

- *Optimum Oxygen Transfer Efficiency*
- *Biofouling Resistant Silicone Membrane*
- *Extensively Performance Tested*
- *Chemically Cleanable (CIP)*
- *Australian Design Internationally Patented*

## Description

Aquablade L is the most versatile fine bubble diffuser on the market anywhere in the world.

### Various lengths

- Single span up to 5.8m long
- Multiple spans joined together up to 11.6m utilisng a single air entry.

Aquablade L follows the innovative [AquaBlade Blue](#) and utilises many of the tried and tested elements including the base plate and specially formulated silicone membrane.

Aquablade L has been developed as a complete fine bubble diffusers package, designed by engineers in Australia that have been refining fine bubble aeration since 1990.

Designed to reduce installation time by reducing fixings and site assembly. Site testing has been simplified by ensuring all Aquablade L diffusers arrive to site 100% assembled and each one has passed a rigorous QA process measuring back pressure and air flow.

## Design

### Design Advantages

Each Diffuser uses our long term proven silicone rubber membrane technology which has been demonstrated to outperform EPDM and other typical membrane materials in terms of microbial resistance, resistance to temperature.

There are no metal components internal to the diffuser, so chemical cleaning is readily achieved

The Structural pultruded GRP base is very strong, enabling a 5.8m diffuser to require only two supports (4 anchors or bolts), so less time is required for on-site installation, reducing the overall cost of the diffusers

The diffuser air inlet incorporates an integral check valve to prevent backflow

Low profile base plant design maximises the realised aeration volume of any aeration basin

## Technical

### Performance Characteristics

A high transfer rate of oxygen is produced through the optimised profile of the slits and the slitting pattern. When airflow to the diffuser is stopped, these slits tightly close to prevent backflow of mixed liquor.

- The diffuser membrane will not shrink even after years of operation. The special high quality elastomeric material also provides a high resistance to the formation of biofilms especially when compared to other reputable membrane manufacturers.
- Excellent flow versus back pressure characteristics allowing reduced power consumption.
- Typical airflows range from 3 Nm /h.m to 18Nm /h.m with a maximum of 30 Nm /h.m for both fine and coarse pore membranes (see Diffuser Pressure Loss Curve).

## Key Advantages

### Key Characteristics

- The concave profile of the Aquabalde L Baseplate allows for air to pass between the baseplate and the silicone membrane serving as an air feed chamber. This pipe like air chamber reduced the need for any additional feed pipes in the bioreactor and also allows the diffusers to be fitted closer to the floor of the reactor increasing tank operational volumes
- By utilising a structural FRP baseplate to retain the proprietary silicone membrane all feed pipework used in conventional diffuser grids is removed from the bioreactor. Only a 2 inch feed is required to feed up to 2 x 5.8m diffusers. Diffuser manifolds can be utilised to offer multiple 2 inch feeds, or multiple 2 inch flexible feeds can be utilised. This versatility offers designers the choice that best suits the application.

## Key Installations

*Kingaroy WWTP*

*Bundamba STP*

*Longford WWTP*

## Services

Aquatec Maxcon has over 47 years' experience in treating water and wastewater for both municipal and industrial applications. A leader of the water industry, Aquatec Maxcon has introduced a range of innovative process technologies to Australia including the first UASB, IC Reactor, Membrane Bioreactor and Circox Reactor. We have a successful track record in introducing new technologies, and have diligently supported their implementation within Australian conditions.

Aquatec Maxcon Pty Ltd is part of the Aquatec Maxcon Group which provides a complete vertically integrated range of in-house services including:

- Design and construction;
- Project management, commissioning and operation;

- Installation and maintenance;
- Steel fabrication, sand blasting and painting;
- Machine and plant automation, system integration, electronic repairs and servicing and SCADA configuration.

### Applications

- Activated sludge systems
- Intermitten aeration
- Oxidation ditches
- Aerobic sludge digestion
- Aquaculture
- Most industrial biological treatment sytems

For non standard duties, membranes are available in other materials including EPDM, nitrile and polyurethane.

Aquatec Maxcon has established and maintains a dedicated service department for scheduled maintainence and breakdown services.

[Services Home Page](#)