



**Glanua Mobile Wastewater
Treatment Solutions**

Design • Build • Operate • Optimise

Glanua
For a cleaner planet

Why Choose Glanua

Industry-Proven Performance

Successfully deployed on live sites, maintaining uninterrupted supply during major upgrades and permanent installations.

Glanua Mobile Wastewater Treatment Solutions provide a flexible, resilient and future-ready approach to water treatment delivery, ensuring compliance, continuity of supply and confidence in even the most challenging operating conditions.

Glanua
For a cleaner planet

Key Benefits of Glanua Mobile Wastewater Treatment Solutions

- Consistently achieves high levels of contaminant removal (BOD, COD, TSS, FOG), ensuring compliant discharge to environmental standards and protecting receiving waters
- Modular, containerised solutions that can be rapidly deployed and tailored to specific wastewater characteristics, flow rates and site constraints
- Reduced operational and maintenance costs through energy-efficient technologies, automation, and optimised chemical usage
- Reliable performance under variable and shock load conditions, maintaining treatment efficiency during peak flows or changing influent quality
- Supports regulatory compliance with integrated monitoring, control systems, and data-driven optimisation for consistent performance
- Rapid mobilisation and reduced programme risk through off-site manufacture (DfMA) and plug-and-play installation, minimising on-site construction and disruption
- Scalable and flexible systems that can be easily expanded, relocated, or integrated with existing infrastructure to meet evolving capacity demands
- Lower carbon footprint through efficient process design, reduced material usage, and alignment with circular economy and sustainability principles
- Enables temporary, emergency, or interim treatment solutions. Ideal for maintenance shutdowns, capacity shortfalls or rapid response scenarios
- Full lifecycle support available including design, build, operation, maintenance, and remote monitoring, ensuring long-term performance and reliability

Typical Applications:

- Municipal Wastewater Treatment Plants
- Temporary, emergency or permanent capacity support during upgrades or demand growth
- Industrial Wastewater Treatment Systems
- Process Wastewater treatment, resilience support and compliance-driven upgrades
- Emergency and Resilience Deployment
- Rapid response to increased loadings, asset failures or process related failures

Designed to Meet Water Industry Standards:

- Engineered in accordance with recognised utility technical standards and CE certification
- Treatment Compliance to local and national environmental standards
- Designed and monitored in accordance with European Union, EA and EPA standards
- Expert technical support from Glanua's inhouse Engineering Department
- Delivered and supported by Glanua's in-house design, manufacturing, commissioning and operational teams
- Incorporates advanced monitoring, control, and automation systems (SCADA/telemetry) to provide real-time performance tracking and auditable compliance reporting
- Designed in line with best practice process engineering and MEICA standards, ensuring safe, efficient, and robust system performance across all operating conditions
- Utilises proven and industry-recognised treatment technologies to deliver reliable treatment and consistent discharge standards
- Designed to align with sustainability and circular economy principles, supporting water reuse, reduced emissions, and long-term environmental protection

M Series - Modular WWTP Systems

Technical Overview:

The Glanua M Series utilises proven Moving Bed Biofilm Reactor (MBBR) technology along with an anoxic zone to provide enhanced biological treatment for municipal and industrial wastewaters. Units can be installed as standalone systems or integrated with Glanua DAF or clarifiers Series processes to form a complete treatment solution.

The Solution:

System operations from 550 PE to 1100 PE with scalability achieved through modular and parallel arrangements depending on loadings required.

	PE	Flow (FFT)	Average Flow	BOD Load (kg/d)	TKN Load (kg/d)	Effluent Ammonia	BOD < 15 mg/l
M1100	1100	632.5	247.5	66	12.1	No requirement	BOD < 15 mg/l
M950	950	546.25	213.75	57	10.45	10 mg/l	BOD < 15 mg/l
M750	750	431.25	168.75	45	8.25	5 mg/l	BOD < 15 mg/l
M650	650	373.75	146.25	39	7.15	2 mg/l	BOD < 15 mg/l
M550	550	316.25	123.75	33	6.05	1 mg/l	BOD < 15 mg/l
M550	550	316.25	123.75	33	6.05	0.5 mg/l	BOD < 15 mg/l

* Clients should contact Glanua to define final system sizing based on treated water requirements.

