

Airport News

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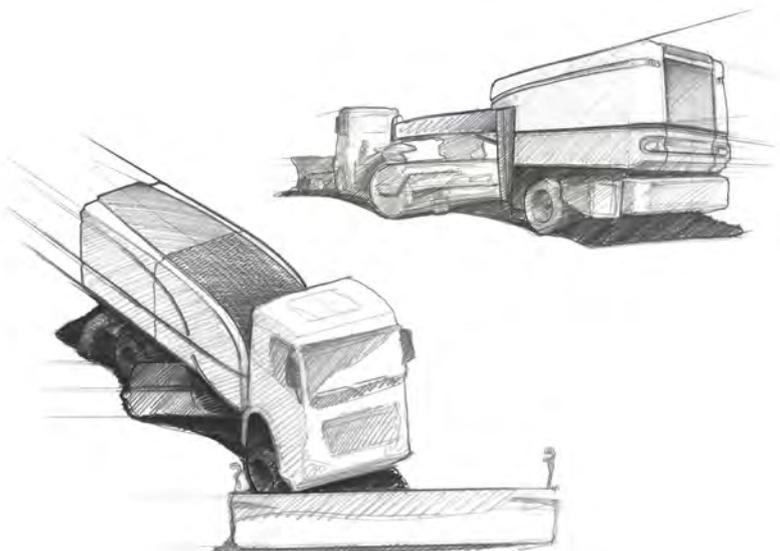
Interview with development and product management

The development of a new generation of jet sweepers

It all begins with a decision....

...the decision to create a new generation of jet sweepers which is one of a kind in terms of functionality, operation, serviceability and design and which enthral customers with a new, innovative overall solution.

The schedule for the new Schmidt CJS and TJS was quite tight. Besides the new EuroMot 4 auxiliary engine, the adaptation to the new Euro 6 carrier vehicles and technical optimisations, the focus was also placed on the design of the new CJS and TJS generations. Following a call for tenders in the autumn of 2014, two design agencies presented their preliminary design proposals as part of workshops held in St. Blasien in October 2014. The choice fell on Panik Ebner Design from Stuttgart. "The design agency had a clearly defined assignment", Theresia Winkler-Flügel, Product Manager for Airport Devices at Schmidt and manager of the technology project, recalls.



"Firstly, the vehicle was to be redesigned to become fresher and more dynamic. With the design of the new CJS and TJS, we additionally wanted to initiate a component-sharing concept which can be transferred to other vehicles of the airport family at a later point. This is to enhance the memorability of our product family. At the same time, however, certain variables, such as better access to the battery, hydraulic unit or other internal components, had to be taken into account in order to make the maintenance easier for our customers. Last but not least, the question of the hood material had to be addressed. There were quite a few aspects coming together, which is why the assignment required not only creativity but also a great deal of technical skills and experience on part of the designer. At the workshop, we also defined the attributes we associate with the vehicles, such as "powerful", "precise" and "durable" as well as "elegant", "experienced" or "high-quality". In order to transfer these attributes to the design, the associations we gathered were linked to an animal that combines all of them: the eagle."



Clemens Schwörer has also been involved in the development project in a leading capacity from the very beginning. He works for Schmidt as a design engineer in the field of snow clearance. "In addition to the tight schedule, the greatest challenge in this project was the reconciliation of technical functionality and new design. The body had to be adapted to a new carrier vehicle, since the previous vehicle model, the Mercedes-Benz Actros Euro 5, was superseded by the new Mercedes-Benz Arocs Euro 6, with adaptation meaning in this case the total conversion of the carrier vehicles in terms of elevating the frame and the drive train to create space for the brush. We also had to turn a hand to the auxiliary engine to implement the currently valid EuroMot 4 emission standard. All in all, you could say that everything above the truck chassis has been redesigned and reconstructed", the engineer recalls. "Another important aspect during the development phase was the question of the optimum material for the hood, which had previously consisted of aluminium sections. The old design allowed relatively little flexibility, in addition to

involving the risk of corrosion resulting from aluminium reacting with certain de-icing materials. For this reason, we decided to use a four-part plastic hood made of GFRP.

