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AeroFocus

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Sustainability initiatives set to take flight

Bucher's XPowa V90 aero with glycol recovery helps Luxembourg airport's sustainability strategy go from strength to strength.



3
Glycol recovery
success in
Luxembourg

4
Innovating
sustainability,
Driving change

6
MaxPowa
V95t aero and
CityCat VR50e

8
Total Bucher
Care, next level
service

11
V95t lands
at Alghero
airport

Making a difference every day



Mike Moore

As I begin my third year as the Global Key Account Manager, I am privileged to contribute to the dynamism of this fast-paced and innovative sector.

As we reach Spring 2024, I'm delighted to share the latest edition of AeroFocus, our dedicated airport magazine at Bucher Municipal. As I begin my third year as the Global Key Account Manager, I am privileged to contribute to the dynamism of this fast-paced and innovative sector.

We recently attended the Norwegian Snow Symposium which focused on safe, efficient, and green airfield winter operations. The event was a resounding success, offering valuable insights into how to improve winter operations.

In this issue, we also focus on, exploring Luxembourg Airport's sustainability triumphs, showcase how Bucher Municipal pioneers sustainable change through innovation, and providing an insider's perspective from our Parts and Technical Support teams, unravelling Bucher Municipal's comprehensive 360-degree approach to customer service.

Our focus also turns to two of our cutting-edge sustainable airport sweepers, the Bucher MaxPowa V95t aero and the Bucher CityCat VR50e.

I hope you find this edition engaging and informative.

Mike Moore
Global Key Account Manager, Bucher Municipal

Glycol recovery success at Luxembourg Airport



Two years since Luxembourg Airport's Bucher XPowa V90 aero with glycol recovery started its operations, the airport's sustainability strategy continues to go from strength to strength as it focuses on 'building today the green airport of tomorrow.'

The winter season in airports brings some demanding challenges. When temperatures fall below freezing point, runways, aircraft flight surfaces, windows and other exterior aircraft components need to be de-iced before take-off. Ice adversely affects aerodynamics, preventing systems from operating effectively and increases aircraft weight. In winter weather conditions aircraft must be treated to ensure safe operations.

The aircraft de-icing process involves the application of aircraft de-icing fluid (ADF) products, generally composed of chemical agents based on propylene/ethylene glycol. Significant volume of de-icing fluid is applied to aircraft exterior to melt any ice and snow before applying a more viscous anti-icing fluid to prevent ice reforming on the flight surfaces before take-off. Residual ADF will pool as surface fluid around the stand area or de-icing pad.

Although an essential operation for aircraft safety, if fluid is left unrecovered, de-icing products become a main cause of organic loads in surface waters, which can damage downstream ecosystems. Recovery and recycling of glycol not only reduces water run-off contamination and downstream environmental damage but can also contribute to reducing the carbon footprint of airport winter operations.

As part of Luxembourg Airport's journey to reach net zero by 2030, OSCH, Bucher Municipal's exclusive sales and service partner in Luxembourg, supplied their new Bucher XPowa V90 aero with glycol recovery in December 2021.

The Bucher XPowa V90 aero's deep and straight hopper design means that the material in the container does not slosh about during operations, and no liquid comes out of the intake duct flap. This combined with a high-performance suction fan and hydrostatic drive, ensures



that in one pass fluids are collected, reducing carbon footprint whilst effectively clearing the area for airport traffic.

Managing Partner of OSCH, Gilles Osch, comments: "Luxembourg Airport has seen a vast improvement in managing water containing spent de-icing fluid since their Bucher XPowa V90 aero with glycol recovery started its operations in 2021. As Bucher's Luxembourg partner, we work to supply customers with the best quality solutions to help them achieve their sustainability goals using environmental resources responsibly and carefully."

Glycol recovery at airports is crucial for minimising environmental impact and protecting the local water table by efficiently managing and recycling de-icing fluids. This mitigates any potential pollution, ensuring sustainable airport operations.

