

Airport News

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Airport Swedavia

Reduce to the max

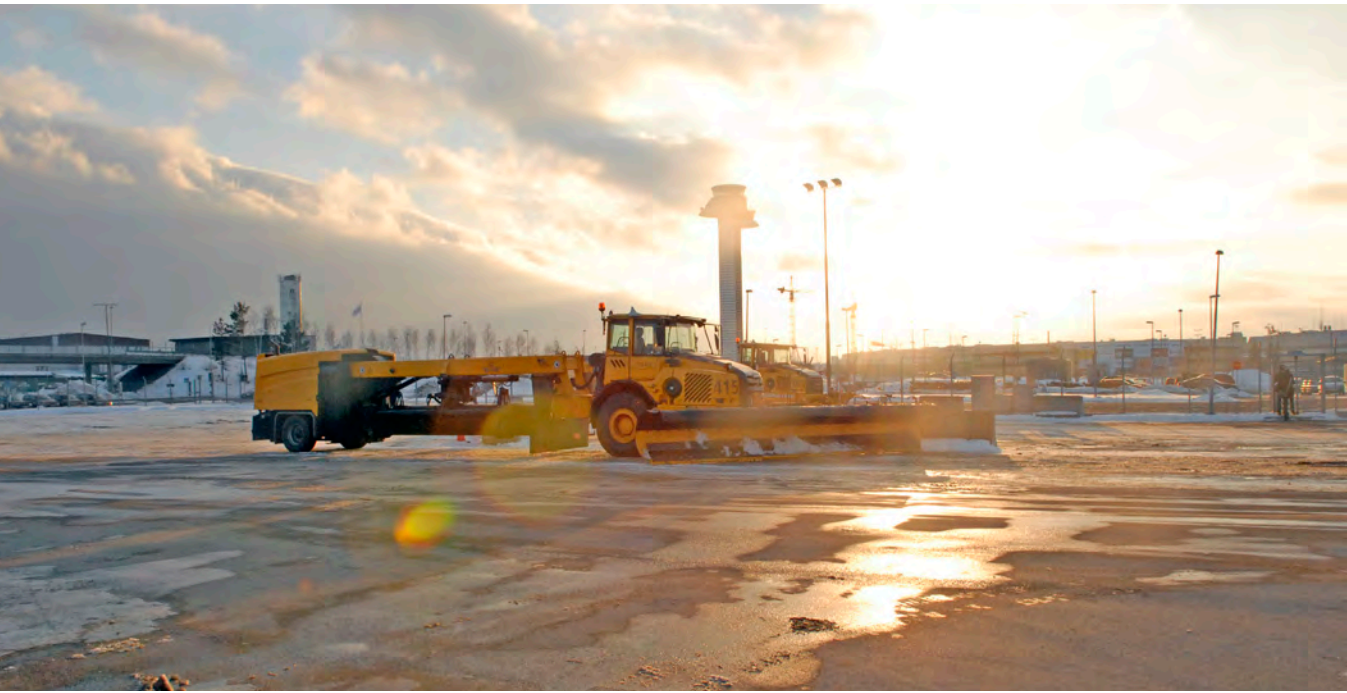
First CO₂ neutral Towed Jet Sweepers for Swedish Airports

Air traffic accounts for approximately 2% of global fossil carbon dioxide emissions. Together with emissions of nitrogen oxides, steam and effects of condensation trails, it is estimated that aviation is responsible for about 3.5% of humankind's total impact on climate change. It's not only planes flying from one destination to another but the infrastructure that goes with it, the ground handling, and the maintenance of the runways and taxiways of the airport such as snow removal. To make your airport operations smart and also green, ASH Group is looking for new technologies to reduce costs as well as emissions. "Reduce to the max" is the claim for the first CO₂ neutral TJS-C (Towed Jet Sweeper - Compact) which was developed by ASH Group. Since October 2014, we are in the process to deliver 29 of them to different airports in Sweden.

The state-owned company Swedavia takes on a pioneering role. The aim: to make all 10 airports in Sweden carbon-neutral until 2020. "We want to operate our international hubs almost CO₂ neutral", says Bertil Ekhaga, Senior Manager of machinery at Swedavia. A commendable concept and a challenge for ASH Group. As an international manufacturer and system provider of innovative technical products we feel obliged to support our customers, be a partner for them and want them achieving their goals. In addition to that ASH Group is aware of its social and ecological responsibility with regard to climate issues as these are some of the major challenges we all are facing today.



In partnership with Volvo, ASH Group started therefore to develop what is today the world's first "Green runway Sweeper (Jet Sweeper TJS). This new TJS is powered by Volvo engines fuelled by a mixture of bio-gas and biodiesel.



In December 2010 the first prototype of the CO₂ neutral snow removal machine series was handed over to Swedavia. In 2014 ASH Group finally delivered a full series of 29 new carbon-neutral machines to Swedavia. "The "Green TJS" brings together sustainability and economy in airport snow removal for the first time. The TJS machines are made for fast, effective, and intensive cleaning of runways, taxiways, aprons and supply roads. This counts also for the Green TJS. High working speed and manoeuvrability are the key issues of this product. It's about two major issues: sustainability and economic

well-being", says Andreas Schwald, Key Account Manager for Airport Equipment at ASH Group. „The airport operators are happy about any reduction of CO₂ emissions. More and more airports are looking for solutions to improve their CO₂ balance. It is essentially about two points: sustainability and profitability. Because the pollutant balance also provides information about how efficiently a company operates. It allows to draw conclusions about the energy and resource consumption. Furthermore there is also political pressure. The climate debate does not stop at airports and their operators".

