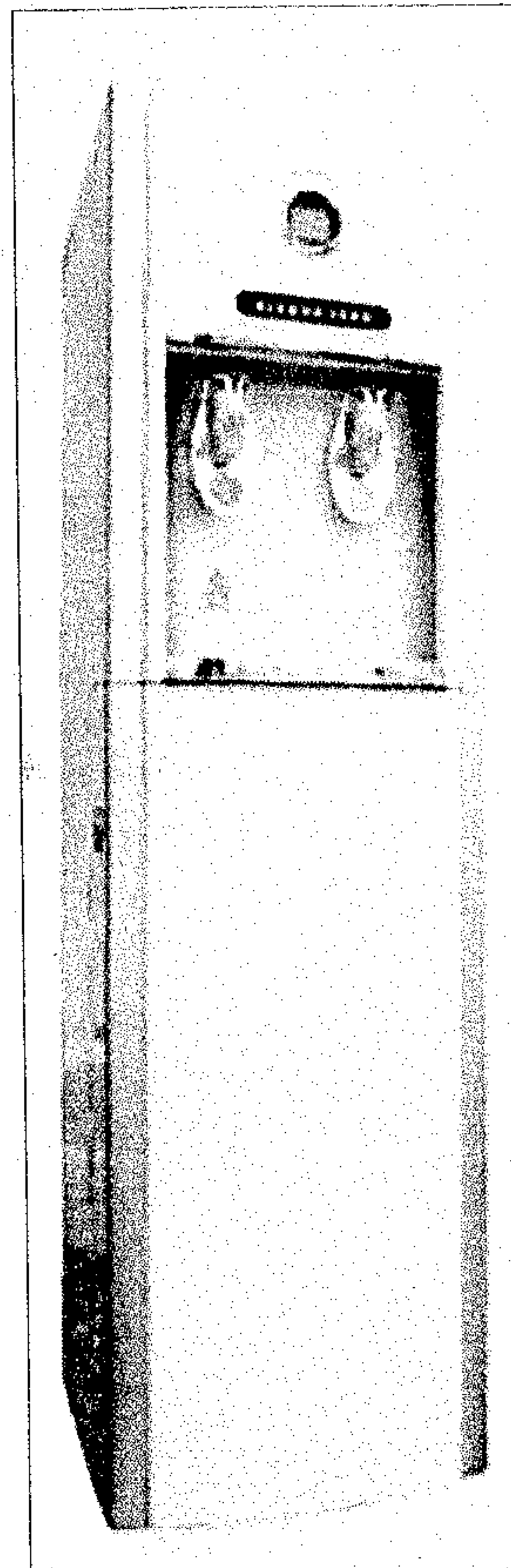


Moisture harvested in the air turned into water

At any time there are 3.1 quadrillion gallons of water in the atmosphere, and now a clever machine called AirQua is able to tap some of it for drinking, writes Helen Grange



The AirQua Sano (domestic/office unit) costs R13 750 from Amanzi 4 Life. Call 011 025 4711 or 011 478 2255, or visit www.airqua.com

WATER, water everywhere, and plenty of it to drink. In fact, it is in the air all around you, but it took a young Singaporean entrepreneur, Vincent Oh, to come up with the technology to tap it at a rate that makes it practical enough to use in the home, office, and in fact anywhere where there is a shortage of safe drinking water.