If you want to find out more about how Bucher Municipal's range of airport sweepers can support your sustainability strategy, please contact, Global Key Account Manager for Airports, Mike Moore:

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Innovating sustainability: **Driving** change



Sustainability is no longer just a buzzword or a goal for the future. Everyone needs to contribute today by harnessing innovation and sustainable solutions.

Carbon and fuel saving is a concern across the globe, with the public becoming increasingly aware of lowering their carbon footprint. As pressure on airports to reduce their environmental impact increases, airports look to leading global equipment manufacturers to provide sustainable solutions that go above and beyond expectations.

At Bucher Municipal, our global mission is to not only develop innovative equipment and technology to support airports in their journey to net-zero, but we are investing in factories that set the standard in reducing the environmental impact of equipment manufacturing.

Sustainable manufacturing

Bucher's leading airport truck-mounted sweepers are manufactured at our state-of-the-art UK assembly Unit 10, situated within our manufacturing site at Dorking, UK. The site meets strict environmental guidelines to protect the natural beauty of its surrounding area. Our new assembly hall (Unit 10) has been fully designed in-line with our global sustainability strategy.

Yolanda Cobos, Head of Management Systems, explains: "At Bucher UK, we are committed to our environmental responsibilities both as a producer of environmental equipment and as a manufacturing site at the foothills of the beautiful Surrey Hills.

"Certification in 14001 for environmental management and 50001 for energy management means we have a strong focus on energy efficiency and environmental protection, as well as preventing pollution from our activities. We are always looking for ways to reduce waste, reduce our reliance on fossil fuels and improve our product range to help our customers reduce their environmental impacts.

"We have recently fitted 200kWp solar installation on the new Unit 10 to power the building, which has reduced our purchased electricity by nearly 50% and around 6 tonnes of carbon emissions for this building alone, and future installations on other production buildings will reduce this further."

HVO fuels

As the world becomes more environmentally conscious, the demand for alternative energy increases. For Bucher Municipal, that means creating sweeping and cleaning solutions that prepare us for the low-carbon societies of tomorrow.

We are committed to providing innovative technology and solutions to support our airport customers in achieving a net-zero airside fleet. Our latest step forwards in the fight against climate change was replacing diesel at the Dorking site with HVO biodiesel (Hydrotreated Vegetable Oil). Our sweepers are designed to run on biodiesels and HVO is used for the function testing before despatch, so the sweeper you buy starts its life on a diet of renewable fuel, which can continue in your airport.

Switching to a sustainable HVO only site has saved around 100 tonnes of carbon emissions when compared to the equivalent in regular fossil diesel.

Electric vehicles in every division

As a company we are proud to have developed electric vehicles in every division. For airport customers, our proven CityCat 5006 has a fully electrified award-winning successor in the Bucher CityCat VR50e. Winner of the German Innovation Award 2023 and German Design Award Gold 2023, this all-electric performance package



The introduction of new upgraded laser cutting equipment has reduced the energy consumption for steel profiling



represents a milestone for compact sweepers and is set to revolutionise sustainable airport operations.

As a technology company, Bucher Municipal contributes to sustainable development on two levels. Our efficient and innovative machines enable our airport customers to reduce their carbon footprint. We also focus on energy efficiency and renewable energies, reducing the emissions in our own production environment.

To find out more about our sustainable airport solutions, contact Mike Moore, Global Key Account Manager for Airports:

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Environmental management measures and projects implemented since 2021:

- Dorking truck mounted sweeper manufacturing site is "HVO Only." Saving up to 93% carbon saving compared with regular fossil diesel.
- Upgrade of brake presses.
- Insulation improvements for old welding building.
- Installation of water meters to measure water consumption for metal treatment plant.
- Change of wet paint product to reduce time spent in oven curing.
- Latest manufacturing facilities fitted with roof mounted photovoltaic solar arrays producing carbon neutral electricity.
- Introduction of new upgraded laser cutting equipment has significantly reduced the energy consumption for steel profiling.

The annual carbon emission reduction achieved by these schemes equates to 124 tCO₂.

