

Lightweight x-ray machines set to revolutionise market

March 17 2016, by Andrew Spence



Making X-ray machines smaller and lighter with carbon nanotube technology is revolutionizing the market in the medical devices industry.

Micro-X has established its headquarters in Adelaide, the capital of South Australia, in preparation for the production of its lightweight

machines.

Managing Director Peter Rowland said Micro-X had successfully produced a 75kg mobile x-ray machine – just a fraction of the size and weight of the 600kg machines traditionally used in hospitals.

He said Micro-X had the rights to apply technology from a company in the United States that was commercializing the carbon nanotubes as the electron emitter within an x-ray machine.

"This technology was developed at the University of North Carolina at Chapel Hill and partially at Duke University, which is nearby but we've got the sole rights to apply that technology in mobile medical," Rowland said.

"In one of these 600kg monsters, the x-ray tube itself weighs about 26kg and if you think about holding that over a bed safely you need a vertical and horizontal support arm that's quite strong and a cart that's quite strong."

"By comparison, our tube is one kilogram and is about the size of a large grapefruit. Our task has been to reduce the size of the overall cart in the same ratio."



Rowland said the portable x-ray machines, which are due to be released towards the end of the year, would address a real market need.

"A lot of medical devices are very clever but if they require a change to the way medicine is practiced – if it's a disruptive product – then sales are going to come very slowly because you not only have to sell the technology in the product but you also have to sell a whole new way of doing things," he said.

"That's not the kind of path to revenue you need for a startup company so our first product is simply a better mousetrap.

"That smallness and lightness translates to simplicity and simplicity

translates to a lot cheaper. So we've got what we believe is a real game-changing first launch product.

"There's a clear market interest in a unit that's smaller, can get into tighter spaces, is easy to manoeuvre with less effort for radiographers and we're coming in at half the price."

Rowland said mobile units could be stationed in radiography departments and easily wheeled to where they were needed within a hospital or they could be kept in areas such as intensive care or thoracic wards where they were needed regularly.

He said there was also an opportunity for aged care facilities or visiting radiologists to easily transport the units to where they were needed and then email x-rays to treating physicians to help keep patients out of hospitals and medical clinics.

"We had a soft product launch at the radiology society of North America with our distribution partner in Chicago in November and the unit was an amazing success.

"We had people from hospitals all over the world saying 'when can we get one'."

Micro-X is undertaking regulatory testing of the units for functionality and longevity before it embarks on full-scale production in the coming months at its assembly line in South Australia.

The company is located in the Tonsley precinct, the site of a former Mitsubishi car manufacturing plant, which has been converted into a modern hub for high-value industries.

Micro-X was given a one-year \$3 million loan by the South Australian

Government to launch production and expects to build about 150 saleable units by the end of the year.

"We're sizing our initial factory to be able to build four units a day so that's about 1000 units a year," Rowland said.

"We've designed this unit to be built in Australia.

"It's cleverly designed so that the assembly operation is not labour intensive – if you can put them together in a very short time then the price of Australian labour doesn't end up being a major deterrent in the end cost of the product."

Provided by The Lead

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