

SBR SYSTEMS

BluOne

BioBatch

BioBatchPlus

Sequencing Batch Reactor



Starplast® 

WHY SBR?

Among the numerous advantages of the **SBR** system is its very low sludge production.

The specific sizing of **BluOne** and **BioBatch** generates a high level of competition among the bacteria present in the plant, which ensures that the system requires sludge wasting at a lower frequency compared to conventional systems, resulting in significant operational cost savings.

BioBatch Plus is an **SBR** system equipped with an additional excess sludge storage tank, allowing sludge to be wasted only once every 4 years.

In this configuration, the SBR system is fitted with an additional air-lift device which, activated at regular intervals, transfers a portion of the sludge into the storage tank.

The Starplast SBR solutions therefore rank among the most competitive systems available on the European small and medium-scale wastewater treatment market.



BluOne

Sequencing Batch Reactor

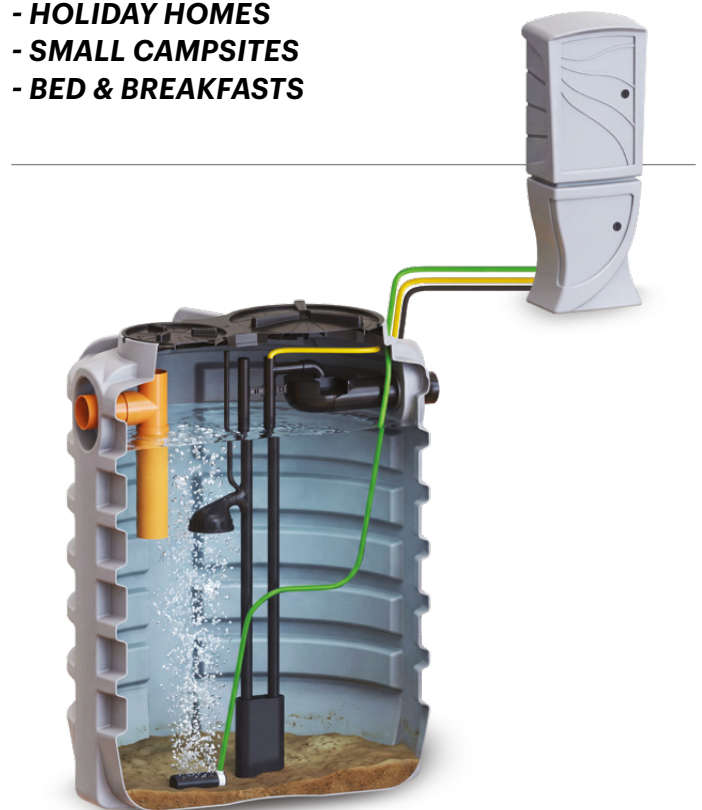
- SINGLE-FAMILY HOMES OR SECOND HOMES
- SMALL AGRITOURISM FACILITIES
- USERS WITH CONSTANT LOAD PROFILES