About 8 months after selecting the design agency, a so-called mock-up, i.e. a full-size model, of the CJS design was created. The substructure consisted of a wooden framework, covered by a Styrofoam shell as the hood. "This provided the basis for further optimisations, while already giving us a good idea in respect of the original", Theresia Winkler-Flügel says. After adopting the final design, an external supplier was ultimately entrusted with the manufacture of the corresponding tools and moulds for the GFRP parts. At the same time, the carrier vehicle had to be prepared for the new body and then everything had to be put together to create the so-called prototype. A new generation of jet sweepers was born, marking the beginning of another success story of the Schmidt CJS and TJS.



Theresia Winkler-Flügel



Product Manager Airport Devices
Aebi Schmidt Deutschland GmbH

Experiencing how a product "grows" and develops is extremely exciting, but it required many small interlocking cogs, negotiations and decisions. As the technology project manager, I'm in charge of coordinating everything. The close contact with external players, such as designers or suppliers, and internal departments, such as development, purchasing or sales, requires good communication skills and perseverance. In the end, however, it's worth the effort – the result is a great new CJS and TJS.



Clemens Schwörer

Design Engineer Snow Clearance
Aebi Schmidt Deutschland GmbH

Our development team in the field of snow clearance consists of 5 designers, all of them experts in their subject area. This is also necessary because we monitor the entire development and construction process, from electrical installations, hydraulic system and vehicle technology to the hood. Certainly, the most beautiful moment was when the first new CJS prototype was completely assembled. But after the project is before the project. Our work does not end when the first vehicle of the series leaves the factory. This is when the subsequent work and the documentation start – just everything that was missed out before.

“Design is also how it works.”

Steve Jobs

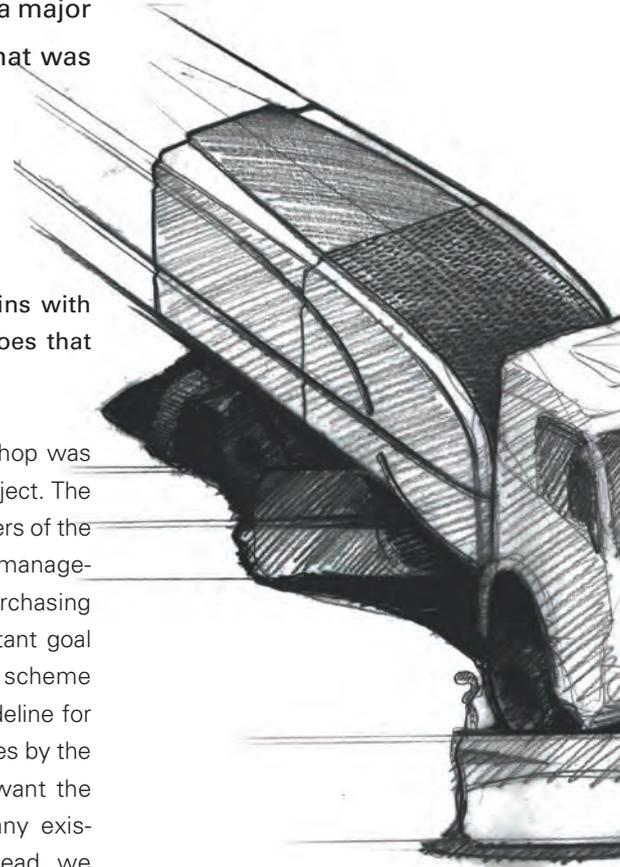
An interview with Andreas Panik – Certificated Designer and Managing Director of Panik Ebner Design

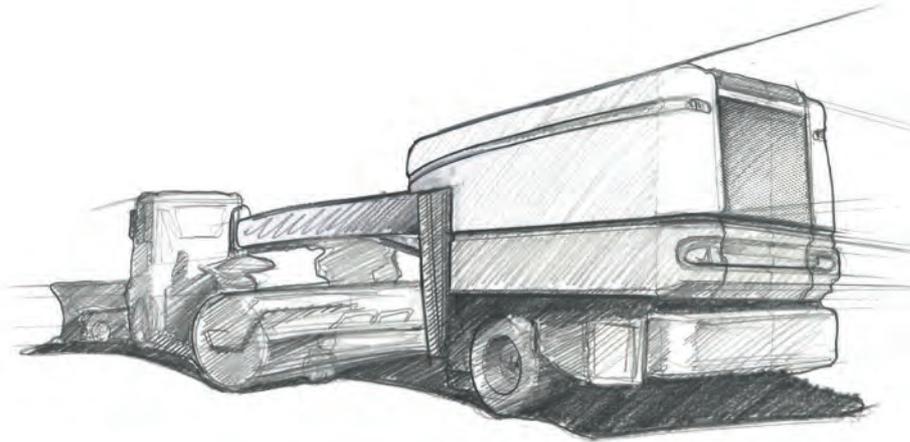
Mr Panik, you and your team at Panik Ebner Design played a major role in the redesign of the CJS and TJS jet sweepers. What was your specific assignment?

