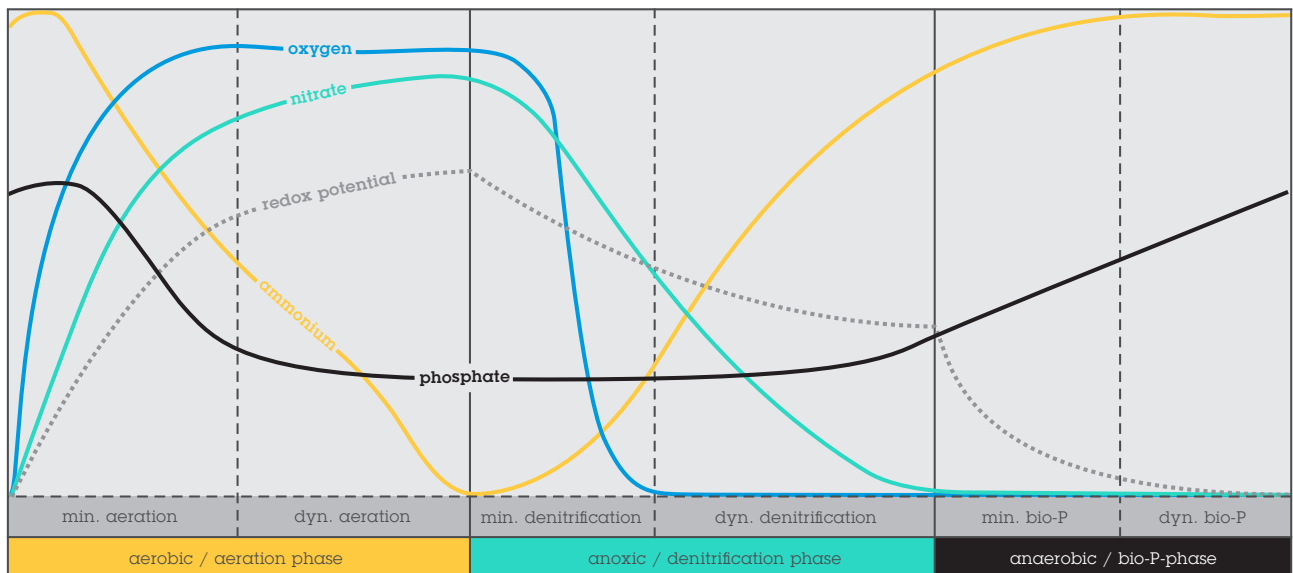




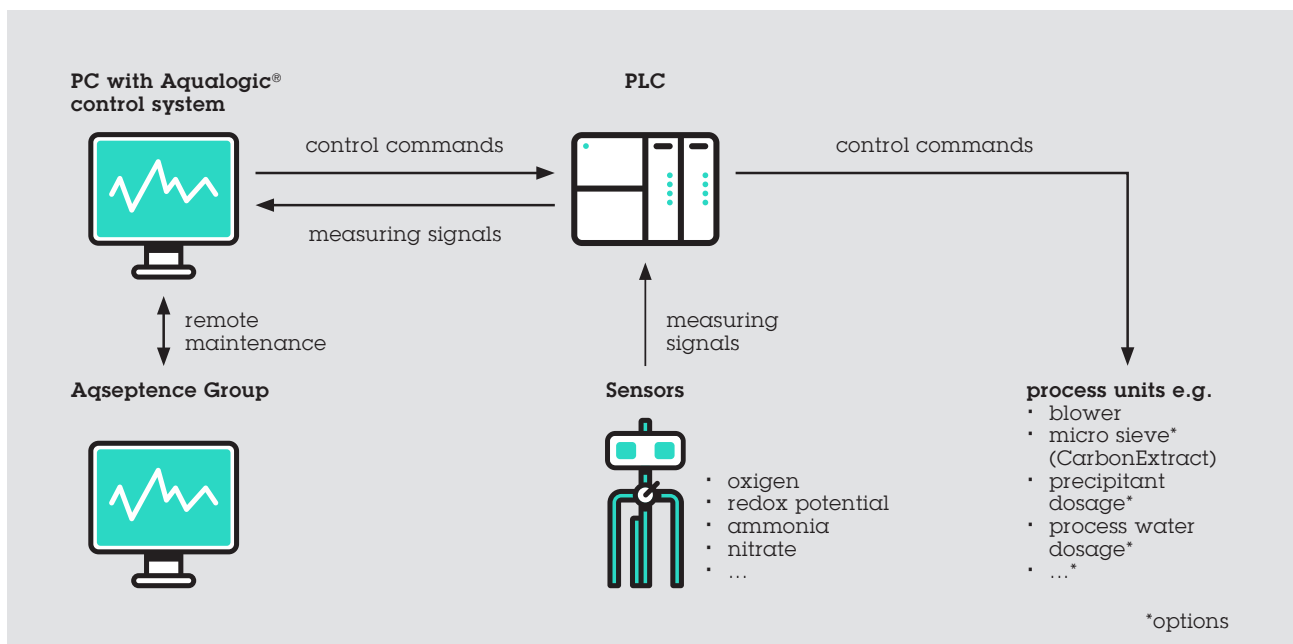
Reliable Performance.  
Sustainable Results.

