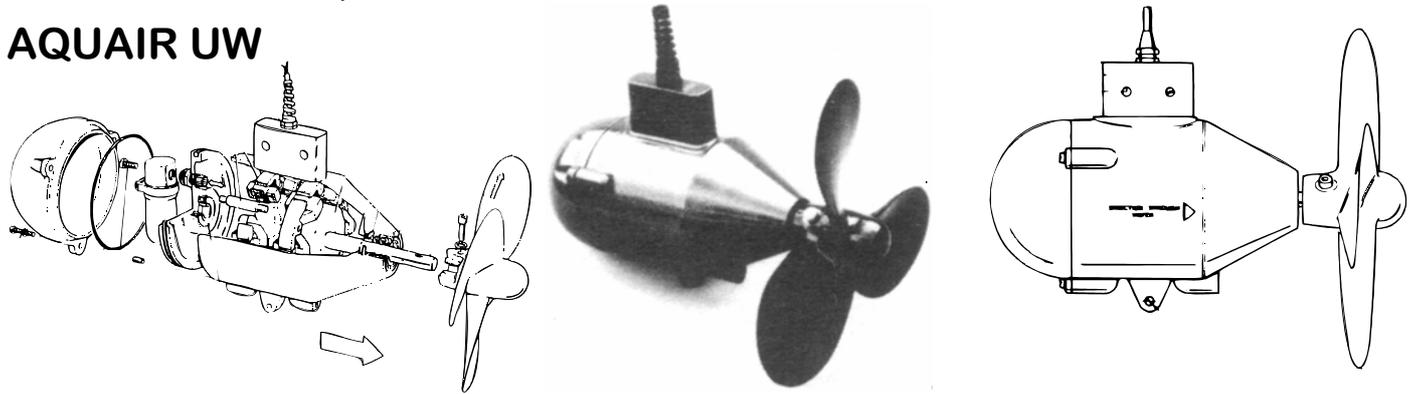


Aquair Submersible Micro Hydro

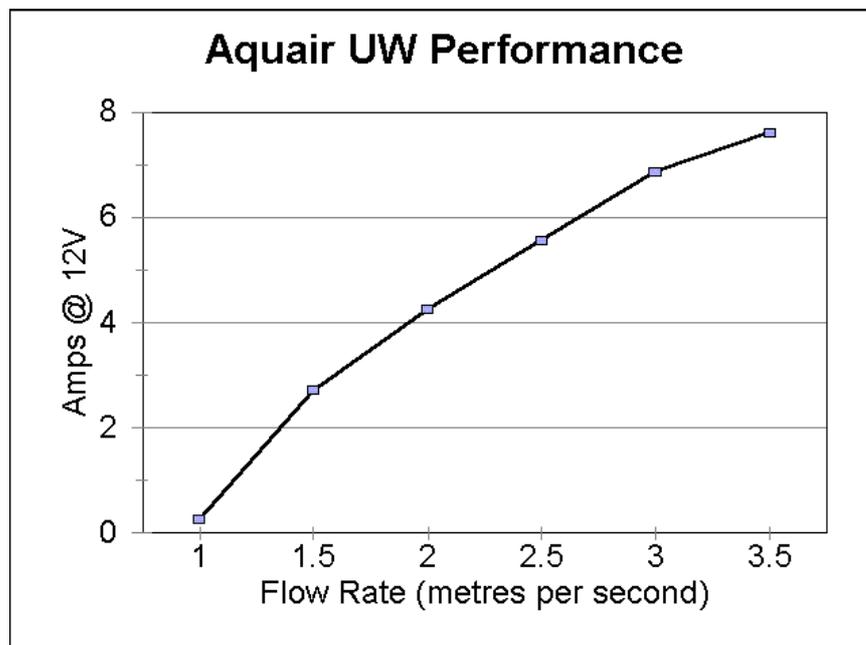
A submersible propeller type hydro generator which will produce power (up to 2.4 kWh/day) in a fast flowing stream of water. When mounted in a stream that flows at 15kph (4.2 m/s), it will produce 8 amps at 12 volt continuously. Even a stream flowing at 10kph (2.8 m/s) it will produce 1.5 kWh/day. The water speed can be increased by using a venturi funnel. Operates just below the water surface and is driven by an on-shaft propeller. It is available in 12 or 24 volts. If you have a choice of voltage, you should be aware that the power cable for the 12V model will need to be four times larger than that for the 24V model. The propeller is 312mm diameter, so the water depth needs to be at least 400mm.

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The forward facing 3 bladed propeller drives a permanent magnet alternator producing up to 8 Amps output current for a 12 volt system. The shaft rotates in double seals for optimum protection, backed by twin 'O' ring static seals at the rear of the casing. The cable exit is similarly double sealed by an internal moulding and external gland. The alternator body is filled with hydraulic fluid to eliminate corrosion and to equalise pressure changes caused by variation in immersion depth and ambient temperature. A reservoir in the end casing allows expansion and contraction of this fluid.

If you are measuring the speed of your stream, you should do so at the proposed location of the hydro. If you are timing a floating object being swept along by the current you should use something that is mostly submerged (like a block of wood) rather than something that only skims the surface of the water, such as styrofoam.



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