



IntelliPro® Process Management System Flow Characterization Features

The Flow Characterization IntelliPro® system is a PC based system that features monitoring of the process parameters in different locations of the plant. Process data is collected, analyzed and trended. The system provides a full statistical analysis of the data, providing a visual aid for the operator which he can then use to enhance the operation and performance of the system. The IntelliPro will include upgrades to the control system as follows:

- PC with IntelliPro® software developed by Aqua-Aerobic Systems, Inc.
- Communication settings between the probes, the gateway/PLC and the PC.
- Instrumentation Package for IntelliPro System.
- Process, instrumentation and software onsite training.
- Free online support, including troubleshooting and software updates.

The IntelliPro system will receive signals from the instrumentation provided in the equipment package. The in-basin instrumentation communicates with an instrumentation gateway or a PLC control panel and PC via an internal digital network.

The system will monitor signals from Dissolved Oxygen (DO), pH, Ammonia ($\text{NH}_3\text{-N}$), Nitrates ($\text{NO}_3\text{-N}$), Phosphate ($\text{PO}_4\text{-P}$) and TSS sensors (if provided in the package).

The software includes monitoring, statistical analysis and trending of the most common parameters, enhanced trending and advanced tools that provide a simple solution for the operator to modify the system operation.



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

IntelliPro® Data Characterization Features

Features	Comments
Display status of process variables	All the instrumentation reading and current process conditions.
Statistical Evaluation	Full statistical analysis allows for the comparison of specified conditions and defined (or required) parameters. This includes but is not limited to Mean (Average), Standard Deviation, Coefficient of Variation (Cv), Variance (v), Percentiles, etc.
Composite Sampling Option	The system allows for characterization of a defined time interval which can vary from 1-hour to 12-Hours.
Advanced trending of system parameters	Trends are stored to allow for the operator to compare day-by-day operation. This gives the operator a visual aid to determine how the system is performing.
Parameters Comparison	The system allows establishing relationship between parameters over a period of time.
Overlay Historical Values	Allows for the operator to compare the current plant operation with the design conditions.
Operator adjustable settings and presets	All the settings are user friendly and completely adjustable to provide flexibility of operation of the system.
BioAlert™ Notifications	Notifications that alert the operator of potential process issues with recommended corrective action.
Electronic Manuals	The system includes support module where the operator can find all the hardware and software operation and maintenance manuals.
Free Online troubleshooting available from Aqua-Aerobic Systems	High speed internet connection required. Service includes mechanical and process troubleshooting.
Free IntelliPro software upgrades	Excludes major system enhancements or addition of features not included in purchased version (available for additional cost)

Notes:

- 1) High speed internet connection with recommended minimum download and upload speeds of 1 MB/s shall be available (by others). A fixed IP address is required from the internet service provider.
- 2) If the system flow will be incorporated in to the IntelliPro, influent flow meter signal shall be available directly hardwired to the PLC panel or instrumentation gateway.

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