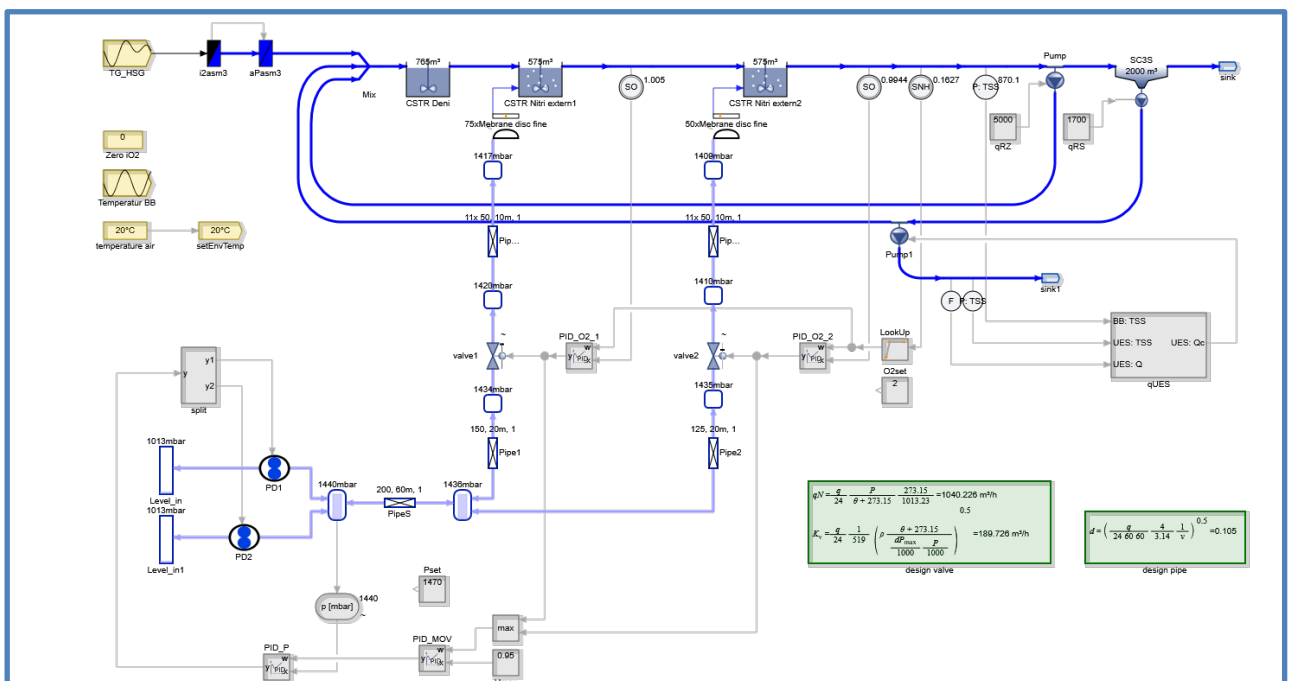


Simulator for Wastewater Treatment

*Modeling and simulation of Wastewater Treatment Plants
Sewer Systems and Rivers*

SIMBA#water is an integrated modeling and simulation platform for sewer networks, wastewater treatment plants and Rivers.

- Integrated models of process, equipment, controls and costs
- Integration of design and simulation for planning
- Development and testing of control strategies
- On-line execution for operational support (Digital Twins)



WWTP model including aeration system and control





Features and Services

Model Library "Water"

- Activated sludge and digestion models
- Membrane bioreactors, digester and sludge treatment models
- Biofilm technologies (e.g. MBBR, MABR, AGS, trickling filters)
- Extended Supply and Nexus Libraries
- Equipment, control of aeration systems (blowers, valves, diffusors)
- Sewer networks (hydrological and hydrodynamic modelling approaches)
- River transport and quality
- **New:** activated sludge reactors (e.g. multi-stage plug-flow, step-feed, oxidation ditches)
- **New:** river water quality assessment according to Urban Pollution Management (UPM) Manual
- **New:** drinking water models according to DIN-38404-10:2012-12
- **New:** adsorption models (powdered activated carbon) as 4th treatment stage

Selected Features

- Enhanced Process Matrix Editor, extensive set of model verification checks
- Extended home screen (videos, manuals, templates), Sankey diagrams
- Powerful graphical scripting tools, script execution via WEB apps
- Support of laboratory experiments with the Batch Library
- **New:** support for algebraic equation systems
- **New:** extended Model-Based Predictive Control (MBPC) Library (SISO, MIMO control)
- **New:** design and evaluation of WWTPs according to the German Water Association publication T4/2016 "Design of sewage treatment plants in warm and cold climate zones" ([EXPOPLAN Tool](#))
- **New:** real-time execution online for operational support through [opsCTRL](#) ([digital twins](#))

Support and Services

- Industry leading support including Training-on-the-job options
- **New:** remote training framework offering modular options to tailor to client needs
- Simulation studies
- Development of control concepts
- **New:** videos and extended manuals



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