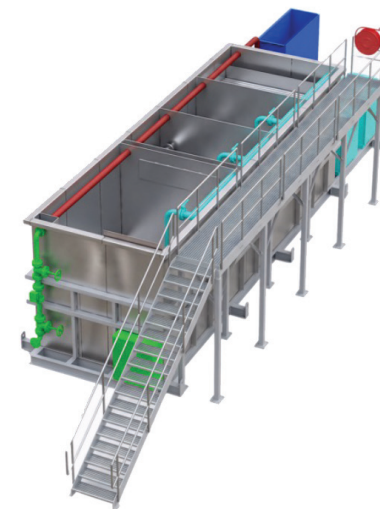
Key Technical Features:

- High-efficiency biofilm treatment using free-moving protected surface area media
- Optimised oxygen transfer and mixing through integrated fine - bubble aeration
- Modular reactor design suitable for new builds or retrofits into existing tanks
- Automatic dissolved oxygen and ammonia load control for stable biological performance
- Low sludge production due to attached-growth biomass characteristics
- Robust media retention screens preventing loss of carriers during flow fluctuations
- Fully automated control system with real-time monitoring of DO, ammonia, ORP, pH, and temperature

Design Loadings		
BOD load per PE	60	gm/d
TKN load per PE	11	gm/d
Avg. Flow per PE	225	ltr/d
FFT per PE	575	ltr/d
BOD conc.	266.7	mg/l
TKN conc.	48.9	mg/l

Typical Applications:

- Biological treatment for municipal and industrial wastewater plants
- Capacity expansion for overloaded activated-sludge systems without increasing tank volume
- Retrofit upgrades to improve nitrification, BOD removal, or nutrient reduction
- Standalone biological treatment for new installations with limited space or variable loads
- Pre-treatment for high-strength industrial effluents ahead of downstream polishing processes
- Temporary or permanent modular treatment solutions for rapidly growing communities or industrial sites



The Glanua DAF System - Wastewater

The Challenge:

Municipal and industrial wastewater operators face increasing pressure to meet tightening discharge consents while managing highly variable influent loads and rising operational costs.

Common challenges include:

- Stricter regulatory limits for BOD, COD, TSS and Fats, Oils & Greases (FOGs)
- Highly variable hydraulic and organic loadings from industrial processes
- Excessive load on downstream biological treatment systems
- Limited footprint for new treatment assets
- Odour control and operator safety concerns
- The need to reduce energy consumption and whole-life operating costs

Conventional gravity separation and settlement systems often struggle to reliably remove low-density solids, oils and greases, resulting in poor performance, compliance risk and increased downstream treatment burden.



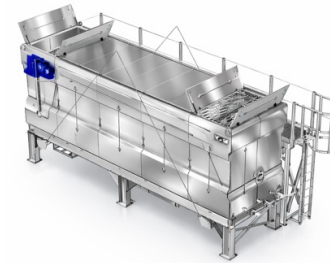
The Solution:

Glanua's Dissolved Air Flotation (DAF) Systems provide a robust, efficient and proven solution for the pre-treatment, primary or tertiary treatment of wastewater.

Using proven dissolved air flotation technology, Glanua DAF systems remove **suspended and colloidal solids, BOD, COD and FOGs** by attaching microbubbles to contaminants, causing them to float to the surface where they are mechanically removed.

Each system is designed to site-specific conditions, manufactured in Glanua's Irish facility and delivered as a modular, self-contained unit, allowing rapid installation, reliable operation and easy integration with existing treatment processes.

Glanua's Unique Whitewater System – Utilising atmospheric air instead of compressed air for whitewater generation, this system reduces carbon footprint and eliminates the need for annual pressure testing due to its engineered design, delivering efficiency, sustainability and peace of mind.



Parameter	Typical Specification
Construction material	Stainless steel (304 / 316 optional)
Configuration	Modular, skid-mounted
Operation	Continuous
Odour control	Fully enclosed
Controls	Local HMI with optional SCADA
Design standards	CE marked, site-specific design
ATEX	Available on request

Key Features:

Efficient Treatment

High-efficiency flotation delivers effective removal of TSS, COD, BOD and FOGs, significantly reducing load on downstream biological or tertiary processes.

Durable Design and Build

Robust stainless steel construction ensures long service life in aggressive wastewater environments, with excellent corrosion resistance and minimal maintenance.

Modular for Easy Integration

Skid-mounted, fully packaged systems are supplied ready for connection, allowing straightforward integration into existing wastewater treatment plants or industrial facilities.

Fully Enclosed for Odour Control

Totally enclosed design minimises odour release and improves operator safety, making the system suitable for indoor or sensitive installations.

Low Energy and Operating Costs

Energy-efficient air injection and recycle systems minimise power consumption while maintaining high treatment performance.

Automated and Operator-Friendly

Interactive HMI and optional SCADA integration provide simple, reliable operation with minimal operator intervention.

The Glanua DAF System

Glanua DAF systems generate a dissolved air-in-water solution by injecting air under pressure into a recycle stream of clarified effluent. When released into the flotation tank, microbubbles attach to suspended solids and oils, lifting them to the surface for removal via mechanical skimming.

