



## WASTEWATER TREATMENT

### INTENSIVE WASTEWATER TREATMENTS

- ACTIF SLUDGE** systems from 2 to 8 population equivalent, with CE
- ACTIF SLUDGE** systems from 2 to 8 population equivalent, with CE and Walloon agreement
- ACTIF SLUDGE** systems for 3 and 4 population equivalent, with CE and French agreement
- ACTIF SLUDGE** systems from 8 to 30 population equivalent, with CE
- MOVING BED** systems from 2 to 7 population equivalent, with CE and French agreement

### EXTENSIVE WASTEWATER TREATMENT

From 0 to 25 population equivalent, with CE

### EFFLUENT DISTRIBUTORS

With 2 to 5 exits



According to EN 12566-3



## Table of contents

Why choose a wastewater treatment from Boralit	3
Advantages	3
Intensive systems	4
Active sludge systems	4
Functioning	4
Characteristics Supercompact	5
Characteristics Supercompact W	6
Characteristics Supercompact French agreement	8
Characteristics WZ	9
Moving bed system	12
Functioning	12
Characteristics	13
Extensive system	15
Functioning	15
Characteristics	16
Effluent distributors	17
Functioning	17
Characteristics	17
Options	19
Replacement parts	21
Installation requirements	22
Maintenance	25
Warranty	25
Other documents	25

The published rates are exclusive of VAT, and ex works.



## WHY CHOOSE A WASTEWATER TREATMENT PLANT FROM BORALIT ?

A water treatment plant of Boralit consist of 2 groups:

- Intensive systems: in these systems, there is intensive pumped in oxygen. So there is a air pump needed.
- Extensive systems: Here comes the oxygen in a natural way in. There is no air pump needed.

They offer **superior quality**, and also countless benefits:

The water treatment plants are made **of plastic**. There can therefore be no concrete rot or crack that can occur.

The life expectance is more than **25 years**.

The systems are **easy or not to be regulate** and not sensitive for disturbances.

All parts are **very light**, giving the whole is very easy mobile.

The **treatment efficiency is higher**, with a lower sludge deposal, than other systems on the market. Especially the Bora-Clean with **efficiency of 99%**.

The pumps (in intensive systems) are of a **very low energy consumption**.

This water treatments are very **easy to maintain**: There are no loose parts that require cleaning.

Activators are not necessary during the start-up or in use.

More than **12.000 sold** systems.

Our system Bora Clean is also very suitable for holiday rentals, where only occasionally people are present. With an efficiency of up to 99% and a power consumption of only 2.2 kwh per year per inhabitant, this is the best water treatment on the Belgian market.

## ADVANTAGES:

Easy to install because of its light weight

Tanks are easy to clean because nothing sticks on PE. So entering the tank is not necessary.

Guarantied watertight

Not possibility that roots grow trough the tank.

The tank is corrosion resistant.

Equipped with a plastic cover that must be replaced by a steel ore plastic cover that meets the legislation.

They all have a welded riser.

Now moving parts that can break.

All parts are replaceable.



## INTENSIEVE SYSTEMS

## ACTIVE SLUDGE SYSTEMS

### FUNCTIONING

This Boralit system is standard conceived of 3 tanks, delivered as monoblok. Namely a pre-treatment (primary sedimentation), aeration and a clarifier (secondary sedimentation). All manufactured in high quality PE, a material with multiple advantages.

The small wastewater treatment plants from Boralit working according the active sludge system. The First tank(s) is a pre-treatment tank and functions like a septic tank. The tank in the middle is intensively aerated. In this tank is a mixture of waste water and biomass. This biomass develops in the waste water, in the form of micro-organisms. In the water treatment plant of Boralit, the aeration is used for both the oxygen supply as for mixing the contents in the reactor. By continuously aerating the installation, the aerobic bacteria are growing. The separation between the treated water and the activated sludge takes place in the clarifier. A part will be returned to the aeration tank (middle tank). This by means of a sludge return. This increases the purification process significantly. Occasionally the sludge should be removed from the system, so the biomass in the aeration tank is kept at the desired level.

The Opur Supercompact wastewater treatment plant is based on the active sludge technology, like most central municipal treatment plants.

Opur Supercompact is built with 3 tanks that are connected to each other as a monoblock. The system consists of first settlement tank (1), aeration tank(2) and final settlement tank (3), and has to be installed underground.

#### First settlement:

In the first settling tank, the solid particles are stopped and gradually liquefied. Accidental dumping of small amounts of detrimental substances are partially taken care of in this tank. The biological transformations are done anaëroob (without oxygen).

#### Aeration tank:

By means of a bubble aerator oxygen is dissolved into the liquid, which enhances growth of aerobic bacteria. These bacteria will consume the biological waste. The continuous flow of air bubbles also creates optimal mixing and consumption of the biological waste and enables treatment of waste waters entering the system.

Final settlement :The third tank is the second settling tank (secondary sedimentation), based on a double final settlement . Here the sludge settles down and from this tank the purified water is discharged from the still water area. There is no need to add bacteria's during the start-up of the system. A sludge return system will return separated sludge to the aeration tank, and will help to bridge periods with limited or no influent (e.g. during vacation period) without negative impact on effluent results

**ACTIVE SLUDGE system from 2 to 8 population equivalent, with CE**

## CHARACTERISTICS

Available in 2 to 5 PE and in 5 to 8 PE.

Consisting of a monoblok of 3 tanks.

It is possible to connect multiple systems in parallel.