Andreas Panik: “We were specifically instructed not to redevelop but to redesign two existing vehicles within a product family that consists of about five different vehicle types. We wanted to counteract the fact that the vehicles are visually split in two parts – the OEM driver’s cab and the Schmidt body. The vehicle is intended to look like a seamless whole. The CJS and TJS vehicles to be developed had to be clearly recognisable as Schmidt vehicles. Additionally, it was important that the new design line of the CJS and TJS provided the potential of transferability to Schmidt’s other airport products.”

Every project usually begins with a blank sheet of paper. Does that apply in this case as well?

Andreas Panik : “A workshop was held in the lead-up to the project. The participants were the members of the executive board, product management, marketing, sales, purchasing and construction. An important goal was to establish a design scheme that can also serve as a guideline for the creation of further vehicles by the Schmidt brand. We didn’t want the redesign to be based on any existing Schmidt products. Instead, we wanted to create a new beginning. This new beginning is also meant to strengthen the customers’ emotional connection to the vehicles on a passionate level.”





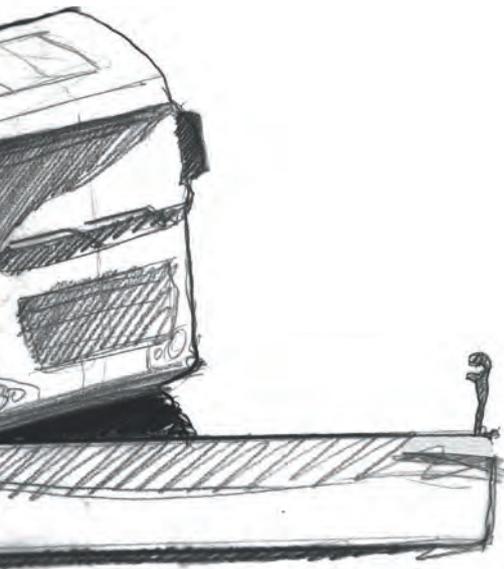
What is the typical process of designing a product?

Andreas Panik: "We asked ourselves various questions: How can the described needs be translated into the design? What creative means can be used to convey power and presence, drive and resilience, appeal and character? We take a very traditional approach in this process, using associative images from a wide range of areas to test and collect responses. Positive associations then need to be "translated" into shapes. This is based specifically on actively controlling the effect of the vehicles when seen from a distance and up close: Their long-distance effect is observed on large airfields, which includes the view of the roof as seen from airport buildings or waiting planes. By contrast, their close-up effect is more significant in sales and trade fair presentations.

You also took a close look at the ideas and requirements of the vehicle operators. How much did that influence your work?

Andreas Panik: "Based on our preliminary discussions at Stuttgart Airport, we think of "the customer" as being made up of the drivers, the depot and the purchasers at the airport. That's why the key emotions to be addressed by the product include not only identification and satisfaction in using a professional tool, but also pride in the performance and commitment to smooth airport operations. And let's not forget that the vehicle fleet needs to be successfully represented to the public, such as waiting passengers, in order to put their minds at ease when there is snow and ice."

We proposed a reduced, striking colour concept for the long-distance effect, featuring clear, horizontal separation lines between the upper areas, the orange side panels and the grey area of the skirts at the bottom. This merges the chassis steel construction and the skirt portion into one dark unit. When viewed from a close distance, details become apparent, such as the striking, curved groove that runs from the rear to the side. The branding element embedded in the groove on the side panel is also designed for the close-up effect, which is strikingly enhanced by the avoidance of any visible screwed connections."





Design process I

Draft and design freeze:

Rarely have we seen a design process in which the various goals of the corporate groups were consistently negotiated, verified and matched based on our drafts. For example, a clear priority was to design the hood in such a way that it allows a maximum number of shared components for CJS and TJS and to increase the ease of maintenance by improving the access to the body's interior. Additionally, the new design scheme was initially to be developed independently of future manufacturing methods. For us, this meant creating designs that can be implemented using both metal and GFRP. At an early design stage, it was also decided that the waistline should be continued as a distinctive character of today's CJS vehicle to make its shape stand out from the spreaders and sprayers. In this particular case, the waistline means foregoing a structural connection between the body and the driver's cab throughout the full height.

