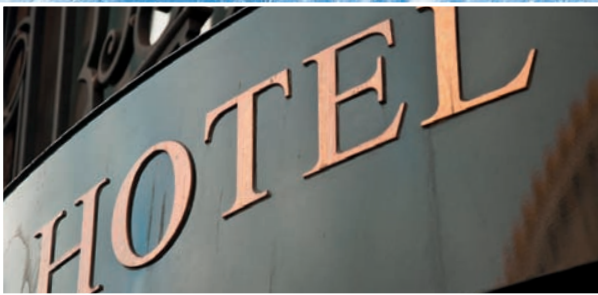


Simply clean water.



Mature technical solutions for the treatment of wastewater from residential areas, villages, hotels and commercial applications

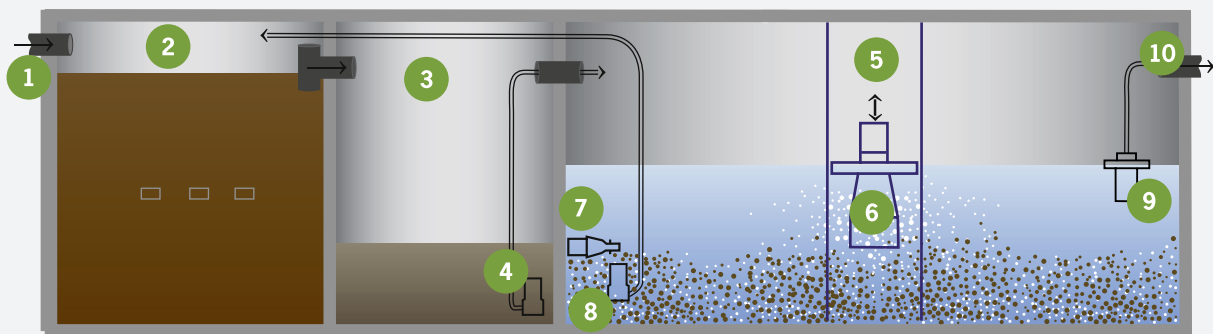
FULLY BIOLOGICAL SBR WASTEWATER TREATMENT PLANTS

AQUAmax[®]
PROFESSIONAL XLA(M)

FUNCTIONAL DIAGRAM



Our AQUAmax[®] PROFESSIONAL XLA(M) plants function this way



Schematic diagram; depending on the plant and installation variant

- | | |
|-----------------------------|--|
| 1. Inlet | 6. Floating surface aerator |
| 2. Primary treatment | 7. Mixer (depending on the system) |
| 3. Buffer | 8. Excess sludge pump (sludge return) |
| 4. Feeding pump | 9. Clear water decanter |
| 5. SBR tank | 10. Outlet |

The AQUAmax[®] PROFESSIONAL XLA(M) plants function according to the principle of the SBR process (Sequencing Batch Reactor) and are basically made up of 3 stages: primary treatment with integrated sludge storage / buffer / biological reactor.

Solids and floating solids are retained in the primary treatment stage. The wastewater containing little solids subsequently flows into the buffer. From there, the biological reactor is charged with wastewater (following an intermediate storage).

Treatment in the reactor takes place according to a fixed pattern:

After being filled with fresh wastewater from the buffer, with the XLAM plants there follows a denitrification phase under anoxic conditions (mixing without oxygenation), whereby nitrate is converted to nitrogen gas. This phase is dispensed with in XLA plants.

Subsequently, during an aeration phase, organic compounds are degraded and ammonium is converted to nitrite and nitrate. During the following settling phase the wastewater separates from the activated sludge. Thereafter, the treated wastewater is drawn off from the upper part of the reactor. Finally, the excess sludge is fed back into the primary treatment stage for batching.

The next cycle can begin with a renewed recharging.

The wastewater treatment plant system for industrial and municipal applications up to 1,000 PT

The AQUAmax® PROFESSIONAL XLA(M) range of models has been designed and standardised specially for residential areas and villages of between 400 and 1,000 inhabitants as well as for larger catering, hotel and commercial operations. The plant technology can be versatilely combined with various tank types and, with regard to the discharge quality, matched to different requirements.

The XLA systems are designed with focus on carbon reduction and nitrification. The XLAM systems are designed for extended purification efficiency with nitrification and denitrification. To match higher treatment goals additional accessories e.g. P-removal units and/or effluent disinfection units are available.

A detailed catalogue can be found in the download area (section AQUAmax® PROFESSIONAL) on www.atbnet.eu or please speak to our sales team. In addition to our standardized plants we naturally also offer individual solutions.

Core components

Automatic control proControl® 2:

- Supported by the filling level-dependent process steps all phases of the treatment process proceed in accordance with the specified program in the central control unit
- Any errors in the process are automatically indicated; depending on the priority of the fault the operation is continued under emergency operation or the plant is taken out of service until the fault is remedied

Floating surface aerator:

- Sufficient supply of oxygen to the wastewater for the deliberate degradation of carbon and for the nitrification
- Floats/matches itself continuously to the to the changing filling level (ensures an optimal oxygenation performance)
- Maintenance tasks can be executed without taking the SBR tank out of service

Mixer (for XLAM plants only):

- Enables an intensive mixing of the tank contents, without addition of oxygen, for the formation of an anoxic environment for the denitrification
- Supplied with guide system and lifting jib for easy installation and maintenance

Pump decanter:

- Clarified water is drawn off from the clarified water zone of the SBR
- Detachable motor part can be easily lifted out of the tank for maintenance purposes



ATB – award winning...

Environment Prize 1999 of the German Federal State of Mecklenburg-Vorpommern • Environment Prize Austria 2001 • Founder Champion 2002
OWL Innovation Prize 2003 • Financial Times Germany "Potential Innovation 2004" • "Finalist" Entrepreneur of the Year 2004, 2005 and 2006
"Finalist" Grand Prize of Small and Medium-sized Businesses 2005 • Innovation Quality Seal "TOP 100" 2006
"Winner" Grand Prize of Small and Medium-sized Businesses 2007 • "Winner" GreenTec-Awards 2014, Category Water and Sewage



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