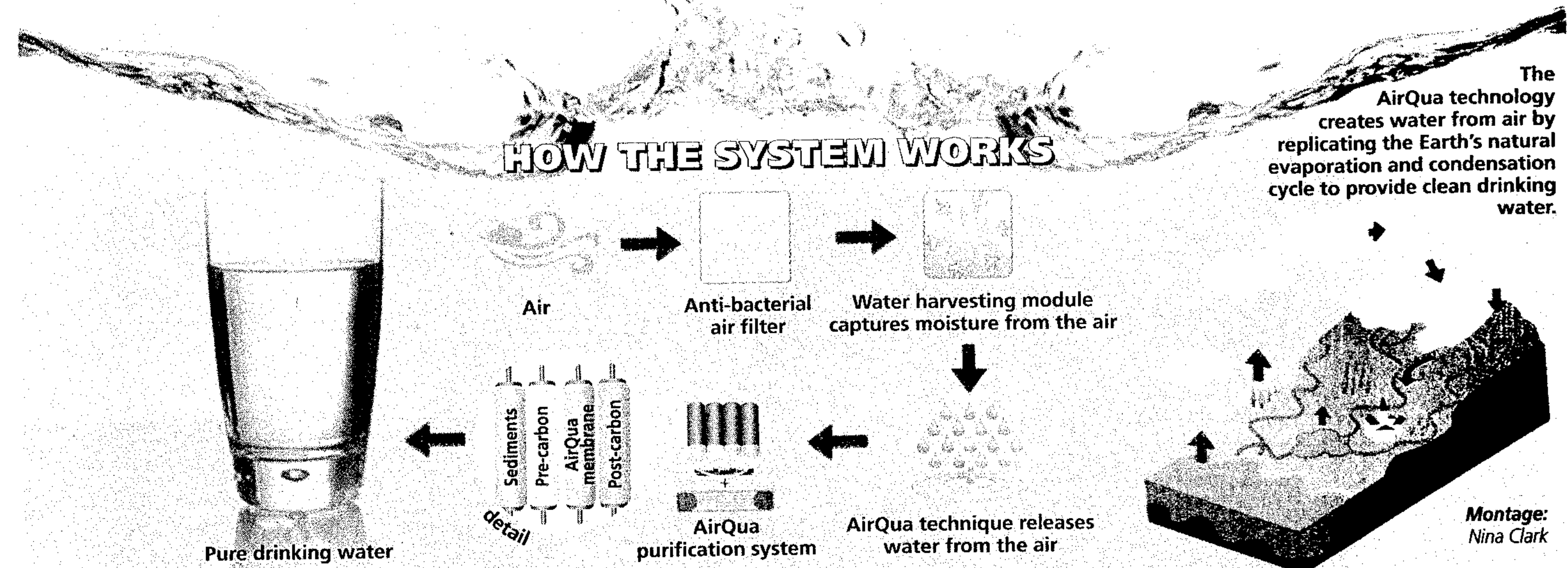
Oh, a 34-year-old computer whizz, founded "water-from-air" technology firm AridTec in 2007, and today distributes a range of AirQua atmospheric water generators (which are manufactured in Singapore and Korea) worldwide, recently including South Africa.

Essentially, the AirQua speeds up the natural condensation process to "harvest" water from air, producing healthy drinking water. And it uses a minimal amount of electricity to do this.

"It draws between 600 to 800 watts of electricity while it's harvesting water, but when it's full it uses less than a light bulb. Depending on local electricity costs, a litre of AirQua water can cost as little as 50c to produce," says Azhar Bhyat of AirQua SA, Africa agent for distribution and technical facilitation.

So how much water does it produce? "A domestic/office-sized unit, which requires only a three-point household socket to operate, produces both cold and hot water, at 3°C and 92°C respectively, in quantity enough to keep a household going in water for both drinking and for food preparation," says Bhyat.

Verve tested an AirQua Sano unit for two weeks. For two days nothing happened, and we started to wonder if it was all a hoax. It turned out that the water was freezing but the fault was quickly and easily



resolved. A rainstorm that day resulted in the unit quickly filling up with water. Looking at it in a glass, the water was crystal clear. It tasted fresh – the claim by the unit's makers that it is "like drinking dew" may be overstated – and it did not have the slight metallic or chemical taste of some tap water.

Verve staffers had cold and hot water on tap every day, and we found that coffee or tea made from this water was very smooth. We were sad to see it go.

"In Johannesburg, a domestic unit will produce about 24 litres a day depending on humidity levels, while at the coast, where there is more humidity, it will produce

around 48 litres a day," says Bhyat. "In the very dry winters on the Highveld this will drop to about half of that."

And in tests conducted by the SA Bureau of Standards, its bacterial count came out at nil, rendering the water purer than bottled water, which due to the bottling and cold chain process, often ends up with impurities and chemicals in it.

"South Africa's municipal water has also been found to be increasingly polluted, so pure, safe atmospheric air-harvested water is going to become an ever more desirable commodity in the future," notes Bhyat.

The "green" aspect to AirQua

goes further than water. Although bottled water is perceived as being the healthy water option, the fact is that bottled water production companies burn millions of barrels of oil and generate tons of greenhouse gasses in the manufacturing, processing and transporting of their products.

And to top this, an estimated 38 billion non-biodegradable plastic water bottles are tossed into landfills around the world annually. This plastic is mostly not recycled, but simply thrown away.

To avoid bottled water, some companies have turned to filter coolers, but if these are inadequately designed or not maintained they can

actually increase contamination levels in the water.

"The genius of AirQua is that it removes the need for all this processing," says Bhyat.

"In each unit there are multiple air and water purification systems which eliminate any micro-organisms including bacteria and viruses, without additives or chemicals of any kind. The water it produces surpasses World Health Organisation drinking water standards."

Okay, so you don't have to buy and cart water around in bottles and you can give tap water a miss, but how much would you have to fork out for an AirQua?

"A domestic or small business

unit costs R13 750, but you would make this money back in 18 to 24 months in savings when compared to renting water dispensers and purchasing 50l water bottles," says Raymond Byrne of Amanzi 4 Life (AirQua SA's supplier to the domestic and small business sector).

"And it is built to last for at least 15 years, with an annual filter maintenance being the only additional expense."

Airqua comes in a range of units producing drinking water from 24 litres a day up to 5 000 litres a day, depending on requirements.

A 120l-a-day unit is being tested underground by the mining industry, Bhyat says.