BioBatch

Sequencing Batch Reactor

- SEASONAL FACILITIES
- HOLIDAY HOMES
- SMALL CAMPSITES
- BED & BREAKFASTS





THE SMART
SUSTAINABLE
SOLUTION
FOR YOUR
BIOLOGICAL
WASTEWATER
DISCHARGE

BioBatchPlus

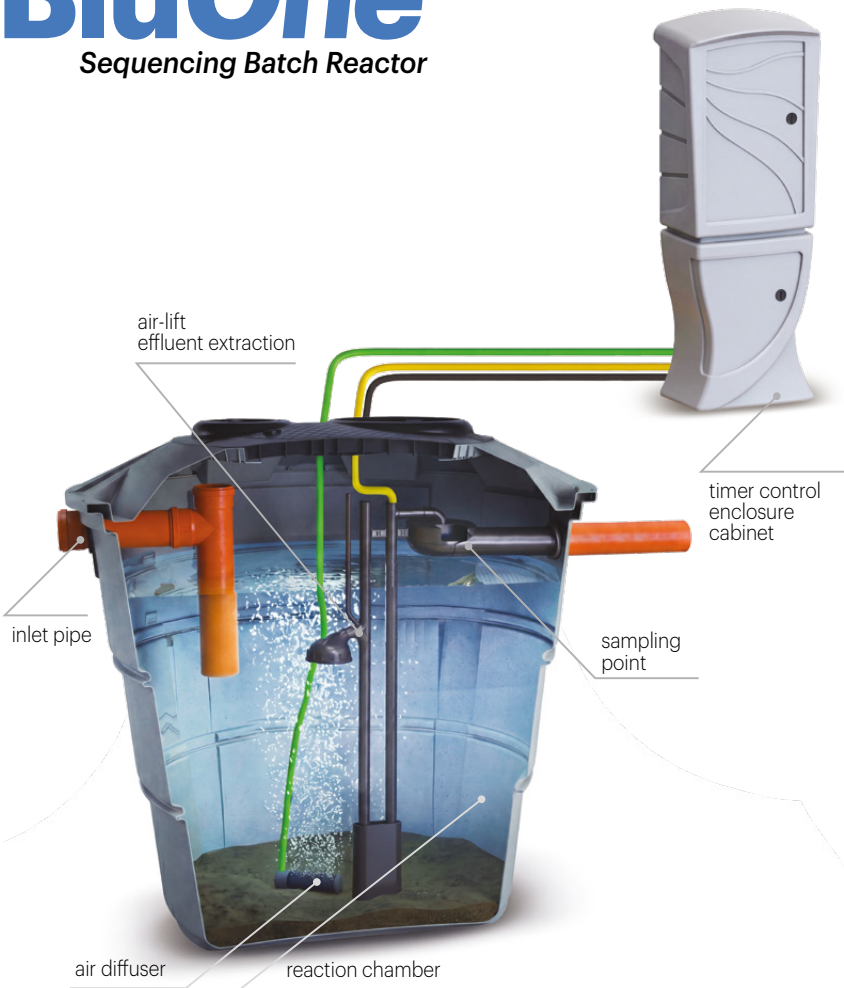
Sequencing Batch Reactor

- SMALL RESIDENTIAL SETTLEMENTS
- HOTELS
- STRUCTURED CAMPSITES
- ACTIVITIES WITH DOMESTIC-LIKE WASTEWATER DISCHARGES
- SENSITIVE AREAS



BluOne

Sequencing Batch Reactor



5 / 16 P.E.

DISCHARGE



VOLUMES
from 2.500
to 7.520 liters

**SPECIFICATION
ITEM**



EXCELLENT REMOVAL EFFICIENCIES OF COD, BOD, AND TSS BLUETOOTH SEQUENCE TIMER

ADVANTAGES

AEROBIC SYSTEM WITH NO UNPLEASANT ODORS

suitable for installation close to residential buildings without nuisance.

VERY LOW SLUDGE PRODUCTION

(approximately one desludging per year), resulting in reduced operating costs.

SINGLE-TANK DESIGN

for simple, fast, and cost-effective installation.

EASY TRANSPORT

thanks to the compact solution.

STACKABLE MODELS

optimizing space during shipping.

EXPECTED PERFORMANCE

Expected pollutant removal efficiencies (under certification):

COD: 92,0% BOD₅: 97,8%
N-NH₄⁺: 94,1% TSS: 94,9%

TWO SAMPLING SYSTEMS

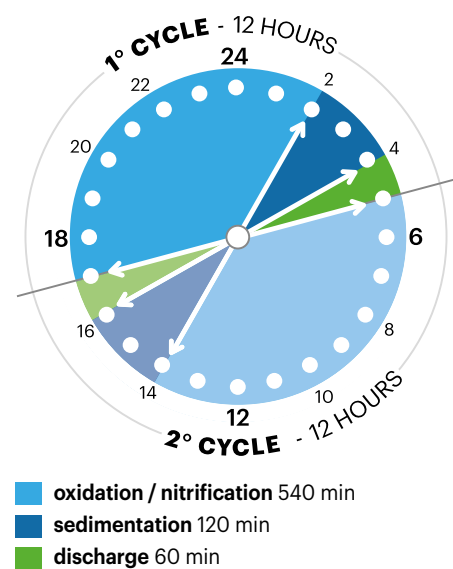
- bottle sampling system
- manual pump sampling system

AVAILABLE MODELS

Mod.	BLUONE 02-05 AI	BLUONE 02-05 CX	BLUONE 02-06 CS	BLUONE 03-08 CS	BLUONE 05-012 CR	BLUONE 06-016 N
P.E.	5	5	6	8	12	16
Vol. liters	2.500	2.600	3.500	4.500	7.000	7.520

TREATMENT SEQUENCES

2 CYCLES/D



BioBatch

Sequencing Batch Reactor

5 / 20 P.E.

