

FEATURES AND BENEFITS OF LAMELLA PLATES

- Proven, reliable performance for different applications
- 90% less footprint compared to traditional open basin clarifiers
- Robust operation
- Capable of effectively treating raw water turbidities of several thousand NTU
- Value for money
- Capital and Operational cost benefits, including typical 30% chemical cost savings with effective settlement
- Effective management of raw water turbidity spikes and fluctuations
- Minimising wind and thermal stratification disturbances to the settled water turbidity
- Flexible design, applicable to existing and new clarifiers and rectangular or circular basins
- Durable stainless steel construction (you can walk on top of the plates)
- Optimised solids settling, ensuring no plate clogging or sludge build-up
- Low maintenance
- NSF-61 approved specification for drinking water

PRODUCTS AND SERVICES

Aquatec Maxcon has almost 50 years of experience in treating water and wastewater for both municipal and industrial applications.

From inception, Aquatec Maxcon has sought to develop high quality market leading technologies better suited to the relatively severe Australian conditions. We have spent over 23 million dollars on research and development of designs that have been refined using input from our workshop, field installation crews and operations staff to ensure the production of reliable and robust equipment. Together with leading technologies sourced internationally, this has now become the most comprehensive range of water and wastewater technology available in Australia.

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

- Design and construction
- Pilot plant and treatability studies
- Process selection and equipment design
- Project management
- Complete in-house manufacturing
- Machine and plant automation
- System integration and SCADA configuration
- Installation, commissioning, operations and maintenance



SANDHURST WATER TREATMENT PLANT



GORDONBROOK WATER TREATMENT PLANT



LAMELLA PLATES

EFFECTIVE SEDIMENTATION

- SIMPLE, EFFECTIVE, ROBUST AND LOW MAINTENANCE TECHNOLOGY
- HIGH PERFORMANCE AND VALUE FOR MONEY
- PROVEN TECHNOLOGY WITH MORE THAN 14,000ML/D INSTALLATIONS

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LAMELLA PLATE SEDIMENTATION

Lamella plate sedimentation is a proven settling technology in the water industry. Lamella clarifiers have a significantly smaller footprint than open basins and tube settlers and achieve impressively low settled water turbidities.

Aquatec Maxcon represents Meurer Research Incorporated's (MRI) proprietary Lamella settling equipment. MRI has engaged in extensive research and development to optimise their Lamella plate clarifier design, and as such have over 50 patents related to the sedimentation process. Aquatec Maxcon has installed and commissioned numerous MRI Lamella plate clarifiers and sludge collectors within Australia and internationally, with outstanding results. Based on sales since 1991, more than 14,000 ML/day of water is being produced worldwide using MRI Lamella plates.

Lamella Plates are generally fabricated from 304 or 316 stainless steel. They can be installed in tanks constructed from various materials, including metal and concrete. In addition to Lamella plates, Aquatec Maxcon can also offer the following MRI technologies to assist in the Lamella clarification process:

- Port Helical Flow Diffusers (to diffuse flow energy entering the clarifier and eliminate floc shearing) (patented),
- Hoseless Cable-Vac Sludge™ Collector with tangential flow orifices for high efficiency, low headloss and reduced structural stress .

A Lamella plate sedimentation solution can be beneficial for almost any potable water treatment plant.

AQUATEC MAXCON



BOWEN WTP



WHAREROA WTP



CENTENNIAL MINE WTP

ADVANTAGES

Durable stainless steel construction:

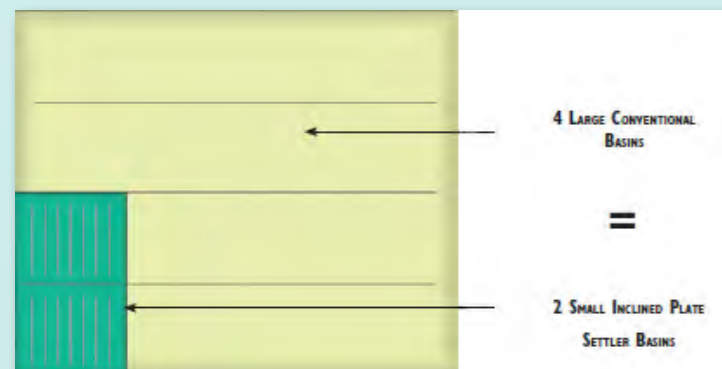
- Optimised solids settling using stainless steel plates with a smooth mill finish, ensuring no plate clogging or sludge build-up.
- Low maintenance; only a hose down required.
- Patented "Top Deck" metered flow distribution across the entire plate width for even flow upwards within the plates.
- Minimisation of thermal current and wind effects on settled water quality.