The Green TJS is powered by Volvo engines fuelled by a mixture of biogas and biodiesel but with this new TJS nothing changes for airport operators or ground handlers. The Green TJS does not differ in power from other TJS machines operating with a conventional Volvo engine. It is equipped with an efficient airport snow plough which produces snow and ice-free surfaces. The hydraulically powered sweeping unit is located under the supporting frame and can be locked lengthwise for transport. The blower unit generates a lateral air flow of up to 145 meters per second over the complete width which blows away the snow across the runway.

The Green TJS by Schmidt can operate without refuelling for over six hours and is capable of working in difficult weather conditions over longer periods. Depending upon snow quantity and height the machine can work at a speed of up to 50 km/h.



One Year – Many Experiences

After one year in operation, we have been asking the management of Swedavia for their experiences with the 29 green TJS machines. An interview with Yvonne Björnström, Manager of Swedavia AB:

Could you please explain a little bit about the background / concept underlying the decision to order CO₂ neutral towed jet sweepers?

"Swedavia has a goal to be carbon-neutral in 2020. This was a progressive goal decided in 2011. Swedavia had an old fleet of vehicles primarily

working with gasoline and diesel. To succeed we decided to work together with suppliers to get new carbon-neutral machines. We decided to have a platform with electricity, biogas and biodiesel. Towed jet sweepers are using 1/3 of Swedavia's fossil carbon dioxide emissions. Therefore, we started a cooperation with AS and Volvo group to create a carbon-neutral towed jet sweeper."

In October 2014 you received the first CO₂ neutral towed jet sweepers. Could you please tell us about your first experiences with this machine? Do you maybe have some empirical values like how

much CO₂ you were able to reduce for example?

"We have had the first carbon-neutral towed jet sweepers working for one winter season at five of ten airports. We have been using biodiesel this first year and we have had a reduction of at least 20% fossil carbon dioxide emissions. This winter season we will use biogas and biodiesel and we calculate to reduce carbon dioxide emissions with 60-80% for the towed jet sweepers."



Successful Team at Arlanda Airport:
Delivery of first CO₂ neutral Towed Jet
Sweepers for Swedish Airports
on 1st October 2014

(from left to right):
Rudi Rosenkamp (CCO Aebi Schmidt),
Torborg Chetkovic, (CEO Swedavia),
Rolf Willkrans (Representative Volvo),
Yvonne Björnström (chief fleet manager
winter maintenance Swedavia)



How would you describe the co-operation between Swedavia, ASH Group and Volvo? Do you think we listened close enough to your wishes and supported them enough?

"I appreciate the good cooperation and the ability to make things happen. It is great to have such suppliers as we have in this delivery."

Carbon-neutral snow clearing has been a decisive subject, but what about the functionality, comfort and usability of the machines?

"Our passion is to have satisfied users and punctuality of the airports as our common goal. We have a strong dialog with our users and our suppliers of the machines, to take care of the feedback and give them information of what is going on."

Swedavia has a leading role at operating carbon-neutral airports. How do you see the future of carbon-neutral airports world-wide?

"The future is green! There are no doubts about creating carbon-neutral transportations in the world. I think we are in the beginning of the green transportation era. The customers

demand to be able to travel around the world without any negative climate impact. At our airports we have seen a strong growth in domestic and international travelling. At the same time there is a growing awareness of environmental and climate issues. My belief is that these two combined, will make a great demand of green travelling and green airports."



Key Account Management
Airport & Rail,
Aebi Schmidt Deutschland GmbH
Andreas Schwald

Airport Munich

Ready for take-off despite ice and snow

An exciting insight into the work of 9 Schmidt TJS 630 jet sweepers at Germany's highest-situated commercial airport

The new TJS 630 jet sweepers at Munich Airport have successfully mastered the first winter season and the second one is just around the corner. Munich Airport is located 448 metres above sea level, making it one of Germany's highest-situated commercial airports. This is why the international hub has to contend with heavy rainfall and large amounts of snow more often than other airports in Germany. The removal of ice and snow thus involves a great deal of winter service work every year. On peak days, up to 400,000 m³ of snow have to be removed. Munich Airport is already cleared when as little as two to three millimetres of fresh snow have fallen. As many as four million square metres need to be kept free of snow and ice and a total of 640 experienced staff members take care of this task, among them 390 local farmers, who go on a "snowflake hunt" with more than 155 vehicles to keep the air traffic going.

Since September 2014, the vehicle fleet of Flughafen München GmbH has also included nine Schmidt TJS630 jet sweepers. Equipped with a front-mounted Schmidt MS 80.1K snow plough, every single one of these giants weighing about twelve tonnes is capable of clearing snow over a width of 5.5 metres in one go. It takes only 30 minutes for these vehicles to completely clear a four-kilometre runway of snow and ice.

Customised solutions for maximum efficiency and effectiveness

Being an innovative system provider offering customised problem solutions, Aebi Schmidt has developed a towed jet sweeper (TJS) for clearing runways and aprons that is exactly tailored to the requirements of Munich Airport. For example, the vehicles have been fitted with a ring brush and a quick-change device, in addition to

optimising the blast nozzle by including the airport's experiences into the development.

One year after the handover, Munich Airport can look back on a successful first winter season. We have asked Mr Günther Schmitz, Head of Fleet Management of Flughafen München GmbH, about his experiences during the first season:

Günther Schmitz: "The new Schmidt TJS jet sweepers were in operation for nearly 150 hours at relatively mild winter temperatures and have proved to be both powerful and reliable. The collaboration with Aebi Schmidt was very constructive and professional at all times. We received competent support during the various project phases from the specification of details to the acceptance of the machines and also had the opportunity to contribute our own experiences and requirements."