## Passavant® Process Efficiency Aqualogic®

Course of various measurement parameters in intermittent operation



Aqualogic® installation scheme



## Options

### Aqualogic® Basic Controller

#### Control system Aqualogic®

#### Enerlogic®

#### Enerlogic® Dynamic Pressure Control

<b>Description</b>	Control system for load-dependent aeration of sewage treatment plants with activated sludge process, available with numerous add-on modules for additional control challenges	Upgrade for an even more energy efficient aeration  Higher energy savings can be realised by temperature- or ammonium-dependent aeration start intensity in combination with a load-dependent tuning of the oxygen concentration.	Control system for maintaining constant pressure of sewage treatment plants with electric air valves  The optimal pressure set point in the air pipe is calculated depending on the ammonium load. The valves opening degree and the compressor power is automatically adjusted.
<b>Type of control system</b>	Fuzzy Logic	Fuzzy Logic	Fuzzy Logic
<b>Your benefits</b>	<ul style="list-style-type: none"> <li>• Lower and more stable nitrogen values</li> <li>• Higher operational stability</li> <li>• Energy savings</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Significant energy savings</li> <li>• Load-dependent oxygen set point</li> <li>• Nitrogen values will not be exceeded</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Efficient control between the optimal valve opening degree, the necessary pressure and the corresponding compressor power</li> <li>• Load-dependent pressure set point</li> <li>• Energy savings</li> <li>• Safety net for unpredictable situations</li> </ul>
<b>Signal inputs</b>	<ul style="list-style-type: none"> <li>• Dissolved oxygen</li> <li>• Temperature</li> <li>• Ammonium (optional)</li> <li>• Nitrate (optional)</li> <li>• Redox potential (optional)</li> <li>• Flow rate (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Dissolved oxygen</li> <li>• Temperature</li> <li>• Ammonium</li> <li>• Nitrate (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure in the air pipe</li> <li>• Ammonium</li> </ul>
<b>Signal outputs</b>	Time of aeration, intensity of aeration	Initial aeration intensity, load-dependent dissolved oxygen set point	Load-dependent pressure set point, valve opening degree, intensity of aeration
<b>Area of application</b>	Sewage treatment plants with activated sludge process and intermittent, simultaneous, pre- or post-dentrification. Suitable for continuous or sequencing batch reactors	Sewage treatment plants with activated sludge process and intermittent, simultaneous, pre- or post-dentrification. Suitable for continuous or sequencing batch reactors	Sewage treatment plants with electric air valves

