



Throughout its years of existence, Premier Tech Water and Environment has specialised in the design and manufacture of wastewater treatment plants for domestic effluent.

Domestic wastewater comes from residences, small communities, and commercial and institutional properties.

Rewatec compact treatment plants are prefabricated solutions that remove wastewater contaminants before safely discharging effluent into the environment in accordance with local regulations.

ADVANTAGES

- quality controlled
- prefabricated
- easy to install
- low maintenance
- minimal visual impact

APPLICATIONS

- residences and small allotments
- towns and villages
- camping sites
- tourist resorts
- industries with domestic effluent

SIZING

We use the definition of population equivalent (PE) as the starting point for our wastewater treatment plant designs.

Each system's treatment efficiency is calculated on the basis of the discharge values permitted by regulations.

We can also design systems for other capacities or effluent concentrations after analysis by our expert technical team.

TABLE OF SIZING PARAMETERS

Parameter	Value
Consumption	150 L/PE.day
COD mass load	120 g/PE.day
BOD ₅ mass load	60 g/PE.day
TSS mass load	75 g/PE.day

SEQUENCING BATCH REACTORS

A sequencing batch reactor (SBR) is a biological treatment system characterised by cycles that make use of a low-load activated sludge process. Each cycle is rated for a duration of eight hours, resulting in a total of three cycles per day.

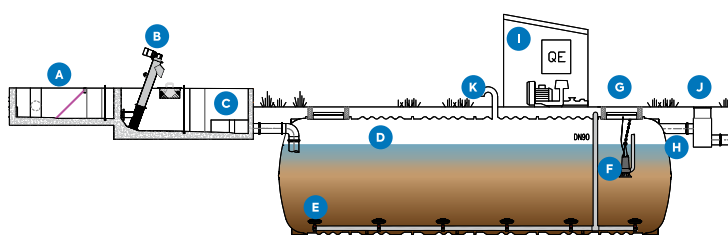
Cycles include aeration, decantation, and discharge phases. They occur sequentially and at predetermined times within a single reactor.

Aeration is performed by a membrane diffuser system fed by a side-channel blower. Discharge is achieved with a submersible pump equipped with a suction system and a skimmer that prevents the aspiration of supernatants and decanted sludge.

The operation of the system is managed by an electrical control panel.

MAIN FEATURES

- High-density polyethylene (HDPE) tanks are durable and resistant to harmful chemicals.
- Fine bubble diffusers provide high-performance mixing and aeration of the biological bed.
- Efficient biological degradation of excess sludge reduces the extraction volume.
- One easy-to-use panel controls all electromechanical equipment.
- High biological degradation of excess sludge, reducing the extraction volume.



LEGEND

- | | |
|--------------------------------|----------------------------------|
| A Manual screen | G Access point |
| B Screw screen | H Treated effluent outlet |
| C Parshall flume | I Support housing |
| D Biological reactor | J Sampling point |
| E Fine bubble diffusers | K Vent |
| F Submersible pump | |

SBR MODELS

EAN13	Volume (L)	Inhab. (PE)	Diam. (mm)	Length (mm)	Height (mm)	Lid (mm)	Tubing (mm)	Power (kW)
5600379814885	15,000	50	2,320	4,580	2,460	1 × Ø 600	Ø 200	1.36
5600379814892	20,000	75	2,320	5,360	2,460	2 × Ø 600	Ø 200	2.15
5600379814908	30,000	100	2,320	6,640	2,460	2 × Ø 600	Ø 200	2.15
5600379814915	35,000	125	2,320	9,200	2,460	2 × Ø 600	Ø 200	2.15
5600379814922	40,000	150	2,320	10,480	2,460	2 × Ø 600	Ø 200	2.15
5600379814946	55,000	200	2,320	14,320	2,460	2 × Ø 600	Ø 200	4.15
5600379815110	65,000	250	2,320	17,880	2,460	2 × Ø 600	Ø 200	4.15

TREATMENT PERFORMANCE

	Concentrations	
	Inlet	Outlet
COD	800 mgO ₂ /L	< 125 mgO ₂ /L
BOD ₅	400 mgO ₂ /L	< 25 mgO ₂ /L
TSS	500 mg/L	< 35 mg/L



EXTENDED AERATION

An extended aeration system provides continuous treatment through the use of a low-load activated sludge process.

The system has two main components: a biological reactor and a secondary clarifier.

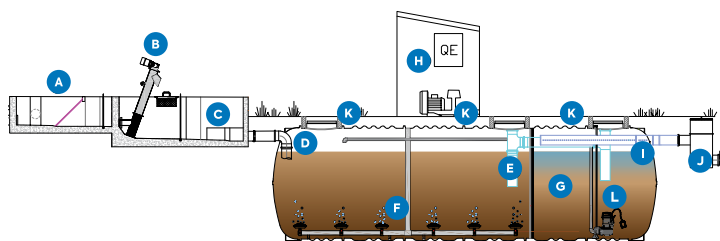
In the biological reactor, microorganisms degrade the contaminant load. The resulting mixture then flows into a secondary clarifier, where biological sludge decants and clarified effluent is discharged downstream.