Benefits of the system:

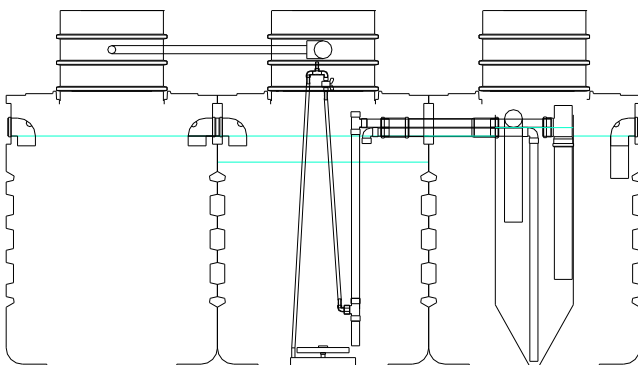
- Fully plastic, less corrosion than concrete, no concrete rot and no cracks
- Installation in sand
- Easy to adjust
- Light weight, so easy and cheap to install
- Standard build-in recirculation
- Choice of 2 monoblock models for families to 5 and 8 persons (5/3 and 8/3)
- Cheapest in maintenance
- Low sludge deposition, high treatment efficiency.
- Pump very low electrical consumption (+/- 100 Kw/y/person for the 5/3 and +/- 80 Kw/y/person for the 8/3)
- Maintenance friendly: no lose parts
- No need of activators

## Opur Supercompact 5/3



Installation in sand	
Volume	3.300 liter
Number of PE	Van 2 tot 5
Length	3.540 mm
Width	1.180 mm
Height	1.910 mm
Height in	1.205 mm
Height out	1.150 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	235 kg
Flow rate air pump	40 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 100 Kw
Price – B01	€ 3.618,87

Dimensions are in mm and informative. Subject to alterations.



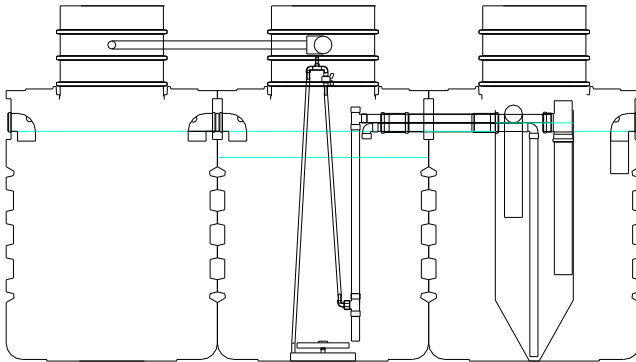
Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

## Opur Supercompact 8/3



Installation in sand	
Volume	4.800 liter
Number of PE	Van 5 tot 8
Length	3.870 mm
Width	1.290 mm
Height	2.250 mm
Height in	1.445 mm
Height out	1.400 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	265 kg
Flow rate air pump	50 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 80 Kw
Price – B01	€ 4.894,19

Dimensions are in mm and informative. Subject to alterations.



Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

**ACTIVE SLUDGE systems from 2 to 8 population equivalent, with CE**

## CHARACTERISTICS

Available in 2 to 5 PE and in 5 to 8 PE.

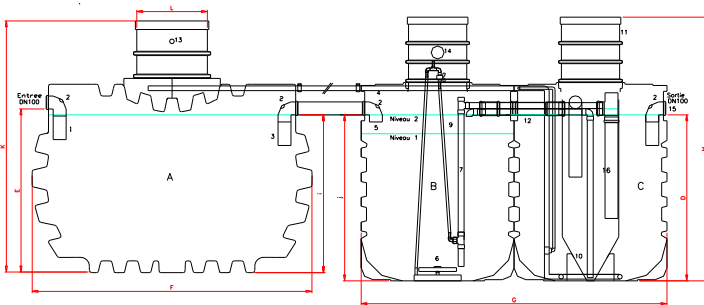
Consisting of 1 tank and a monoblok of 2 tanks.

It is possible to connect multiple systems in parallel.

Benefits of the system:

- Fully plastic, less corrosion than concrete, no concrete rot and no cracks
- Installation in sand
- Easy to adjust
- Light weight, so easy and cheap to install
- Standard build-in recirculation
- Choice of 2 models for families to 5 and 8 persons (W 5/3 and W 8/3)
- Cheapest in maintenance
- Low sludge deposition, high treatment efficiency.
- Pump very low electrical consumption (+/- 100 Kw/y/person for the W 5/3 and +/- 80 Kw/y/person for the W 8/3)
- Maintenance friendly: no lose parts
- No need of activators

## Opur Supercompact W 5/3

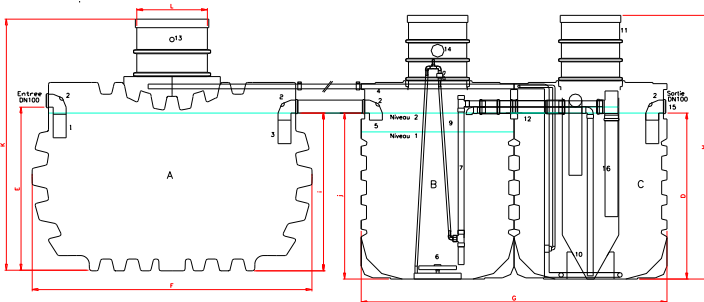


Installation in sand	
Volume	3.000 en 2.200 liter
Number of PE	Van 2 tot 5
Length	2.390 en 2.360 mm
Width	1.610 en 1.180 mm
Height	2.200 en 1.910 mm
Height in	1.500 mm
Height out	1.200 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	180 en 110 kg
Flow rate air pump	40 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 100 Kw
Price – B01	€ 4.908,75

Dimensions are in mm and informative. Subject to alterations.

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

## Opur Supercompact W 8/3



Installation in sand	
Volume	6.000 en 3.200 liter
Number of PE	Van 5 tot 8
Length	2.400 en 2.580 mm
Width	2.070 en 1.290 mm
Height	2.500 en 2.200 mm
Height in	1.850 mm
Height out	1.400 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	270 en 130 kg
Flow rate air pump	50 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 80 Kw
Price – B01	€ 6.468,00

Dimensions are in mm and informative. Subject to alterations.

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97



**ACTIVE SLUDGE systems for 3 and 4 population equivalent, with CE and French agreement**

## CHARACTERISTICS

Available in 2 to 5 PE and in 5 to 7 PE.

Consisting of a monoblok of 2 x 2 tanks.

It is possible to connect multiple systems in parallel.