Key system elements include:

- Coagulation and flocculation (pipe flocculator or floc tanks)
- Whitewater generation and recycle system
- Flotation tank with surface skimmer
- Sludge collection and removal system
- Integrated controls and instrumentation

Key Benefits:

- Improves wastewater quality by reliably removing TSS, COD, BOD and FOGs
- Reduces operational and maintenance costs by lowering load on downstream treatment processes
- Enhances system reliability during variable or shock load conditions
- Supports regulatory compliance for discharge to sewer or environment
- Minimises footprint compared to conventional settlement systems
- Energy-efficient design with low whole-life cost of ownership

The system can operate as:

- A stand-alone treatment solution for discharge to sewer or environment
- Primary treatment to reduce organic loading on biological processes
- Tertiary polishing prior to discharge or membrane treatment



Model No.	Flow Rate/m ³ /hr	Dimensions (Metres) LxWxH	Weight (Tonne)	Power Requirement kW
G-DAF-005	5	3.0 X 1.5 X 1.8	1.8	3.0
G-DAF-010	10	3.5 X 1.5 X 1.8	2.8	3.0
G-DAF-015	15	4.0 X 1.5 X 1.8	3.5	4.5
G-DAF-020	20	4.5 X 1.5 X 1.8	4.1	5.0
G-DAF-025	25	4.0 X 2.0 X 2.4	4.8	5.0
G-DAF-035	35	4.5 X 2.0 X 2.4	5.5	6.0
G-DAF-050	50	5.0 X 2.0 X 2.4	7.5	8.5
G-DAF-075	75	6.5 X 2.0 X 2.4	9.1	11.5
G-DAF-100	100	8.7 X 2.5 X 2.4	11.7	16.75
G-DAF-125	125	10.0 X 2.5 X 2.4	12.5	20.0
G-DAF-150	150	12.5 X 2.5 X 2.4	16.2	23.0

Why choose this product:

- Industry-Proven Performance
- Glanua has a proven track record with hundreds of DAF installations worldwide, delivering reliable performance across municipal and industrial wastewater sectors
- Designed to Meet Wastewater Industry Standards
- Each system is engineered to site-specific requirements, incorporating best-practice design, CE compliance and optional ATEX-rated configurations where required
- Complete Lifecycle Support
- Glanua provides full lifecycle delivery, including process design, manufacture, installation, commissioning, operator training and ongoing technical support, ensuring long-term performance and compliance

Typical Applications

Glanua DAF systems are suitable for a wide range of municipal and industrial wastewater applications, including:

- Industrial wastewater pre-treatment (food & beverage, dairy, meat processing, pharma, manufacturing)
- FOG removal prior to biological treatment
- Primary treatment to debottleneck overloaded plants
- Tertiary treatment and final effluent polishing
- Compliance-driven upgrades for discharge to public sewer or receiving waters

Chemical Dosing Cabinet

The Challenge:

Water and wastewater operators face increasing pressure to maintain precise chemical-dosing accuracy while ensuring safety, regulatory compliance, and system reliability. Incorrect dosing can lead to process inefficiencies, equipment damage, and non-compliance with statutory water-quality standards. Harsh operating environments, chemical corrosion, and restricted space demand robust and compact dosing solutions.

The Solution:

Glanua Chemical Dosing Systems provide a pre-engineered, fully enclosed dosing solution designed for safe, accurate, and reliable chemical dosing. The cabinet integrates pumps, pipework, bunding, controls, and instrumentation into a compact, secure and easy-to-maintain package.

Technical Overview:

- **Precision Dosing Performance:**
Ensures consistent and accurate chemical delivery while minimising overdosing costs
- **Durable, Corrosion-Resistant Construction:**
Built using chemical-resistant plastics for harsh operational environments
- **Fully Bunded Design for Safety:**
Provides safe chemical containment and environmental compliance
- **Modular and Customisable:**
Options for multiple pumps, duty/standby, instrumentation, and SCADA integration
- **Secure and Operator-Friendly:**
Clear internal layouts and optional lighting



Key Technical features:

- Enhances water quality and dosing accuracy
- Improves operator safety and reduces spill risk
- Reduces operational costs through reliable, low-maintenance design
- Supports environmental and industry regulatory compliance
- Simplifies installation with a pre-assembled, plug-and-play cabinet

Typical Applications:

- Municipal water treatment plants
- Wastewater treatment facilities
- Industrial process water systems
- Sludge dewatering applications

Operating Ranges & Configurations:

- Operating flow ranges from 7.5 – 940 l/hr
- Diaphragm or Peristaltic Pumps available deepening on client needs
- Duty/Standby & Duty/Duty/Standby Configurations available
- Cabinet Construction from Polypropylene or Stainless Steel 304/316 on request
- Pipework available in various materials depending on application chemical
- Calibration pots & priming systems
- Pressure relief and pressure sustaining valves
- Digital flow monitoring available on request
- Drip tray and bund return connection for environmental protection (bund alarm available as option)
- Sliding door splash protection guarding
- Full safety signing and hazardous chemical signage tailored to application
- Power & Controls brought back to client terminals external to cabinet

Polymer System

Used in a range of dewatering and chemical coagulation/flocculation applications.