One of these customer-specific requirements is the so-called ring brush, which also needs to be completely exchanged within only 20 minutes. **Günther Schmitz explains the benefits of this ring brush in practical application:**



Manager Airport and Projects, sums up. "Our customers expect reliable and durable products. However, Aebi Schmidt also attaches great importance to not only enthusing its customers with the technical performance of the vehicles, but also offering added value in terms of profitability and comfort, whether in the form of technologies to reduce CO₂ emissions, intuitive vehicle control or guaranteed support round the clock, 365 days a year."

"According to our experience, cassette brushes tend to cause a so-called pumping effect, which means that snow is pushed between the two brush sets as if by a pump and then falls down again behind the brush so that the blower is no longer capable of removing that snow. After conducting our own test runs, we found out that the best results can be achieved with a ring brush. Optimum clearing results also mean leaving behind as little residual moisture as possible to save de-icing material. This saves costs while also benefitting the environment."

Moreover, blast nozzles have been fitted both behind and in front of the brush in order to improve the sweeping result and the cleaning effect.

Günther Schmitz: "The experience of the first season has shown that the blower performance is excellent. The driver can adjust the blower performance in four steps from 0 – 100%, depending on the consistency of the snow. But performance is not the only thing that matters. It is also important that the strong air flow across the surface is not only laminar (i.e. without turbulences), but also absorbs as much moisture as possible from the pores of the flight operation areas so

that the subsequent dilution of the de-icing material and thus the resource consumption is kept to a minimum – at any speed, of course."

Another requirement for placing the order was that the jet sweeper features rear-axle steering, which makes it possible for the rear end to follow the track of the truck without any problems, ensuring that the brush is perfectly covered by the plough even when cornering. As a result, the full clearing width can be used and fewer machines need to be employed. Another clever solution mentioned by Günther Schmitz is the automatic adjustment of the sweeping pattern, which is very easy to operate and is automatically readjusted during operation.

Aebi Schmidt also draws a positive conclusion from the collaboration with Flughafen München GmbH. "We are very proud to see our vehicles in action at one of the busiest airports in Europe. Owing to the close collaboration and the constructive exchange with the persons in charge of the airport's vehicle fleet, we have gained valuable experiences, which we can now utilise in our airport equipment product portfolio", Andreas Fritzsche, Key Account

To Flughafen München GmbH it is clear: These investments into towed jet sweepers have paid off. The team vehicle management led by Günther Schmitz and the team winterservice led by Markus Sellmeier are thus also optimally prepared for the next winter season to keep the air traffic going and be "ready for take-off at MUC" even in snow and ice.



Key Account Manager
Airport and Projects
Aebi Schmidt Deutschland GmbH
Andreas Fritzsche

"To be prepared is half the victory". Heathrow Airport might not necessarily have been thinking about this quote by the 16th Century Spanish novelist, poet and playwright Miguel de Cervantes, author of Don Quixote, when it acquired the Supra 5002 snow blower last year - but that is precisely what it achieved.

Come winter this year; and if this brings heavy snow, the airport will be totally prepared to deal with the tricky conditions thanks to the new snow blower now part of its winter fleet. "The Supra 5002 is built into the Heathrow snow plan when we experience a forecast of over 6cm accumulation. This is the point at which the regulation snow bank profiles will take effect. This allows Heathrow to maintain a full width and full length runway during winter operations," says Ricky Oakes, Winter Operations Manager, Airside Operations, at Heathrow Airport Ltd.

Airport Heathrow

Ready for snow

Heathrow Airport with Equipment from Aebi Schmidt UK

And these are major runways we are talking about. With a total airport size of 1,227 hectares, Heathrow operates two runways; Northern (with a length of 3,902m and a width of 50m) and Southern (with a length of 3,658m and a width of 50m). The airport's planned expansion, including a third, 3,500m long runway and the debate surround it, is currently in the news.

Heathrow is one of the world's busiest airports, handling 73.4 million passengers in 2014 (on 17 August 2014, the airport saw the highest number of passengers in one day: 241,412). More than a third of passengers transfer to other flights, making it a major hub airport. Indeed, the airport is currently used by 80 airlines flying to 185 destinations in 84 countries.

Imagine the chaos if severe weather would strike unprepared. And now imagine the cost of each flight that gets diverted. Depending on several factors, the cost can be high: the destination the diverted flight ends up





Heathrow

Making every journey better

at, whether it is an overnight flight, whether it needs to upload fuel, whether the crew are out of hours, how many transfer passengers miss their onward connections, whether the aircraft has a rotational flight that requires a replacement aircraft and crew, and so on. And this is before mentioning the disruption to passengers themselves. This is why it is so important – indeed crucial, to keep the runways, taxiways, stands and other key areas of the airport clear.

In order to keep operating, Heathrow Airport does all it can to keep the disruption to a minimum; the Supra 5002 will help with this. “Ideally we would have two units, however we currently have one machine only and have built the methodology around a single deployment,” says Ricky.

He explains that, despite the airport’s physical area, one of the reasons for acquiring the Supra 5002 was its medium size: “The previous cutter/blower was oversized for the weather events we experience at Heathrow.

Also, these vehicles were a combination of two units which made for slow operations. The Supra 5002’s speed and operating capacity are a good fit for the conditions and events we face. The machine’s operational capability, speed of operation, visibility and ease of operation are key features for us.”

The Supra 5002 is the world’s first 420 kW (571 hp) snow blower with an ECO-mode. This feature ensures that only the necessary engine power needed to drive the cutting-head and pumps in all conditions is used; thus offering the lowest fuel consumption and sound and exhaust emission levels of any modern four-wheel drive articulated snow blower.