Milestone mock-up:

Following the design freeze and prior to the decision to release the tools, there has to be certainty beyond the project group regarding the assessment and evaluation of the design. To accomplish this, we mounted a full-scale mock-up of the CJS onto an MAN chassis, using the simplest means to produce an almost realistic impression. The body was built in halves using lightweight Exporit that was milled and then painted, with grids and sections being added in the roof and rear area. Large mirrors were used in areas such as the rear to produce a complete impression of the vehicle for all viewers.

Design process II:

Simultaneous engineering

Milestone 1:

Starting the construction of parts:

Our draft ideas were very soon presented in 3D CAD variants, even before the design freeze. This made it possible for package requirements that were known at that time, such as the dimensions and the component-sharing concept, to be evaluated at an early stage of development. The CAD data then served as the basis for enquiries to suppliers and were completely revised in a total of 3 steps.

Milestone 2:

Involving the supplier of GFRP parts:

After Schmidt made an internal decision in favour of using GFRP for the construction instead of other materials, the contact with the supplier was initiated. Owing to the possibilities in the handling of large parts and affordable distribution, the cladding parts were optimised piece by piece.

Milestone 3:

Starting the construction of the steel chassis at Schmidt:

The construction of the steel chassis at Schmidt was started at the same time. The opening concept for the hoods of the TJS and CJS was determined in the course of that process, specifying the positioning of the hinges and the reinforcements of the hood parts as well as the swivelling ranges and the resulting intersections with the fixed parts.



Conclusion:

Fixed deadlines as well as limited capacities and resources make prioritisation a necessity. Today, we can marvel at the implementation of the new hood design of the CJS and TJS, among other things. It took many individual “puzzle pieces” to achieve the ideal result that we can see today. This process and the collaboration with Schmidt has been a very positive experience for me and we are proud to say that the creation of the new CJS and TJS marks a milestone that will continue the success story of this jet sweeper.

Andreas Panik
Managing Director of Panik Ebner Design

Success Story

CJS

1988:

It all began – the first Schmidt CJS of its kind was developed, back then on an Iveco carrier vehicle and a sweeping unit 3,800 mm in length and 720 mm in diameter. The blower unit was powered mechanically and was capable of swivelling via a slewing mechanism.

1990:

From that point, the Mercedes Benz SK series is used as the carrier vehicle, in addition to using MAN vehicles for individual projects, for example in Norway or Munich.

1989:

The first CJS is delivered to Frankfurt Airport and Stuttgart Airport.



1994:

Delivery of the first CJS to Düsseldorf Airport – Today, the third-largest airport in Germany employs 17 Schmidt CJS in winter service. Almost all clearing work is done with these vehicles, ensuring snow- and ice-free service areas. Cologne-Bonn Airport and Stuttgart Airport also have a large fleet of 15 Schmidt CJS each. Today, a total of 119 jet sweepers are used all over Germany.

1998:

Facelift of all CJS models. The CJS 914 Super II is launched. The carrier vehicle is a Mercedes Benz Actros with an OM 501 LA, Euro-Mot 2 auxiliary engine. The sweeping unit is now 4,200 mm in length and 914 mm in diameter. The blower unit can be operated via a flap mechanism instead of the slewing mechanism.

1993:

Handover of a Schmidt CJS to Harbin Taiping International Airport – one of the northernmost airports in China. The Schmidt jet sweepers – today more than 70 – can be found at almost all airports in China, which have to contend with snow and black ice due to their geographical location.

1995/1996:

The automatic sweeping pattern adjustment is developed and patented. In addition, the blower is now powered hydrostatically.



2010:

Handover of the first Schmidt CJS to the Ministry of Defence in Great Britain. Today, 28 vehicles are in service on behalf of the British government.



2011:

The two southernmost Schmidt CJS are delivered to RAF (Royal Air Force) Mount Pleasant Airport on the Falkland Islands. The small airport featuring two runways is an important base of the British Air Force and is simultaneously used in civil aviation. Given an average temperature of 5 °C and about 200 wet and snowy days, the Schmidt CJS almost never run out of work.



2016:

The Schmidt CJS presents itself in a new design and with new features. The success story of the Schmidt jet sweeper has been going on for nearly 30 years now. To be continued...



