Fine Bubble Aeration

Drop-in | Retrievable | Floating

Mapal Aeration Solutions

Delegation to Romania & Bulgaria November 2026

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About Mapal Aeration Solutions

- With over **150 installations worldwide**, Mapal Aeration Solutions provides innovative, proven, energy-efficient aeration solutions for municipal and industrial wastewater treatment.

- We specialise in **drop-in, fully retrievable fine bubble and coarse bubble aeration systems**, designed to improve treatment performance, simplify maintenance and reduce whole-of-life costs.

- Combining **technical expertise, customer-focused engineering and local support**, we deliver practical, flexible solutions tailored to each project's needs.

- We work closely with **water utilities, councils, consultants, EPC contractors and industrial customers** around the world.



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Target Markets



Municipal

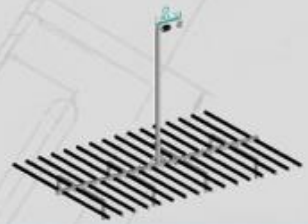
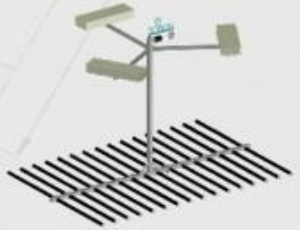
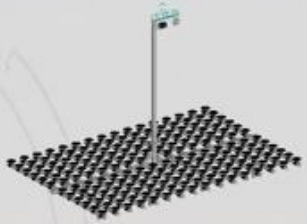
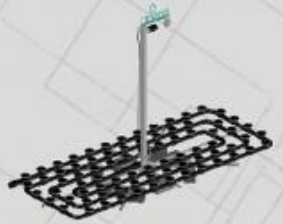
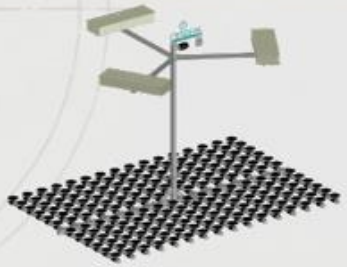
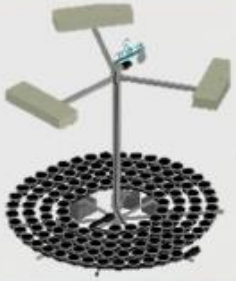
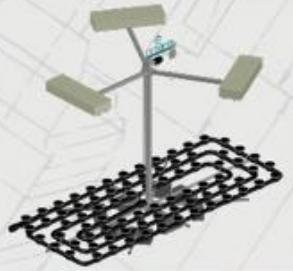


Industrial

- Food & Beverage
- Pulp & Paper
- Oil Refining
- Abattoir
- Semi-conductor
- Detergent Manufacturing
- Airports

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Technology: Configurations

	Grid Aeration Unit*	Spiral Aeration Unit – Circular	Spiral Aeration Unit – Rectangular
Stationary – Tubular Diffuser Floor-resting			
Floating – Tubular Diffuser			
Stationary – Disc Diffuser Floor-resting			
Floating – Disc Diffuser			

All configurations are crane-installed (drop-in), fully retrievable, and suitable for installation in live reactors without draining.

*Grid aeration Units have Mapal's Stainless Steel 304/316 inner tube, tubular diffuser.

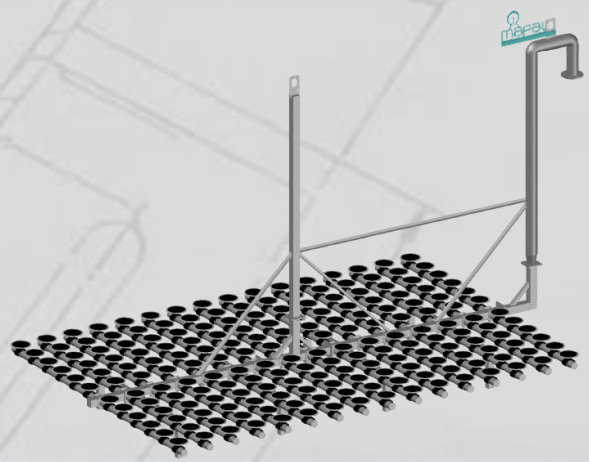
*Spiral/Oval Units have PP/PE inner tube with fine bubble membrane sleeve.

