AMOS

Water & Sewage Pumping and Treatment Engineers

The Pump People.

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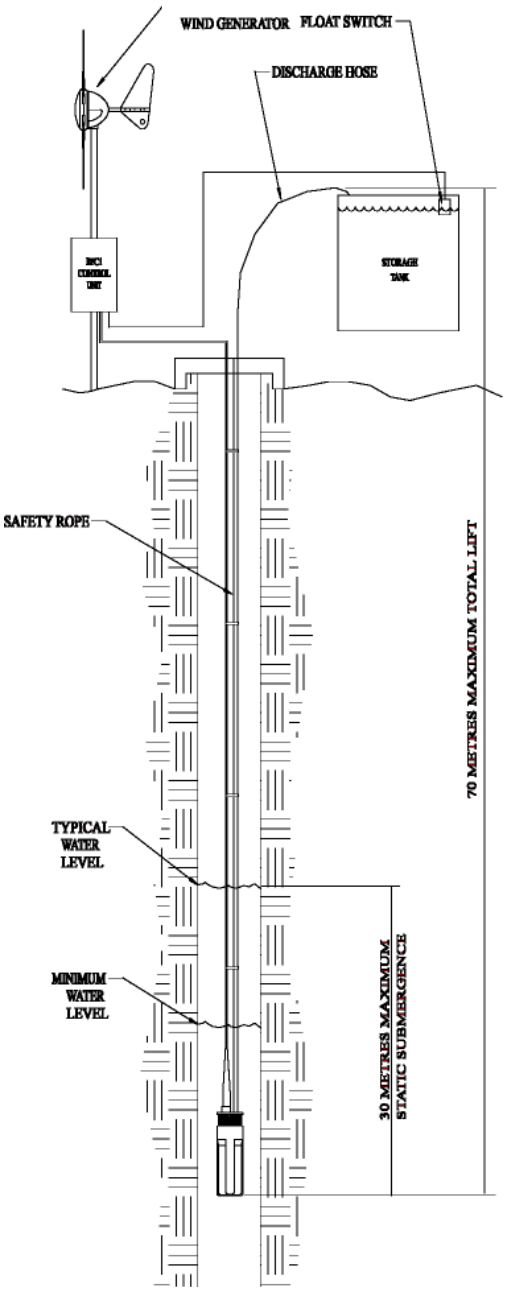
Wind & Solar Pumping Systems

****************************Technical Data Sheet************

Layout of the Basic Model without batteries or solar panels.



Expertise in wind turbines has led to the development of the simple and most efficient small electrically operated wind & solar pumping system available today. It is designed for pumping at isolated locations in all climates without the restriction and high costs associated with traditional mechanically driven wind pumps, this has been achieved through the use of modern materials and innovative design using the highest quality of manufacture.

The system is supplied in kit form and capable of pumping potable water from deep wells or boreholes of 4" diameter to a maximum height of 70 metres. The system incorporates a wind turbine, solar panels and submersible pump via a battery interface control unit which ensures optimum system performance.

Technical Features

Controller accepts solar panel input in parallel with wind charger (maximum 2 x 50w panels).

High wind speed protection, the tail "furls" the unit over wind speeds of 35 mph.

Controller maximizes flow rates over most wind conditions.

1 or 2, 24v battery banks can be attached.

High efficiency proven wind turbine of 910 mm diameter producing 12v or 24v, dc, 3 phase electrical power .

Built-in safety features.

A particular feature of this system is that the wind turbine need not be located directly above the well or borehole (within reason) allowing optimum use of environmental conditions.

Cost Effective and Convenient

No specialized knowledge required for installation and operation - only a basic tool kit is required.

Long life, durable and reliable components.

Complete kit provided.

Minimum maintenance.

Environmentally friendly.

Designed and made in the U.K.

Wind & Solar Powered Water Pump

Submersible Pump Flow and Power Chart

Vertical Lift Metres	Flow Rate Litres/Hr.	Currant Amps
6.1	443	1.5
12.2	432	1.7
18.3	413	2.1
24.4	400	2.4
30.5	390	2.6
36.6	380	2.8
42.7	375	3.1
48.8	370	3.3
55	350	3.6
61	345	3.8
70	310	4.1

How Much Water Will it Pump

The time the pump is able to run each day will depend on the vertical lift and the quality of the site. The chart above shows how much current the pump draws for a given lift. In optimum battery charging conditions with an open site the wind turbine and solar panels can deliver an average of about 15 amphours per day at 24VDC in the winter months rising to about 20 amphours per day in the summer months. For example for a lift of 18.3 metres the current draw of the pump is 2.1A so at an open site the pump should be able to run for 15/2.1 = 7 hours per day in the winter and 20/2.1 = 9.5 hours per day in the summer.