

Energy Costs

Calculating the running cost of an electric pump

The initial purchase price of an electric pump is usually estimated to be around five per cent of the total cost of owning and operating the pump over a 10-year period.

Any changes to the irrigation system, variation in water supply or insufficient maintenance on the pump can result in the pump running less efficiently and costing more to run than it should.

Measuring electricity consumption

Take two readings of the energy meter and note the time between the readings.

	Energy meter reading (kWh)	Time reading was taken
Reading 1		
Reading 2		
Difference (Reading 2 minus Reading 1)	Power used = _____ kWh	Time between readings = _____ min
		Time = _____ hr[^]

[^]Divide the number of minutes between readings by 60

$$\text{Electricity consumption (kW)} = \text{Power used (kWh)} \div \text{Time (hr)}$$

$$= \text{_____ kW}$$

Measuring flow rate

Take two readings of your water meter and note the time between the readings.

	Water meter reading (L)	Time reading was taken
Reading 1		
Reading 2		
Difference (Reading 2 minus Reading 1)	Water used = _____ L	Time between readings = _____ min
		Time = _____ sec[^]

[^]Multiply the number of minutes between readings by 60

$$\text{Flow rate (L/sec)} = \text{Water used (L)} \div \text{Time (sec)}$$

$$= \text{_____ L/sec}$$