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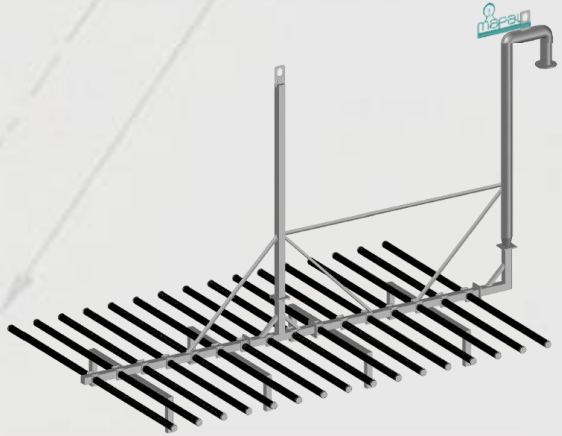
Technology: Configurations

Two-Column Grid Aeration Unit with Central Lifting Column and Side Air-Supply Column

Stationary Floor-resting
Disc Diffuser
Side column air supply



Stationary Floor-resting
Tubular Diffuser
Side column air supply



All configurations are crane-installed (drop-in), fully retrievable, and suitable for installation in live reactors without draining.
*All tubular diffusers on the Grid aeration unit have a Stainless Steel 304/316 inner tube.

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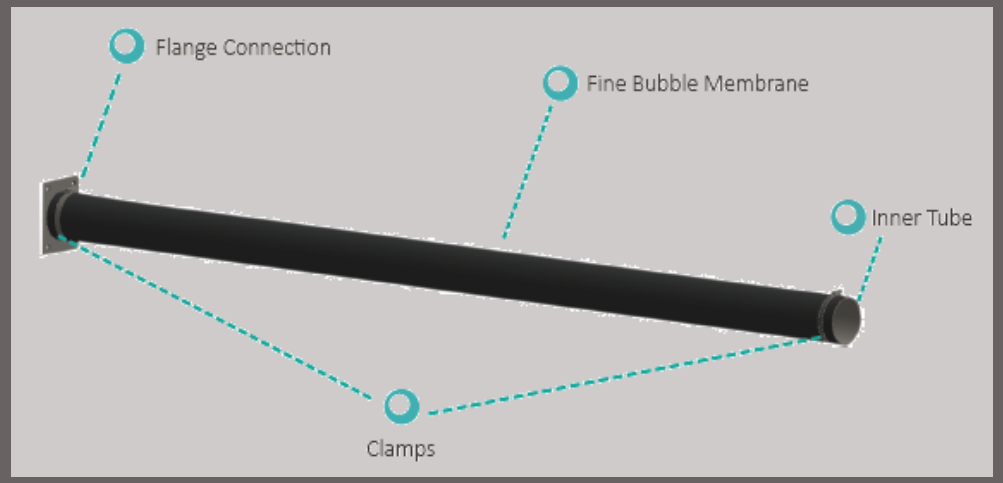
Technology: Diffusers & Fine Bubble Membranes

- Mapal's drop-in aeration units can accommodate Mapal's stainless steel tubular fine bubble diffusers or disc diffusers from any manufacturer.
- Membrane material options: EPDM, SILICON, PU

Silicon

PU

EPDM



Tubular diffuser: Mapal stainless-steel inner tube;
Jaegar EPDM sleeve
(Min airflow: 4 Nm3/hr, max airflow: 18 Nm3/hr)





Disc diffuser: any make and model as per the client preference and standards;
Jaegar, Sanitaire, SSI, etc.

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Grid Aeration Unit: Parts

- Lifting point
- Purge system discharge point
- Air connection
- Drop leg
- Structural guide
- Balance Weight
- Stainless Steel Tubular Diffuser (with membrane sleeve)



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Technology: Purge System

Liquid & Condensation Removal

All Mapal aeration units are equipped with an integrated Airlift Purge System (option: SS316 material) designed for effective removal of accumulated water and condensate from the internal air piping.

