

BioCompact® R Series

The affordable small wastewater treatment system



The BioCompact® R Series (LS Series in the past) provide a compact, built-in wastewater treatment solution for ships and land installations. The BioCompact® R Series covers a sewage production range between 0.85 to 180 m³ per day, which corresponds to a population range of 5 to 1,000 people. The number of people connected to the system depends on the daily water consumption for each particular installation, which vary in different parts of the world, based on the country and application. The BioCompact® R Series are fully contained, containerised, and automated steel units that employ a scaled-down version of the activated sludge process used by municipal treatment plants. All systems require a minimal amount of on-site assembly, very limited human attention, can be monitored, and if required, controlled remotely over the Internet.

The BioCompact® R Series as S Series treatment plants carry a long history, with more than 3,000 units sold since 1980. S-type treatment plants have been approved by the US Coast Guard, the German See-Berufsgenossenschaft, the Marine Division of the British Department of Trade, the Danish Søfartsstyrelsen, the USSR Register of Shipping, the Chinese Register of Shipping, the Finnish Board of Navigation, the National Swedish Administration of Shipping and Navigation, as well as the Polish Rejestr Statków. The R Series adapt the successful concept of the S Series for ship and land based applications.

Unique Features

- ▶ R Series is available for wide range of populations.
- ▶ Long history of successful operation throughout the world.
- ▶ The ControLogic™ system provides complete process electronic control and visualisation, and monitoring via the Internet.
- ▶ System alarms are sent as SMS and e-mails over the Internet.
- ▶ The necessity for sludge removal is minimised due to sludge recirculation and autolysis.
- ▶ Turnkey systems can be shipped to remote locations; no concrete tanks are required.
- ▶ The aeration requirement is electronically determined, and power consumption depends on the actual load in the system.
- ▶ Durable steel construction and special epoxy coating.
- ▶ Modularity allows growth with the community.
- ▶ Low maintenance expenses - few moving parts that may be subject to failure.
- ▶ Superior treatment quality with nitrification-denitrification and biological phosphorus removal.
- ▶ Various options for automatic effluent disinfection.

BioCompact® R Series

System Dimensions

Type	Length (m)	Width (m)	Height (m)	Weight, empty (kg)	Weight, in operation (kg)
R10	1.62	1.47	1.47	1,100	2,350
R15	1.67	1.50	1.72	1,200	2,950
R20	1.99	1.65	1.72	1,420	3,770
R25	2.25	1.65	1.72	1,670	4,550
R35	2.20	2.11	2.17	2,100	6,150
R50	2.20	2.72	2.17	2,725	8,600
R100	3.88	2.40	2.43	4,350	15,880
R200	4.76	3.66	2.45	6,100	26,000
R300	5.10	4.28	2.75	7,980	37,000
R600	6.30	4.76	2.75	11,000	50,000
R800	5.52	4.76	3.35	12,000	52,000
R1000	7.75	6.10	3.20	13,500	104,500

Applications

- ▶ marine vessels and oil and gas platforms,
- ▶ townships, small and remote communities,
- ▶ hotels and resorts,
- ▶ nursing stations and hospitals,
- ▶ correctional facilities,
- ▶ locations where a below-ground system is undesirable (e.g. permafrost regions).

Installation

The BioCompact® R Series plants consist of one to three containers, which can be linked on-site. All dimensions of the containers comply with road and air transportation standards, so that special transportation permits are not required in most countries for the shipment of the containers. For land applications, a concrete base slab is required to support the units.

Maintenance

Ordinary maintenance includes a bimonthly check of the concentration of activated sludge, a monthly check for verification of proper operation of the sensors and their cleaning. Clarifier sludge needs to be pumped out periodically (bi-monthly, quarterly, semi-annually, or annually), depending on load conditions.

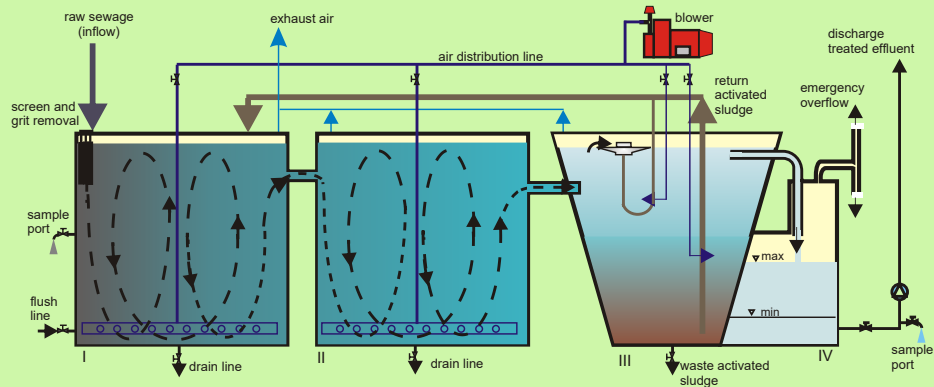
Lifetime

The BioCompact® R Series treatment plants are exceptionally well designed, built, and surface treated, allowing for a lifetime expectancy of at least 20 years. Easy serviceability allows for efficient replacement of blowers and aeration membranes when necessary.

Customer Benefits

- ▶ BioCompact® R Series are turnkey automated sewage treatment systems that combine mechanical simplicity and state-of-the-art electronic controls and process visualisation.
- ▶ BioCompact® R Series operation is automated and requires minimum attention of on-site personnel.
- ▶ BioCompact® R Series includes a feature of secure remote access over the Internet and can be remotely monitored 24/7 in real time.
- ▶ Remote access to the plant is shielded by an Osorno SecureWall™ gateway, which does not allow access for non-registered devices and includes AttackAnalyzer software that allows the user to trace the location of the attacking computer.
- ▶ BioCompact® R Series does continuous internal checks, and if required, sends warnings and alarms as SMS and e-mail. BioCompact® R Series control and visualisation software are based on an "open source" philosophy and do not carry any cost associated with software upgrades or a license fee.

Process Schematic



BioCompact

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