Water Treatment Segment

Contributing to the building of social infrastructure. Pursuing energy conservation and energy generation.

We steadily support the sound formation of social infrastructure through our water-related engineering.
We will continue to explore technologies to realize a carbon-neutral society.

Top market share in Japan

01 Sewage Treatment
02 Sludge Treatment
03 Biomass
04 Water Treatment
05 Industrial Water Treatment
06 Cooling Tower

01. Sewage Treatment

We provide systems and products that meet the challenges of the sewage sector, such as renovation and renewal of aging facilities and measures to combat global warming.

Inflow → Grit chamber → Primary sedimentation tank → Reaction tank → Final sedimentation tank → Filtration → Disinfection → Discharge

- Grit chamber: Large waste is removed
- Primary sedimentation tank: Sinkable matter is allowed to settle
- Reaction tank: Decompose contaminant
- Final sedimentation tank: Sludge is allowed to settle and then separated from the supernatant water
- Filtration: Passed through a layer of sand to remove small matter
- Disinfection: Filtered water is disinfected with chlorine or ultraviolet rays

Grit chamber

Washing to dehydration, all in a single equipment

Residue Cleaning Dehydrator

Features a simple structure that uses a single-axis screw to wash and dehydrate residue. Thanks to its simple and compact structure, it can be installed to the existing plant and it requires less power than the conventional dual shaft type.

Primary sedimentation tank / Final sedimentation tank

Low power, long life

Non-Metallic Sludge Collection System

By using high-performance plastic chains with excellent corrosion and wear resistance, it is possible to lower the power consumption and make it longer life than conventional metal scrapers.

Reaction tank

High oxygen transfer efficiency

PABIO TUBE™

Specially designed durable silicone rubber reduces pressure loss and power consumption of blower while keeping high oxygen transfer efficiency.

Reaction tank

Pursuing efficiency of mixing

Hyperboloid Mixer PABIO Mix™

By rotating the hyperboloid mixer with a low speed at the bottom of the tank, sufficient mixing is achieved with low power.

02. Sludge Treatment

We will contribute to a carbon free society by minimizing the energy required for sludge treatment and converting the energy contained in sewage sludge into electricity and coal-alternative fuels.

Sludge → Concentration → Digestion → Dehydration → Incineration, fuel conversion (P.10)

Effective utilization of gas (P.10)

- Concentration: Dehydration to thicken the sludge
- Digestion: Fermentation to generate biogas
- Dehydration: Sludge is squeezed to remove as much moisture as possible
- Incineration, fuel conversion (P.10): Sludge is treated by an incinerator or is converted into solid fuel

Concentration

High performance and compact

Gravity Belt Thickener

Stable thickening performance is obtained for all kinds of sludge generated in the water treatment. The belt (filter cloth) is made of light and inexpensive resin which maintenance work is easier than metal belt.

Digestion

Short construction period, easy maintenance

Stainless Steel Digester

Construction period can be greatly shortened compared to conventional concrete digesters. Sensors can be installed to monitor the inside of the digester, enabling stable operation and improved maintainability.

Dehydration

Processes difficult-to-dewater sludge

Screw Press Dehydrator

By optimizing the thickening, flocculating, and pressurizing processes, it is possible to reduce the moisture content of difficult-to-dewater sludge such as digested sludge. This reduces GHG emissions and the disposal cost of dewatered sludge.

Incineration

Reduced energy consumption and GHG emissions

High-Efficiency Two-Stage Incinerator

By establishing a heat decomposition zone and complete combustion zone, and optimizing combustion conditions such as temperature, air ratio, and retention time, it is possible to reduce energy consumption as well as GHG emissions.