Bucher Municipal has the widest range of airport sweeping and cleaning solutions on the market. From Europe's first quality and reliable electric truck-mounted sweeper to autonomous and versatile compact sweepers. In this edition of AeroFocus, we're shining a spotlight on our two airport solution headliners, the MaxPowa V95t aero and the CityCat VR50e.

Mission complete

Leading the way – the V95t aero



The **Bucher MaxPowa V95t aero** is renowned as the global-leading, high-speed runway and multipurpose airport sweeper capable of sweeping airports foreign object debris (FOD) free.

The specialised high-speed runway sweeping machine keeps commercial airport runways, taxiways and aprons serviceable, providing the highest performance of material pickup to remove foreign object debris on military airfields. The MaxPowa V95t aero covers all airport cleaning tasks, from glycol recovery to high-speed runway sweeping.

Dan Taylor, Product Manager (Truck Mounted Sweepers), explains: "Our MaxPowa V95t aero is designed specifically for airport cleaning and clearing tasks with operational safety being the prominent factor in our machines design. High performing options are available, including permanent magnet bar, high-pressure water and detergent dosing cleansing systems, providing the capability for our airport customers to tailor the machine specification to any operational requirements."

Stand-out features

High productivity – vast 9.5m³ hopper capacity for sweeping large areas.

High speed – operational speed of up to 40 km/h, the V95t aero cleans large areas of runways, taxiways and aprons quickly and effectively.

High performance – the specialist multitask sweeping and pickup system is located between the axles to protect from accidental collision damage. The V95t aero will pick up a range of debris, including fine dust, FOD and liquid such as glycol or surface water.

Internationally acclaimed – the V95t exceeds the requirements of all internationally recognised military and civilian aviation authority pickup tests, ensuring all debris is removed from traffic surfaces to prevent aircraft damage.

Fuel efficient – The heart of the machine is a powerful yet fuel-efficient Mercedes Benz auxiliary engine. EU Stage V/EPA Tier 4 final (210kW) and EU Stage IIIa (205kW) emissions-compliant options to suit various environmental and operational territory requirements.

FOD removal – foreign object debris (FOD) collection is at the forefront of the design. The V95t has an innovative multipurpose pickup head (specifically designed for airfield applications). The V-formation channels direct larger FOD directly into the primary suction nozzles, then a full-width suction nozzle and a wide sweep brush collects the finer debris.

Stand cleaning capability – optional channel brushes can be combined with high-pressure water systems and detergent dosing for ultimate stand cleaning performance.

Glycol and liquid recovery – the full-width nozzles excel as liquid-recovery nozzles and allow the sweeper to clean up standing water, glycol, deposited detergent mix or fuel spillages. No component changes are required to optimise the pickup unit for liquid recovery, just minor adjustments on the hood.

All-electric pioneer – the CityCat VR50e

The Bucher CityCat VR50e is the fully electric successor to the well-proven CityCat 5006, setting a new standard for airport compact sweepers with its unique design and pioneering technology.

The CityCat VR50e is manoeuvrable, agile and high performing, with heavy-duty suction and a four-wheel steering system - providing a versatile machine for sweeping service access roads and heads of stands where a large hopper capacity and compact agility are equally important.

The innovative all-electric CityCat VR50e compact won Gold at the German Design Award 2023 for 'Excellent Product Design,' which is awarded for excellent, comprehensive, and innovative design work.

Sandro Voser, Product Marketing Manager (Compact Sweepers), comments: "Our CityCat VR50e sets a new standard for compact sweepers and offers airport customers the perfect mid-sized all-electric sweeping solution. The innovative combination of features means it has the appetite of a large truck mounted sweeper, the functionality of a multi-season vehicle and the manoeuvrability and unrivalled operator visibility of a compact sweeper."



Stand-out features

Efficient & sustainable – powered by a 137 kWh Bucher Battery Pack, which provides the capacity to complete a 10-hour shift with zero exhaust emissions.

Super-fast charging – fully charged in less than 2 hours with 70 kW DC fast-charging function.

