Power Consumption – P1PV(CD)KY Water Coolers

The power consumption of a water cooler is dependent on two main conditions:

- Ambient temperature
- Usage of the cooler

There are a number of different methods of estimating the power consumption of a water cooler. These can be summarised as:

- Standby Energy Consumption
- Average Power Consumption

Standby Energy Consumption:
There is no European standard for measuring standby energy consumption. OASIS uses the American "Energy Star" protocol for this purpose. Standby Energy consumption is defined as the power to "dead cycle" the water cooler – i.e. power is connected to the cooler and no cold water is drawn from the cooler. The cooler is located in a room that is controlled at a temperature of 24ºC and the power required to hold cold water temperatures at 10ºC is recorded. Results are as follows

Power Consumption: < 90 Watt.hours of electricity per day

Average Power Consumption:

- At standard office conditions (21ºC air temperature), the P1PVKY water cooler is capable of producing a maximum of 20.0 litres of cold water per hour.
- In order to produce this amount of cold water, the unit will consume approximately 100 Watt.hours of electricity
- In order to produce 1 litre of cold water, the unit will consume 5 Watt.hours of electricity (i.e. 100 Watt.hours / 20.0 litres)
- Total power required to produce X litres of cold water = 5X + 90 Watt.hours (i.e. standby power consumption + power to chill X litres of water)
- For example, to produce 8 litres of cold water per day, the water cooler will consume 8 x 5 + 90 = 130 Watt.hours of electricity
- 1000 Watt.hours = 1 kW.hr
- To convert to an average running cost for a cooler, simply multiply the figure in "kW.hours" by the unit cost of electricity.