2005:

Redesign of the control panel. The new SPC control system is more intuitive, more user-friendly and is arranged ergonomically. It additionally features a colour display.

2012 & 2013:

The Manchester Airport Group relies on Schmidt winter service technology – 9 CJS are put into service. A total of 49 jet sweepers are in charge of winter service at various civil airports in Great Britain.

2003:

The delivery of a CJS to Norilsk Airport in Russia marks the beginning of the CJS success story in Russia. Today, more than 100 CJS are used all over the country, from the 3 airports in Moscow (Domodedovo, Vnukovo & Sheremetyevo) to Tyumen, Yekaterinburg (Koltsovo), Talakan, Khanty-Mansiysk and Mineralnye-Vody all the way to Khabarovsk, even in the cold of Siberia.



2015:

Delivery of the anniversary model: The 500th Schmidt CJS goes to Harbin Taiping International Airport in China, where the number of Schmidt CJS in service has grown to 14 since 1993.



A large orange Schmidt AS990 truck is parked on an airport tarmac. The truck is equipped with a large hopper and a liquid suction nozzle. In the background, there is an airport building and a plane with the tail number C34. The sky is blue with white clouds.

SCHMIDT

The AS990:

Uncompromising cleaning for every challenge.

- + Special stand cleaning version
- + High sweeping speed: 40 km/h
- + Sweeping width: 2,300 / 3,500 mm
- + Large cleaning area due to optimal suction power
- + Versatile, all-year application possible:
mounting of magnet bar, sweeping brush, snow plough
- + Big hopper volume at short wheelbase and
optimal weight distribution on the axles
- + Liquid suction nozzle as a quick-change system

Schmidt Airport Technology

Premium solutions

Schmidt airport technology - synonymous with
the working areas of airports operational. Clearing,
tailor-made system solutions for every application.



The ASP:

Maximum spraying width for preventative and curative use.

- + Customised solution
- + Economical: precise dosage
- + Precise and even distribution
- + Reduced swirling caused by turbulence
- + High working speed: up to 45 km/h, road speed related
- + Spraying width: up to 30 m

through innovation.

With **high-tech machines** designed to keep all roads safe for de-icing and cleaning; we offer innovative and

Schmidt - One partner for all of your daily challenges!



International Airport Dubai

First-class performance in extreme conditions

Schmidt ASC990 high-speed sweeper

Dubai is the epitome of the extreme. This is where you will find the world's only 7-star hotel, the most spacious shopping mall, the largest artificial islands and the world's highest water fountains. Dubai International Airport holds a record as well. Counting 70.96 million passengers, it has been selected as the world's busiest international airport for the second time in a row. The growth figures are also record-breaking: The number of passengers in 2015 increased by 10.9% compared to the previous year.

Measured by the total passenger volume (national and international passengers), Dubai International Airport ranks third, only surpassed by the airports in Atlanta and Peking. More than 100 airlines offer over 240 destinations on six continents and, after putting the new terminal D with 17 gates into service, an annual handling capacity of 90 million passengers is reached, the goal being to increase this figure to as many as 103 million passengers by 2020.

With up to 1,100 aircraft movements a day at peak times and only 10 wet days a year, the airport service areas at Dubai International Airport are among the most challenging ones in the world as regards surface cleaning. In addition, there are extreme temperatures of up to 45 °C in the shade and what are referred to as the Shamal winds in summer blowing sand from the north over the Persian Gulf to Dubai – and consequently also onto the airport's runways.

Extreme conditions require extreme reliability

While maintaining the airfields and aircraft stands, the Dubai Civil Aviation Authority attaches great importance to not only perfect sweeping results but also the high reliability of the equipment – despite or just because of the extreme conditions. The decision to purchase the Schmidt ASC990 high-performance sweeper was preceded by a strict selection process. The first few vehicles have been in use since 2002; an additional 6 vehicles will follow by 2017. The addition "C" stands for the optionally available airport stand cleaning function.

"The combination of high-performance sweeper and airport stand cleaning equipment was a key argument in our selection process", says Johnny Saliba the Head of Gargash Machinery GMGT, and dealers of Aebi-Schmidt products in the region. "It permits maximum flexibi-

lity while keeping the use of resources to a minimum. The high reliability and the excellent sweeping results, even at high operating speeds of up to 40 km/h, were additional convincing arguments. The ASC990 is very sturdy; the hopper bottom, for example, is made of steel. Moreover, the hydraulic tilting of the dirt hopper by 52° without having to start the auxiliary engine is a very convenient option."