Benefits of the system:

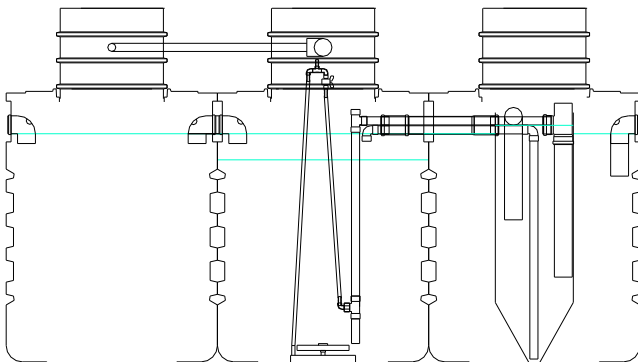
- Certified according CE EN12566-3
- 3 reinforced tanks in monobloc, equipped completely ready to install
- Ultra strong tanks with only 1% deformation and 25 years of guaranty
- Light weight: easy to transport and to install
- No adjustment
- Low energy consumption (+/- 100 Kw/y/person for the SC3 and +/- 80 Kw/y/person for the SC4)
- Low maintenance cost
- Delivered with stainless steel pump housing.
- Bigger systems available up to 30 PE

### Opur Supercompact 3



Installation in sand	
Volume	3.300 liter
Number of PE	3
Length	3.540 mm
Width	1.180 mm
Height	1.910 mm
Height in	1.205 mm
Height out	1.150 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	235 kg
Flow rate air pump	40 l/min
Aeration regime	Continu
Consumption/year/person	+/- 100 Kw
French certification number	ANC 2011-009
Price – B01	€ 2.965,56

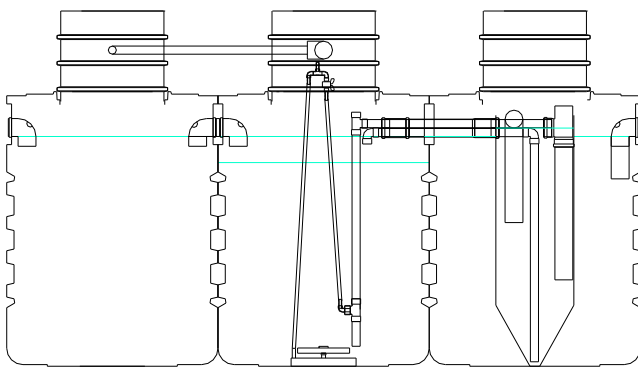
Dimensions are in mm and informative. Subject to alterations.



Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97



## Opur Supercompact 4



Installation in sand	
Volume	4.800 liter
Number of PE	4
Length	3.870 mm
Width	1.290 mm
Height	2.250 mm
Height in	1.445 mm
Height out	1.400 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	265 kg
Flow rate air pump	60 l/min
Aeration regime	Continu
Consumption/year/person	+/- 80 Kw
French certification number	ANC 2011-009ext01
Price – B01	€ 3.929,99
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

### **ACTIVE SLUDGE systems from 8 to 30 population equivalent, with CE**

## CHARACTERISTICS

Available from 8 to 12, 12 to 16, 16 to 22 and from 22 to 30 PE.

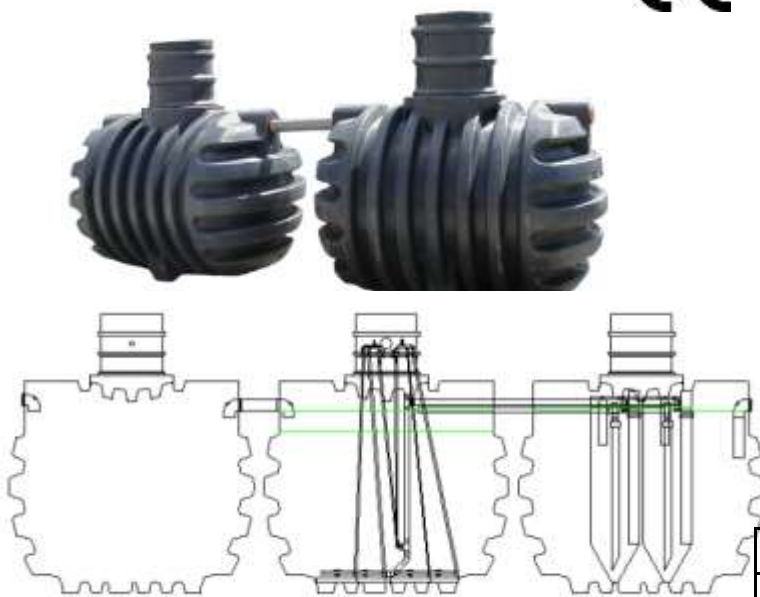
Consisting of 2 x 3 tanks.

It is possible to connect multiple systems in parallel.

Benefits of the system:

- Fully plastic, less corrosion than concrete, no concrete rot and no cracks
- Installation in sand
- Easy to adjust
- Light weight, so easy and cheap to install
- Standard build-in recirculation
- Cheapest in maintenance
- Low sludge deposition, high treatment efficiency.
- Pump very low electrical consumption (+/- 85 Kw/y/person)
- Maintenance friendly: no lose parts
- No need of activators

**WZ12/3**

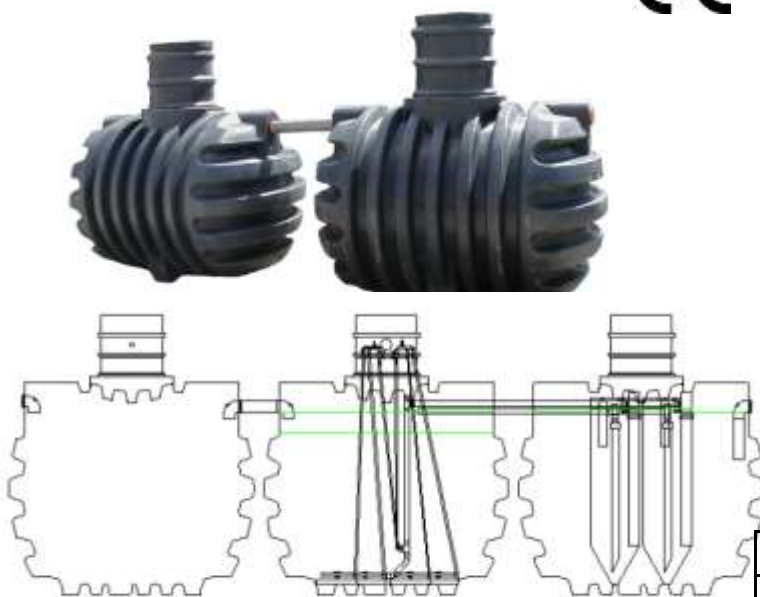


Installation in sand	
Volume	3 x 2.400 liter
Number of PE	Van 8 tot 12
Length	2.350 mm
Width	1.350 mm
Height	1.850 mm
Height in	1.220 mm
Height out	1.180 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	400 kg
Flow rate air pump	80 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 85 Kw
Price – B01	€ 6.462,46

Dimensions are in mm and informative. Subject to alterations.

