a WOW Lab BLUEPRINT

Wind Power - Outdoor Windmill

# Additional Information

## Choosing an Electric Motor (10 ft. Windmill)

The output of the windmill generator is dependent on the electric motor used. The ideal electric motor is a DC motor designed for low rpm. The WOW Lab used an Ametek 50 DCV motor with a 3/4 in. threaded shaft. Large permanent magnet DC motors would work well for the 10 ft. windmill.

Alternatively, an electric generator can be constructed from base parts. While this process is more involved, generators designed for low rpm provide significantly greater output. There are various sources on the internet with instructions on how to build a generator. Refer to the *Resources* section.

## Mounting the Rotor to the Motor

This process is dependent on the motor used for the generator. A motor with a threaded shaft is preferable because this will allow for the use of a threaded flange to mount the rotor to the motor.

If the shaft of the motor is threadless, it might be possible to mount it by drilling a large enough hole through the centre of the circular piece of plywood that the shaft fits through. Sandwich the plywood with two hose-clamps and drill a screw into the plywood so that it hits the screw of the hose-clamp when the plywood spins (**Figure 1**).

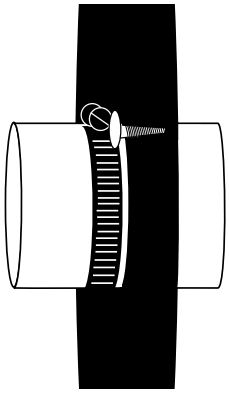

Figure 1