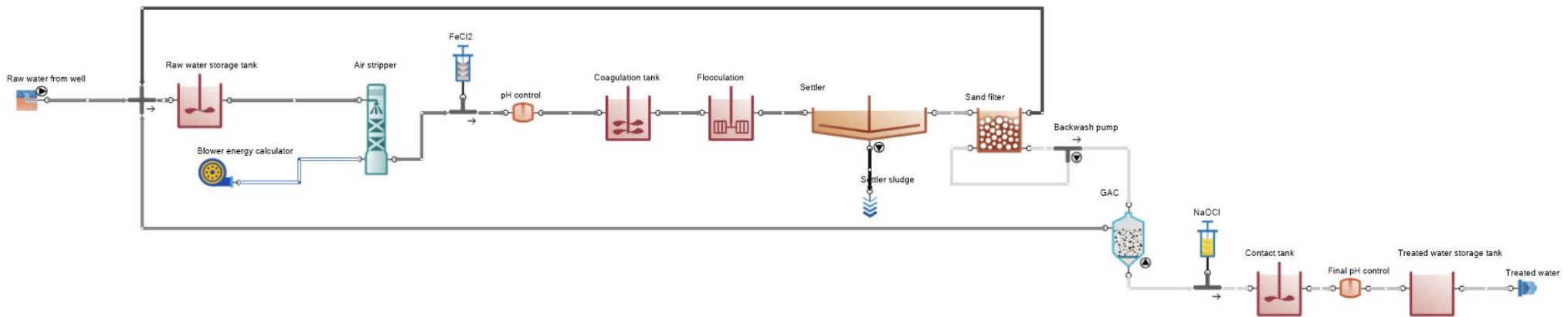# WHY CHOOSE DYNAMIZU 26.0

DYNAMIZU (newborn sister of SUMO) is one of the first dynamic simulators focused on water: potable, effluent reuse and ultrapure applications. It comes with detailed ultrafiltration and reverse osmosis models, energy and cost calculations, water industry-specific chemicals, surface water and municipal wastewater effluent inputs, engineer-oriented adsorption and gas exchange models. Robust steady-state solver, easy scenario handling, automated analysis and optimization, and a ton of other features.

THE DYNAMIZU ADVANTAGE

➡ Extensive **calibrated model library** for water treatment and water reuse processes, including micropollutants;

➡ **Supported** by the largest[1] water-wastewater simulation company, round the clock;

➡ DYNAMIZU is the only commercial **open process source** process water simulator[1] (coded in Excel tabular format in SumoSlang©);

➡ Virtually **unlimited** biological and physico-chemical treatment **configurations** available[2]; compatible with Sumo

➡ Only simulator that allows complete flexibility to **build your own models** or modify any models in DYNAMIZU;

➡ Integrated **steady-state and dynamic simulations**, popups, sticky notes, undo, Book of SumoSlang©, documentation in the Dynamita Wiki.

➡ Advanced simulation features: **Analysis and optimization**

Ask for more details: info@dynamita.com or visit dynamita.com

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[1] To the best of our knowledge

[2] If we don't have it, we'll build it. Timeline and development cost (if any) is case specific

TECHNICAL SPECIFICATIONS

▪ Biokinetic/chemical models

➥ DYNAMIZU MODELS (DYNAMITA IN-HOUSE RESEARCHED/DEVELOPED)
- Water and heat balance
- General water treatment library
- Micropollutant library
- Two-step nitrification/denitrification
- Flocculation of colloidal matter
- Aeration
- Gas transfer, stripping
- Sulfur oxidation/reduction/precipitation
- Chemical P removal (iron/alum)
- Scaling risk and precipitates,
- Chloramine formation, dechlorination
- pH, alkalinity
- Controllers (PID, deadband, timer, on-off, ratio)

➥ YOUR OWN MODELS
- Model editor/automated mass balance check
- Dedicated process engineering/research support
- SumoSlang – built-in intuitive simulation language for any dynamic or algebraic model

▪ Process units/configurations
- Easy, flexible influent specification

➥ MEMBRANES
- Microfiltration (MF)
- Ultrafiltration (UF)
- Reverse Osmosis (RO)
- Membrane contactor

➥ ORGANIC POLISHING
- Granular Activated Carbon (GAC)
- Biological Activated Carbon (BAC)

➥ REACTORS
- CSTR
- MBBR, IFAS
- MBR
- Biological filter

➥ MECHANICAL SEPARATORS
- Pretreatment
- Settlers
- DAF
- Sand filters
- Solids treatment

➥ ION EXCHANGERS
- Cation exchanger
- Anion exchanger
- Mixed bed ion exchanger

▪ Strong points

➥ EASIEST SOFTWARE TO GET UP TO SPEED WITH
- GUI Windows 10, 11 based (compiled models are platform independent)
- Runs on Mac within Parallels or Windows
- Unique, user-friendly task-flow based software design, undo, Excel report
- Mass flow displays/annotation directly on drawing board. Publication ready
- Expert support in process software
- Training courses, technology transfer
- Open API connection to 3rd party apps, Excel toolkit complementing DYNAMIZU
- Dynamita Influent Tools
- Dynamita Aeration Tool
- Dynamita Pump and Blower Tools

TECHNICAL SPECIFICATIONS

■ Biokinetic/chemical models

➡ ENERGY AND COST CALCULATION LAYER ON TOP OF PROCESS LAYER

■ Process units/configurations

➡ OTHER UNITS
- Air stripper, Carbonator
- Disinfection (chlorination, UV, ozonation)
- Heat exchangers, Evaporator
- DO, pH, temperature control

➡ FLOW CONTROL ELEMENTS
- Pumps, bypass weirs, channels, EQ basin
- Flow combiners/dividers
- Inline chemical dosage units (polymers, metal salts, acid, base, buffers, disinfectants)

➡ TOOLS
- Sum, ratio, totalizers, noise, mapping...

➡ CONFIGURATIONS
- Unlimited complexity
- Typical example plants (e.g. softening, desalination, deep aquifer, reuse facility, ultrapure water system, etc.) provided with software.

DYNAMITA OFFICES

➡ Western Europe (France, Luxembourg, Austria)

➡ Eastern Europe (Hungary)

➡ North America (Canada)

OFFICIAL REPRESENTATIVES

➡ South Korea, Japan, China, Vietnam, Brazil, Colombia, Mexico, Uruguay, Benelux

PRICING

➡ Commercial volume discounts, classroom and research pricing, standalone, mobile, network and container licenses for annual lease or outright purchase.

➡ Training is available online, at your location or at Dynamita offices.

Ask for more details or our detailed price list: info@dynamita.com or visit dynamita.com