System aeration is carried out by a membrane diffuser system fed by a side-channel blower. Treated effluent is discharged by gravity. Biological sludge is recirculated to the reactor with a submersible pump in the secondary clarifier.

The operation of the system is managed by an electrical control panel.

MAIN FEATURES

- High-density polyethylene (HDPE) tanks are durable and resistant to harmful chemicals.
- Fine bubble diffusers provide high-performance mixing and aeration of the biological bed.
- Exceptionally reliable sludge recirculation pump and blower.
- One easy-to-use panel controls all electromechanical equipment.
- Easy operation and maintenance.



LEGEND

- | | |
|--------------------------------|------------------------------------|
| A Manual screen | G Secondary clarifier |
| B Screw screen | H Support housing |
| C Parshall flume | I Treated effluent outlet |
| D Biological reactor | J Sampling point |
| E Connection piping | K Access point |
| F Fine bubble diffusers | L Sludge recirculation pump |

EXTENDED AERATION MODELS

EAN13	Volume (L)	Inhab. (PE)	Diam. (mm)	Length (mm)	Height (mm)	Lid (mm)	Tubing (mm)	Power (kW)
5600379815011	15,000	50	2,320	4,580	2,460	2 × Ø 600	Ø 200	1.36
5600379815028	25,000	75	2,320	6,640	2,460	2 × Ø 600	Ø 200	2.15
5600379815035	30,000	100	2,320	7,920	2,460	2 × Ø 600	Ø 200	2.15
5600379815127	35,000	125	2,320	9,200	2,460	2 × Ø 600	Ø 200	2.15
5600379815042	40,000	150	2,320	10,480	2,460	2 × Ø 600	Ø 200	2.15
5600379815059	55,000	200	2,320	14,320	2,460	2 × Ø 600	Ø 200	3.95
5600379815066	60,000	250	2,320	15,600	2,460	2 × Ø 600	Ø 200	3.95

PREMIER TECH'S 360° SUPPORT

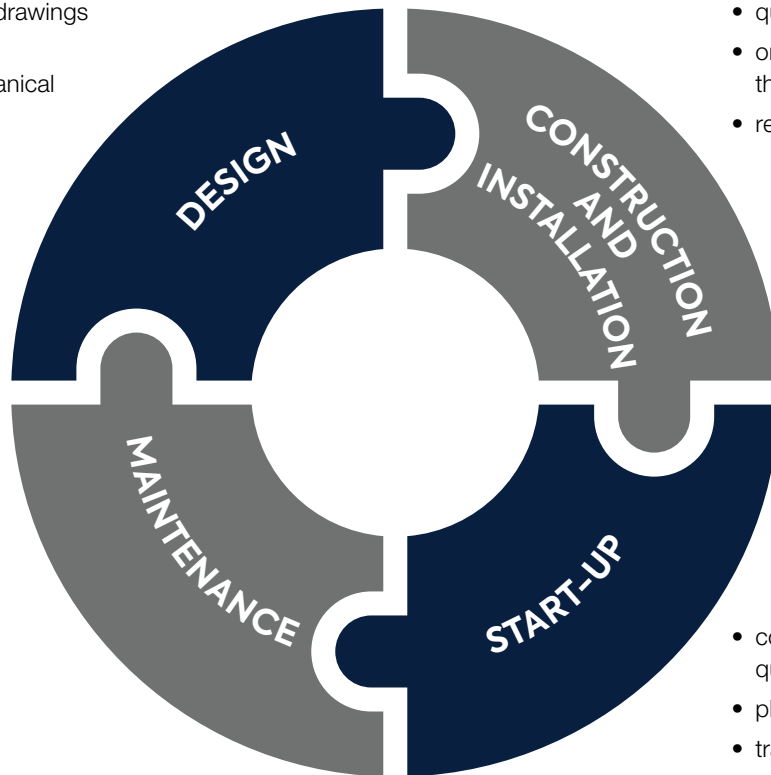
PROUD OF OUR PRODUCTS SINCE 1995

Proven experience is the foundation of our global team. Together, we have the technical knowledge and industry experience to help you to succeed in all phases of your project.



- engineering support to ensure the best solution
- support with technical drawings and diagrams
- advice for electromechanical equipment
- control cabinet design, including diagrams

- technical support from our experts
- maintenance services with our own teams
- remote support solutions available



- dedicated project managers
- quick response to all questions
- on-site support to ensure the quality of the facilities
- real-time problem solving

- commissioning by qualified technicians
- plant verification
- training of operating teams



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MAKING A DIFFERENCE FOR WATER AND THE ENVIRONMENT

At Premier Tech, People and Technologies connect in lasting, transformative ways, giving life to products and services that help feed, protect, and improve our world. Our expert teams are constantly innovating, redefining the boundaries of what is possible through effective, efficient and sustainable solutions. Driven by a shared passion, we are committed to protecting our resources for the future.

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