- Narrow droplet spectrum
- Wide flow range
- Ultra low volume (ULV) and low volume (LV) capability
- Wind driven
- Suitable for use in general agriculture, forestry, plantation, migratory pest and public health spraying
- 50 years of technical expertise

Precise flow control

The flow to each atomiser is controlled by a variable restrictor unit (VRU). This provides finger-tip control of the flow by the adjustment of a 7-position control knob. VRUs are supplied with fittings and adaptors for the standard nozzle outlets found on most booms to eliminate the need for any special pipework or modifications of the boom.

Overall flow from the aircraft is regulated by the boom pressure in exactly the same way as a conventional nozzle spray system.

The optional Micronair application monitor gives the pilot an accurate display of the actual application rate. RPM sensors are also available to monitor atomiser rotational speed.

Simple installation

The light weight and low drag of AU5000 atomisers enables them to be fitted directly onto the standard spray booms of most agricultural aircraft without any structural modification. Booms and installation kits are available for some types of non-agricultural aircraft (e.g. Cessna 170/180 series).

Between 6 to 12 AU5000 atomisers are recommended for most conventional spraying applications. Each atomiser is supplied with a complete installation kit including a mounting clamp, diaphragm check valve, variable restrictor unit (VRU) and all necessary hoses and fittings.

The mounting clamps supplied with AU5000 atomisers are available for a wide range of round and streamline section spray booms. All clamps incorporate a moulded rubber shock bush to absorb vibration from the boom or atomiser.

Positive shut-off to eliminate the risk of spray leakage

Every atomiser is supplied with a diaphragm check valve and a secondary shut-off inside the atomiser. This unique combination ensures an immediate and precise shut-off at the end of each spray run and eliminates the risk of chemical leakage on the ground.

Suitable for helicopters

AU5000 atomisers are ideally suited for use on both fixedwing aircraft and helicopters operating at speeds of 145 km/hr (90 mph) and more. Different length fan blades are available to ensure optimal performance over the full airspeed range. For airspeeds below 145 km/hr (90 mph), the smaller AU7000 atomiser is recommended.

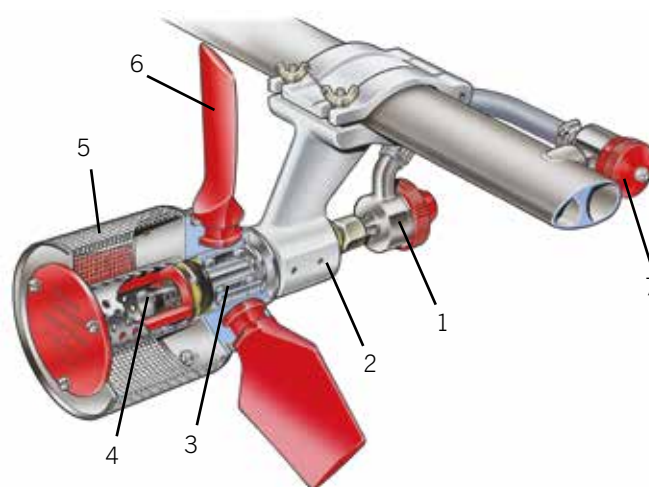


Specification

Weight:	1.8 kg complete with mounting bracket
Mounting:	By streamlined mounting clamp (specify boom size and profile when ordering)
Liquid throughput:	0 – 23 l/min per atomiser
Flow control:	By variable restrictor unit (VRU)
Liquid shut-off:	By diaphragm check valve and internal secondary shut-off
Rotational speed:	Adjustable three bladed fan running at 2,000 – 10,000 rpm (max)
Operating airspeed:	145 – 240 km/hr
Droplet size:	Adjustable (50 – 400 µm VMD)
Above figures are for guidance only. Performance will vary according to chemical formulation and conditions of use. See AU5000 handbook for full details.	

Supplied with:

- Variable restrictor unit (VRU) for flow control
- Diaphragm check valve (DCV)
- Choice of boom clamps for different boom profiles and sizes



1. Diaphragm check valve
2. Mounting clamp
3. Sealed bearings
4. Secondary shut-off valve
5. Atomiser gauze
6. Adjustable fan blades
7. Variable restrictor unit

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