

PRODUCT DATASHEET

FAST Tank System

Modular wastewater treatment | 10 to >100,000 m³/day

DATASHEET NO.

DS-YS-FAST-R03

F
FACTORY-BUILT

A
ASSEMBLED

S
STEEL

T
TANK SYSTEM

ENGINEERING BASIS

FAB

FACTORY-BUILT MODULES

Tank panels, partitions and stiffening are fabricated under controlled workshop conditions before site assembly.

FEA

STRUCTURAL VERIFICATION

Plate thickness, stiffeners, supports and load cases are checked for the selected geometry and project design basis.

MOC

STEEL MATERIAL OPTIONS

SS304, SS316 or coated carbon steel is selected against wastewater chemistry, exposure and lifecycle requirements.

MOD

MODULAR CAPACITY

Parallel tanks and treatment trains allow phased capacity from compact packages to large municipal installations.

PRODUCT OVERVIEW

The FAST Tank System is a factory-built, site-assembled steel wastewater-treatment platform configured as one or more process modules. Tanks, partitions and structural reinforcement are engineered around the selected biological process and hydraulic profile. Modular manufacture transfers substantial work from the construction site to a controlled workshop environment, enabling phased capacity, rapid assembly and a compact plant layout. SS304, SS316 and coated carbon-steel construction are available to suit wastewater chemistry, environment and lifecycle requirements.



PROJECT TANK FABRICATION



Actual-project rectangular process tank | factory-fabricated steel construction



Actual-project hopper-bottom process tank | integrated supports and discharge zones

PRODUCT DATASHEET

Process & Engineering Configuration

Defined biological processes | structural verification | insulated operation

PROCESS TECHNOLOGY - WHAT THE ABBREVIATIONS MEAN

A/O	A ² /O	MBR
In this datasheet: Anoxic / Oxidic . The anoxic zone supports denitrification; the following aerobic zone removes organics and nitrifies ammonia.	Anaerobic / Anoxic / Oxidic . Adds an anaerobic stage to support biological phosphorus removal, while the anoxic and aerobic stages remove nitrogen and organics.	Membrane Bioreactor . Biological treatment is combined with membrane solids separation for compact layout and consistently low-turbidity effluent.

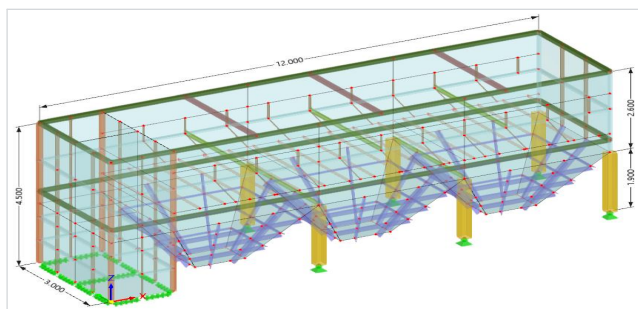


* Anaerobic stage applies to A²/O. Equalization, tertiary treatment and sludge handling are configured to project requirements.

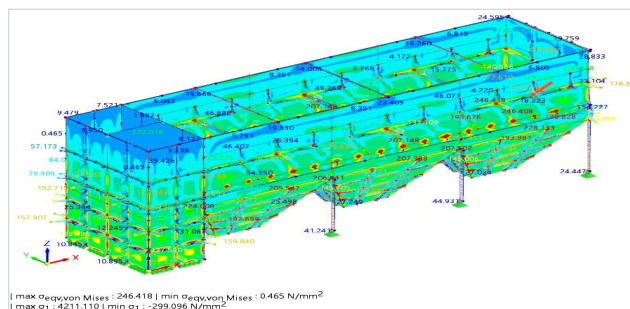
TECHNICAL CONFIGURATION

TECHNICAL ITEM	CONFIGURATION
Process selection	A/O, A ² /O, MBR or a project-specific combination selected from influent data and discharge/reuse target.
Tank construction	Prefabricated welded SS304, SS316 or coated carbon-steel modules with internal partitions and stiffeners.
Structural verification	Project-specific load combinations, plate/stiffener checks, deflection limits and finite-element verification as required.
Module arrangement	Single or parallel trains; rectangular, compartmented or hopper-bottom geometry; above-ground or integrated installation.
Aeration and mixing	Fine-bubble aeration, mixers and internal recycle selected for oxygen transfer, suspension and biological nutrient removal.
Solid separation	Secondary clarification or membrane separation, depending on effluent quality, footprint and operating philosophy.
Temperature insulation	Optional external insulation and protective cladding reduce heat loss or gain; heating or cooling interface is offered where active temperature control is required.
Controls	Local PLC/HMI with instrument integration, alarms and optional remote monitoring / SCADA interface.
Corrosion protection	Material grade, coating system, surface preparation and lining selected for wastewater chemistry and service environment.

PROJECT-SPECIFIC STRUCTURAL VERIFICATION



Finite-element geometry: tank walls, partitions, hoppers and support conditions



Representative von Mises stress evaluation for the project load case

PRODUCT DATASHEET

Capacity, Scope & Selection

Scalable modular architecture | phased expansion | project-specific engineering



Representative large-capacity municipal installation | multi-train modular process arrangement

>100,000

m³/day scalable capacity through project-specific parallel treatment trains

ADDITIONAL SIZES AVAILABLE ON REQUEST

INDICATIVE CAPACITY RANGE

DESIGN BAND	CAPACITY m ³ /day	TYPICAL ARRANGEMENT	APPLICATION
Compact	10-100	Single compact module	Municipal, camp or decentralized loads
Small	>100-500	Single / parallel modules	Commercial and small community plants
Medium	>500-2,500	Parallel process modules	Municipal and industrial wastewater
Large	>2,500-10,000	Multi-train modular plant	Large communities and industrial sites
Multi-train	>10,000-40,000	Phased modular treatment trains	Municipal expansion and regional systems
High / mega-scale	>40,000-100,000+	Engineered multi-train architecture	Capacity expanded by trains; custom sizes on request

Capacity bands are preliminary guidance. Final process, module / train count, volume, footprint, materials, options, standards and guarantees are confirmed from actual wastewater, site conditions and client specifications.

STANDARD SUPPLY SCOPE	EXTRA OPTIONS
- Prefabricated process tanks, internal partitions and structural stiffening - Aeration, mixing, recycle and sludge-withdrawal equipment as selected - Clarification or membrane-separation package - Package piping, valves, instruments and local PLC/HMI within the agreed boundary - Access platforms, ladders and handrails where included in the layout	- Temperature insulation, protective cladding and heating interface - Tertiary filtration, UV or chlorination / dechlorination - Odor control, chemical dosing and sludge dewatering - Remote monitoring, SCADA and containerized electrical/control room - External balance-of-plant and civil/foundation scope by agreement

INFORMATION REQUIRED FOR FINAL SELECTION

1 DESIGN FLOW	2 INFLUENT QUALITY	3 REQUIRED EFFLUENT	4 SITE BASIS
Average, peak and minimum hydraulic load	BOD, COD, TSS, TN, NH4-N, TP, salinity and temperature	Discharge or reuse standard and disinfection requirement	Plot limits, elevation, ambient conditions, utilities and installation constraints