

Treatment Principles and Types of Johkasou

Johkasou are designed for treating both black water and gray water discharged from houses. The contaminants contained in wastewater are broken down biochemically by the catabolism of microorganisms such as bacteria and metazoan organisms. Johkasou are designed to maximize the purifying function of microorganisms, and have solid-liquid separation function, sludge storage function and disinfection function.

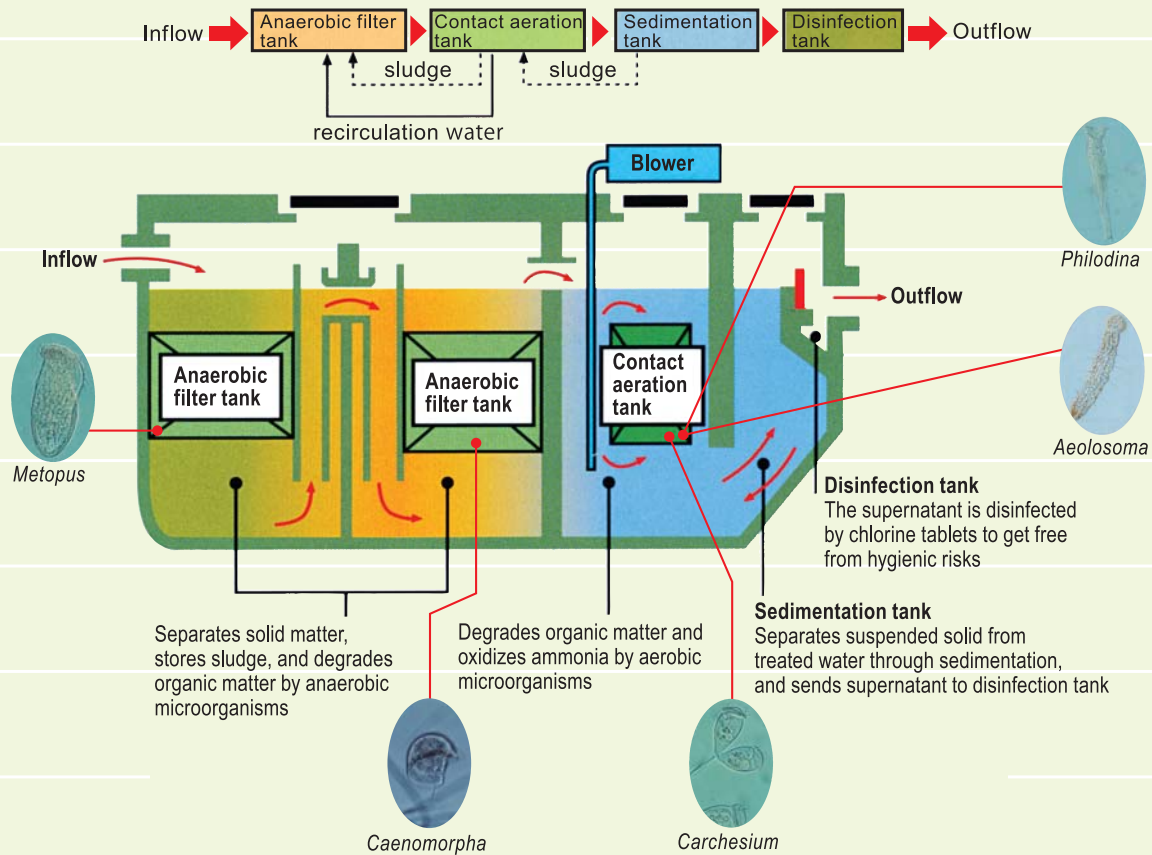


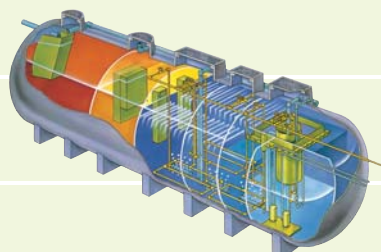
Figure 15 Structure and treatment principle of johkasou

The capacity, the treatment process and the material of johkasou are selectable, depending on the usage of the building, quantity and quality of wastewater to be treated, and the regulation issues of discharge areas. However, johkasou are usually classified by the capacity in terms of number of users for design, or people equivalent (PE).

- Small-scale johkasou: Johaksou used for individual household and small scale wastewater treatment with capacity of 5 to 50 PE, or average amount of wastewater less than 10 m³/day. Most small-scale johkasou are made of plastics such as FRP (fiberglass reinforced plastic) or DCPD (Dicyclopentadiene) at factories.
- Medium-scale johkasou: Johaksou used for medium-scale wastewater treatment with capacity of 51 to 500 PE, or average amount of wastewater less than 100 m³/day. Medium-scale johkasou are made of FRP at factories, or are built of reinforced concrete (RC) at sites of installation.
- Large-scale johkasou: Johaksou used for large-scale wastewater treatment with capacity of 501 PE or more, or average amount of wastewater more than 100 m³/day. Large-scale johkasou are mainly built of reinforced concrete (RC) at sites of installation.



Small-scale johkasou (FRP-made)



Medium-scale johkasou (FRP-made)



Large-scale johkasou (RC-made)