Following delivery of the machine, Aebi Schmidt UK provided certified

training on the Supra 5002 to six operators over three days. “The training was well received by the operators,” says Ricky. “The operators at Heathrow do not get the experience of regular heavy snow experienced on the continent so training is an expensive necessity at Heathrow.”

The Heathrow operators like the Supra 5002, “especially as the cab and function layout is consistent with the other Schmidt machines that we have,” says Ricky.

This highlights the fact that the relationship between Heathrow Airport and Aebi Schmidt is not new. Heathrow took delivery of its first Schmidt airport de-icer over 12 years ago, in July 2003. In fact, the company has more than 50 Schmidt machines at the airport, including sweepers,



combis, spreaders, de-icers and jet sweepers amongst others. And what is this relationship like? "The professional approach to working with Heathrow and understanding our situation has been outstanding," says Ricky.

It is one of Aebi Schmidt UK's highest priorities to work hand in hand with its customers, to understand their needs and to offer only the right solutions.

Mike Moore, Key Account Manager at Aebi Schmidt UK says: "We are always happy to be contacted by Heathrow Airport and/or its service provider (Babcock International Group, Engineering Support) to carry out certified training, deal with any technical repairs, de-icer calibrations or supply spare parts, amongst other

things. However, we never lose sight of our customers' priorities and in the case of Heathrow Airport Ltd, it is to run the UK's premier international airport in an effective and safe manner. We are here to help them achieve that."

Ricky says: "Aebi Schmidt UK helps define our needs before offering solutions, this creates a positive relationship and ensures the solutions offered are the right ones."



Winter Operations Manager, Airside Operations,
at Heathrow Airport Ltd., Ricky Oakes
Key Account Manager at Aebi Schmidt UK, Mike Moore



Supra 5002

Runways, taxiways and aprons are the heart of every airport. They are pulsating pacesetters and provide the basis for hundreds of aircraft movements every day. Absolute cleanliness of the surface is top priority because a jet engine – as an aircraft turbine is also called – tends to suck in any loose material in its surroundings.

Owing to strict safety precautions, so-called FOD (foreign object debris), such as pens, coins, maintenance parts, cables, tools and pieces of luggage, rarely find their way to airport traffic areas, but if they do, they pose a great risk. Damage to the engines often causes expensive flight cancellations and even more expensive repairs for the airlines, the costs of which can quickly run into the millions. Damaged engines can even

Airport Düsseldorf

Cleanliness is a must

Schmidt AS 990 truck-mounted sweeper ensures safe traffic areas



cause life-threatening situations on both the landside and the airside.

Airport operators therefore make every effort to minimise the risk posed by FOD. This includes continuous training courses for the staff, in addition to technical measures, such as sweeping the aircraft stands as well as the taxiways before the machines arrive and after they have left.



Düsseldorf Airport relies on cleaning technology by Aebi Schmidt.

The stands at Düsseldorf Airport are swept after every aircraft movement as well. The Schmidt AS 990 truck-mounted sweeper has made a name for itself in this area. The high-performance sweeper, which has been developed specifically for use at airports, is available with a hopper capacity of 9 m³ and exhibits an



operating speed of up to 40 km/h in sweeping mode. The machine is perfectly adapted to the special requirements of airport operations, down to its sweeping width of 3.5 metres.

“The engines of the AS 990 machines almost never get cold at our airport”, reports Helmut Didschun, who is in charge of the operation of these machines at the airport. “We constantly use 2 to 3 of these airport sweepers, thereby making a valuable contribution to air safety at our airport.”

Counting more than 20 million passengers annually, Düsseldorf Airport

is the third-largest airport in Germany and is regularly approached by the world's most advanced airplane types, such as the airbus A 380 and the Boeing 787 Dreamliner.

“The runway sweepers at our airport are operated in 2 extended shifts, whereby we have achieved another increase in air safety”, Helmut Didschun reports. However, the Schmidt AS 990 not only has to deliver top performance in summer; winter also puts high demands on this machine because it has proved extremely useful when it comes to the collection of aircraft de-icing material.

Versatile in use – Schmidt AS 990 is also capable of collecting glycol

“Here at Düsseldorf Airport, we constantly switch between sweeping and glycol collection mode. The Schmidt AS 990 is the perfect machine for this purpose, since its design permits both the collection of debris and the high-performance collection of glycol. The rotary brush fitted in the suction vehicle makes it particularly easy to collect highly adhesive glycol”, Operations Manager Helmut Didschun says. A glycol-additive-water mixture, which is highly viscous and therefore sticks to the surface, is sprayed onto the aircraft for de-icing and preventing ice deposits. Of course, the material also has this effect on the de-icing pads, which are the areas at airports where these de-icing measures are taken. In these areas, the residual glycol is collected using the Schmidt AS 990 and is discharged into specially designated disposal basins.

“The optional additional disc brushes allow for increasing the sweeping width from 2.30 metres to 3.50 metres, which we can use very effectively

to increase the productivity, given the large surfaces to be cleaned”, Helmut Didschun says. “Our drivers also highly appreciate the high level of operational comfort. All relevant operating parameters are visible to the driver at a glance in the straight-forward colour display of the control panel. The sweeping pattern is adjusted centrally while the brush length is displayed as well, making it possible for us to notice immediately when the brush needs to be replaced.”

This is also an important factor for Helmut Didschun and his team, given the AS 990 machines' huge number of operating hours in Düsseldorf. “For us, the AS 990 has turned out to be the most economical model in long-term operation.”

The next time you visit Düsseldorf Airport, have a look if you can spot the sweepers from the Black Forest on the apron – the chance of you seeing a Schmidt AS 990 is quite high.



Key Account Manager Airport,
Aebi Schmidt Deutschland GmbH
Thomas Pollul

Airport Marseille

Persistent equipment for persistent pollution

Hot water washer machine Schmidt Cityjet 3000 put to the test.

