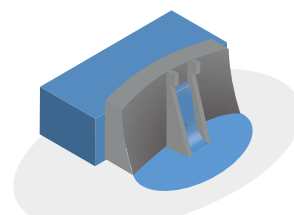


All about a containerized micro-hydropower

Product Features

“Small-hydropower” is a technology that uses the flow of water from rivers and agricultural water to generate electricity. Although there is no strict limitation to the volume of electricity produced, any such system that could generate less than 1000 kW is called a small-hydropower or simply micro-hydro. Whereas large hydropower projects require several years of preparation time, small hydropower projects can be up and running in a very short time.

Around the World, there are many small rivers, agricultural water and locations with a great potential for electricity generation and the small micro hydropower has been designed for that purpose.



Hydroelectric power plant

In case of a container type micro-hydro



One package!

Easy to transport!

Easy to install!

Previously separated components are now offered in one package. This eliminates the need for buildings and their indoor plumbing and wiring works, shortening the construction time and improving safety.

Different ways of use

As a stand-alone power supply

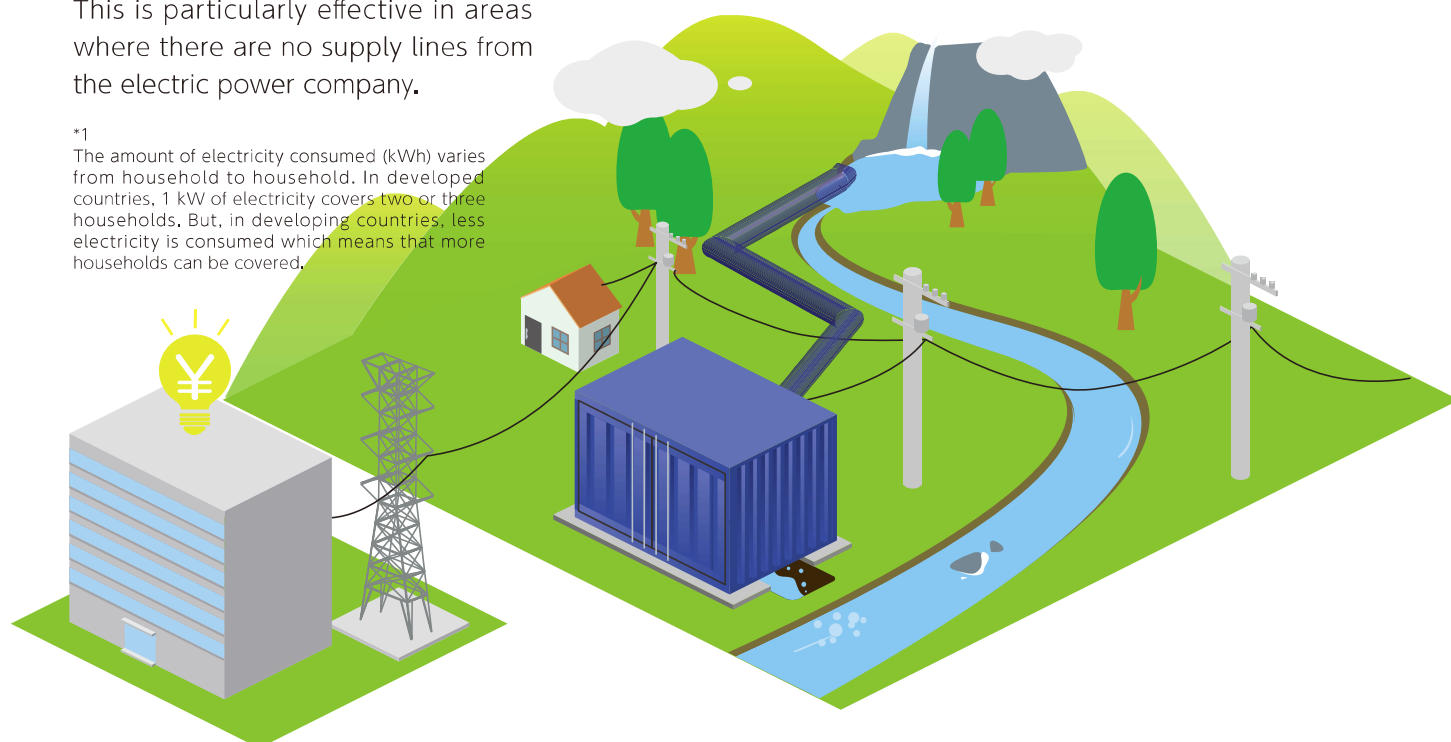
This unit is a small power station that can produce electricity and, without using the electric power company's supply lines, send it to homes in the surrounding area*1.

This is particularly effective in areas where there are no supply lines from the electric power company.

*1 The amount of electricity consumed (kWh) varies from household to household. In developed countries, 1 kW of electricity covers two or three households. But, in developing countries, less electricity is consumed which means that more households can be covered.

