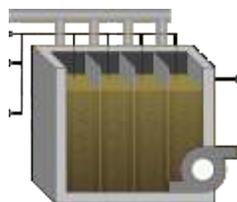
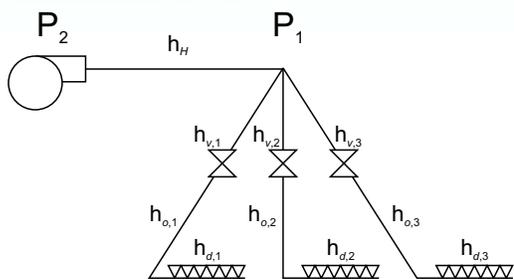
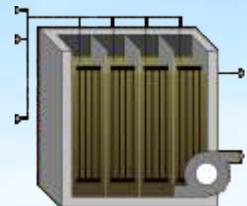


What's NEW in GPS-X™ 6.5

Membrane-Aerated Bioreactor

The new membrane-aerated bioreactor (MABR) model predicts the performance of activated sludge systems using biofilm populations growing on membrane-aerated media. The Hydromantis biofilm model has been modified and updated to simulate biofilm growth on membranes that provide aeration through the media surface. The model has been successfully calibrated to G.E.'s Zeelung MABR system.



Air Delivery Headloss Model

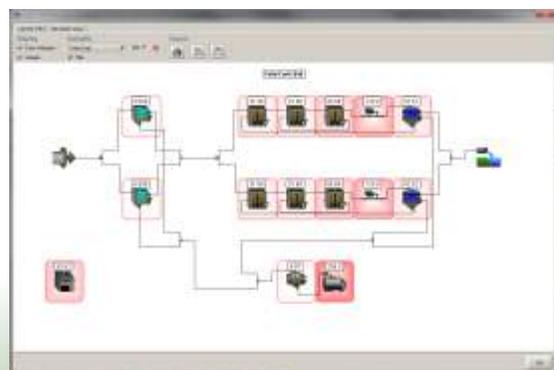
The powerful new air delivery headloss model allows users to model the pressure losses in the air delivery system. The model predicts the airflows, blower pressures and valve positions in a typical activated sludge aeration system. There are two different valve control systems (Most Open Valve and Pressure Set point) as well as several different valve models available.

- h_d : Diffuser Pressure Loss, kPa
- h_o : Distribution Pipe Pressure Loss, kPa
- h_v : Valve Pressure Loss, kPa
- h_H : Main Header Pressure Loss, kPa
- P_1 : Main Header Outlet Pressure, kPa
- P_2 : Blower Pressure, kPa

New Energy Usage and Operating Cost Diagrams

With one click of a button, you can visualize the energy usage or operating cost that is associated with each unit process or view a summary of the entire plant.

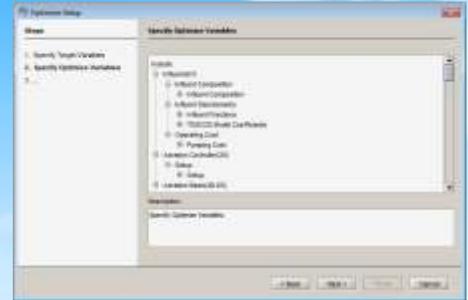
Click on any unit process to get a detailed breakdown and a corresponding pie-chart.



New Process Optimizer Setup

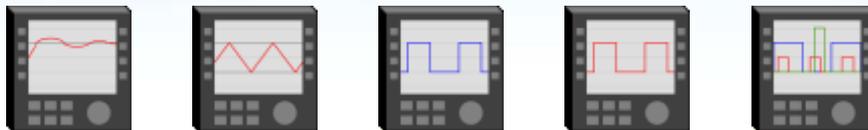
The GPS-X Optimizer feature is now set up through a simple step-by-step wizard. This powerful mathematical optimization tool finds the optimal set of input parameters to achieve a given objective.

For example, the GPS-X Optimizer can find the best set of aerated and anoxic zone volumes to minimize effluent Total Nitrogen.



Process Control

A new "Process Control" object group has been created. New objects for the PID, Timer, Flow Timer, Scheduler and ON/OFF controllers have been implemented for clarity and ease-of-use.



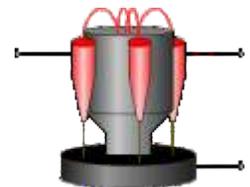
Upgrades to Pumping Energy Cost Calculations

The pump model has been updated with several new options for specifying pump performance and efficiency to estimate pumping energy cost for both fixed speed and variable speed pumps.



Hydrocyclone

The new hydrocyclone model provides an easy way to preferentially settle out the heavier elements of a wastewater stream. Individual capture rates are available for each state variable. The model is calibrated for the preferential separation of heavier biomass such as Anammox granules.



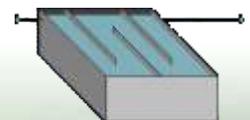
Advanced Oxidation

The new advanced oxidation object in GPS-X can be used to simulate dosage of oxidants for removal of soluble COD.



Updated Chlorination Model

The new chlorination model in GPS-X 6.5 allows modellers to predict disinfection performance as well as the formation of several chlorine byproducts under a range of different operations.



+ much more.

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