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

**WZ16/3**

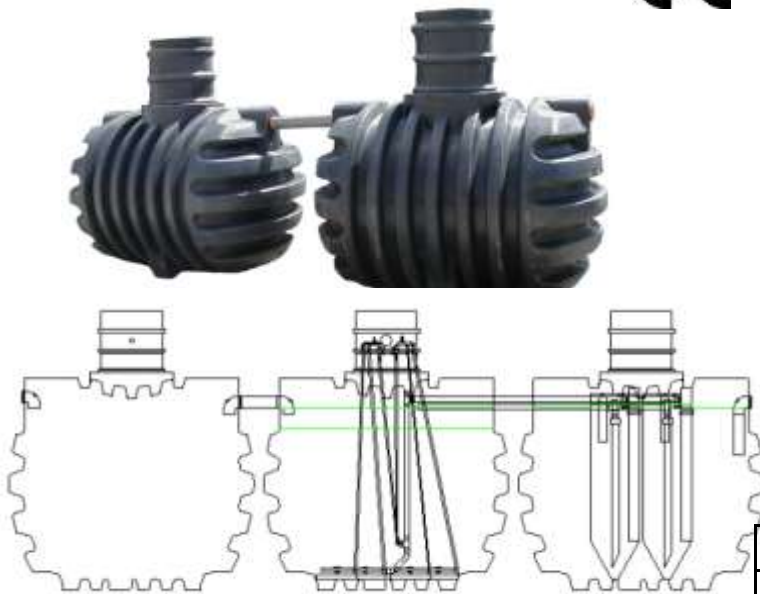


Installation in sand	
Volume	3 x 3.300 liter
Number of PE	Van 12 tot 16
Length	2.390 mm
Width	1.610 mm
Height	2.210 mm
Height in	1.500 mm
Height out	1.450 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	620 kg
Flow rate air pump	100 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 85 Kw
Price – B01	€ 8.571,65

Dimensions are in mm and informative. Subject to alterations.

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

**WZ22/3**

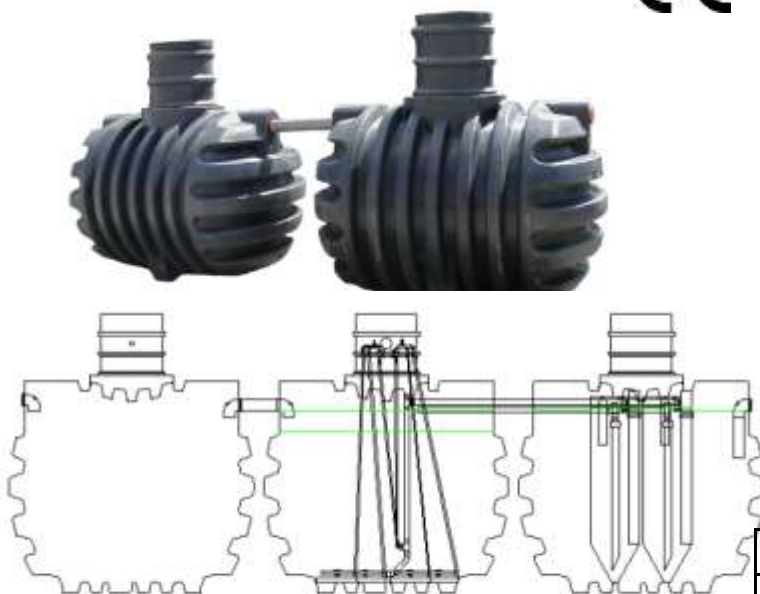


Installation in sand	
Volume	3 x 6.000 liter
Number of PE	Van 16 tot 22
Length	2.400 mm
Width	2.070 mm
Height	2.470 mm
Height in	1.850 mm
Height out	1.800 mm
Diameter in/out	125 mm
Diameter manholes	600 mm
Weight	920 kg
Flow rate air pump	150 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 85 Kw
Price – B01	€ 10.976,49

Dimensions are in mm and informative. Subject to alterations.

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97

**WZ30/3**



Installation in sand	
Volume	3 x 6.000 liter
Number of PE	Van 22 tot 30
Length	2.400 mm
Width	2.070 mm
Height	2.470 mm
Height in	1.850 mm
Height out	1.800 mm
Diameter in/out	125 mm
Diameter manholes	600 mm
Weight	945 kg
Flow rate air pump	200 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 85 Kw
Price – B01	€ 13.562,56

Dimensions are in mm and informative. Subject to alterations.

Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	9,4	< 2	38	95,6
<b>COD</b>	66	38	192	89,4
<b>SS</b>	12	< 2	59	97



# MOVING BED SYSTEMS

## FUNCTIONING

This Boralit system is standard conceived of 4 tanks, delivered as monoblok. Namely 2 pre-treatment tanks (primary sedimentation), aeration and a clarifier (secondary sedimentation). All manufactured in high quality PE, a material with multiple advantages.

The small wastewater treatment plants from Boralit working according the moving bed system. The First 2 tanks are the pre-treatment tanks and functions like a septic tank. The third tank is periodically aerated. In this tank is a mixture of waste water and biomass. This biomass develops in the waste water, in the form of micro-organisms. In this tank is a support material to hold the bacteria better in the tank.

In the water treatment plant of Boralit, the aeration is used for both the oxygen supply as for mixing the contents in the reactor. By continuously aerating the installation, the aerobic bacteria are growing. By the periodically aeration there is an alternating aerobe and anaerobe circumstance.