A manually operated ball valve is provided for each unit. The purge valve is installed in an easily accessible location, typically near the air pipe connection to the manifold, allowing simple, safe, and controlled purging during operation or maintenance







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Standard Aeration Supply Arrangement

Mapal Aeration unit

HDPE Pipe

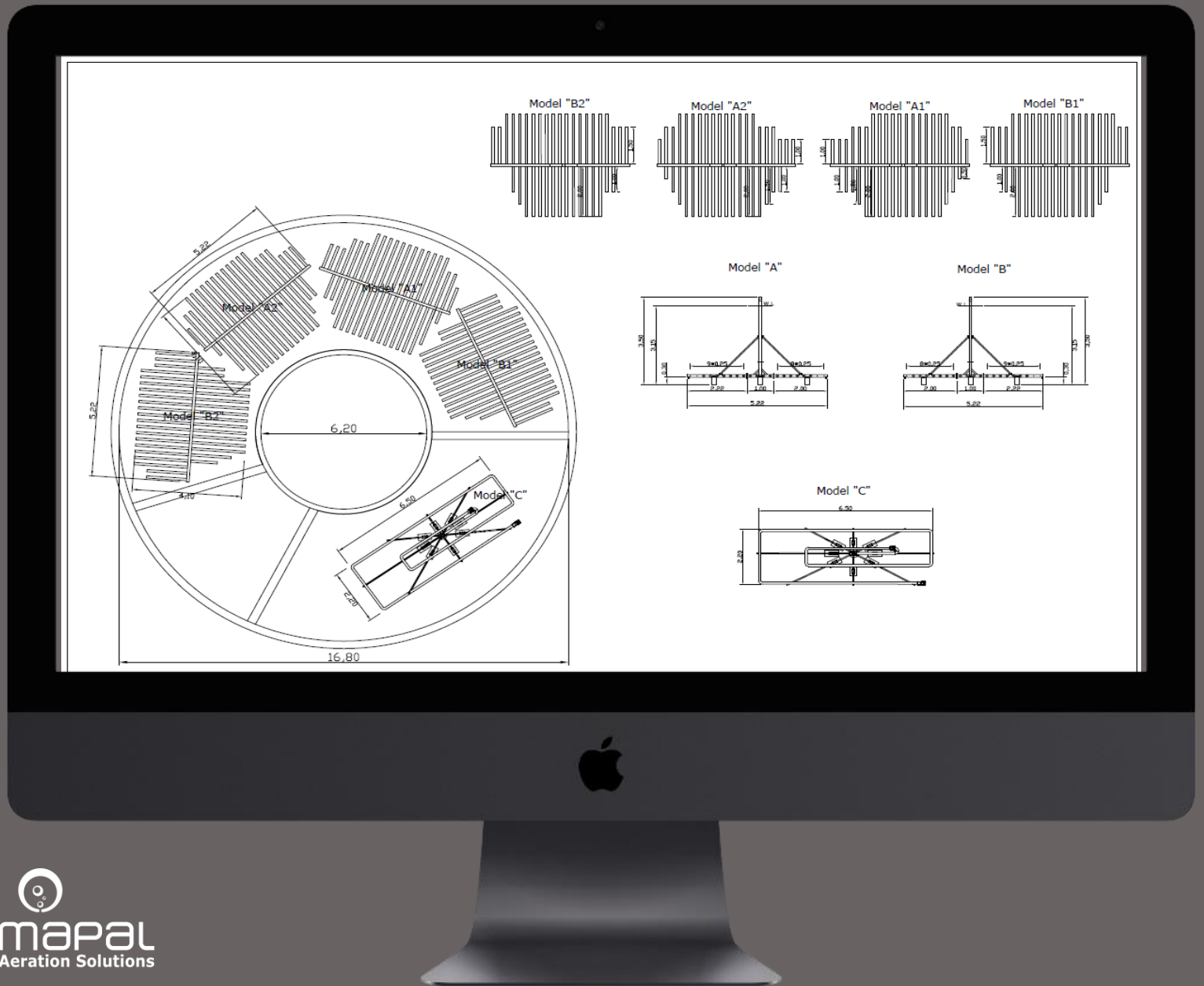
Manifold

Air blower



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Custom Design



Design:

Process design and performance data using BioWin

Project Partnership:

From the drawing board to commissioning

Reliable Support:

Direct access to our engineering and operational service team

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Custom Design



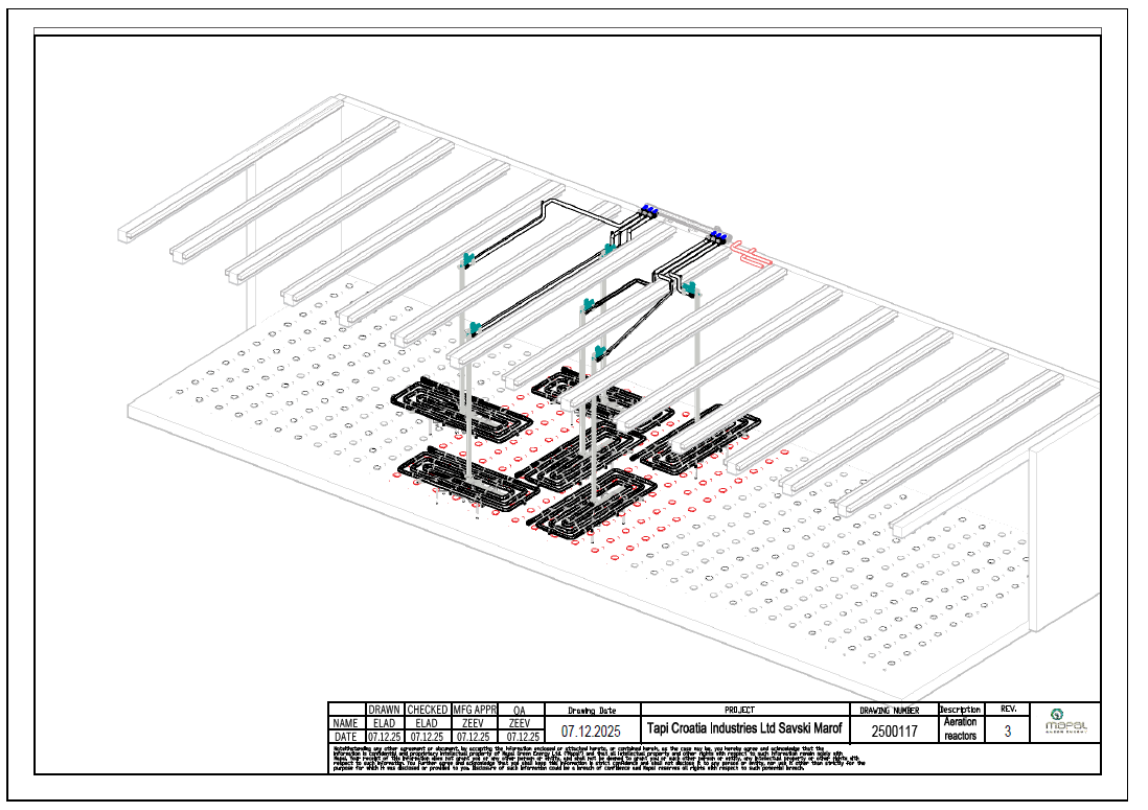




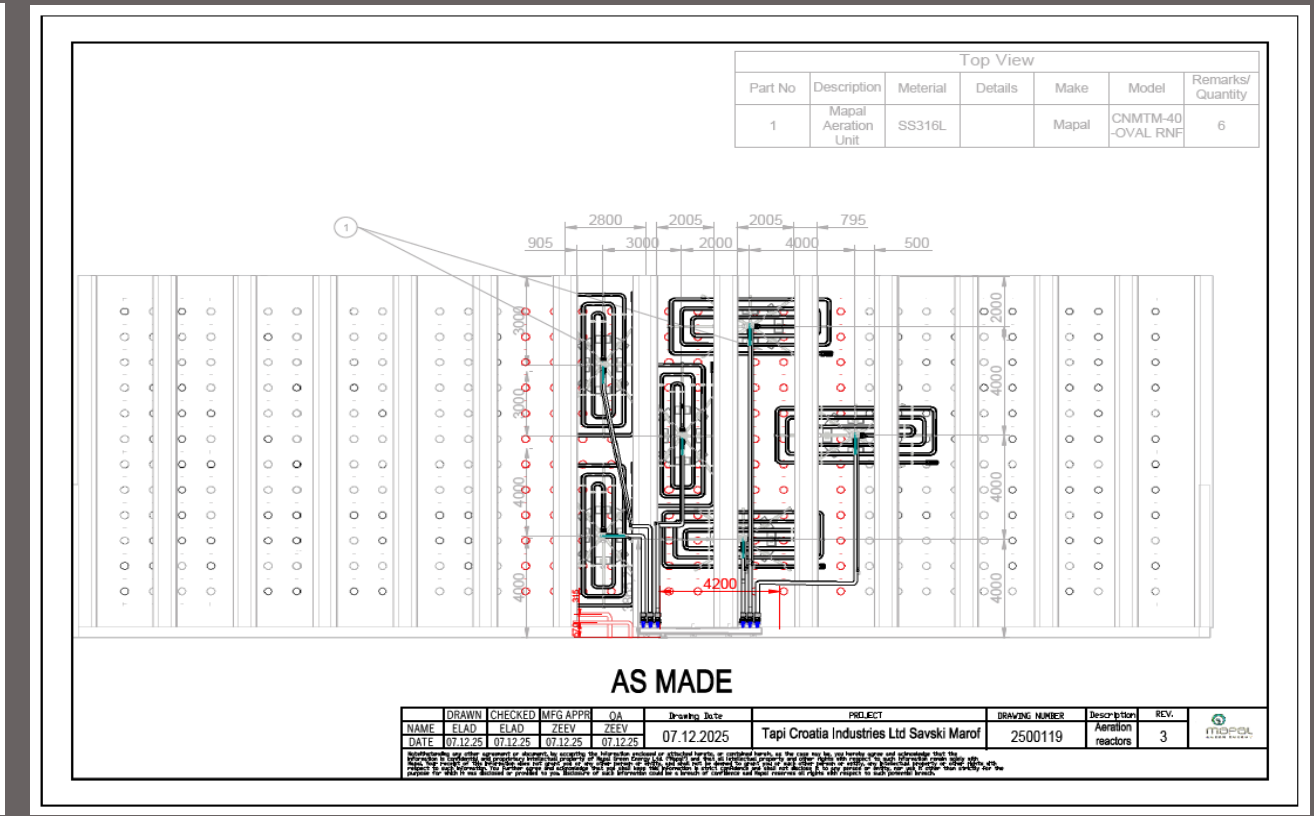
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Custom Design

Spiral Units in Tight Dimensions & Limited Access



	DRAWN	CHECKED	MFG APPR	QA	Drawing Date	PROJECT	DRAWING NUMBER	Description	REV.
NAME	ELAD	ELAD	ZEEV	ZEEV	07.12.2025	Tapi Croatia Industries Ltd Savski Marof	2500117	Aeration reactors	3
DATE	07.12.25	07.12.25	07.12.25	07.12.25					



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Aeration System in Croatia

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Custom Design