DISCHARGE

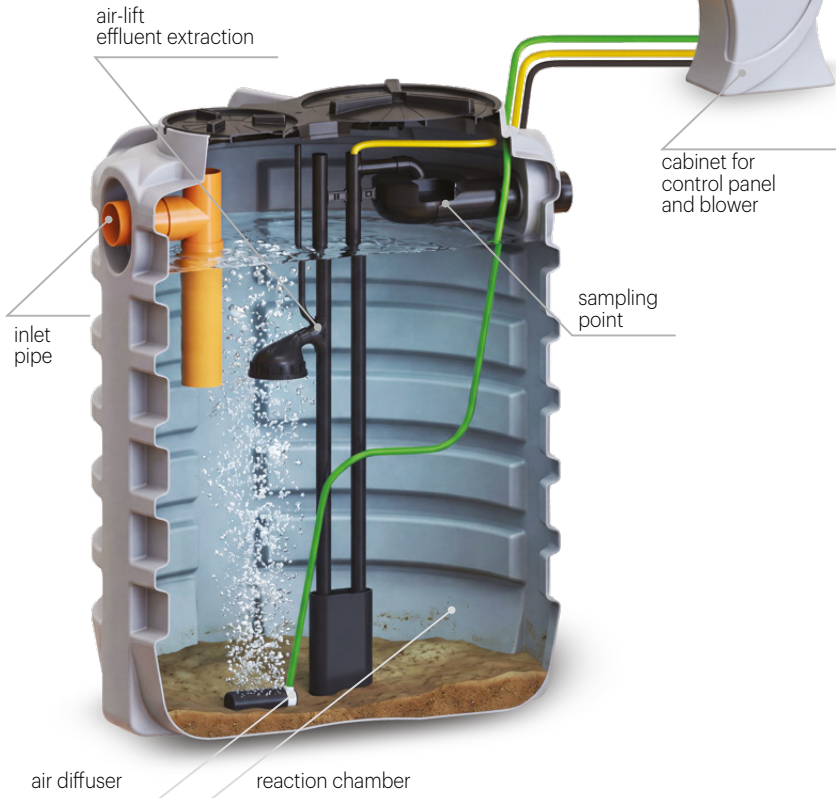


T4
soil

VOLUMES

from 2.600
to 9.750 liters

SPECIFICATION
ITEM



**NITRIFICATION,
DENITRIFICATION AND
ALARM PANEL**

ADVANTAGES

NO UNPLEASANT ODOURS

aerobic system without septic conditions, suitable for installation near residential buildings

LOW SLUDGE PRODUCTION

approximately one desludging per year, with reduced operating costs

SIMPLE INSTALLATION

single-tank design, quick installation, and lower construction costs

OPERATION

dynamic cycle management

COD: 85-95% BOD₅: 60-90%
N-NH₄⁺: 90-98% TSS: 85-95%

TWO SAMPLING SYSTEMS

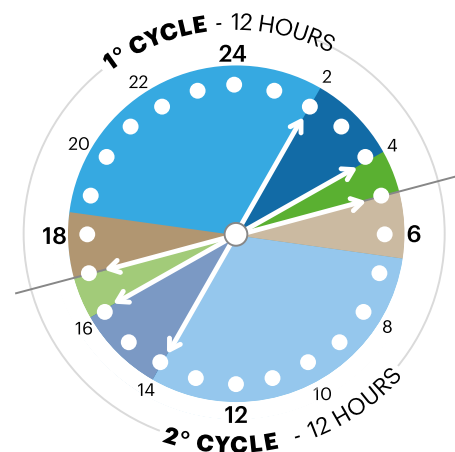
- bottle sampling system
- manual pump sampling system

WATER RECOVERY

reusable for non-potable applications thanks to the high treatment quality.