The separation between the treated water and the activated sludge takes place in the clarifier. A part will be returned to the aeration tank (middle tank). This by means of a sludge return. This increases the purification process significantly. Occasionally the sludge should be removed from the system, so the biomass in the aeration tank is kept at the desired level.

The Opur Supercompact MB wastewater treatment plant is based on the moving bed technology.

Opur Supercompact is built with 4 tanks that are connected to each other as a monoblock. The system consists of 2 first settlement tanks (1 and 2), aeration tank(3) and final settlement tank (4), and has to be installed underground.

First settlement:

In the first settling tanks, the solid particles are stopped and gradually liquefied. Accidental dumping of small amounts of detrimental substances are partially taken care of in this tanks. The biological transformations are done anaerobe (without oxygen).

Aeration tank:

By means of a bubble aerator oxygen is dissolved into the liquid, which enhances growth of aerobic bacteria. These bacteria will consume the biological waste.

The continuous flow of air bubbles also creates optimal mixing and consumption of the biological waste and enables treatment of waste waters entering the system.

Final settlement :

The third tank is the second settling tank (secondary sedimentation), based on a double final settlement . Here the sludge settles down and from this tank the purified water is discharged from the still water area. There is no need to add bacteria's during the start-up of the system. A sludge return system will return separated sludge to the aeration tank, and will help to bridge periods with limited or no influent (e.g. during vacation period) without negative impact on effluent results

**MOVING BED systems from 2 to 7 population equivalent, with CE and French agreement**

## CHARACTERISTICS

Available in 2 to 5 PE and in 5 to 7 PE.

Consisting of a monoblok of 2 x 2 tanks.

It is possible to connect multiple systems in parallel.

Benefits of the system:

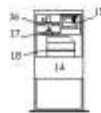
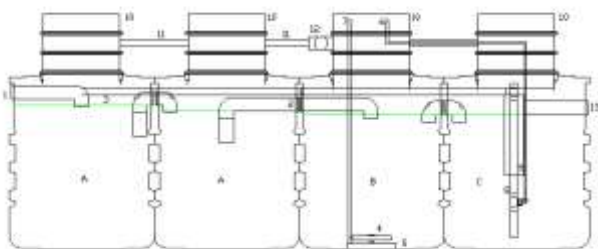
- Certified according CE EN12566-3
- On the base of moving bed technologies
- 4 reinforced rotomoulded tanks in monoblok, equipped completely ready to install
- Ultra strong tanks with only 1% deformation and 25 years of guaranty
- Light weight: easy to transport and to install
- No adjustment
- Low energy consumption (+/- 80 Kw/y/person for the MB5 and +/- 90 Kw/y/person for the MB7)
- Low maintenance cost
- Delivered with stainless steel pump housing.
- 5 PE and 7 PE certified according EN12566-3
- Bigger systems available up to 30 PE

## Opur Supercompact MB5



Installation in sand	
Volume	4 x 1.100 liter
Number of PE	Van 2 tot 5
Length	2.360 mm
Width	2.360 mm
Height	1.900 mm
Height in	1.285 mm
Height out	1.155 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	330 kg
Flow rate air pump	50 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 80 Kw
French certification number	ANC 2014-013
Price – B01	€ 4.645,53

Dimensions are in mm and informative. Subject to alterations.

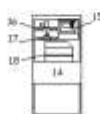
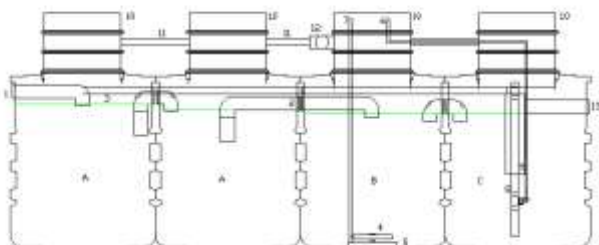


Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	15	5	24	95,1
<b>COD</b>	60	34	92	90,8
<b>SS</b>	16	3	46	95,4

# Opur Supercompact MB7



Installation in sand	
Volume	4 x 1.600 liter
Number of PE	Van 2 tot 5
Length	2.580 mm
Width	2.580 mm
Height	2.250 mm
Height in	1.450 mm
Height out	1.320 mm
Diameter in/out	110 mm
Diameter manholes	600 mm
Weight	370 kg
Flow rate air pump	80 l/min
Aeration regime	Continuously
Consumption/year/person	+/- 90 Kw
French certification number	ANC 2014-013ext01
Price – B01	€ 6.224,33
<small>Dimensions are in mm and informative. Subject to alterations.</small>	



Results achieved				
	Average	Minimum	Maximum	% Average
<b>BOD</b>	15	5	24	95,1
<b>COD</b>	60	34	92	90,8
<b>SS</b>	16	3	46	95,4





## EXTENSIVE SYSTEM

### FUNCTIONING

Our extensive system is working completely different than our other systems. The pre-treatment tank is similar, and operates as a septic tank. After this pre-treatment, the water flows by gravity in a pumping station, which will dispense the water over the top of the filter. In the filter the water flows through a natural medium and is purified. It flows then by gravity out of the system.

The big advantage of this system is that there is now minimum occupation needed. So it is ideal for camping lots and vacation houses.

The filter is delivered as a kit. It consists of a standard 3D EPDM foil, prefabricated tubes and connections, some bags with the medium and an installation manual.

The installation is easy to install and to connect. Follow the instructions carefully.

Working principle :

Pre-treatment :

Tank A is the pre-treatment with a volume of 6.000 liter.

The wastewater from the house arrives in this pre-treatment. It is an anaerobic environment, making it liquefied.

The inlet is equipped with a curve to bring the water to the bottom of the tank.

The curve at the outlet is installed so only liquefied water can flow out.

Pumping station :

Tank B is the pumping station with a volume of 130 L.

A pump is installed in this tank. From the moment that there is a certain amount of liquid in the tank, the pump will bring it to the dispenser unit of the filter.

BORA-CLEAN filter:

The wastewater, coming from the pumping station, arrives in the dispenser unit on top of the filter. It is perforated at the bottom side.

