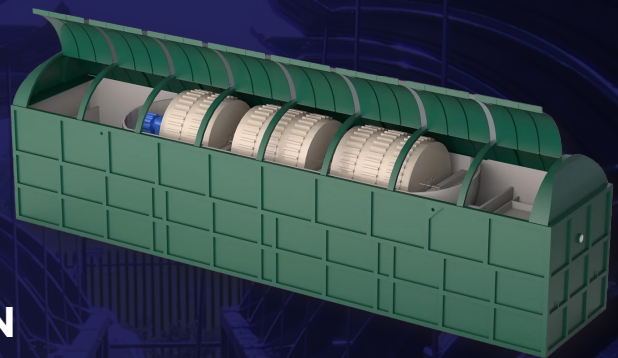




WATER AND WASTEWATER TREATMENT SOLUTIONS

Blivet™



THE SMARTER RBC SOLUTION

The BMS Blivet™ stands out as the world's most compact 'all in one' plug & play package sewage treatment system, celebrated for its efficiency, reliability, and versatility.

THE SMART CUSTOMISED TURNKEY SOLUTIONS FOR:

- Construction sites
- Mine Sites
- Housing developments including high-rise developments
- Hotels and holiday resorts
- Leisure developments
- Villages / townships
- Areas not connected to mains sewers including remote sites
- Environmentally sensitive sites