TREATMENT SEQUENCES

2 CYCLES/D



- denitrification 90 min
- oxidation / nitrification 540 min
- sedimentation 120 min
- discharge 60 min

AVAILABLE MODELS

Mod.	BIOBATCH 5	BIOBATCH 5	BIOBATCH 6	BIOBATCH 7	BIOBATCH 10	BIOBATCH 15	BIOBATCH 20
P.E.	5	5	6	7	10	15	20
Vol. liters	2.500	2.600	3.020	3.500	5.100	7.000	9.750

BioBatchPlus

Sequencing Batch Reactor

5 / 50 P.E.

DISCHARGE

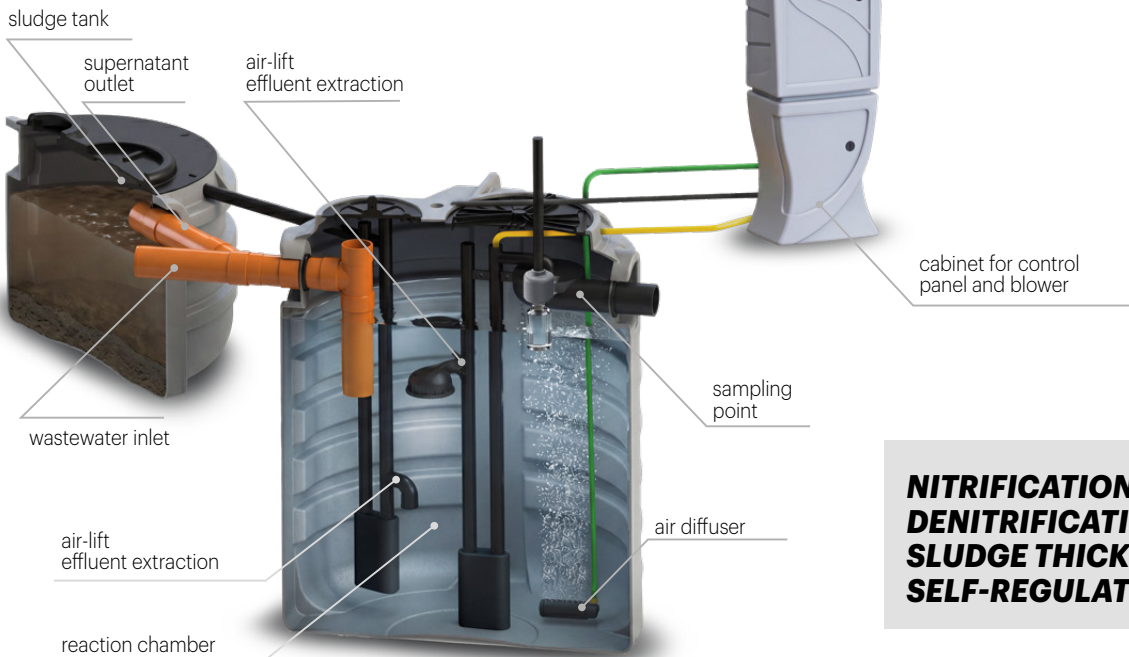


T4
soil

VOLUMES

from 2.600
to 24.000 liters

SPECIFICATION ITEM



**NITRIFICATION,
DENITRIFICATION AND
SLUDGE THICKENING
SELF-REGULATING BLOWER**

ADVANTAGES

NO UNPLEASANT ODORS

aerobic system, suitable for installation near residential buildings

LOW SLUDGE PRODUCTION

reduces desludging operations (approximately once every 4 years)

WATER QUALITY

improves effluent quality

OPERATION

- adaptation to actual loads
- stabilization of the treatment process

EXPECTED PERFORMANCES

Expected pollutant removal efficiencies (under certification):

COD: 85-98% BOD₅: 90-99%
TKN: 60-95% TSS: 85-98%

WATER RECOVERY

reusable for non-potable uses thanks to high treatment quality.

