

Local container deposit tech bolsters WA war on waste

BUSINESS

Adelaide-based technology and engineering company SAGE Automation has expanded its Tonsley footprint to ramp up production of smart container deposit systems as more states adopt paid can and bottle recycling schemes.



GEN3 Automatic Redemption Terminals, at SAGE's Tonsley manufacturing space before being shipped to WA. Photo: SAGE Group

The sorting machines, known as automatic redemption terminals, were developed and manufactured by SAGE Group, the University of South Australia and Nukon in 2018 for local company Container Deposit Systems (CDS) in a bid to help reduce the nation's landfill.

Last month, SAGE deployed the latest generation of terminals to Western Australia ahead the launch of the state's container deposit scheme – containers for change – on October 1.

The terminals identify and sort containers by integrating industrial internet of things technology with a counting and sorting system.

They allow customers to return deposit cans, plastic bottles and glass in any condition for a cash or instant bank refund.

A recycling depot employee loads the mixed containers onto a sorting hopper that uses advanced vision technology to count up to 350 containers per minute without the need for coding or labelling.

Conveyer belts, electric motors and spinning discs sort the containers by separating common recyclables like metals, plastics and glass. The machines have seen thousands of images of containers and can identify different container types, including unwanted materials.

The containers are ready to be recycled once compressed air pushes them into specific categorised cages.

The entire process takes only a few minutes and a refund receipt based on the number of containers counted is automatically generated.

SAGE Automation general manager Paul Johnson said since the initial release of terminals, the group and CDS had continued to refine the design of the terminals, making them more accessible and easier to maintain.

He said 40 of the latest terminals, which were developed and manufactured in collaboration with mechanical partner Macweld Industries, had been shipped to depots across Western Australia following an expansion of SAGE's manufacturing space.

"The container deposit legislation launched in Western Australia, so, SAGE Group have assisted CDS to be ready for that," Johnson said.

"We needed to lease extra manufacturing space at Tonsley to meet the demands of CDS's expansion into WA.

"The demand for more terminals led to more work for our manufacturing team, and a need to expand our footprint at Tonsley.

"SAGE is also providing some great opportunities for manufacturing career development in this innovative area. With COVID-19 impacting travel, we've been able to support our client with the local team on the ground in Western Australia."

According to the WA government, beverage containers in the state make up 45 per cent of the volume of litter, with the Containers for Change scheme aiming to reduce landfill while also creating up to 500 jobs.

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More than 220 container refund points were established across Western Australia ahead of the program launch.

South Australia led the country in recycling, introducing a container refund scheme in 1977, with other Australian states slowly following suit.

In 2018, Queensland launched its scheme, driving the return of more than two billion containers.

“Container Deposit Systems has driven improvement in recycling depot productivity by developing an aid to manual count utilising state of the art technology,” Duncanson said.

“The convenience and reliability of the system, confirmed through customer feedback, encourages recycling resulting in a cleaner environment. CDS is proudly designed and manufactured in Australia.”

Johnson said SAGE was preparing for further expansion ahead of Victoria and Tasmania’s recycling initiatives, which are due to commence by 2022.

“We’re looking for expanding opportunities with these new jurisdictions coming into play,” he said.

“CDS have more than 150 auto-return terminals in Queensland and NSW at more than 40 depots. So, the opportunity in Victoria is at least of that scale.”

SAGE’s work on the terminals is the latest in a string of manufacturing projects for the business.

In 2016 the company also began working with self-service bag drop company ICM Airport Technics on its bag-drop units for airports and airlines all over the world.

It has since delivered more than 414 panels to countries including Japan, China, Singapore and the US, and continues to manufacture for ICM.

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