On the third-largest airport in France, the Aéroport Marseille Provence, with approximately 8,000,000 passengers annually, cleanliness also has top priority. Especially on the start and landing runways, safety must be ensured by constant cleaning and maintenance. We spoke with Bernard Pastor, workshop supervisor at Marseille Airport, on the exigencies of the Marseille Airport at their cleaning vehicles. He told us why and where vehicles of Schmidt have been used for many years and which properties have convinced him and his colleagues.



You have made the acquisition in 2013 for a hot water washer machine on Swingo chassis. What are the principal reasons for the acquisition of this type, especially in the achievement of objectives?

Bernard Pastor: "We are effectively already equipped with a runway sweeper AS 990 from Schmidt, which actually does a very good job in terms of runways, taxiways and aircraft positions. Whereas we needed for the removal of isolated and confined puddles of oil and hydrocarbon, a machine more precise and especially more aggressive with regard to these contaminations. Therefore, we have focused on the compact street washer Schmidt Cityjet 3000 with hot water. This washer machine is mounted on the Schmidt Cargy's chassis, the same of the worldwide known sweeper. As well as the AS 990, the

washer is driven by a dozen of operators riders who find the operation very convenient and reliable. Even though it is in fact only a small vehicle, its concept and implementation with water heating and dirty water collection, require an expert hand and a right observation of the user's instructions."

You also have a runway sweeper Schmidt AS 990 fitted for aircraft parking position cleaning. Which point of the "small" washer are complementary to the "large"?

Bernard Pastor: "Both machines complement each other perfectly. As already mentioned the AS 990 can handle very efficiently and at high speed big surfaces, whereas it is not made for cleaning surfaces in detail. To treat these precisely, in deepness and in order to take care of large oil

stains especially under the gateways, we turned to a compact washer with hot water, which work with more accuracy and efficiency on these kinds of pollution, as any industrial scrubber or drier with rotating brushes, what we already experienced in the past. This type of machine is expensive in maintenance and operation costs for a very low efficiency."

Precisely what are the technical points that seduced you in the acquisition of this Schmidt washer?

Bernard Pastor: "We already have a suction sweeper from another manufacturer with 2 big diameter scraping brushes which proved ultimately be more a street sweeper as a surface scraper, by reaching very quickly its limits on this kind of airport pollution. That is why with the Cityjet, we have appreciated the possibility of washing



the oil stains at high pressure especially with hot water rather than with brushes that wear out. Important also is that the washer sucks the dirty water. This reduces indirectly our cost of brushes because the Cityjet requires much less wearing parts and is mainly an undeniable performance gain. The carrier vehicle also has the advantage of being in hydrostatic drive so it can be driven like an automatic transmission vehicle. It also has a high level of comfort, the best on the market, particularly in terms of its hydro pneumatic suspension and fully air-conditioned panoramic cab popular in our regions with very high temperatures.

Related to the washing equipment itself, we particularly like the ingenious work process that allows embarking a large amount of water and making a high-pressure cleaning, either

forward or backward with a front mounted wash unit, which is pulled and not pushed, avoiding any accidental breakage. In addition to comfort, the four-wheel steering chassis provides greater maneuverability, highly appreciated to get dirt at airplanes feet. The VM engine, we had no problem with it, on the contrary we have been impressed by its reliability and low maintenance. Only, the control panel provides a high demand on the driver's skills so we need to train each driver very good."

Which experience do you have with the washer vehicle by today?

Bernard Pastor: "In summary, after it has passed through the first two years of operation, it does a very good job and has been taken really well in operation. Certainly, there will be many years ahead coming. When

I look at the service still providing by airport sweeper Schmidt AS750, we bought in 1992, you can imagine."

Why do the workers love to drive with a Schmidt machine?

Bernard Pastor: "You know, a little less comfortable or little less effective machine is inevitably rejected by the drivers and it is nice to say that it is not the case of the Schmidt washer. On the contrary, as already stated, comfort has helped them even with the accuracy and effectiveness of cleaning. In any case, there are no rejections of drivers, but rather their full consent!"

What do you think about Schmidt in general and do you like to work with Schmidt?



Bernard Pastor: "For almost 20 years I have worked with Schmidt machines and I think to know quite well the company from outside. Schmidt is one of the rare manufacturers of airport equipment, which even if there is nothing to sell, visits the airport to inquire of the customer satisfaction and examine the market developments. Schmidt is a faithful supplier attentive to customers and their expectations."

How would you describe your Schmidt French distributor, the company Europe Service?

Bernard Pastor: "Firstly, regarding to the spare parts, he is one of the few suppliers who actually manages, despite its location in Aurillac in the center of France, to send parts from late in the afternoon and deliver them the next day. Seen from this point of view, I have a very good experience, although it is sometimes difficult in identifying the spare parts but the warehousemen of Europe service in direct connection with Schmidt plants stand behind and are ready all time to take over our demand. I will also praise at the After-Sales team, because they have people quite

competent and trained on the equipment on which they work. I can even recommend the After-sales service of Schmidt Europe Service to other suppliers. Commercially, again, there is nothing to say about the scheduled support, attention of the Schmidt Europe Service sales force. These are people you meet at trade shows but also in the work floor!"

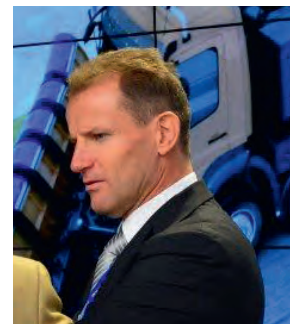
Together with Europe Service, takes Schmidt enough in consideration the airport requests and do you feel in good hands, especially regarding after sales?