INFLUENT RAW WATER CHARACTERISTICS

The Lamella clarifier is proven to provide effective sedimentation, even with raw water turbidities of several thousand NTU.

ROBUST AND FLEXIBLE PROCESS

MRI Lamella clarifiers are robust in the treatment of raw water turbidity spikes and fluctuations. They can be applied to a wide range of flow rates and are individually designed for your application. Lamella plates can be applied to open basin clarifiers to increase the flow capacity of the existing structure. The Lamella plates are also beneficial for sludge thickening.



COST BENEFITS

MRI Lamella Clarifiers are cost effective and value for money.

CAPITAL EXPENDITURE

- Smaller footprint therefore less material required for tank construction.
- Corrosion-free material, permanent sedimentation solution.
- No inlet water pipe diffuser.

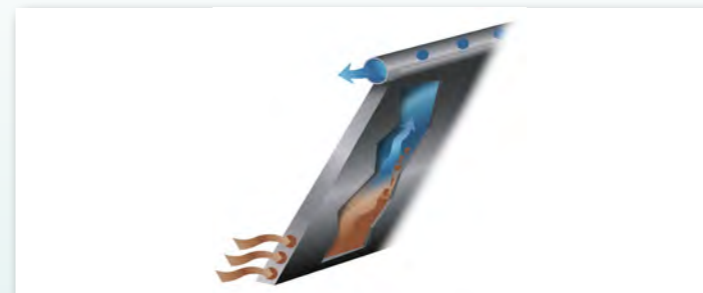
OPERATIONAL EXPENDITURE

- Minimal operator attendance and maintenance.
- Chemical Dosing reduction with effective settlement.

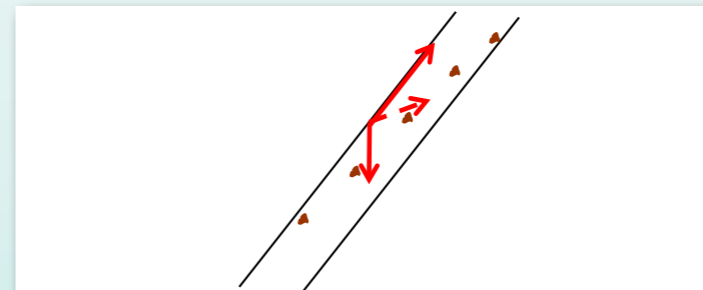


INSTALLATION OF PLATES AT CENTENNIAL MINE WTP

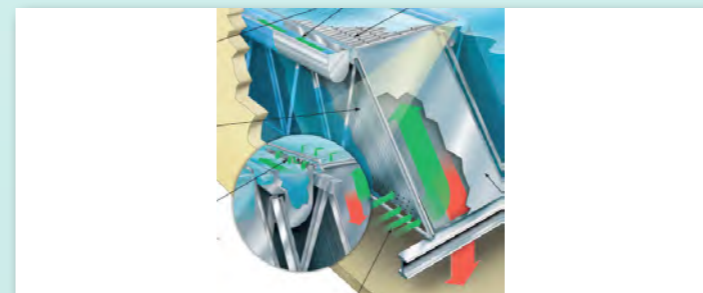
HOW THE MRI LAMELLA PLATES ACHIEVE OPTIMISED SETTLING



Flocculated water enters through the inlet ports on the side of the plate.



The particles travel through a trajectory dictated by fluid drag and gravity forces. The particles contact the plates and settle. Settling distance is minimised in comparison to open basins.



The clarified water exits into troughs via the flow control orifices in the effluent tubes. The sludge exits through the bottom of the plates.

LARGE SCALE MRI LAMELLA PLATE INSTALLATIONS WITHIN AUSTRALIA



LUGGAGE POINT WWTP (TERTIARY CLARIFICATION)



BUNDAMBA WTP (PRE-TREATMENT SEDIMENTATION)



MIRAMAR WTP, SAN DIEGO CA (800 ML/D)