

“All clear?!”



Guide for operators of small sewage treatment plants

Clarity about small sewage treatment plants



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Many questions ... and answers



With the large range of products on offer, how can you decide what is a responsible and sustainable choice?

batchpur small sewage treatment plants are designed and manufactured with care and foresight. These are small technical details which confirm our commitment to sustainability and performance, such as high-quality, long-life materials used for the individual components in accordance with a high industrial standard, glued and welded connections in plastic piping and sockets instead of fast plug-in connectors etc. You will discover this as a consumer as the years pass. In addition, the individual batchpur components can be simply and inexpensively removed and replaced. **batchpur is the small sewage treatment plant which also thinks for the next generation.**

A technical sewage treatment plant needs energy to clean the waste water. How is this really adjusted to the amount of sewage water?

The energy consumption of a small sewage treatment plant is largely dependent on the waste composition and quantity of waste water to be cleaned.

A large amount of waste water usually means a higher energy intake; little waste water means a lower supply of energy for sewage treatment. In the case of a so-called "automatic adjustment" to the amount of waste water this often requires only a "two-point control". Using a pressure sensor or float switch two operating modes of a plant are determined: Normal operation and holiday mode (also termed saving or holiday mode). This is, in principle, a very simple control that can more or less accurately detect only two operating states of a plant.

But in terms of waste water amounts ultimately no two days are the same: The amounts of loads of a washing machine differ daily. Or usually showers are not taken always at the same time or using the same amount of water. Or guests come to visit. Or a family member is working night shifts.

So it is obvious that for a small sewage treatment plant there are no constant conditions with regard to the waste water inflow. There are cycles in which absolutely no waste water is produced - for example at night - and there are cycles in which the buffer of the system is filled with 10% or 20% or 70% or 100%.

When a small sewage treatment plant has only a two-point control, all different load scenarios can be ultimately handled by only two different control commands. Thus, these systems often run at 100% to ensure cleaning performance, even when only a small sewage load is present.

batchpur works with continuous recording of waste water in the SBR reactor. This technology is exceptional and protected by a European patent. Only through this continuous recording can it be guaranteed that the energy is actually supplied as required by the waste water.

... all about technology and quality.

How does continuous recording of the waste water amount work?

The continuous recording of the amount of waste water is comparable to the precise adjustment of a heating control to the outdoor temperature. Only a heater that can be infinitely adjusted to rapidly changing weather conditions works in an economically effective way. The same applies to small sewage treatment plants. Depending on how much waste water is to be treated in each cycle, an appropriate amount of oxygen needs to be supplied to the SBR systems. The more waste water, the more oxygen – the more oxygen, the more electrical energy is required.

Just as your heating system with a variable temperature control uses the energy corresponding to the actual needs, a batchpur small sewage treatment plant reacts with patent-protected pressure sensor technology. That is, the water level is measured by the controls using a pressure sensor, which is not in contact with the water and therefore works free of wear and tear. **Small sewage treatment plant records continuously the actual load in each cycle and uses only as much energy as is actually needed in the respective cycle for sewage treatment.**

This will save you money while ensuring consistent cleaning quality, because only as much energy is used as needed. The units used (e.g. compressor) only run as long as is absolutely necessary.

Of course, this increases the life of the compressor and reduces the maintenance costs.

What are the manufacturer's details on energy consumption based on?

The energy consumption of small sewage treatment plants is determined by an accredited testing institute in a test area. The procedure and the ambient criteria are strictly defined by the Construction Products Regulation. Make sure that a manufacturer publishes the values of its own measurements or the official results. **All information that you find at batchpur is officially determined by a neutral testing centre for consumption values.**

What is the value of a small sewage treatment plant and how can this be recognised?

In addition to the technology and the running cost in operation, the largest differences are in the processing of assembly kits for a small sewage treatment plant. Thus, the plastic pipe systems are, for example, often only assembled from HT pipes. The costs of this implementation are significantly lower in manufacturing and are actually used only at zero pressure in construction technology. Since these connectors are not designed for pressurization, the sleeves are often stabilized with additional screws.

batchpur uses as airlift tubes exclusively those of a certified industrial standard, which are glued to pressure-resistant pipe joints to 10 bar. Of course, the production of these air-lift pumps is more sophisticated and costly. **An investment that pays off.**

Furthermore: Often the compressors used are too small. These must then run permanently under a full load. This is comparable to a small car, which is continually being driven at high speed with full throttle: The result is high energy consumption and faster wear and tear. **batchpur uses compressors that are far above the average requirements and ensure energy savings in a stress-free energy level of continuous operation.**





Recognize real benefits!

Air lift pump versus electric pump:
What are the decisive criteria of both options?

Whether it is an ordinary pump or an airlift pump, both are there to keep the waste water moving in the clarification tank. Sewage is a very "aggressive" medium (both corrosive and abrasive) in that these components operate where they are exposed to chemical reactions which cause both abrasion and corrosion. The electric submersible pumps very often used in SBR plants have three serious drawbacks: they show far more wear and tear on account of these chemical influences, they require intensive maintenance, since they can become entwined and through contact with the gases in the container they require reliable explosion protection. **batchpur uses pulsometers that work without an electronic drive unit in the tank, operating virtually clog-free because they contain no moving parts and on account of the high-quality plastics guarantee a long service life in sewage treatment.**

Help to make a decision and factors which show the
"added value" of a small sewage treatment plant:

www.batchpur.com What is included in the standard package?

In batchpur cleaning classes C, N and D and many "extras" are included in the standard package. For example, nitrogen elimination (nitrification and denitrification) as well as the necessary sampling containers are included as standard. **It is worthwhile to study thoroughly and compare offers to avoid hidden costs.**

Is safety guaranteed?

Question the compliance with the Equipment and Product Safety Act. **batchpur meets these requirements also in regard to ATEX and explosion protection!**

What additional costs can ensue?

In the batchpur small sewage treatment plant high-quality plastics and stainless steel are used according to industry standards. Overall, the system is designed in an extremely maintenance-friendly way because all parts that require regular maintenance are easily accessible and most building components are assembled reversibly. From design to processing attention is paid to corrosion-free, wear-free technical solutions. **Ensuing costs are under control.**

What will I need in future?

batchpur can handle all cleaning classes: Should the environmental requirements for your region change - you can always upgrade your batchpur small sewage treatment plant to the highest cleaning class H.

And if you want, you can now go online with your batchpur small sewage treatment plant: The new easy ... con-control allows the exchange of data in two directions. Not only can you check online and access your log book, you can control also the parameters of the system online, or grant access to your service technician for maintenance activities. This will save you travel costs and not force you to "give away" holidays. **This is the future.**

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