novaprocess.com.au

BMS Blivet™

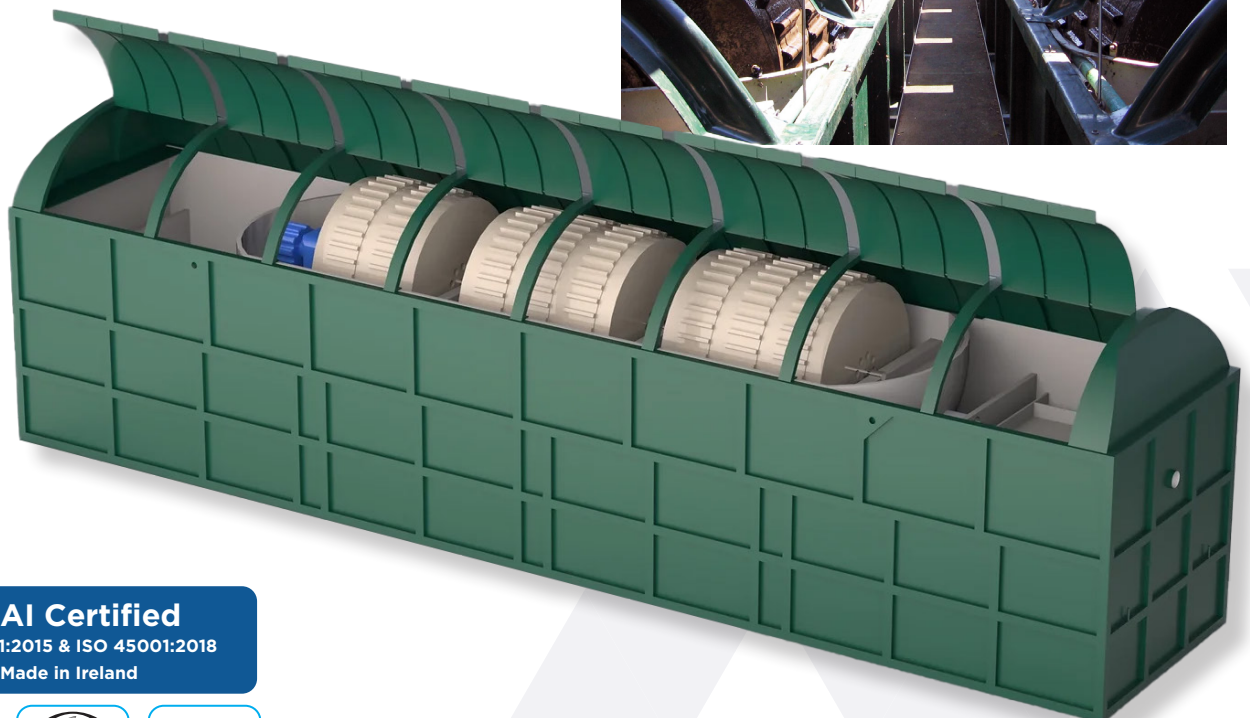
The Next Generation RBC

PACKAGE SEWAGE TREATMENT PLANT

The BMS Blivet™ stands out as a cutting-edge sewage treatment system, celebrated for its efficiency, reliability, and versatility.

In proud partnership with **Butler Manufacturing Services (BMS)**, **Nova Process** introduces The Next Generation RBC Solution, the BMS Blivet™. This innovative unit caters to a wide range of applications - whether permanent, temporary, or emergency - delivering consistent high-quality treatment in diverse conditions. Key features include the advanced BMS Aerotor® for effective aerobic treatment, state-of-the-art Lamellae Plate Settlement Technology for optimal separation and treatment, and an extended sludge storage capacity minimizing maintenance needs.

With its Plug & Play technology, low power consumption, and modular expandability, the BMS Blivet™ offers a robust, scalable solution for modern wastewater management, ensuring seamless operation and enhanced security across varied environments.



NSAI Certified

ISO 9001:2015 & ISO 45001:2018

Made in Ireland



QUALITY
I.S. EN ISO 9001:2015
NSAI Certified



HEALTH & SAFETY
I.S. ISO 45001:2018
NSAI Certified



How Does the Blivet™ work?

The BMS Blivet™ employs a cutting-edge combination of lamellae plate settlement and advanced biological treatment through the next-generation BMS Aerotor® RBC/Biodisc. These processes are expertly integrated within a robust, steel-reinforced GRP/FRP tank, ensuring the efficient treatment of sewage to meet specified standards.

The lamellae plate settlement technology significantly enhances the separation of solids, while the BMS Aerotor® RBC/Biodisc facilitates superior biological treatment, breaking down organic matter with exceptional efficiency. This synergy of technologies allows the Blivet™ to deliver outstanding performance in a compact footprint.

For applications requiring higher levels of treatment, the system can be equipped with UV disinfection to produce water suitable for non-potable reuse, such as toilet flushing, wheel washing, and various industrial processes. This additional capability not only promotes sustainability but also maximizes the utility of treated water.



Incoming Sewage

The **BMS Blivet™** is designed to accept raw, unscreened sewage. However, if the incoming sewage is likely to be contaminated with excessive amounts of non-soluble solids e.g. rags, wet wipes, female hygiene products etc., then inlet screening is recommended.

Primary Settlement Area

Having entered the unit, the raw sewage is then deflected towards the base of the unit by a full width baffle. This area at the base of the unit is the sludge storage area and is common with the Primary Settlement area. The raw sewage commences an upward flow pattern through the primary lamella plates and eventually crosses a notched weir as settled sewage with a 30% BOD reduction and 75% solids reduction. The solids remain in the sludge storage area.

BMS Aerotor™

After the settled liquor has crossed the notched weir, it is piped to the first rotor chamber of the unit which contains a lift rotor. The liquor enters the rotor through inlet ports on the periphery of the front face of the rotor. The rotor is rotating at 6 rpm, which is much quicker than traditional RBC's, this causes excess biofilm growth to be shed from the rotor's contact surface and growth to be directly proportional to the sewage load. The internal spiral formation of the rotor lifts the liquor and cascades it through the sandwich sections, contacting with the surface biomass (fixed film reaction) while actively aerating the liquor.

The **BMS Aerotor™** is in essence a pump, with both sewage liquor and air being pumped through.