The amount of wastewater is from that volume that it is more than the volume of the dispenser unit. Therefore the wastewater is divided equally over the system.

This wastewater is passing different layers of medium, and treated at that moment.

At the bottom of the filter is outlet. Perforated at the bottom. The treated water is flowing out of the system by this outlet.

Sample pit:

The sample pit is last in the line, with a volume of 9,4 l.

The filter must be installed behind a pretreatment tank of 6.000 liter (SP/RW6000) and a pumping station of 130 liter (PP1300). After the filter you install a sample pit

The filter is for 5 PE. If necessary, you can install up to 5 installations parallel to each other with our effluent distributor.

The filter is designed to withstand under occupation. That is ideal for holiday houses, camping lots, .

The installation is intended to install underground. We offer in option wooden bezels for a better view.

It is possible to install the installation partially above ground (20 cm and 60 cm). To do this there are options available to facilitate the installation.





## CHARACTERISTICS

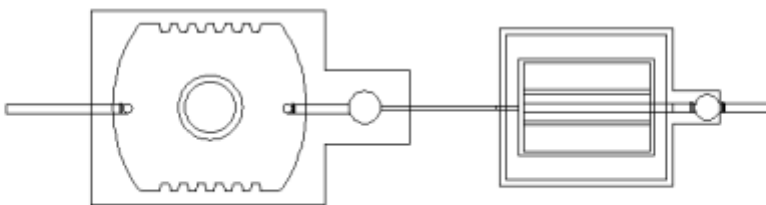
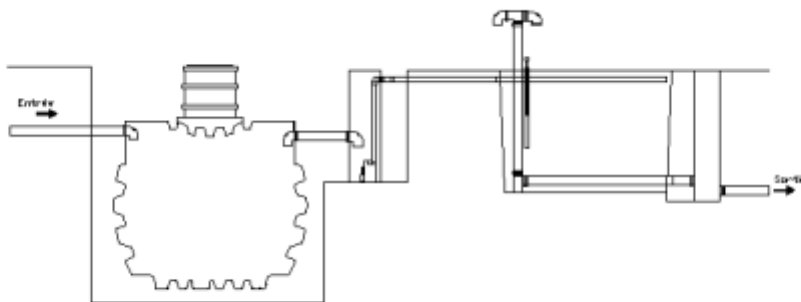
Available in 0 to 5 PE.

Carried out in 3D EPDM.

It is possible to connect multiple systems in parallel.

- Suitable for irregular load such as campsites and holiday homes.
- Consistent of a 3D EPDM foil (3), filled with a natural filter medium.
- EPDM applies to the latest legislation and is 1,5 mm thick.
- EPDM welded in stead of glued.
- No adjustment necessary. Start automatically.
- Kit, easy and cheap to install.
- Standard for 5 PE.
- Cheapest in maintenance.
- Low sludge deposition, high purification efficiency.
- Easy to maintain: no loose parts that need to be cleaned or that may block.
- No additives needed at startup or during use.
- To install after a pre-treatment of 6.000 (1) liter and a pumping station of 130 liter (2). After the filter is a sampling pit installed (4).
- Extensive system.
- ONLY 0,83 m<sup>2</sup> PER INHABITANT !!
- For occupation > 5 PE, easy to install one or more parallel, by means of a effluent dispenser.
- Only 2,2 kw/year/person !!

## Bora-Clean filter 5



Installation in sand	
Volume pretreatment	6.000 liter
Number of PE	Van 0 tot 5
Length pretreatment	2.400 mm
Width pretreatment	2.070 mm
Height pretreatment	2.500 mm
Height in pretreatment	1.850 mm
Height out pretreatment	1.800 mm
Diameter in/out pretreatment	125 mm
Diameter manhole	600 mm
Weight pretreatment	290 kg
Length filter	2.140 mm
Width filter	2.540 mm
Height filter	1.200 mm
Aeration regime	Continuously
Consumption/year/person	+/- 2,2 Kw
Walloon certification number	2017/06/200/A
Price – B01	€ 6.351,25
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

Results achieved				
	Average	Minimum	Maximum	% Average
BOD	3	2	6	99
COD	27	19	39	96,2
SS	7	<5	22	98,3

## EFFLUENT DISTRIBUTORS

### FUNCTIONING

The liquid enters the installation via the inlet.

The installation is filled up to the outlets, and flows out to the different water treatment plants.

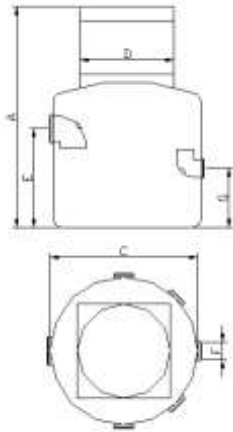
The outlets are installed at the same heights, so that the same amount of liquid flows through the different outlets.

### CHARACTERISTICS

The effluent distributor is a device that is used to distribute the same amount of liquid to different water treatment plants.

They are available with 2, 3, 4 and 5 exits.

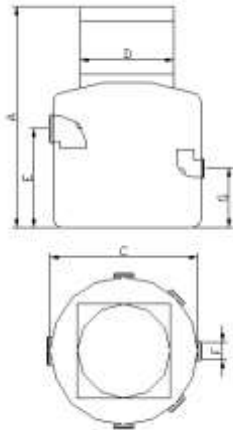
## VERD02



Installation in 15 cm consolidated sand	
Volume	300 liter
Number of exits	2
Length	900 mm
Width	900 mm
Height	930 mm
Height in	600 mm
Height out	360 mm
Diameter in	125 mm
Diameter out	110 mm
Diameter manhole	600 kg
Weight	23 kg
Price – B01	€ 462,00

Dimensions are in mm and informative. Subject to alterations.

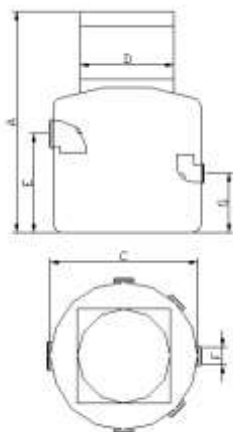
## VERD03



Installation in 15 cm consolidated sand	
Volume	300 liter
Number of exits	3
Length	900 mm
Width	900 mm
Height	930 mm
Height in	600 mm
Height out	360 mm
Diameter in	125 mm
Diameter out	110 mm
Diameter manhole	600 kg
Weight	23 kg
Price – B01	€ 484,00

Dimensions are in mm and informative. Subject to alterations.