## Optional Add-on Modules

Aqualogic® Precipitant Dosage with Phosphate Analyzer	Aqualogic® Precipitant Dosage without Phosphate Analyzer	Aqualogic® CarbonControl	Aqualogic® Filtrate- / Process Water Dosage	Aqualogic® Recirculation Control
Control module for precipitant dosage  Load-dependent with phosphate analyzer	Control module for precipitant dosage  Aeration-dependent without phosphate analyzer	Control module for denitrification: Process dependent (Partial) bypass of primary sedimentation <b>or</b> variance of pre-sieving (e.g. Noggerath® Rotary Drum Screen RSH-MG) <b>and/or</b> carbon dosage	Control module to dose process water  The amount of the dose depends on the degradation process in the aeration tank. Process water is added into the basin during the low-load time.	Control module to determine the amount of recirculation
Fuzzy Logic	Fuzzy Logic	Fuzzy Logic	Fuzzy Logic	Fuzzy Logic
<ul style="list-style-type: none"> <li>• Load-dependent control or diurnal variation-dependent control possible</li> <li>• Phosphate limits are not exceeded</li> <li>• Precipitant savings</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Load-dependent control or diurnal variation-dependent control possible</li> <li>• Phosphate limits are not exceeded</li> <li>• Precipitant savings</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of nitrate reduction</li> <li>• Lower and more stable nitrogen values</li> <li>• Higher operational stability</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of the peak loads</li> <li>• Lower and more stable nitrogen values</li> <li>• Higher operational stability</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Prevention of a hydraulic overload</li> <li>• Energy savings</li> <li>• Lower and stable nitrogen values</li> <li>• Increased operational stability</li> <li>• Safety net for unpredictable situations</li> </ul>
<ul style="list-style-type: none"> <li>• Flow rate</li> <li>• Orthophosphate</li> </ul>	<ul style="list-style-type: none"> <li>• Flow rate</li> <li>• Dissolved oxygen</li> </ul>	<ul style="list-style-type: none"> <li>• Nitrate</li> <li>• Flow rate</li> </ul>	<ul style="list-style-type: none"> <li>• Ammonium</li> <li>• COD (optional)</li> <li>• Level indicator</li> </ul>	<ul style="list-style-type: none"> <li>• Nitrate denitrification (optional)</li> <li>• Nitrate nitrification</li> <li>• Flow rate</li> </ul>
Dosage amount	Dosage amount	Dosage amount	Dosage amount	Recirculation flow amount
Sewage treatment plants with chemical phosphate elimination	Sewage treatment plants with chemical phosphate elimination	Sewage treatment plants with pre-denitrification, post-denitrification <b>or</b> intermittent operation	Sewage treatment plants with process water reservoir, sludge digestion or buffer tanks	Sewage treatment plants with pre-denitrification

## Options

### Optional Add-on Modules

	<b>Aqualogic® Return Sludge Control</b>	<b>Aqualogic® Excess Sludge Control</b>	<b>Aqualogic® Sludge Age Control</b>
<b>Description</b>	Control system to determine the amount of return activated sludge	Control system to optimize the dry matter content in the aeration tank	Control module to optimize the age of the sludge based on the temperature and load of the sewage treatment plant
<b>Type of control system</b>	Fuzzy Logic	Fuzzy Logic	Fuzzy Logic
<b>Your benefits</b>	<ul style="list-style-type: none"> <li>• Prevention of a hydraulic overload</li> <li>• Higher operational stability</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• More positive sludge characteristics</li> <li>• Higher operational stability</li> <li>• Safety net for unpredictable situations</li> </ul>	<ul style="list-style-type: none"> <li>• Energy savings</li> <li>• More positive sludge characteristics</li> <li>• Higher gas yield</li> <li>• Higher operational stability</li> <li>• Safety net for unpredictable situations</li> </ul>
<b>Signal inputs</b>	<ul style="list-style-type: none"> <li>• Flow rate</li> <li>• Sludge level (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• MLSS aeration tank</li> <li>• Flow rate</li> <li>• Sludge level (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• MLSS aeration tank</li> <li>• MLSS return sludge pipe (optional)</li> <li>• Temperature</li> <li>• Flow rate</li> </ul>
<b>Signal outputs</b>	Amount of return activated sludge	Excess sludge amount	Excess sludge amount
<b>Area of application</b>	Sewage treatment plants with activated sludge treatment process	Activated sludge process	Sewage treatment plants without aerobic sludge stabilization in the aeration tank

### **Aqseptence Group GmbH** **Water Treatment Systems**

Kettelerstrasse 5-11  
97222 Rimpfing · Germany  
Phone +49 9365 8082-60  
Fax +49 9365 8082-50  
info.aqualogic@aqseptence.com

[www.aqseptence.com](http://www.aqseptence.com)

Version 1.1

The technical data stated in this brochure are indicative only and have to be determined for each individual case. Reserve technical changes.