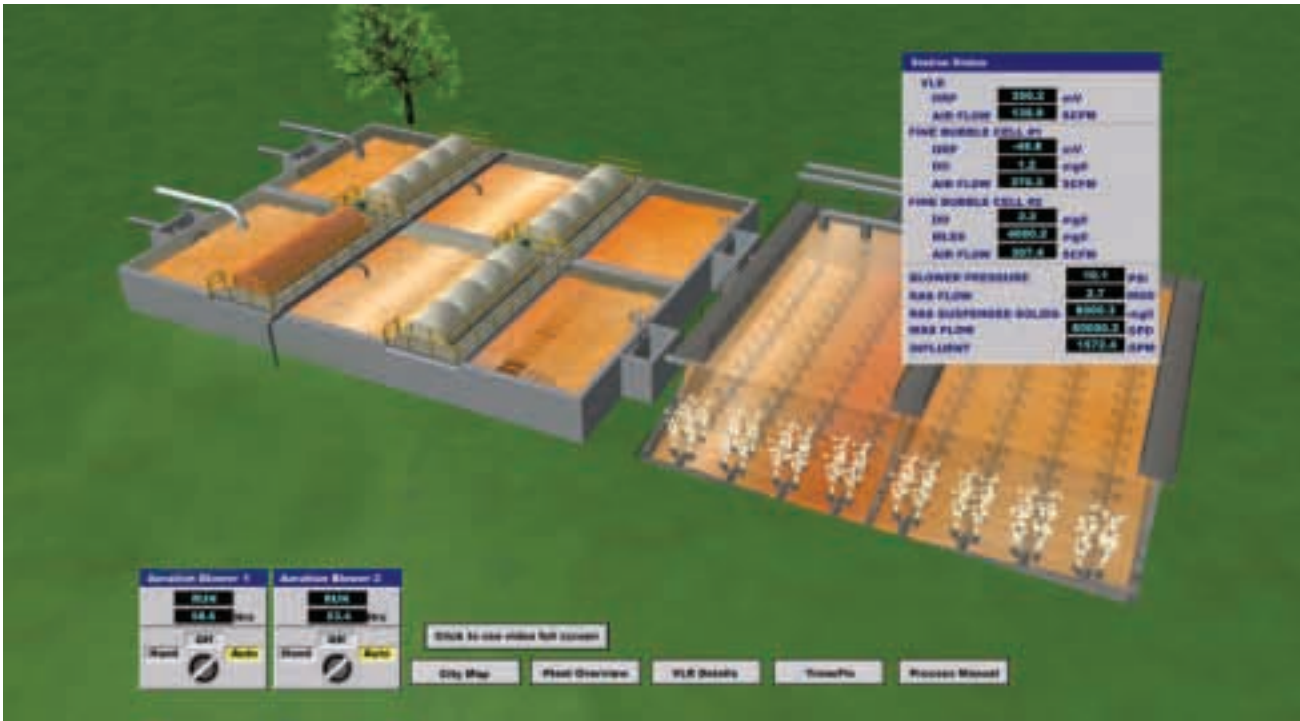


SmartBNR™ Controls That Work With Operators

Water Technologies

SIEMENS



The SmartBNR™ System Empowers Operators, Cuts Energy Costs and Enhances System Reliability.

Most plant controls are nothing more than a controller connected to a DO probe, programmed by someone who may be unfamiliar with your actual process. Siemens provides a control system designed by our process engineers who have a thorough understanding of the complete process.

SmartBNR™ Controls Offer Capabilities Unmatched By Any Other Available System.

- Precise control of simultaneous nutrient removal in a single reactor.
- Predictive aerator response to reactor conditions.
- Integrated control strategy using both oxidation-reduction potential (ORP) and dissolved oxygen (DO).
- Automated sludge wasting maintains an optimum sludge age.
- Automated stormflow response ensures that no solids are lost over the weirs.

SmartBNR™ Systems Deliver Unparalleled Performance Guaranteed Process Performance

- Highly reliable SmartBNR™ systems include a process performance warranty.

Minimum Power Costs

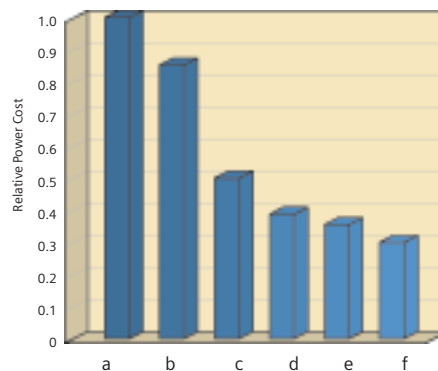
- SmartBNR's power usage is guaranteed to deliver absolute minimum power costs.

Hands-Free Operation

- Automated SRT controls and stormflow modes allow for reliable hands-free operation.

Untended Plant Operation

- SmartBNR's ability to interface with existing automation makes dependable untended plant operation a reality for any system.



SmartBNR™ systems reduce aeration costs dramatically.



Automated Stormwater Mode

A rainstorm in the middle of the night often requires an operator to run to the plant to keep solids from washing out. The SmartBNR™ prevents this problem by automating the stormflow mode of operation to ensure that no solids are lost over the weirs. Duty operators can direct their attention elsewhere.

Envirex® Smart Process Controls

Siemens Water Technologies offers a group of products designed to automate operation of your plant and get the highest degree of reliability at the lowest operational cost. An integrated solution from Siemens ensures that you will have not only the most efficient plant possible, but also the most reliable plant possible.

Aerated-Anoxic Aeration Control

The SmartBNR™ system optimizes oxygen delivery using an aerated-anoxic reactor. The process allows for simultaneous nitrification/denitrification in a single reactor. It also allows for enhanced biological phosphorus removal without using expensive and inefficient anaerobic tanks. Aerated-anoxic processes have been an Envirex® mainstay for many years. Among such systems which can benefit from the SmartBNR™ process control are: Orbal®, Vertical Loop Reactor (VLR®), VertiCel®, Cannibal® and BioNutre™ processes.

Automated SRT Control

The main function of activated sludge is to turn soluble waste into biosolids. Control of the solids inventory in this process is the key to running a plant well. The SmartBNR™ system measures the solids inventory in the process and wastes sludge to maintain a constant target sludge age.



The Strantronic® 880 transmitter from Siemens ChemFeed & Disinfection Group monitors ORP with an accuracy of $\pm 0.05\%$ per year.

SmartBNR, Strantrol, Orbal, Vertical Loop Reactor (VLR), VertiCel, Cannibal and BioNutre are trademarks of Siemens, its subsidiaries or affiliates.

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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