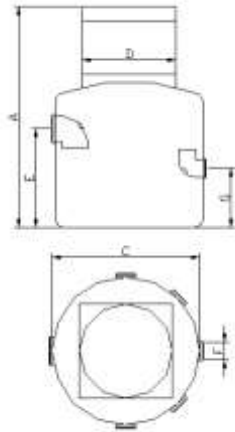
## VERD04



Installation in 15 cm consolidated sand	
Volume	300 liter
Number of exits	4
Length	900 mm
Width	900 mm
Height	930 mm
Height in	600 mm
Height out	360 mm
Diameter in	125 mm
Diameter out	110 mm
Diameter manhole	600 kg
Weight	23 kg
Price – B01	€ 506,00

Dimensions are in mm and informative. Subject to alterations.

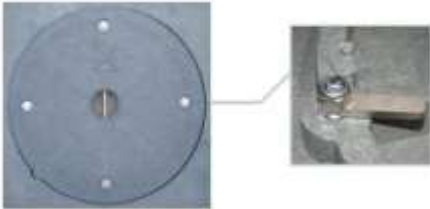
## VERD05



Installation in 15 cm consolidated sand	
Volume	300 liter
Number of exits	5
Length	900 mm
Width	900 mm
Height	930 mm
Height in	600 mm
Height out	360 mm
Diameter in	125 mm
Diameter out	110 mm
Diameter manhole	600 kg
Weight	23 kg
Price – B01	€ 528,00
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

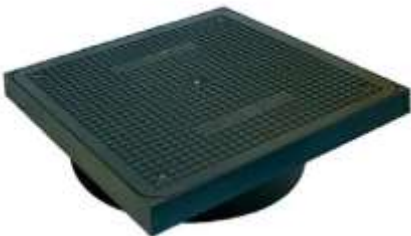
## OPTIONS

### Plastic pedestrian cover Boralit: KDB B



Color	Gray
Length	700 mm
Width	700 mm
Height	145 mm
Diameter opening	590 mm
Weight	20 kg
Price – B02	€ 151,24
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

### Plastic watertight cover: B125 Hermelock.



Color	Black
Length	714 mm
Width	714 mm
Height	257 mm
Diameter opening	625 mm
Weight	27,1 kg
Price – B05	€ 572,00
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

### GVK pump housing small



Color	White
Length	250 mm
Width	400 mm
Height	500 mm
Weight	8,5 kg
Price – B02	€ 520,00
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

### GVK pump housing large

Color	White
Length	250 mm
Width	400 mm
Height	1.400 mm
Weight	15,6 kg
Price – B02	€ 869,00
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

Sampling pit STP B



Color	Black
Height	600 mm
Diameter	480 mm
Height in	180 mm
Height out	180 mm
Diameter in/out	110/125 mm
Weight	6 kg
Price – B02	€ 271,15
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

Sampling pit STP 110



Color	Gray
Height	1.000 mm
Diameter	315 mm
Height in	270 mm
Height out	150 mm
Diameter in/out	110 mm
Weight	10 kg
Price – B02	€ 89,93
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

Sampling pit STP 125



Color	Gray
Height	1.000 mm
Diameter	315 mm
Height in	260 mm
Height out	140 mm
Diameter in/out	125 mm
Weight	10 kg
Price – B02	€ 92,65
<small>Dimensions are in mm and informative. Subject to alterations.</small>	

Nice finish Bora Clean

Type	Price – B02
Flat	€ 77,00
20 cm	€ 676,50
60 cm	€ 1.155,00

**Maintenance contracts.** There are different possibilities. Please contact us for more information.

**GSM module:** sends an sms when an alarm message occurs on the control box

Type	Price – B02
GSM module	€ 242,00

## REPLACEMENT PARTS

Part	Price – B02
Pump 40 W	€ 146,30
Pump 50 W	€ 239,09
Pump 60 W	€ 368,45
Pump 80 W	€ 382,31
Pump 100 W	€ 436,59
Pump 150 W	€ 1.053,29
Pump 200 W	€ 1.088,52
Pump 250 W	€ 1.587,95
Controlbox ECO for SC MB and SC W	€ 362,67
Medium for SC MB per 200 liter	€ 147,38
Electric vane for SC MB	€ 79,70
Concrete block	€ 113,09
Aeration disc	€ 250,70
Flexible/meter	€ 6,78
Alarm pr for supercompact	€ 231,63
Alarm for BIO-CLEAN filter	€ 85,80
EPDM for Bora Clean	€ 1.639,00
Lower medium for Bora Clean	€ 247,50
Middle medium for Bora Clean	€ 247,50
Upper medium for Bora Clean	€ 247,50
Sample pit for SCW	€ 198,00

## INSTALLATION PROCEDURE, MAINTENANCE AND WARRANTY FOR INDIVIDUAL WATER PURIFICATION

The client acknowledges to have received a copy of this and agrees.  
The installation requirements should be read FIRST BEFORE placement.

In the event of loss by the customer of the installation requirements the customer must always ask for a new copy of the installation requirements at Boralit nv, or download them from the Boralit Web site.

## INSTALLATION PROCEDURES IN CONSOLIDATED SAND

### WHERE TO INSTALL?

Find a place where the facility can be easily installed and where the drain of the house can be led. Check for enough fall to the drain of the infiltration-facility. Make sure there is no possible flow-back from flooding, high water, heavy rainfall. The pump(s) should be in a dry and well-ventilated place. At preference in a cellar, garage, shelter or a separate room. The standard delivered aeration pump can be installed up to 15 m from the aeration tank. In case there is a greater distance between the pump and the system, please contact us as this will require a pump with more power. It is also possible to install a special stainless steel pump housing (see B.2.5 options) near the wastewater treatment system. This way, the pump can be installed near the aeration tank and it will be protected against bad weather. What's more, the pump will be easy to reach during maintenance of the system.





