

Press Release. Technijet become UK distributor for Robotic Clever Cleaner

Kirkby Lonsdale, UK, February 2010.

Technijet, a medium sized rapidly growing UK supplier of automated cleaning equipment has signed an exclusive UK distribution agreement with Ramsta Robotics of Sweden to distribute their Robotic agricultural cleaning device known as the Clever Cleaner.

The Clever Cleaner is an independent, battery driven mobile robot that fits to an external high pressure cleaning system. The device can operate for up to 48 hours without human intervention, lighting or assistance. It will spray, wash and thoroughly clean the working environment it is in. The main application so far has been farmyard and agricultural animal enclosures for example pig pens. Traditionally this has been an unpleasant, messy and unhealthy human role. However the development of the Clever Cleaner has been pioneered in the environmentally progressive Scandinavian region where hundreds have already been sold and are in daily use.

Where the Scandinavians pioneer environmental progress, the rest of the world usually follows. The driving force behind the Clever Cleaner came from farmers and the agricultural sector. Ramsta Robotics' Stefan Johansson explained the new trend towards high-tech robotic solutions for improved cleanliness in agriculture. "In Scandinavian farming the trend is towards reducing costs and eliminating the dirtiest jobs. Cleaning large enclosures used by animals is a good example. This is a routine job that has to be done frequently and has always been done by people with high-pressure hoses. Often big sections in a pig house could take a day or two to clean thoroughly. The work was boring and unhealthy – the cleaning process created airborne aerosols of animal waste that the farmer was constantly breathing in. The physical process of using high-pressure hoses for prolonged periods is noisy, draining, dirty and the farming community asked us if there was a better way. "

The Clever Cleaner is a robot on wheels, weighing 270 kg with a programmable control system. It is totally self enclosed and powered by two rechargeable lead/acid batteries. These will power the Clever Cleaner for up to 48 hours – as long as is needed for even the largest area. The robotic arm has a cleaning radius of up to 6 meters from the base unit and can



swivel in all directions so that any area can be reached and cleaned. Water is directed from the nozzle at an incredible 180-210 bar (up to 3000 pounds/square inch), this is twice the force used in



the best professional car wash systems and is designed to clean the most stubborn dried-on dirt. The only connection is to the water supply with a retractable hose. The cleaner drives around its target area using a very accurate Hitachi control system to ensure inch perfect positioning. It works in complete darkness if necessary and follows the exact teaching commands of the human who will have initially 'taught' the cleaner how to clean the area with the remote control.

The device can be used in two modes, 'manual' and 'teach'. In manual mode a remote control drives the cleaner around whilst the robotic spray arm moves around spraying water, this mode is good if you want to clean something using the Clever Cleaner whilst standing a safe distance away from the mess. In 'teaching' mode the cleaner remembers the precise commands given by the operator and follows them so that it can clean the area fully automatically itself in the future building the programmed movements into a

smooth and consistent operation from the data stored. This saves a human operator from having to undertake a noisy, unpleasant and unhealthy job, saving time and money. In Scandinavia it is a job that they are pleased to have automated. "You teach it how to clean one given area and it remembers how you did it. You can then program it to clean many different areas consecutively and it stores the jobs in its memory" explained Stefan Johansson of Ramsta Robotics. "Here in Scandinavia they do not want to go back to the days of using people to clean when a robot on wheels can do it. The farmers can spend time with their animals instead of having to do menial and unhealthy work. We estimate that animal health increases by up to 5% simply by allowing the farmers to do what they do best – look after the animals in a clean and healthy environment. This increase in animal health is something the farmers can measure – it has a direct financial impact, animals are healthier and more productive in a clean enclosure"

Technijet already have a number of UK farmers and agricultural associations interested in the Clever Cleaner. The pig farming community is one that is particularly interested. "Only a few years ago robots were not available to do this type of work, we had always considered the environment too difficult and demanding. We are familiar with seeing robots manufacturing cars but not cleaning animal pens. Ramsta Robotics with the Clever Cleaner have achieved this and they have done it at a price that is affordable to the average business" said David MacFarlane, MD of Technijet.

"It has an incredible build spec and comes to UK customers as a fully proven ready-to-use product. We have never seen anything quite like it and we already have a number of people asking for demonstrations. You just need to see it working to realise how effective it is. It works totally independently in the very worst environments possible. The payback time is fast as it works for 2 days on one charge, but with a second set of batteries the operation can be continual and non-stop.

The real key to this technology is that it does jobs that no human should really have to, and it does it better, faster and without needing a break"

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