

# WSB® Clean Septic System

The treatment system trusted worldwide.



Since 1999, more than **50,000** systems have been successfully installed across **27** countries.

- + Consistent and proven results
- + Self cleaning media that never needs to be replaced
- + Compact installation
- + Remote monitoring provides peace of mind
- + Low operational and service costs

 **wsb**® *clean*



**TANKS-A-LOT**

onsite water and sewage solutions



Compliant to  
NSF/ANSI Standard 40



## The model for WSB® clean: nature

WSB® clean is an advanced wastewater treatment system developed by the researchers from the Bergmann Group in co-operation with the technical universities of Chemnitz, Cottbus and Dresden in Germany. The treatment process is modeled on the natural purification of a creek or stream. In nature, the stones and rocks in the stream act as a clarifying biofilm consisting of micro-organisms that attach to and treat the waste. Instead of the stone or rock in a creek, the WSB® clean system uses patented plastic carrier material called "Kaldnes". These carriers provide the ideal housing for micro-organisms as a thin biofilm.

LAMINARY INTERFACE ▶ The surface of the biofilm.

AEROBIC LAYER ▶ Responsible for the degradation of carbon compounds and the conversion of ammonium to nitrate.

ANOXIC LAYER ▶ In the absence of dissolved oxygen, the bound oxygen is used to turn the nitrate into nitrogen and oxygen (denitrification).

ANAEROBIC LAYER ▶ Here sulfate is degraded.

Enjoy  
the space  
of your  
property

WSB® clean is a compact system that requires much less space than conventional septic systems. The size of the disposal bed can be greatly reduced as it is no longer needed for treating majority of the wastewater. WSB® clean protects your investment and allows for more uses of your property. The size of the WSB® clean system is determined by local regulations in accordance with the daily design flow and by the soil characteristics of the property. Most installations can utilize a single tank for treatment up to 3,800 LPD (1,000 US gallons).

Low electrical consumption:  
<\$40/year\*

based on 1,600 L/day  
and \$0.10/kWh  
\*Model WSB400  
w/pump



## Low energy and life cycle costs

WSB® clean requires less electricity and maintenance than other wastewater systems, while providing exceptional performance. The Kaldnes media is self-cleaning and never has to be cleaned or replaced. Some systems use more than ten times the amount of electricity while others stating lower energy consumption require media cleaning or replacement resulting in higher maintenance and operation costs over the lifetime of the system.

## 1 PRIMARY CLARIFICATION

Wastewater leaves the home and enters the system. This chamber preconditions the wastewater, replacing the need for an additional septic or holding chamber.

## 2 BIOLOGICAL CLEANING STAGE

Microorganisms form a biofilm on the carrier material, Kaldnes. This media has been specifically designed to give microorganisms optimal living conditions to form a biofilm that is required for treating the wastewater.

## 3 AERATION

Fine bubble diffusers supply oxygen into the reactor, which the microorganisms need for treating the wastewater. Through the motion of the media within this chamber, the media material self-cleans; therefore the media does not clog up and never has to be replaced or cleaned.

## 4 FINAL CLARIFICATION

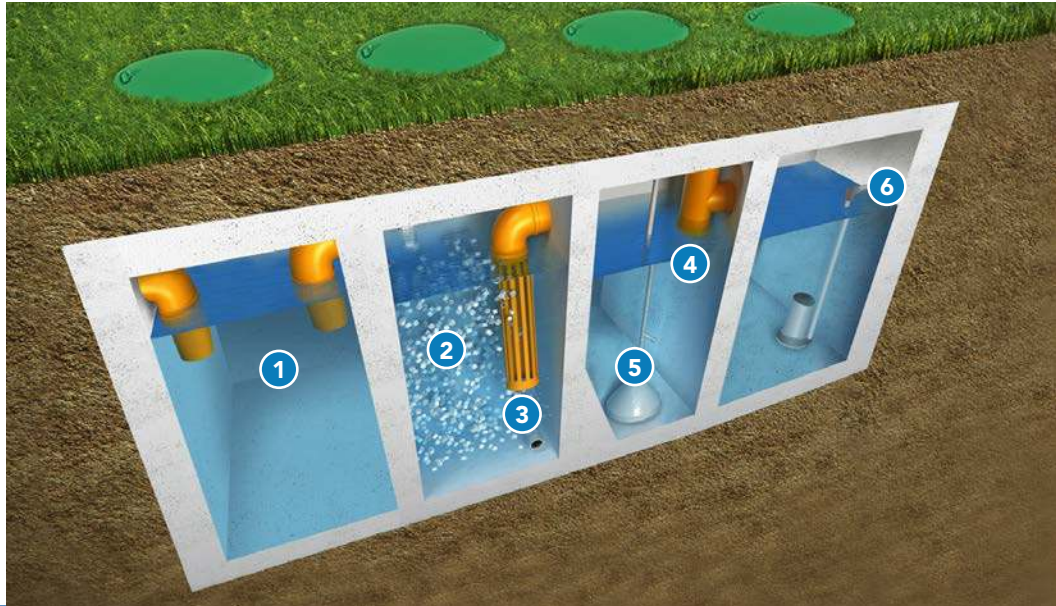
Fine particles coming out of the biological cleaning stage settle to the bottom in this chamber.