Spiral Units in Tight Dimensions & Limited Access









Aeration System in Croatia

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Installation

Units arrive **90% assembled**

Final assembly by the reactor

Units are lifted with a **Crane**







Installation Base: Municipal Wastewater Treatment Plants


Tatura, VIC, Australia


Blackmans Bay, TAS, Australia


Kilmore, VIC, Australia


Gisborne, VIC, Australia

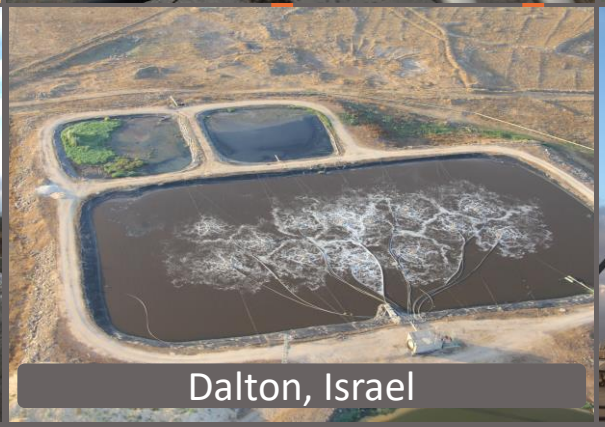

Horwich, UK


Stanbridgeford, UK


Chesham, UK


Ayelet Gadot, Israel


Afula, Israel


Dalton, Israel


Timorim, Israel


Arad, Israel

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Installation Base: Industrial Wastewater Treatment Plants