Excellent visibility – A fully glazed cab in combination with led headlights offers excellent all-around visibility with maximum illumination of the sweeping area at lowest energy consumption.

4-wheel steering – included as standard for tightest turning circle in class and great manageability.

Operator comfort – The completely redesigned cab, includes the Smart-Con operating system, offering the operator maximum comfort and safety while providing a modern workplace.

Increased productivity – the 5.6 m³ hopper, 880 litres of fresh water and an optional water recirculation feature achieves increased on-station time, enhances productivity and reduces running costs.

High speed – Up to 50 km/h driving speed for economic transfer from the place of use.

Compact to truck mounted...

Compact sweepers

Manoeuvrable machines for sweeping inaccessible areas around head of stands and terminals.

Truck mounted sweepers

Powerful truck mounted sweepers designed for high-speed runway sweeping and stand cleaning.

Total Bucher Care

At Bucher Municipal, we pride ourselves on providing next-level customer service, going above and beyond to ensure we keep your machines running efficiently and operating at the highest level all year round. Our extensive customer-facing teams maintain this first-class service, and here, we meet some of the people responsible for making this happen.

Parts Team

Based in Dorking UK, Bucher Municipal's global parts centre houses over 30,000 material lines of stock and with guaranteed next-day delivery for UK orders before 5pm (plus next day delivery overseas for orders prior to 3pm), the team goes above and beyond to ensure an unrivalled customer service.

Holly Martin, Parts Sales Manager and Louisa Monk, Parts Logistics Manager, explain how their teams prioritise customer service.

Holly says: "Our large team structure with dedicated sales and logistics departments take care of everything our customers need. In many cases, we are dealing with technical requests, assisting with part identification and if a customer requires further technical assistance, we can direct them to the right person."

The Parts Logistics team includes the warehouse (for stock management), demand planning team (for forecast/ planning of inventory), commercial pricing team and product group owners.

With over 30,000 lines of stock available to order via the E-shop or through the Parts Sales team, the global parts centre carries parts for all Bucher products up to 10 years old.



The Bucher Municipal UK Logistics and Sales Parts Team led by Louisa Monk and Holly Martin

Bucher Municipal's global parts centre houses over 30,000 material lines of stock and with guaranteed next-day delivery for UK orders before 5pm

Louisa comments: "I started at the company in 1995, and there have been significant changes since then with the scale of our product ranges. We've invested heavily in our planning team with sophisticated forecasting and material planning tools, plus a dedicated team enabling us to achieve our parts availability goals."

With over 30,000 lines of stock available to order via the E-shop or through the Parts Sales team, the global parts centre carries parts for all Bucher products up to 10 years old.

"Quality is paramount for us. It is in every element of everything we do, from customer service on the phone, through to how swiftly and seamlessly orders are processed and the accuracy of stock we have, to the warehouse picking and freight provider getting this out, ensuring the right part is delivered at the right time in perfect condition and at a competitive price," Louisa explains.

Holly continues, "Our Parts Sales and Parts Logistics teams work from the same office so we can communicate directly on any customer request. This means customer challenges are resolved quickly and effectively."

For Bucher Municipal's international airport customers, having high-performing and reliable sweepers is critical for operations. If a customer declares a VOR, a dedicated team will ensure this is the highest priority and pulls



out all the stops to get the machine back in operation as quickly as possible. Customers are kept up to date throughout the day on the progress of their request, and the parts team will work with the service network to get the part to the field engineer or customer.

To get in touch with our Parts team email spares.uk@buchermunicipal.com or call our team of experts on 01306 874606. For technical support from your local service centre visit buchermunicipal.com/where-to-buy.

Technical Support Team

David West,
Technical Support Specialist/Trainer Supervisor

David is a technical support specialist and trainer supervisor responsible for compact sweepers in the UK. He is part of a team of four technical specialists, each looking after a different product area, with his three colleagues Calum, Joe and Alex responsible for winter maintenance vehicles, truck-mounted sweepers and sewer vehicles, respectively.