The ASC990 also scores points when it comes to servicing and comfort. All important areas are easy to access and the highly intuitive, language-independent operation ensures easy understanding without requiring much time and learning effort. The ASC990 can also easily handle fine desert sand. The interior of the two flow-optimised suction nozzles is hot-vulcanised as a standard, resulting in low friction and thus less wear and tear. In addition, it is approved for application at an external temperature of up to 54 °C, even at full performance.

60 years of success in series – 60 years of expertise in sweeping technology

Schmidt sweeping technology has been synonymous with maximum quality and outstanding performance for 60 years throughout the globe. The Schmidt ASC990 truck-mounted sweeper combines decades of experience with the latest findings and innovative technology – for perfect sweeping results at high surface capacity. It is not only designed to prevent potential damage to aircraft on runways caused by foreign object debris (F.O.D. – Foreign Object Damage). The ASC990 can also prevent risks posed by leakage of liquids, such as oils, by collecting them and cleaning the dirty surface in a single pass by applying a mixture of detergent and water. 6 water nozzles and 6 detergent nozzles are positioned in front of the two disc

brushes. The water nozzles are supplied by the hydraulically operated water pump and the detergent nozzles by a separate pump. The disc brushes rub the cleaning emulsion of water and detergent into the surface. The loosened material is then collected in the hopper via the rear-mount suction-sweeping unit.

A strong suction fan ensures an air flow rate of approx. 32,000 m³/h. The specifically developed liquid suction unit can be mounted between the axles, on the rear or as a quick-change system on the rear of the ASC990. The quick-change system allows for exchanging the rear-mount suction unit for the liquid suction unit within just a few minutes. The liquid suction unit is flexibly designed at the centre, permitting it to collect liquids from slightly inclined de-icing surfaces down to the pores. The special nozzle is capable of collecting up to 99% of the de-icing agent glycol. Other liquids, such as surface water, are even collected to 100%.

The sweeping and suction width is 2,300 mm; the two disc brushes even increase the sweeping width to up to 3,500 mm. The ASC990 can additionally be fitted with blast nozzles. The blast nozzles conduct a strong air stream onto the traffic area, making it possible to clean and dry larger areas in one go. The debris flap for picking up larger objects, such as beverage cans or bottles, is included as a standard.



Aebi Schmidt machines are distributed by Gargash Motors and General Trading LLC as one of the leading business house in the United Arab Emirates. For the past century, the company has evolved at a pace that matches the progress of the UAE.

Gargash being the distributor of Aebi Schmidt machines already established it's name in the market being the supplier of various machines to Dubai Airports, Dubai Municipality, Sharjah Environment Company – Bee'ah or Al Jaber Contracting. Gargash Sales Team is fully committed and well-trained to give the best offer to our valued customers.

Likewise, After Sales Support has been committed to provide parts and services that will help the customers to keep their business running smoothly with maximum availability and safety.

Compact sweeper Swingo 200⁺

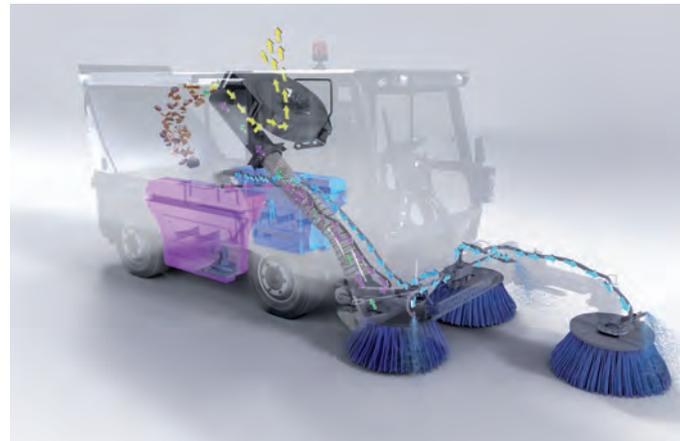
Innovation inside

Koanda air circulation system reduces the emission of harmful particulate matter by up to 95%.