## HOW TO INSTALL?

- Dig a square pit of adequate dimensions. See to it that all ground water present in the pit, is pumped out. Once the pit is dry, it must be covered by at least 10cm of consolidated sand (150 kg/m<sup>3</sup>). Make sure the sand is level so the tank is installed perfectly level to insure proper flow through the system. A concrete cap can be placed over the tanks to prevent tank floatation from groundwater pressure.
- Install the facility in correct order (tank 1: primary-sedimentation, tank 2: aeration tank, tank 3: secondary sedimentation). The arrows show the direction in which the water will flow.
- Connect the drain pipe of the house (if necessary, install a grease-trap between drain and wastewater treatment system) with the inlet of the facility (tank1: primary sedimentation).
- Connect the outlet of the wastewater treatment system with the drain pipe that goes to discharge or dispersal area, ... Make sure there is no flow-back possible.
- Connect the tanks (only for types WZ).
- Fill up the 2 (3) tanks with water through the first tank and let the water flow from the first tank through the other tanks until all tanks are filled with clear water. Attention: the secondary sedimentation tank (last tank) should be filled as follows: first fill the cone, then fill the outer part of the tank. At the same time backfill the pit round the tanks with consolidated sand (150 kg/m<sup>3</sup>) up to the level of the in-and outlet.
- Pull up the ballast-blocks from the aeration tank with the provided ropes. Screw the aeration discs on the provided screw thread and lower the blocks back into the tank.
- Saw the risers to the correct height to have them at ground level.
- Make sure there is adequate ventilation of the primary sedimentation tank and on the aeration tank. For this purpose the primary settling tank has been provided with a 50 mm pipe and a muff pipe DN100 (Ø110 mm) in the riser. Connect them to a T of 110 mm with reduction to 50 mm and lead the 110 mm to a well-ventilated place (For the Opur Supercompact the connection between tank 1 and 2 has already been made). Bring it to sufficient height above the ground and fix 2 curves 110 mm 90° to get a chimney-effect.
- Connect the aeration tube and the aeration pump. For this, use a tube of 110 mm through which the aeration tube goes from the aeration pump to the manhole of tank 2. In case of several pumps, either pump can be put on either connection.
- Back-fill the pit with consolidated sand (150 kg/m<sup>3</sup>) to requested level.

**Remark:** In case the facility gets embedded deeper in the ground than is permitted by the PE-riser, or in case one wants to make a manhole himself (e.g. brick-work) a support structure or concrete cap should be installed. This structure or cap should not rest on the tank nor on the brick-work and should divert the pressure to undisturbed ground.



## BE CAREFUL

In case any vehicles might drive in the immediate surroundings of the facility:

- A strong cover should be used e.g. pedestrians' 50kN, vehicles 125 kN, trucks 250 kN or heavy weight vehicles 400 kN.
- The cover should be cast in a sufficiently strong, reinforced concrete slab (=pressure plate) to avoid any immediate pressure on the tanks (ask for information at a recognized technician or desk). The slab should rest on the ground around the pit that has not been churned.
- The PE covers which come standard with the wastewater treatment system cannot carry the weight of persons/vehicles passing above the system and have no lock. That's why you should always install Boralit PE covers that are adapted to the persons/traffic passing above them and which can be locked.

## ELECTRIC CONNECTION

- Connect (Branch) the aeration pump to a grounded receptacle (230V) in a well-ventilated, dry place. Make sure correct fuses guard the electrical circuit.
- In case of installation of an alarm, it should be branched to a second socket or fixed connection. This alarm should be put in one of the aerial tubes from the pump to the aerator.

## ADJUSTMENTS

All of the systems should be adjusted. Which means that the present flow-taps (possibly one or more) that are in the manhole of the aeration tank, should be adjusted correctly. This adjustment is not difficult but will take some of your time:

- Make sure the pump(s) are electrically connected and no possible waste water can enter the tank (the water should be at rest, wait until no more water enters the installation)
- The flow-taps should be closed. Accurately open the taps just a little bit.
- Let the facility work for some hours and check the level of the liquid in the middle-tank.
- On the PVC tube of the airlift you will find 2 marks. If the liquid is between the marks, the taps are correctly adjusted.
- If the liquid is beneath the lower mark, the taps should be closed some more. If the liquid is above the upper mark, the taps should be opened some more.
- Wait again for some hours and check again. Adjust more if necessary until the liquid is at the desired level.

## INSTALLATION PROCEDURES IN REGULAR SAND

Follow above instructions and If there is no groundwater, the consolidated sand can be replaced by regular sand. Please contact us if the tank becomes more deeply embedded in the ground than is permitted by the PE-riser. For the Supercompact MV, see the manual.



## INSTALLATION PROCEDURES FOR THE BORA-CLEAN filter

**Ask our specific installation procedures on [sales@boralit.be](mailto:sales@boralit.be)**

## MAINTANANCE

It's possible to subscribe to a maintenance contract for annual check-ups.

When the installation is not maintained as demanded by a Boralit maintenance service the user can not expect any longer that the installation will suffice to the normal demands. In that case we are not sure that the effluents will be as they have to be in conformity with environmental rules. If changes or maintenance are done by others than the Boralit maintenance service you can no longer expect that the installation will suffice to the requirements.

## WARRANTY

We offer a 10-year warranty on all our products for manufacturing defects, except the aeration pumps and other electric or mechanical, ... parts which carry a 2-year warranty. For the models Supercompact 5/2, 5/3, 8/2 and 8/3 its 25 years. Failure to comply with installation procedures and guidelines will void the warranty.

The general sales and warranty conditions of Boralit count.

## OTHER DOCUMENTS

These documents are also available:

- Range water treatments.
- Data sheet Supercompact MB
- Data sheet Supercompact W
- Data sheet Supercompact 5-8
- Data sheet Supercompact 3-4
- Data sheet Bora Clean
- Data sheet cleaning and filling
- Manual Supercompact
- Manual Supercompact W
- Manual Supercompact French agreement
- Manual WZ
- Manual Supercompact MB.
- Manual BoraClean
- Manual Control box ECO
- Maintenance contracts standard and all-in
- CE attest