The role of the technical support team is to support the UK service network of 6 conveniently located service centres, including technical training for the team of over 60 factory-trained engineers. The team also supports customers directly by providing in-depth technical training for their in-house engineers, so they have a thorough understanding of the workings of their Bucher machines and diagnose any problems if they arise whilst still having the technical support at hand.

Although David's team covers the UK, the customer journey is the same across Bucher Municipal's international regions, so customers have the same level of 'Total Bucher Care.'

The role of the technical support team is to support the UK service network of 6 conveniently located service centres, including technical training for the team of over 60 factory-trained engineers.



From L to R: Calum Jaffray, David West and Joe Faulkner

David explains: "The first point of contact for our airport customers if they need technical assistance would be to contact their local Bucher service centre. (For example, for Leeds Bradford Airport, this would be Leeds). Then, if further back-up is required, we are on hand to offer technical assistance.

"My team work closely with the global competency centres for each product. For my role looking after compact sweepers, this is in Niederweningen, Switzerland. Although I cover UK compact sweepers, our airport customers can be confident that the global support network is operated through each product competency centre, ensuring the highest level of technical expertise." With Bucher Municipal's highest standard of customer service, airport customers have the peace of mind that there are different layers of support for their machines, from field engineers to technical support, then global competency centres for each product.

The foundation of Bucher Municipal's technical support is offered through specialist technical training courses, ensuring the customer's internal engineers have in-depth knowledge of their machines systems. This includes everything from electrical, voltage testing and hydraulics.

"We will try to replicate common faults to arm the airport teams with everything they need to keep their machine operating seamlessly. The in-depth courses can take up to 3 days covering different aspects of the machine." David explains.



V95t lands at Alghero Airport



Alghero Airport in North Sardinia starts 2024 on a high, with their new Bucher MaxPowa V95t aero ready for operation. Working closely with Alghero Airport, the knowledgeable Bucher Municipal sales team supported the customer through the selection and procurement process for a new sweeper. The perfect solution was realised in the form of a MaxPowa V95t aero, direct from the company's demonstration fleet, factory maintained, low operational hours and high specification with immediate availability.

Alghero Airport was looking to replace its old sweeper with a higher-performance machine, and the Bucher MaxPowa V95t ticked all the boxes. With a maximum operational sweeping speed of 40km/h, the V95t is renowned as an industry-leading, high-speed runway airport sweeper developed to provide exceptional performance with the lowest environmental impact. A contract requirement of Alghero Airport's new sweeper was a magnetic bar to collect ferrous debris, keeping the airside safe and FOD-free.

Marco Spelozzo, Bucher Municipal Italy Area Manager for Sweepers, explains: "We had been speaking with Alghero Airport for some time, so when the opportunity arose to renew their contract, we set to work finding the best-performing solution at a competitive cost. The Bucher demonstration fleet had a high-specification V95t, which became available for re-purposing. The specification included the customer requirement of a magnet bar and with low operational hours provided a good value option for this high performance 9.5m³ powerhouse."

In January 2024, three members of the Alghero Airport operations team received specialised operator training on their new V95t, and they are looking forward to putting the machine through its paces over the coming months.

A contract requirement of the new sweeper was a magnetic bar to capture metal residues, keeping the airside safe and FOD-free.



To find out more about Bucher Municipal's range of airport sweepers, contact Global Key Account Manager for Airports Mike Moore:

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Bucher Municipal
Focusing on functional
engineering, environmental
integrity, people's needs and
continuous innovation.



Bucher Municipal



For local contact and support, please scan the QR code or visit

buchermunicipal.com

At Bucher Municipal, we innovate and engineer better cleaning and clearing solutions, helping our customers grow and maintain efficient and profitable businesses. Leveraging the over 200-year-old heritage of Bucher, we are committed to helping you achieve more using less. Taking pride in being seen as a reliable partner, we work locally with you in realising the possibilities for a smarter, cleaner and more efficient tomorrow. Today.



Driven by better



Bucher Municipal
E-Shop

Technical data is subject to change without prior notice.
The illustrations may deviate from standard equipment.