The Glanua's Polymer Make-Up System can be used in a range of dewatering and chemical coagulation/flocculation applications to batch and condition raw emulsion polymers. The batching system is fully automated and can be connected to downstream processes to provide on-demand flow proportional dosing, increasing process efficiency and minimising operator input.

Key system elements include:

- Raw Polymer Pump: The Polymer System utilises a progressive cavity pump to feed raw polymer at a metered rate to the mixing system
- Polymer Dilution Tank: The CE marked Polymer Systems are manufactured in a dedicated fabrication facility to the highest standards. With an effective volume of 1250 litres, these tanks are fabricated from high grade 304L stainless steel (316 available on request)
- Dilute Polymer Dosing Pump: Once polymer solution has been prepared to the desired concentration, a progressive cavity pump is utilised to deliver diluted polymer to the downstream process

Benefits of the Glanua Polymer System:

- Automatic batching process for continuous use applications. Unique neat polymer introduction technology, ensuring zero blockage on entry batching system.
- Glanua's Polymer System can be controlled from downstream flocculation or dewatering processes for on-demand flow proportional dosing control. Progressive Cavity pumps used ensuring consistent dosing rates and minimising blockages.
- Our Polymer System is constructed from 304 Stainless Steel (316 available on request), ensuring superior corrosion resistance and longevity. Simple calibration method and control system ensuring ease of operation and maintenance.
- Our Polymer system incorporates the use of a hydrostatic level sensor for automatic batching and control of pumps, mounted externally for ease of maintenance. This robust sensor prevents fouling and bridging as experienced with alternative methods of control.

Tank Details	
Tank Dimensions (W x L x H)	1m x 1.25m x 1.2m
Tank material	Stainless Steel 304 (316 available on request)
CE Certified	Yes
Power Inputs	
Voltage	400 Volts
Frequency	50 Hz
Raw Polymer Pump	0.55 kW
Dilute Polymer Dosing Pump	0.75 kW
Mixer Motor	1.5 kW

Dynamix - Advanced air mixing system

Technical Overview

Glanua's Dynamix is an advanced air mixing system designed to improve chemical dosing efficiency into wastewater treatment. Treatment plants rely on chemical coagulants to remove phosphorus (P), however poor mixing between wastewater and chemical, often leads to chemical overdosing, poor removal performance, increased costs and permit non-compliance risks.

Operating Ranges & Configurations

Dynamix uses coarse bubble air to create turbulence for mixing, ensuring even chemical distribution. Unlike traditional methods, it integrates smoothly into existing water treatment systems without disrupting site hydraulics. This system can be installed in inlet channels or chambers on site without any shutdown required.

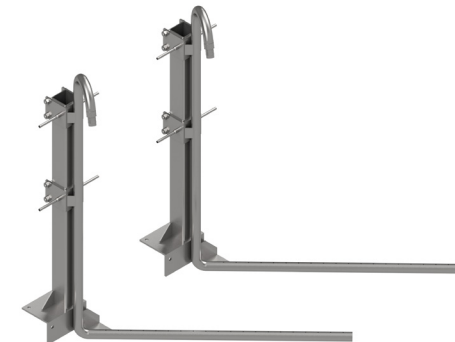
Clients should contact Glanua to define final system sizing based on site requirements.

Key Technical Features

- Minimises short circuiting, ensuring efficient chemical application
- Reducing chemical demand Optimised oxygen transfer and mixing through integrated coarse -bubble aeration
- Modular design suitable for new builds or retrofits into existing channels and chamber

Typical Applications

- Chemical mixing for municipal and industrial wastewater plants
- Can be installed in inlet channels and chambers
- Retrofit upgrades to improve efficiency of existing dosing systems



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planet



Our commitment as a complete solutions provider

At Glanua, we are dedicated to transforming water and wastewater infrastructure with technical excellence, environmental stewardship and innovative thinking to build a cleaner planet.

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**Glanua, a complete solution
provider of water, wastewater
and bioresource innovations**

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