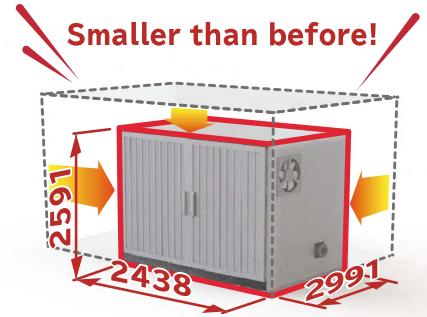
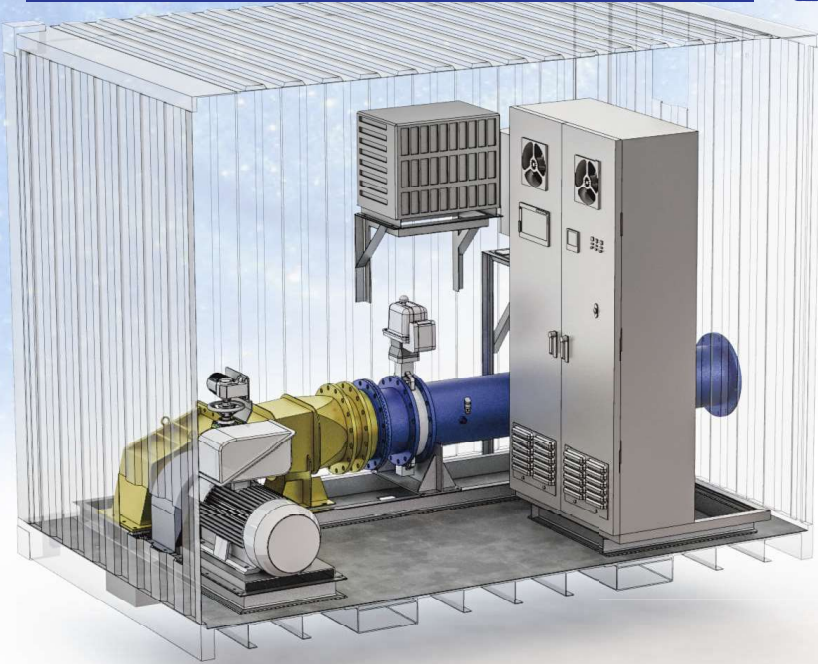
As a power generation business

This unit can also be used to produce and sell electricity to the electric power company



Effective head : 10~100m
 Flow rate : 0.02~0.6m³/sec.
 Power generation 19.9, 30, 49.9kW

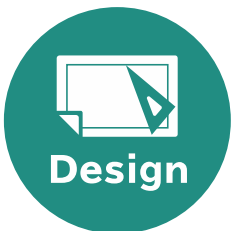
Cost savings (as no building is required)
Compact
 and easy to install!



Quality assurance through completion of the product.
Reliable and Stable Power Generation.



Optional: Remotely Monitoring Device



Reliable long life design.
Nakayama's unique packaging for noise reduction.



Maintaining water discharge even in case of failure.

Applicable to small rivers, springs, irrigation channels, etc.!



Examples of installation



Looking toward the Future

Society 5.0 for SDGs

Society 5.0 is the fifth new society in the history of human social development.

In the Fifth Science and Technology Basic Plan of the Cabinet Office, it is defined as "a human-centered society that achieves both economic development and solutions to social problems through a system that highly integrates cyberspace (virtual space) and physical space (real space)".

We believe that small-scale hydroelectric power generation can be one approach to achieving the 17 Sustainable Development Goals set by the United Nations, as well as a key element of the future society that Japan should aim for.

Promoting the SDGs through Small Hydropower



Goal 7

Ensure access to affordable, reliable, sustainable and modern energy for all.



Goal 11

Make cities and human settlements inclusive, safe, resilient and sustainable.



Goal 13

Take urgent action to combat climate change and its impacts.



Goal 14

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

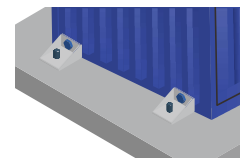
On-site installation process



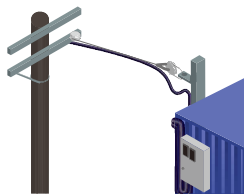
1 Transport the container by truck.



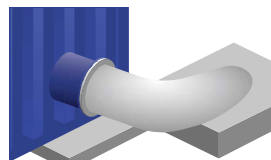
2 Place it at the site where you want to install the unit.



3 Secure the four corners of the container with anchor bolts.



4 Wire the container to the electrical wires.



5 Connect the container piping to the water pressure pipe at the site.

Note: Be sure to check the size of the pipe and the size of the flange (5k, 10k, 16k, etc.).



6 The installation is now complete.

What the customer needs to do

1. Construction of water intake facilities; piping, container foundation and installation work.
2. Power wiring (from the power reception point to the container inlet) and installation of meters for transactions (power purchase/sale).