Bernard Pastor: "Regarding the after sales, I have already expressed myself, but it is clear that we are today, as yesterday, keen to control our operating costs. Moreover, the operating cost of a machine throughout its complete lifetime becomes a very important criterion.

For a distributor, one-shot sale of equipment, everyone knows how, but no monitoring during its complete lifetime, is something that is today forbidden on any airport, even if manufacturer's plant is at the other end of the world. For instance, we're

getting more and more requirements on the FOD (Foreign object debris) collection what is becoming increasingly important and our sweepers are more and more in preventive operation that means strained. These are effectively the challenges of the airport of Marseille, namely a control of the costs, after-sales and maintenance.

This is also with Schmidt, that I established the first maintenance contract at this time for the snow removal equipment for which it is important for the airport that this equipment is ready to clear snow at any day and any hour.



Area Sales Manager,
Aebi Schmidt International AG
Franck Fargier

Smart airports: Start Knowing. Stop Guessing.

Airport. "Sweeping and winter vehicles"

The managing authority of an airport has one overriding goal:

keeping the airport safe and accessible at all times. Integral to achieving this is using all available resources at the airport's disposal to keep runways as clean and safe as possible.

Data Mining will become more and more important in the years to come in the field of Airport Telematics as 'bigdata' is everywhere and needs intelligent solutions to help the airport achieve maximal insight in the land- and airside activities. Latest cutting edge technologies help to retrieve this data out of the vehicles into management cockpits and onto intelligent GIS maps. Reports are drawn out of these systems for internal and external use as environmental reporting gets more and more important for every airport.

Airport Report from DMi International BV from Holland (DMi) saves time, telephone calls and paperwork. It also provides operators with real-time information from their machines, allowing them to respond quickly and effectively to whatever comes their way.

With Airport Report, airports know where their sweepers and de-icing machines are, and what they're doing in every detail. Far beyond track and



trace, DMi processes detailed action data, helping operators control airfield operations. The system allows the user to create useful management and environmental reports, so every stakeholder has greater insight into performance and results.

The system is very flexible, and suitable for FOD (foreign objects debris) and many other safety inspections, as well as incident handling. Users can simply register all runway incursions and FOD hotspots on a mobile device. These inspections can then be shared through GPRS/3G/4G/WIFI.

"DMi Airport Report gives you insights into the whereabouts of your vehicles, and which parts they did or did not cover," says George Mensonides of Amsterdam Schiphol

work their way through priorities, depending on traffic. When a new priority comes in we can immediately see which vehicle is nearby and whether there is enough de-icing fluid to start the activities.

DMi helps operators to improve the quality of your work, and keep your airport safe and accessible at all times. Airport Report from Data Mining Innovators saves time, telephone calls and paperwork and help the Airports with SMART telematics...



Airport Düsseldorf

Do you just sweep or do you spray as well?

The world's first Swingo compact sweeper with brine spray and spray bar in winter maintenance service

Sometimes the best ideas lie in the street in the truest sense of the word, or to put it another way: they drive. What was first born as an idea in a customer meeting with Pipjorke in spring 2014 has now been driving on the roads and runways at Düsseldorf airport since January 2015: the first Schmidt Swingo with CSP compact spray and Schmidt snow plough.

For around 7 years, Pipjorke has been responsible for winter maintenance work at Düsseldorf airport, among other things. First just in the context of cleaning work in public areas, on pavements and in parking areas, and the removal of quantities of snow from the apron. For 5 years, Pipjorke has also supported Flughafen Düsseldorf GmbH on the apron with winter maintenance devices for clearing the entire apron. Initially just with large devices, but now for two years also with small devices on pavements and around the so-called „fingers“, i.e. the passenger boarding bridges. In the other months of the year, the company uses two Schmidt

Swingo 200 sweepers. So why not use the Schmidt Swingo's potential in winter too?!

„The Pipjorke company management's desire was for a Swingo compact sweeper for winter use. This should – along with its sweeping functionality – be able, thanks to appropriate conversion, to spread brine fluid because Düsseldorf airport prefers brine to be sprayed on the apron,“ says Thomas Pollul, Key Account Manager for the airports department at Schmidt in St. Blasien. „After more detailed analysis with the development department and intensive discussions of our customer's



requirements, we replaced the Swingo's water tank with an additional fresh water tank to function as a brine tank, with the two tanks being connected. As a result, it can now carry a total of 400 litres of brine.“

In dry or lightly damp conditions and at a temperature of down to -6 degrees, the process of spreading brine is the clearly superior alternative to environmentally damaging grit. The dosing occurs in a closed electrical-hydraulic circuit. Here, the spraying quantity is



adjusted, travel-dependent, for the driving speed via the speedometer. Even with minimal dosing, optimal distribution is achieved. The even application of the spraying liquid occurs via a spray bar mounted on the rear end of the sprayer. Flat spray nozzles with a wide pressure range are used for spreading the fluid. The spray nozzles are located close to the ground and ensure even spraying with a width of 8 metres, with optional asymmetrically adjustable jet nozzles.

Other adaptations were necessary in order to make the Swingo fit for its new area of application. Since the spraying speed at the normal working speed of 12km/h was too slow, the latter was increased to 25km/h. Side spray nozzles which could initially only be turned on and off manually can now be automatically operated from the control panel in the cabin.