## 5 SLUDGE RETURN

Settled solids are returned out of the bottom of the final clarification and sent into the primary clarification chamber for further clarification and storage.

## 6 EFFLUENT/ PUMP CHAMBER

The clarified water can now be discharged to a disposal bed that is smaller in size than a traditional septic system.



WSB® clean control panel and Web Viewer for remote monitoring of each system.

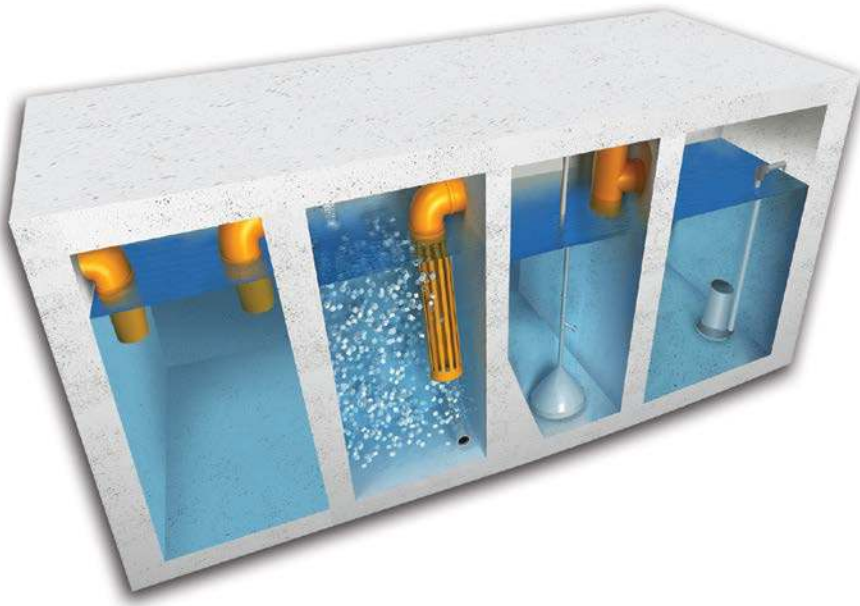


## Variability of flows is not a problem

The two most common situations that cause failure in other treatment plants are over-load and under-load conditions. Over-loading occurs during concentrated periods of water usage in a short time while under-loading occurs during periods of inactiveness. These conditions in other biological processes cause the treatment performance to be severely reduced which could compromise the disposal bed's expected lifespan. The WSB® clean system has been designed and tested to handle all situations, whether it is a big party with an increased usage over a short period of time or a vacation period or seasonal cottage where there is no wastewater flow for an extended period of time.

## The basis of long-term reliable performance

WSB® clean control panels come with 24/7 remote management. A web based monitoring system has been developed specifically to provide full operational surveillance of each system with instant notification sent via email and SMS. The information is stored on a web based data base providing a historical report on each system. Remote monitoring ensures a reliable working system and saves money on operation and maintenance while remaining virtually invisible to the homeowner.



## Advantages of WSB® clean

- + Reliable performance year-round
- + Media is self-cleaning and never has to be replaced
- + 24/7 remote monitoring results in peace of mind and low maintenance costs
- + Small footprint and simple to install
- + Low energy consumption
- + Low operation costs
- + No noise or smell
- + Easily blends into existing landscape



### TANKS-A-LOT

Contact **TANKS-A-LOT** or a local installer for more information.

#100 - 53251 RR232, Sherwood Park, AB T8A 4V2

P 780.472.8265 | F 780.499.0650

sales@tanks-a-lot.com | www.tanks-a-lot.com

WSB 2560 4/5 Bedroom Home

WSB 3065 6 Bedroom Home

WSB 3800 7 Bedroom Home

### LARGER SIZES AVAILABLE UPON REQUEST

\* Based on Alberta 2009 Standard of practice

Bergmann North America Inc. (BNA) specializes in decentralized wastewater treatment system design, supply, manufacturing, installation, operation, management, and control solutions.

TANKS-A-LOT is a licensed distributor of BNA for WSB® clean wastewater treatment systems. Our team is ready to help you elect the right solution for your project.

Also available:

- + Commercial and High Strength Wastewater Treatment Systems
- + Nutrient Reduction options
- + click+clean® Control Panels with remote management features