



**AQUA-AEROBIC SYSTEMS, INC.**  
Partnering for Solutions

## **IntelliPro® Process Management System Features and Options**

The IntelliPro® Process Management System is a PC based system that features control and monitoring of the process to enhance the operation and performance of the system. The system is comprised of the following:

- In-basin instrumentation with mounting and communication module.
- PC with IntelliPro® software developed by Aqua-Aerobic Systems, Inc.
- Network settings to allow communication between the probes, the PLC and the PC.
- Process, instrumentation and software onsite training
- Free online support, including troubleshooting and software updates.

There are different level of monitoring and control with the IntelliPro® system:

### **1) IntelliPro System**

The most common parameters to control and monitor are DO, pH, TSS and Level Measurement instruments.

The software includes monitoring, control (passive or active) and trending of the most common parameters and process calculations, including Mass control, Aeration control and advanced tools that provide a simple solution for the operator to modify the system operation.

### **2) Addition of BNR Monitoring and Control**

In addition to the instrumentation and features listed above, nutrient removal features can be added. This incorporates Nitrate (NO<sub>3</sub>-N), Ammonia (NH<sub>3</sub>-N), Phosphate (PO<sub>4</sub>-P) and Oxidation-Reduction Potential (ORP).

Based on the additional instrumentation, the system's features are enhanced allowing for monitoring and control of biological nutrient removal and chemical addition to the system. This option also incorporates additional process variables to give the operator a full visualization of the performance of the system.

A list of the most notable features can be found in the table below.

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## Options Comparison

Features	IntelliPro	Addition of BNR	Comments
Display status of all the current process variables	X		All the instrumentation reading and current status of the phases are displayed.
Automatic DO Control	X		Note that these features can be selected to be in passive or active mode
Automatic Mass Control	X		
Automatic cycle adjustment based on influent flow or system performance.	X		
Advanced trending of system parameters and calculated process parameters	X		Trends are stored to allow for the operator to compare day-by-day operation and see how the system automatically reacts to certain situations.
Process variable automatic calculations (SRT, F/M)	X		Process parameters are calculated, displayed and trended.
Sludge Volume Index Calculation and trending tools	X		Also stores SVI values previously calculated
Comparison of current operation and design parameters	X		Allows for the operator to compare the current plant operation with the design conditions.
Operator adjustable settings and presets	X		All the settings are user friendly and completely adjustable to provide flexibility of operation of the system.
BioAlert™ Notifications	X		Notifications that alert the operator of potential process issues with recommended corrective action
Electronic process, mechanical and extensive process library.	X		The system includes support module where the operator can find all the mechanical and process information needed to operate and optimize the plant operation and performance.
Aeration relational variables (OUR, AOR, Field transfer rates)		X	Allows for the operator to understand the aeration demand and aeration system's performance at all times.
Nitrification rate		X	Trends rates of nutrient removal to allow for the operator to measure the effectiveness of the system in each cycle.
Denitrification rate		X	
Biological phosphorus release rate		X	
Biological phosphorus removal rate		X	
Oxidation-reduction potential (ORP)		X	ORP is displayed, trended and utilize to enhance the phosphorus and nitrate removal in the system.
Sludge production and sludge yield calculations		X	Accurate daily sludge production of the system is calculated and trended.
Automatic aeration time adjustment based on nitrogen in the system and effluent required		X	Ammonia and nitrate levels will modify the aeration cycle to meet effluent required.
Metal salt addition control based on phosphorus level		X	Chemical addition requirements are calculated. Operators can manually dose chemicals or let the IntelliPro control the chemical feed systems automatically.
Carbon addition to enhance phosphorous release		X	
Carbon addition control to enhance denitrification		X	
Carbon addition control for under loaded plants		X	
Advanced BioAlert™ notifications		X	Additional notifications with emphasis on Biological Nutrient Removal
Free Online troubleshooting available from Aqua	X		High speed internet connection required. Service includes mechanical and process troubleshooting.
Free IntelliPro software upgrades	X		Excludes major system enhancements or addition of features not included in purchased version (available for additional cost)
1-Year Service Agreement	X		For the instrumentation, only with Hach Equipment

**Note: To take advantage all the features of the BNR version, all the probes and analyzers must be included.**

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