The world's first Swingo in combination with brine tank and spray bar has now been in use since January 2015. „The spraying performance is outstanding and the spraying quantity is easy to adjust,” says Matthias Pipjorke, Manager of the Pipjorke waste management facility and co-initiator of the project. „My employees like to drive the Swingo. It's manoeuvrable, manageable and with the rear view camera the driver always has a view of the spray pattern. For my company, the Swingo is indispensable at Düsseldorf airport. The possibilities are endless. It can be used both as a snow plough and as a snow blower, and with a spray bar or a spray disc at the rear as required. In normal snow-fall, clearing and spraying is possible

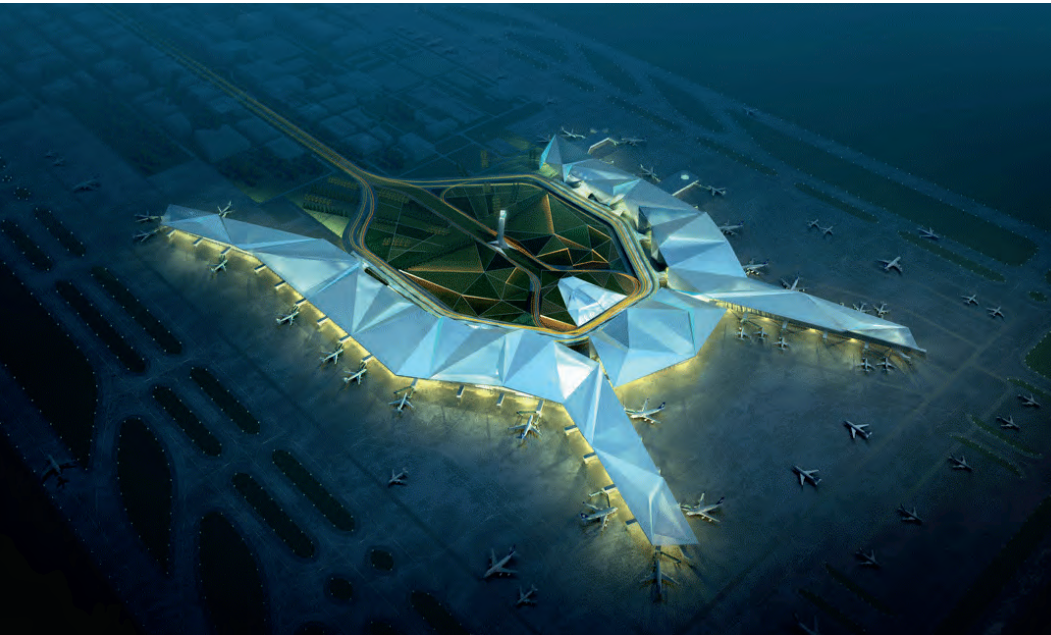
with no problem. On inclines, for example on pedestrian bridges, snow chains or tyres with spikes are an advantage.”

Conversion between summer and winter operation is possible within a short space of time. The Schmidt Swingo thus becomes the new all-rounder in the field of compact sweeping and winter equipment. Entirely in line with the motto of „Do you just sweep or do you spray as well?”



Key Account Manager Airport,
Aebi Schmidt Deutschland GmbH
Thomas Pollul

Design study conducted on behalf of the Heilongjiang Airport Group for a new terminal and gateway hub for Northeast China, designed for 45 million passengers a year. The study was prepared by Design Studio HASSEL in collaboration with Airbiz, AYD and CNARDI. It is based on the city's identity as an "ice city". (Image source: HASSEL)



Airport Beijing

More efficient, more innovative, more sustainable

Chinese airports rely on winter maintenance equipment by ASH Group.

In no other country of the world is the airport industry experiencing such a tremendous and, most notably, rapid change as in China. While China still had 175 airports in 2011, this figure is expected to increase to about 250 by 2020. The Civil Aviation Administration of China (CAAC) aims to enable 82 percent of the Chinese population (about 1.07 billion) to reach an airport within 100 km – at present, 60 percent (about 780 million) of the inhabitants are able to do so.

The 500th Schmidt CJS was handed over to the crew of Ha



However, not only the growth rates but also the passenger figures are outsized, especially at Beijing International Airport. The second-largest airport in the world (for now), counting more than 86 million passengers a year, already reached its capacity limit shortly after its opening in 2008, which is why a gigantic new building has been constructed since 2011 – with a maximum capacity of 130 million passengers a year. Its opening is scheduled for 2018.

In addition to a new awareness of mobility and traffic, China is also seeing increasing requirements for efficient and sustainable technologies. "We are noticing that topics such as 'smart airport', automation and enhanced efficiency are increasingly gaining significance in the airport business", says David Achermann, Area Sales Manager Asia-Pacific at Aebi Schmidt International. "Factors such as CO₂ emissions or resource consumption are also becoming more and more important to Chinese airport operators. We also have the appropriate solution at hand in this area: Our green TJS (towed jet sweeper), the world's very first 'green jet sweeper', which is powered by a mixture of biogas and biodiesel, also offers great potential for the future in China."

Harbin Airport at the beginning of 2015.



With the sales partner HUA RUI Long-Range and the team headed by Xing Hua Zhong, customers of the ASH Group in China have a highly competent and committed representative at their disposal that not only ensures premium regional support at five locations, but can also be called on at short notice should there be any questions or need for support services. Customer service also includes annual training and instruction on the equipment before the onset of winter as well as an inspection of the machines before and after the cold season. "In China, the Schmidt brand is synonymous with 'best quality' and 'best service'. Our special equipment is now found at nearly all airports in China, which have to contend with snow and black ice due to their geographical location", David Achermann says.

The Schmidt CJS jet sweeper model of success – used in winter service at Harbin Airport

Harbin Airport also relies on winter maintenance equipment by ASH Group. Harbin Taiping International Airport is considered an important hub for flights to Southeast Asia and North America and is one of the three busiest airports in Northeast China.