Pulp & Paper



SAPPI Paper Mill, South Africa



Pulp & Paper Plant, Indonesia

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Installation Base: Industrial Wastewater Treatment Plants

Airports



Ben Gurion Airport, Tel Aviv, Israel



Heathrow Airport, London, UK

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Installation Base: Industrial Wastewater Treatment Plants



Semiconductor Plant, Israel



Oil Refinery, Israel



Detergent Factory, Israel

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Installation Base: Industrial Wastewater Treatment Plants

Farming



Animal Farming Wastage, Israel



Chicken Abattoir, Israel



Chicken Abattoir, South Africa

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Projects:

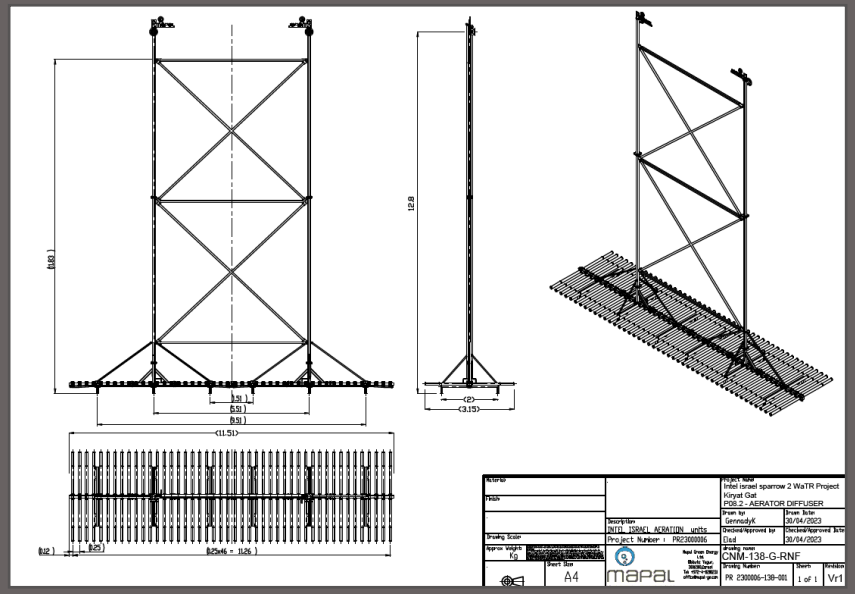
Case study with Grid Unit

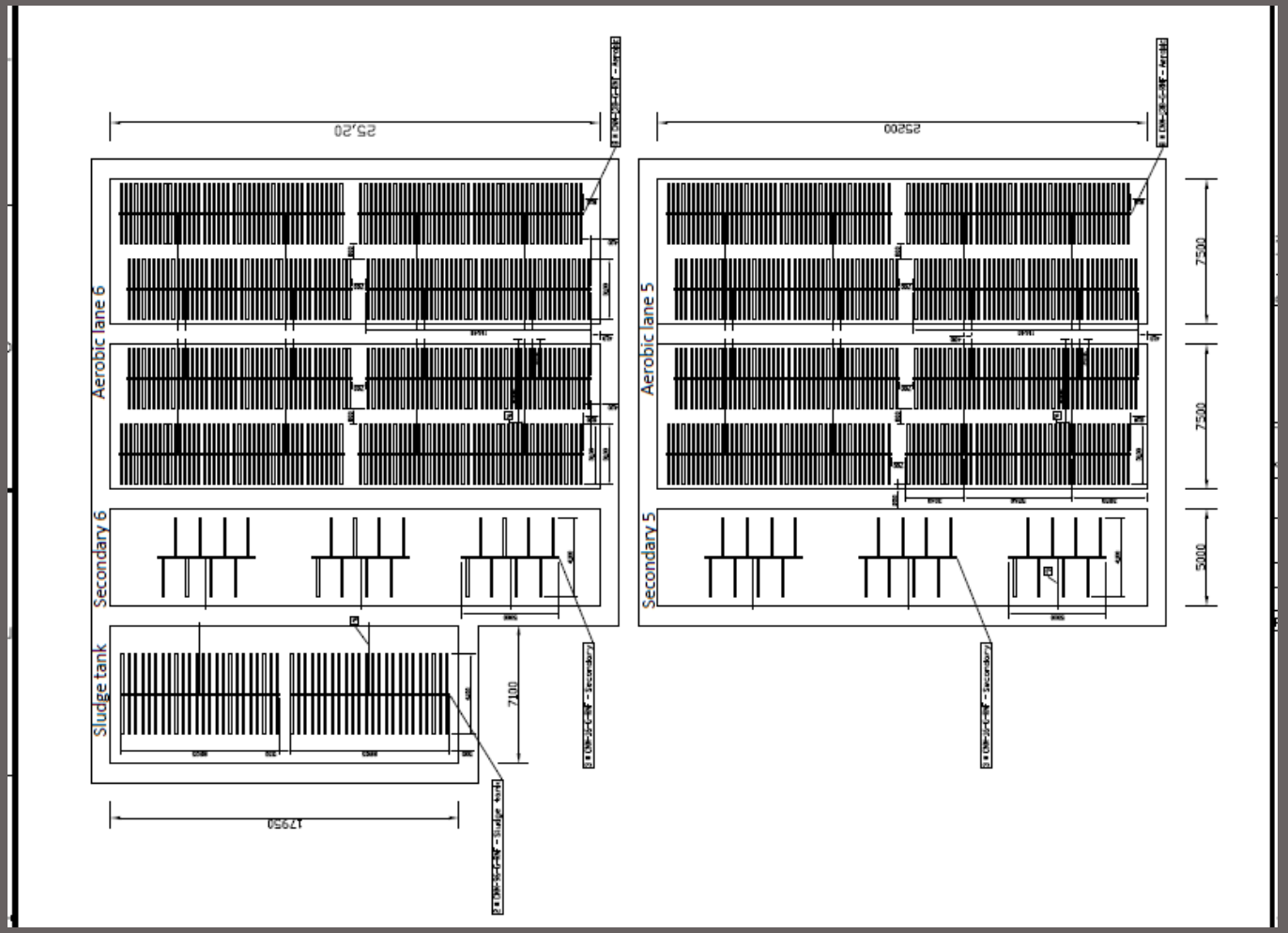
Scope of Supply:

Mapal's CNM™ -138-G-RNF - Aerobic 2 Lane

Each unit comes with:

- Retrievable (floor-resting) frame - SS-316L
- 69 Tubular fine bubble diffusers
- Each diffuser Length: 2m
- Diameter: 90mm
- Inner Body - SS-316L
- Membrane: silicon coated fine bubble diffuser





Semiconductor Factory (Confidential), Israel

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Projects:

Case study with Grid Unit





Semiconductor Factory (Confidential), Israel

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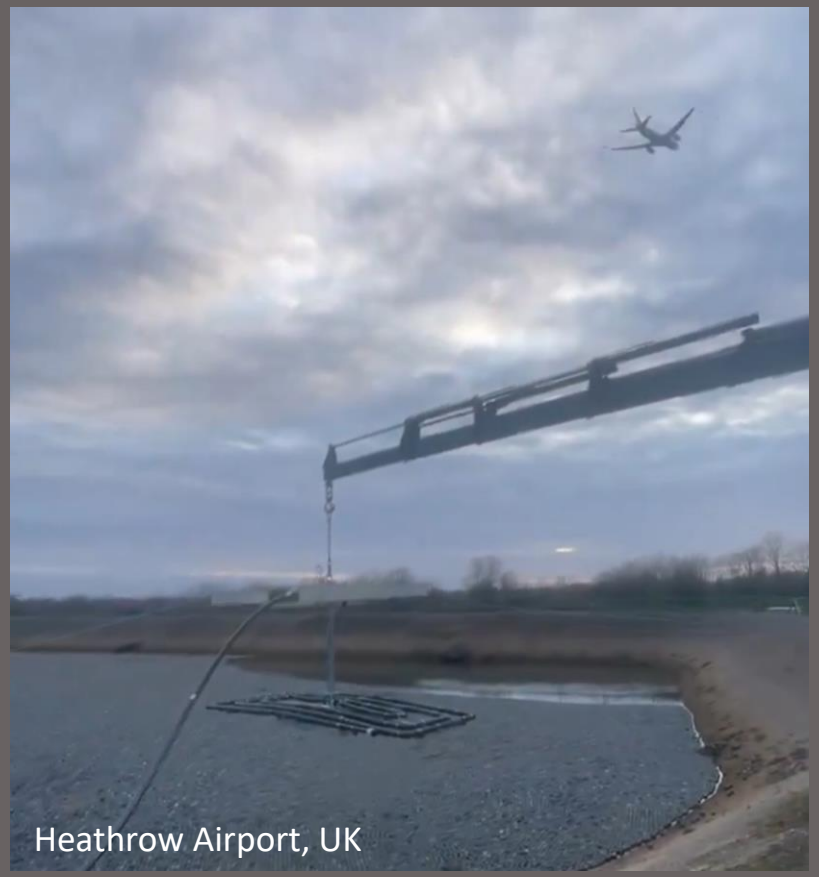
Aeration Rental