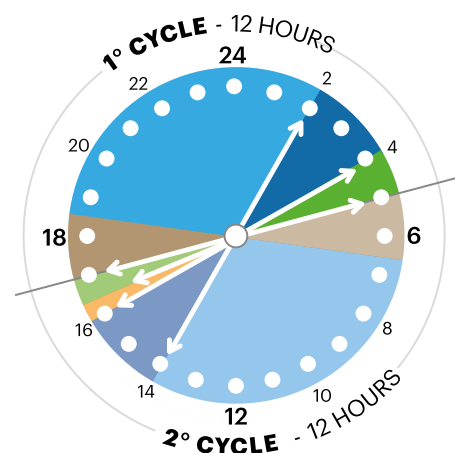
LOW ENERGY CONSUMPTION

TWO SAMPLING SYSTEMS

- bottle sampling system
- manual pump sampling system

TREATMENT SEQUENCES

2 CYCLES/D



- denitrification 90 min
- oxidation / nitrification 540 min
- sedimentation 120 min
- sludge discharge 1 time/week
(duration depending on the model)
- discharge 60 min

AVAILABLE MODELS

Mod.	BIO BATCH PLUS 5	BIO BATCH PLUS 6	BIO BATCH PLUS 7	BIO BATCH PLUS 10	BIO BATCH PLUS 15	BIO BATCH PLUS 20
P.E.	5	6	7	10	15	20
Vol. liters	2.600	3.020	3.500	5.100	7.000	8.800

Mod.	BIO BATCH PLUS 24	BIO BATCH PLUS 28	BIO BATCH PLUS 32	BIO BATCH PLUS 38	BIO BATCH PLUS 44	BIO BATCH PLUS 50
P.E.	24	28	32	38	44	50
Vol. liters	10.450	11.800	13.360	17.650	19.130	23.420

SAMPLING SYSTEMS

To ensure effective control of effluent quality, it is essential to have practical and reliable solutions for sample collection. Depending on operational requirements and the characteristics of the plant, different methods are available to carry out sampling in a simple, safe, and representative way. **Below are two solutions designed to adapt to different usage contexts and required levels of practicality.**



MANUAL PUMP SAMPLING SYSTEM
with direct suction from inside the tank



BOTTLE SAMPLING SYSTEM
positioned inside the cabinet

SELECTION GUIDE

The **BLUONE**, **BIOBATCH** and **BIOBATCH Plus** systems represent Starplast's latest solutions for the treatment of domestic wastewater from small and medium-sized users. All systems use SBR (Sequencing Batch Reactor) technology with 2 cycles per day and stand out in the sector for the product quality that has always distinguished Starplast in the wastewater treatment market. The three configurations ensure high performance (certified according to UNI EN 12566-3), very low sludge production, and reuse potential. Wastewater is thus transformed from a waste into a valuable opportunity for water savings for the end user. To ensure effective control of effluent quality, it is essential to have practical and reliable solutions for sample collection. Depending on operational requirements and plant characteristics, different methods are available to carry out sampling in a simple, safe, and representative way. Below are two solutions designed to adapt to different usage contexts and required levels of practicality.

BluOne Sequencing Batch Reactor

Dedicated to small users, it stands out among the three systems for its simple operation. The system includes the following phases: oxidation (45 min on – 15 min off), sedimentation (120 min), and discharge (60 min). In particular, the **BLUONE** 02–05 AI system, built with the stackable Aurora tank combined with the BLUONE kit, makes the system easy to transport and install even in remote locations (islands, mountain areas, and sites where transport is particularly challenging), without compromising high performance.


BioBatch Sequencing Batch Reactor

It further enhances the already high performance of **BLUONE** by adding an anoxic phase (90 min), ensuring effective nitrogen and phosphorus removal. It is particularly recommended where high-quality effluent is required for reuse, or in environmentally sensitive areas such as nature parks or high-value tourist zones with significant natural heritage. The system is equipped with an electrical control panel featuring blower regulation via an APP, allowing the blower to be managed according to parameters derived from discharge analysis.

BioBatchPlus Sequencing Batch Reactor

All the systems described stand out for their extremely low maintenance requirements, unique in their category. The design allows sludge removal only once per year, with a significant reduction in operating costs. With the addition of a storage tank and an air-lift in the biological compartment, **BIOBATCH PLUS** can be desludged only once every 4 years, bringing operating costs close to zero. The air-lift is activated for just a few minutes per week, depending on the model. The system is ideal where minimizing operating costs is a priority or where sludge removal is particularly expensive or difficult to carry out.



 +39 0722 079201

 info@starplastsrl.it
www.starplastsrl.it

   **Starplast srl**

 Via dell'Artigianato, 43 / 61028
Sassocorvaro Auditore (PU)