Given the more than 3,200 metres of runways, taxiways and aprons, the team headed by Peng Liu, Manager Airfield Management Department, has a lot to do in winter and has had positive experiences with the Schmidt compact jet sweeper (CJS). The first one of the altogether 14 Schmidt CJS machines – among them the anniversary model, the 500th Schmidt CJS delivered in early 2015 – has been in use here since 1993. The superior performance at high driving speed and the outstanding clearing capacity have particularly convinced the crew of Harbin Airport. "We are very satisfied with the Schmidt compact jet sweepers (CJS), in terms of both handling and sweeping results", Pen Liu says. "Moreover, the machines are extremely reliable and the service life of the cutting edges and roller brushes is long. The machine's operation is intuitive and even new drivers quickly find their way around. The straightforward control panel features Chinese characters and internationally understood symbols. Our drivers also appreciate the high level of driving comfort. We associate maximum quality and excellent service with Schmidt equipment."

All over the world, our customers particularly appreciate the Schmidt CJS for the combination of efficient clearing and sweeping technology as well as the high blower performance. The CJS' brush suspension system features an optimum design, ensuring that the roller brushes always stay in contact with the ground, irrespective of the surface structure and the driving speed. The blower performance is also significantly higher than in similar vehicles of other manufacturers. The CJS impresses with innovative technology, efficiency and high

clearing capacity, combined with unparalleled manoeuvrability.

We work hand-in-hand with our customers. These close customer relations, the understanding of our customers' needs and not least our commitment in customer service have substantially contributed to the success of Aebi Schmidt's products. We are proud of our great number of references and satisfied airport customers of all sizes throughout the globe.



Our specialist for Asia:
David Achermann,
Aebi Schmidt International

The Service Department International team
Top left to right: Tobias Winkler, Markus Böhler
Bottom left to right: Waldemar Arndt, Simon Bücklers, Daniel Böhler



ASH Service Team

We take care of your business

**Our service promise. 365 days a year. In
more than 80 countries around the world.**

Join us in taking a look behind the scenes and learn more about the exciting work done every day by our international service team.

In more than 80 countries around the world, our customers are able to rely on an expert, reliable contact. In Europe, the market is covered primarily by dedicated sales organisations. Customers outside of Europe are looked after by commercial partners and Aebi Schmidt International, which operates worldwide. It also includes a highly specialised, five-man service team for whom no distance is too far and no challenge is too great.

One of them is Simon Bücklers. Like all the other members of the „Service Department International“ team, he is an acknowledged specialist when it comes to vehicles and equipment from Aebi Schmidt. He learned his trade from the bottom up. „Thanks to my training as a precision mechanic at Aebi Schmidt at the St. Blasien site, I picked up a good basic knowledge of our machines and equipment. This basis is also required on our deployments all around the globe because, when we are called up, our dealers and customers usually have big expectations. The problem then needs to be sorted out in a short space of time in order to prevent the machines from being idle at great cost,“ says Simon Bücklers. This is why, despite usually having a technical background with vehicles, every „new recruit“ to the Service International Team also first undergoes training lasting at least a year in order to learn all about the products and functionalities down to the finest detail.

Everyday work under the guidance of team leader Daniel Böhler is anything but normal and requires not just technical know-how, but also a great deal of flexibility and spontaneity. „Essentially one of us can be contacted at all times, even at weekends, on public holidays and also at night - this is because if, for example, a winter maintenance vehicle has a problem at an airport on the other side of the world, this is something that cannot wait until somebody is back in the office on our side of the globe.“

But in order to conserve resources and costs, when a request is received from overseas, the service specialists first analyse the problem over the telephone or by remotely accessing a diagnostic PC on site and try to

Schmidt CJS driver training at Leh Airport in India/Kashmir at an altitude of around 3500 m above sea level.



Plenty of interest in dealer training courses such as here in Srinagar in India/Kashmir ...



remedy the problem by this method. It is often possible to rectify supposed defects by making a few adjustments by hand. If this digital „first aid“ does not yield the desired result, a colleague from the team will very shortly set off with special tools in their bag to solve the problem on site. Before this, it is usually necessary to organise the replacement parts that are required and coordinate their transfer to where they are needed. „The close working relationship that we have with our replacement parts department is of real benefit to us here,“ explains Simon Bücklers. „Our colleagues are based in the office right next door, and the short distances also help us to get the appropriate replacement parts to their destination by the fastest route.“

But as well as service assignments, Simon Bücklers and his colleagues also have other vital tasks: they deliver international training to dealers so that they are then able to take on mounting of machinery or complex service assignments themselves. In addition, they are also deployed on site during the complete assembly of new vehicles, such as the Schmidt SK mountable sweeper or if necessary they perform specific alterations to vehicles.

Each deployment is as individual as the customer. In the last five years alone, Simon Bücklers has travelled to 31 different countries around the world on behalf of Aebi Schmidt International, from Iceland and Norway to South Korea, Vietnam, Saudi Arabia and New Zealand.

We want to know what it is that he particularly enjoys about his work. Simon Bücklers does not have to think about this for too long. One aspect is overcoming technical challenges and having the opportunity to help a customer with a problem or instruct them on how to operate a new machine. But it is also dealing with very different cultures and characters that makes the work so exciting. His experience is that you are greeted initially as a foreigner and then by the time you leave you are regarded as a colleague.

Simon Bücklers has no idea today where the next assignment will take him. One thing is certain though: he would like to spend his forthcoming summer vacation at home in the Black Forest because in the holidays he enjoys not having to pack his suitcase for once.



... or here in Ho Chi Minh City in Vietnam.



Delivery of a Schmidt CJS and driver training in Talakan in Russia at around -42°C.

SCHMIDT

A brand of **ASH**