Low Head Micro-hydroelectric Generator

The ZD series low head micro hydroelectric generators are designed for families in remote areas to product power for their households easily and inexpensively. Thousands of them has already installed throughout the world.

ZD series are the perfect hydro turbine for slow moving rivers and streams. Small, natural waterfalls or dams provide the ideal setting for them.

A simple AC single-phase, brushless permanent magnet alternator is attached to a propeller turbine. All or part of the stream flow is diverted into an intake canal where it forms a vortex, causing the propeller to rotate as it exits through a draft tube to flow free again . All that is required is a vertical drop (head) and a sufficient rate of water flow, which are commonly obtained by installing the micro-hydroelectric generator on a small waterfall, dam or diversion trench. Electricity passes along a wire and into a house and an electronic load controller (supplied) stabilizes the voltage to 110V or 220V to protect electrical appliances during use. The generator can also be used to set other voltages such as 120V, 230V or 240V. Being lightweight and portable, installation is very simple and is explained in the Instruction Manual. Once installed there are no running costs and maintenance costs are extremely low.

MODEL	Runner Diameter	Water Fall (m)	Water Flow (m3/s)	Output Voltage	Power (W)	Speed r/min
ZD2.0-0.3DCT4-Z	120mm	1．7~2。0	0.04	220V	300	1500
ZD2.5-0.5DCT4-Z	120mm	2.2 ~ 2.5	0.04	220V	500	1500
ZD3.0-0.7DCT4-Z	120mm	2.5 ~ 3.0	0.05	220V	700	1500
ZD3.0-1.0DCT4-Z	150mm	3.0~4.0	0.07	220V	1000	1500

It is important to keep in mind that output can only be accurately determined if head and flow measurements are made correctly, so care should be taken during this process. Two other important factors in a site assessment are system voltage, and transmission distance. The voltage and distance the power must travel can affect the efficiency and cost of your transmission lines.