The liquor emerges from the lift rotor below the centre of the rotor on the opposite face to the peripheral inlet ports and spills into a captive tray to be conveyed into the next rotor compartment. Here it enters a float rotor below the centre and the same process occurs as in the lift rotor. This continues until the final splitter box in the unit which divides the elevated flow between a recirculation line and the separated final settlement area.

Recirculation

The rate of the gravity recirculation (due to the lift occurring in the lift rotor) can be adjusted by hand stops in the splitter box. The treatment process means that regardless of low flow levels or high flow levels (up to 3 x DWF), that the sewage liquor will always be in contact with a continually aerated intense surface biofilm and will receive full treatment and cannot bypass the BMS Aerotor™, this is known as a 'plug flow system' and is the main reason that the BMS Blivet™ is one of the most flexible systems available worldwide when dealing with continual flow variation's, which are often seen at sites such as hotels, schools, restaurants and caravan parks.

Final Settlement Area

The final settlement area or humus tank, has a sloped hopper bottom. The treated liquor travels upward through the final settlement lamella plates, leaving the solids in the base. It then crosses a final notched weir to emerge at the opposite end to the inlet for discharge as fully treated effluent. A submersible pump in the base of the final settlement area is activated on a timer and returns the settled humus sludge to the primary settlement/sludge storage area.

Why the BMS Blivet™ ?

BETTER PERFORMANCE. LESS MAINTENANCE.

The BMS Blivet™ brings you the most efficient and sustainable RBC technology on the market. You'll find all the benefits of traditional RBC systems (needing less power, spare parts and maintenance) with none of the pitfalls of the traditional RBC systems. Traditional RBCs often suffer from eccentric loads on the shaft due to excess growth and also have one-sided growth issues if the unit is switched off for a period of time. Due to the BMS Aerotor™ rotating at 6 rpm excess growth is immediately sheared, meaning that the The BMS Blivet™ is immune to the main downsides of traditional RBC systems.

Optional UV disinfection gives your project the option to repurpose wastewater for non-potable reuse such as toilet flushing or wheel washing.

ADVANTAGES OVER OTHER RBC SYSTEMS

Lower costs

The BMS Blivet™ has one of the lowest maintenance costs of any sewage treatment system, offering a compelling 'whole-life cost' with the lowest '20-year spare parts' requirements on the market.

Superior flow resistance

The rotational media is enclosed in an outer drum to provide active aeration, intense surface area and net hydraulic lift.

- Hybrid of active aeration and fixed film reaction with an intense spiral GRP media mounted on a horizontal shaft.
- 97% of the surface area of the Aerotor™ is inside the Aerotor™ drum.
- A single Aerotor™ provides an equivalent surface area to that of 3 x traditional RBC's.

Less work

Only 30 minutes to 1 hour of maintenance is required by a general maintenance person each week.

Takes up less space

Lamella plate settlers in both the Primary Settlement and Final Settlement Zones make the system even more compact than other RBC Units.

Avoid excess growth issues

- Aerotor biomass growth is proportional to the incoming load and does not require a minimum MLSS to function as is the case with active aeration type systems.
- Sludge storage is provided in the base of the unit.
- Self-cleansing with no extraneous pumping or sludge returns required.

