

## BioCompact® Overview

The affordable small wastewater treatment system



The packaged affordable wastewater treatment systems that have become known as BioCompact® over the past 25 years, are available exclusively through BioCompact Ltd. and its authorised distribution partners in North, Central and South America, and in Asia. These units were initially developed by *Apparatebau Salzkotten*, a German corporation, and are now manufactured in Canada by BioCompact Ltd. At the present time, there are more than 2,000 installations worldwide.

### Description

The BioCompact® is a complete biological sewage treatment system that achieves full biological treatment of sewage. This is accomplished in a downsized version of the "activated sludge process" used in advanced, large municipal wastewater treatment plants. Unlike septic tanks, the sewage undergoes a complete treatment cycle. Extensive testing has shown that the discharge complies with the strict German Environmental regulations (DIN 4261, Section 2, Small Wastewater Treatment Plants). The routine testing performed on the first installation in the USA confirms that the BOD reduction and the TSS level of the discharge comply with the "Ten States Standard". The BioCompact® is the most cost efficient and environmentally friendly solution for wastewater treatment of lakeshore properties, clusters of homes, small communities, parks, country clubs, and trailer parks. The BioCompact® is **not** designed for industrial or hazardous waste, solid food, rubber and plastic, or motor oil.

The continually outstanding performance of the BioCompact® is maintained by ControLogic™, an electronic monitoring device that is available only through ControLogic™ assures that the treatment process self-adapts to changing load and flow conditions, optimising its performance as one would expect in a full-scale, state-of-the-art municipal treatment plant! Aside from the control and monitoring functions of ControLogic™, it also allows remote data access through a telephone line. This feature indicates that these systems are ready for the Internet age! All systems delivered after the third quarter of 2001 are equipped "Internet Ready".

### Applications

All BioCompact® model series are affordable, small wastewater treatment systems of choice for townships, smaller communities, isolated hotels, lakeshore properties and resorts, rural hospitals, prisons, and new developments. Modular scale-up is immediate, avoiding large, up-front investment for future community growth.

### Lifetime

All BioCompact® units are exceptionally well designed, built, and surface-treated, allowing a lifetime expectancy of more than 20 years.

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## Technical Details of the Surface Protection

- The unit is steelblasted inside and out, in accordance with DIN 50 049 and Swedish standard Sa 2,5.
- The first protection layer is applied in airless spraying inside and outside; the minimum thickness of the coating is 150 micron. This special anti-corrosion paint is solvent free and provides a very high degree of corrosion protection (contains zinc and phosphate).
- The second protection layer of coating is at least 150 micron thick. This coating is a pigmented, solvent-free liquid plastic of high elasticity at all practical temperatures.
- The unique two-layer polymer coating on the steel shell is rated for at least 20 years of corrosion protection that would result in leakage. The integrity of the system is electronically monitored.

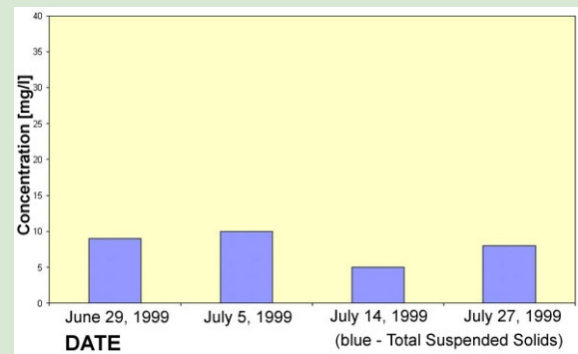
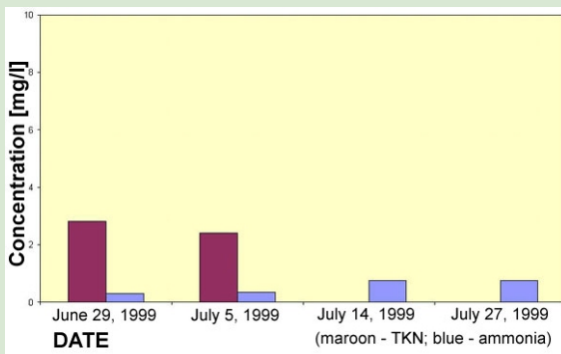
*Technical details may be subject to change.*

## Construction Materials

The BioCompact® are durable steel structures. Great care has been taken in the development of a coating that protects the integrity of the steel to the extent that the lifetime of a BioCompact® reaches or exceeds 20 years. The wall thickness of the BioCompact® regularly surprises our customers, and easily explains the high weight of the units. The resulting structural stability is protected by two layers of coating. Two different colours are used for easy visual inspection of coating integrity.

## Performance

BioCompact® systems have been in residential and commercial use in Europe since the late 1970's, and many went into the former East Germany to serve as efficient municipal systems after the re-unification of the country. A re-test of the earliest installations by German authorities, on some of the earliest BioCompact® Systems installed over 15 years earlier, have confirmed the continuous efficiencies, and the durability of the systems. One of the early installations has been continuously monitored by German authorities for over one year, resulting in the confirmation that the efficiency of operation is constantly around 98% removal of the load (BOD and COD) in residential wastewater. This excellent track record has been verified with the first USA installation. As shown below, the values for nitrogen and for suspended solids are well within limits.



*The first land installation of a BioCompact® in North America (in Minnesota in 1999) was in time for the 4<sup>th</sup> of July weekend of this lakeshore community, with the corresponding extraordinary use.*

## Maintenance

Ordinary maintenance includes a bimonthly check of the concentration of activated sludge, a monthly check for verification of proper operation of sensors and their cleaning. Non-degradable items, such as fibrous materials, plastic, rubber items, etc., sand, and the digested excess sludge accumulates over time and must be removed from time to time. The frequency of discarding this waste depends largely on the influent wastewater quality, and thus on the habits of the population connected to the treatment system.

**BioCompact**®

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