Drom Hasharon, Israel


Frozen Food Plant, UK


Heathrow Airport, UK


Drom Hasharon, Israel


Heathrow Airport, UK

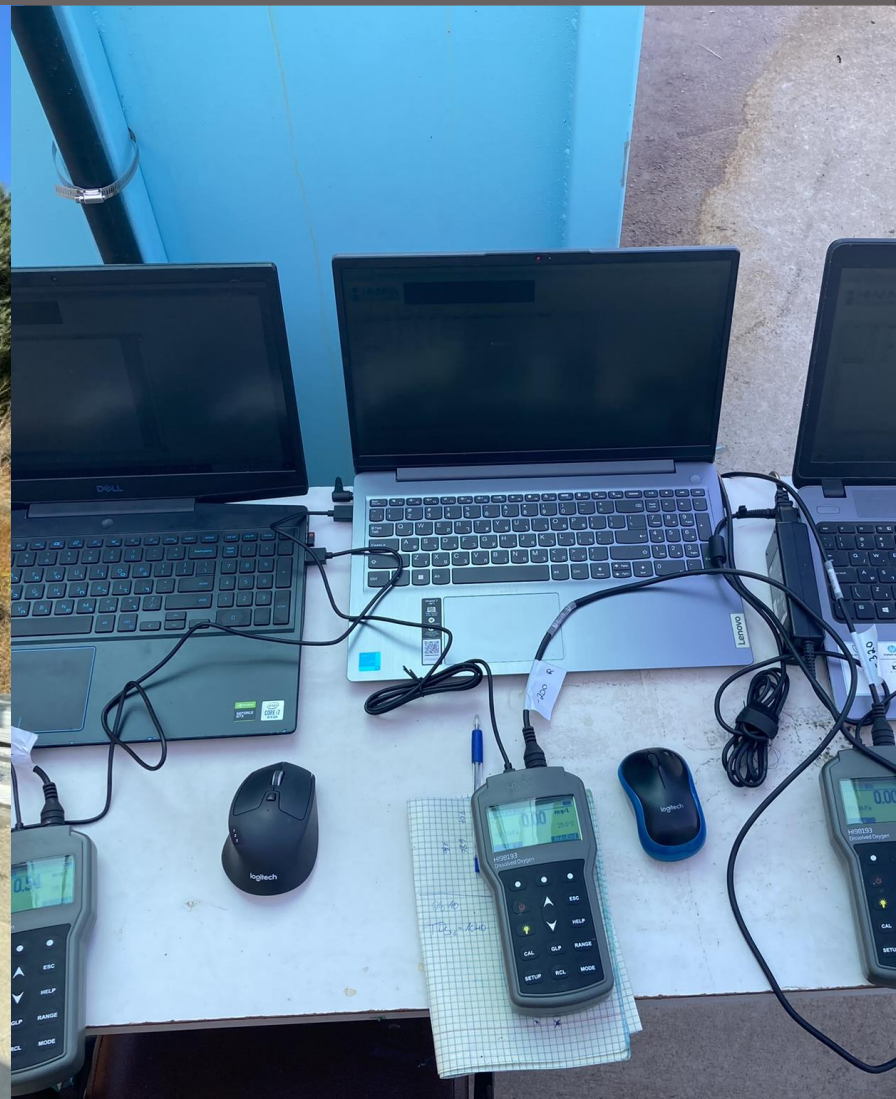
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Research & Development:

SOTE - Standard Oxygen Transfer Efficiency Test







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Any questions?

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