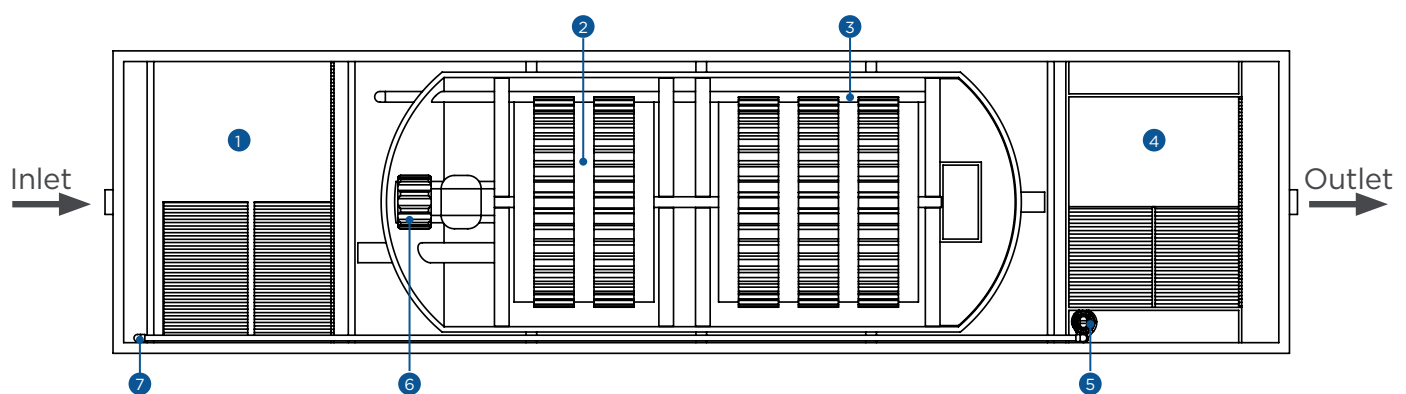
Mechanical / electrical benefits

- Remote access grease nipples.
- The main motor ranges from 0.37kW to 0.75 kW.
- A sludge pump of maximum 0.8 kW is fitted in the final settlement compartment.
- The BMS Blivet™ is a plug and play system ideal for temporary and permanent use that is fully road transportable and fully assembled.
- The alarm output can also be connected to a Building Management System or GSM Dial out system.

Civil works benefits

- Only requires a flat level pad, either concrete or permanent hard surface.
- The BMS Blivet™ can be placed above ground or below ground without a concrete surround.

BMS Blivet™ process



(1) Primary Settlement Area (Lamella plates). (2) BMS Aerotor. (3) Recirculation Line (By gravity). (4) Final Settlement Area (Lamella Plates). (5) Submersible Pump. (6) Motor. (7) Sludge Return Line.

SELECTION GUIDE

CAPACITY (EP)

OUTPUT QUALITY (mg/L)

BLIVET™ MODEL	DIMENSIONS (M)	25/35	20/30	20/30/5	20/30/5/15	15/15
BMS BL500	4.9 (L) x 2.93 (H) x 2.27 (W)	62	50	30	30	45
BMS BL1000	5.4 (L) x 2.93 (H) x 2.27 (W)	125	100	65	65	90
BMS BL1500	6.4 (L) x 2.93 (H) x 2.27 (W)	188	150	100	100	135
BMS BL2000	7.5 (L) x 2.93 (H) x 2.27 (W)	250	200	135	135	180
BMS BL3000	9.3 (L) x 2.93 (H) x 2.27 (W)	312	250	170	170	225
BMS BL3500	10.1 (L) x 2.93 (H) x 2.27 (W)	406	325	220	220	295
BMS BL4000	19.9 (L) x 2.93 (H) x 2.27 (W)	500	400	270	270	360

Levels of treatment - upper limit. Output Quality (24hr period)

Green = Biological Oxygen demand Red = Suspended Solids Blue = Ammonia Purple = Total Nitrogen

Phosphorus Reduction to 1 mg/L can be added to any of the above by downsizing the PE figures by 20% i.e. multiply the figures by 0.8.
 All Calculations are based on 60g of BOD, 200L (max) of flow, 8 g of Nitrogen /1 person/day and on sewage flow (i.e. not combined sewerage).
 Other effluent standards are available on request. BMS Blivets can treat up to 5000 PE, extra capacity can be achieved by placing units in parallel or in series or a combination of both depending on the site requirements. Add 1 m to length when UV system is added at the outlet. This table is a guide only. Please contact Nova Process to confirm your selection.

KEY BENEFITS

The Aerobic Treatment

- Employs the advanced BMS Aerotor® for efficient, high-performance sewage treatment.

