Abstract

DEVELOPMENT OF AN ENERGY SAVING AND ENVIRONMENTALLY FRIENDLY MOBILE ATMOSPHERIC DEHUMIDIFIER FOR WATER GENERATOR AND DRINKING PURPOSES

A tool for producing water and drinking water from air humidity using the development of atmospheric dehumidifiers that are movable, energy saving and environmentally friendly and can be equipped with generator units, or electrical power source or other power sources consisting of: an air handling unit container located on a wheeled machine frame where there is an atmospheric air blower fan; a number of pre air filters; medium filters and UV light lamps; a cooling machine as an air condensing device consisting of an evaporator equipped with a heat pipe to condense water vapor taken from air humidity to form dew; another atmospheric air blower fan installed after the condenser of the cooling machine. The dew formed will flow into dew drip pan, u-pipes, dew pumps, dew filters, UV light tubes, dew storage tanks, ultra violet light dipping lamps until it comes out where all parts, including pipes, tanks, pumps etc. where the dew flows, must be made of food grade metal preferably made of stainless-steel metal so that the dew is suitable for drinking. The cooling machine uses an environmentally friendly refrigerant. A number of controls and sensors as well as a panel are also installed on the machine frame to run the device including an inverter motor adapter.

Figure 1