Output motor requires 5V 2A to run, therefore need P = 5\*2=10W plus other things 15W. Assume power conversion about 80% efficient, therefore need approximately 19W.

Using Power equation taken from: <http://books.google.co.nz/books?id=0aWZ3esTwVIC&pg=PA70&dq=investigate+three+different+forms+of+power+generation+that+exploit+the+abundance+of+water+on+Earth&hl=en&ei=RtwwTvSUKKTUiAKl2eymBg&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCwQ6AEwAA#v=onepage&q=investigate%20three%20different%20forms%20of%20power%20generation%20that%20exploit%20the%20abundance%20of%20water%20on%20Earth&f=false>

Assume efficiency of turbine = 0.3 given Betz Limits of 0.6. Density of water 1000, gravity 9.81m/s.

V is velocity, about 3 knots = 1.54 m/s

Diameter of Turbine needs to be 17.5cm.