Primary & Final Settlement

- Utilizes state-of-the-art Lamellae Plate Settlement Technology to ensure effective separation and treatment.

Plug Flow Design

- Guarantees an optimal and efficient treatment process, making every drop count.

Extended Sludge Storage

- Offers a minimum of 3 months' storage capacity, reducing the frequency of maintenance.

Net Hydraulic Lift

- Outlet is 150mm higher than the inlet, ensuring at least 100mm of gravity flow with adjustable internal recirculation.

Robust and Reliable

- Built to deliver consistent and dependable performance, even in challenging conditions.

Versatile Installation

- Suitable for both above-ground and below-ground installations, featuring an all-purpose GRP steel-reinforced tank.

Compact and Containerized

- Designed to fit in a standard container, making transportation and setup a breeze.

Highly Portable

- Easily transported from site to site via truck or container, offering unparalleled mobility.

Ready to Use

- Delivered as a complete 'ready to go' solution with Plug & Play technology for immediate operation.

Minimal Maintenance

- Exceptionally easy to operate and maintain, requiring only ½ to 1 man-hour per week.

Low Power Consumption

- Operates with just 2 electromechanical components, consuming only 8 - 15 kWh/day.

Multi-Purpose Use

- Versatile enough for permanent, temporary, or emergency applications, adapting to your needs.

Modular Expandability

- Units can be easily expanded to meet growing demands, ensuring scalability.

Enhanced Security

- Lockdown covers provide added protection and safety, giving you peace of mind.

Operational Flexibility

- Can be operated in parallel or series to meet various effluent parameters, making it adaptable to different requirements.

The BMS Blivet™ integrates all these advanced features into a single, unique unit that is ready to transform your sewage treatment process. Whether you're managing a permanent facility or a temporary setup, the BMS Blivet™ ensures optimal performance with minimal hassle.

WHY THE RBC SOLUTION?

This table shows how RBC systems outperform traditional activated sludge process systems.

NEXT GENERATION RBC SYSTEMS	TRADITIONAL ACTIVATED SLUDGE SYSTEMS
	
DELIVERED 'READY TO GO' Shorter Installation time, saving on labour and material costs	INDIVIDUAL COMPONENTS Longer Installation time, generally 6 x that of an equivalent RBC
SMALLER FOOTPRINT In addition to the RBC unit only 2 tanks are required	LARGER FOOTPRINT In a comparable size population system large Steel Tanks and additional poly tanks are required in addition to those of the RBC option
LESS ENERGY No external blower or large submersible aerators required, fewer electromechanical components	MORE ENERGY External blower or large submersible aerators and greater number of electromechanical components required using 8 x more energy
LOWER OPEX COST Up to 90% saving on operational costs due to less maintenance and energy requirements	HIGHER OPEX COST 8 x 9 times more expensive due to maintenance and energy requirements
SIMPLE MAINTENANCE A lower level of skilled labour required for monthly bearing-lubrication plus weekly inspection	CONSTANT SKILLED MAINTENANCE Trained and skilled labour required with ongoing diagnostic maintenance and calibration of instrumentation
DURABLE 30+ years lifespan on structure and GRP components	SHORT LIFESPAN 10-year guarantee or less on steel tank liners
QUIET <60dB, can be installed near buildings	NOISY >100dB, may require additional soundproofing if near buildings
SHORT SEEDING Less than 1 month to self-seed and durable to changing influent loads	LENGTHY SEEDING Up to 3 months with possible assistance, susceptible to changes in influent loads
LONG PROCESS WARRANTY 20 years ,without change to flow and wastewater entrance criteria	SHORT PROCESS WARRANTY Generally, only 12 months

Discover how the **BMS Blivet™** can revolutionize your sewage treatment needs today.

Call or email **NOVA PROCESS** to find the solution for your project.

Phone: **08 9480 0499**

Email: **info@novaprocess.com.au**



Level 3, 1060 Hay Street
West Perth WA 6005



Scan QR
>> website