

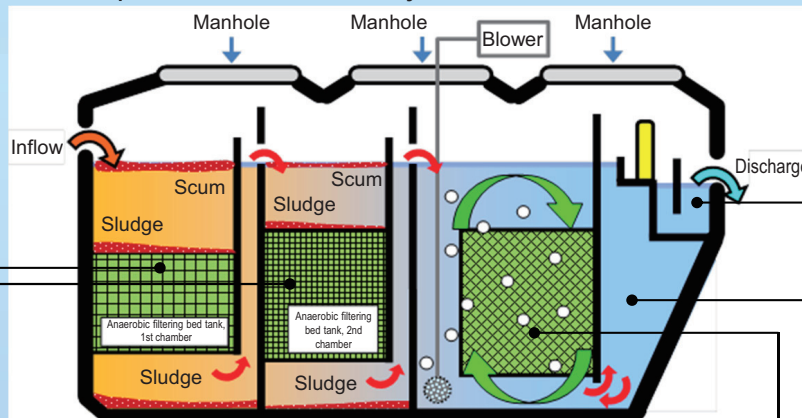
Basic Structure and Characteristics of Johkasou

Johkasou is decentralized wastewater treatment technology unique to Japan for purifying wastewater discharged from general households using the properties of microorganisms to degrade organic contaminants.

The structure of johkasou is designed to fully demonstrate the purification functions of microorganisms.

In terms of decentralized wastewater treatment technology overseas, septic tanks are widely used in developing countries, but these tanks have structural, maintenance and control problems that make it difficult to ensure hygienic treatment of wastewater. On the other hand, johkasou demonstrates excellent sewage treatment performance by combining anaerobic and aerobic treatments, and its structure is convenient in terms of maintenance and management.

Example of the structure of johkasou



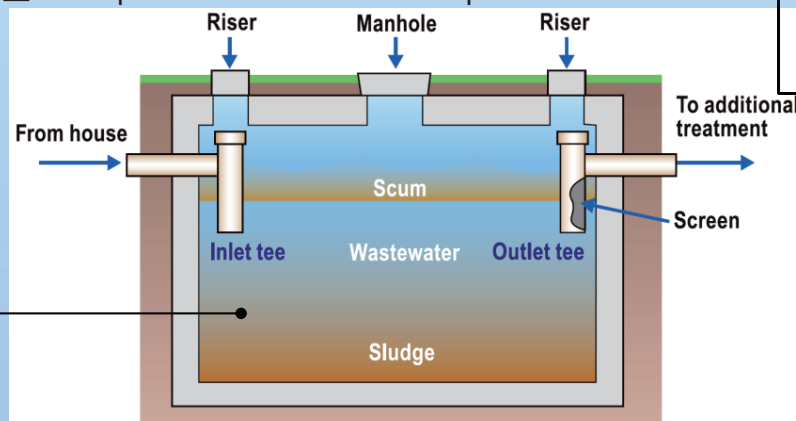
Disinfection tank

Treated water is disinfected by chlorine before discharge.

Sedimentation tank

Suspended solids in treated water settle and the clean layer is fed to the disinfection tank.

Example of the structure of a septic tank



Biological contact aeration equipment

- Aerobic microorganisms degrade organic contaminants.
- Ammonia is oxidized.

- Solid waste in wastewater is separated and sludge is stored.
- Organic contaminants are degraded by anaerobic microorganisms.

Treatment processes of johkasou is different from decentralized household wastewater treatment facilities overseas. The red frames to the right show the treatment processes not possessed by septic tanks.

Johkasou	Septic tank
Anaerobic treatment + Aerobic treatment	Anaerobic treatment
Treated wastewater is discharged directly into the environment.	Retreatment (land treatment) of treated water is essential.

Major characteristics of johkasou

Excellent treatment performance

The purification functions of microorganisms are utilized, and wastewater treatment with high water quality similar to that of a sewage treatment plant is possible (20 mg/L and lower, and BOD removal ratio 90% and higher). Advanced treatment such as the removal of nitrogen and phosphorous is also applied.

Space-saving installation/early achievement of investment effect

Compact space equivalent to only one parking spot is required for johkasou installation at each household, and johkasou is buried out of sight underground. In addition, installation construction work takes only about one week and the investment effect is quickly realized.

Less impact to the water environment

The form of water discharge from each household is unchanged after installation of johkasou; there is no change other than the improved quality of the water discharged. Johkasou also contributes to maintaining the stable water flow of rivers.

Resilient to disasters such as earthquakes

Johkasou is installed individually without any long pipes, which makes it more resilient to disasters such as earthquakes.