“Innovation inside” is the theme of the Schmidt Swingo 200⁺ compact sweeper. The patent-pending combination of the pressurised water recirculation system and the Koanda air circulation system, which will be presented at the IFAT 2016 for the first time, reduces the emission of harmful particulate matter by up to 95%. The water consumption and the noise level during sweeping operations are reduced significantly, permitting sweeping operations even at moderate sub-zero temperatures. Owing to the intelligent water system, the machine becomes even more efficient and eco-friendly than ever before – the need for time-consuming stops to refill water is eliminated, making extended sweeping operations possible.

The pressurised water recirculation system ensures large amounts of water in the suction system of the Swingo 200⁺, enabling reliable and low-wear collection of dirt. The optimum water recovery system guarantees compacted and semi-solid debris. The hopper capacity of 2 m³ is utilised optimally to guarantee the efficient handling of resources. The new system comes with a 190-l fresh water tank and a 190-l water recirculation tank (in the Euro6 variant: 170-l water recirculation tank). The tank can additionally transport up to 250 l of circulating water. The pressurised water recirculation system is fitted as standard in the 2- and 3-brush models. The Koanda air circulation system is available for the 3-brush model as an option.

A new high-performance suction nozzle (option) brings a significant increase in efficiency while reducing the suction fan speed, which, in turn, reduces the diesel engine output, saving up to 15% operating costs or 1 l of fuel per hour of operation. Assuming 1,500 hours of operation per year and a fuel price of € 1.30 per l, this yields savings of € 1,950 as well as 3,930 kg less CO₂ emissions annually.





Footless driving – New control lever sets standards in compact sweepers

“Single-handed sweeping and driving” is the motto of the new control lever for the Swingo and Cleango sweepers, which is now available as an option. It permits the driver to simultaneously control the speed and operate the sweeping unit with one hand. Dangling legs can now be taken literally, because “footless” driving offers a one-of-a-kind driving experience. Moreover, the worldwide unique height- and tilt-adjustable steering column incl. swivelling function sets new standards in the class of compact sweepers, permitting ergonomic entry and exit as well as a comfortable sitting position even for tall drivers.



Sets new standards - Schmidt Swingo 200+ Koanda

Experience the cleanest compact sweeper in its class.

- reduce particulate emissions by 95%
- minimize water consumption
- extend operating times
- enjoy footless driving – driving and sweeping with one hand

www.aebi-schmidt.com



The community of Westland in the province of South Holland, which has a population of 100,000, is also referred to as the “glass city” because it is home to the largest area of greenhouses for growing crops in the Netherlands. The region, which is dominated by horticulture, therefore attaches a great deal of importance to sustainability and environmental friendliness. This also applies to work involving maintenance of the local infrastructure.

Cleango 500 in Westland

Successful debut

“Glass city” opts for environmentally sustainable sweeping technology from Schmidt

When the tender was put out for a new sweeper, the Euro6 exhaust emissions standard was therefore a criterion that had to be met. The decision to add a Schmidt Cleango sweeper to the fleet is one that Tim van der Noll, area manager for the cleaning team in the community of Westland, has not regretted. “The Cleango is our first sweeper from Schmidt. The level of scepticism in particular with regard to operating the machine with two joysticks instead of one, which was previously the case, was therefore initially high among colleagues. But thanks to a demonstration and the excellent instruction briefing given by the team from Schmidt, this scepticism quickly subsided and has in fact now turned into the opposite sentiment: the drivers now actually prefer working with the Cleango.”

The Cleango 500 offers the holding capacity of a large mounted sweeper with its large hopper of approx. 5 m³ and combines this advantage with the flexibility of a compact sweeper. A VM R756 Euro6 common rail engine delivers maximum power with 500 Nm at 1,400 rpm, a cubic capacity of 4,455 cc and 6 cylinders as well as a closed particulate filter system, while at the same time reducing particulate emissions. Thanks to the ECO-Drive function with automatic speed reduction (on transport runs down to around 1600 rpm), fuel savings of up to 20% can be achieved. In addition, in this mode the machine operates up to 3 dB(A) quieter.

The Cleango has been deployed in Westland since autumn 2015 and has already been able to demonstrate its performance capabilities. “We are very happy with the machine, it actually performs even better than ex-



pected," says van der Noll. "The high suction power of the Cleango was really put to the test during the autumn. But the Cleango did not balk even at large quantities of leaves, and instead completed its task superbly well." This is not really a surprise because the Cleango boasts a high-performance suction fan with an air flow of 14,000 m³/h. Combined with a suction nozzle width of 700 mm and a large debris flap, the vehicle is also designed to pick up larger debris. The flexibly mounted, sound-proofed driver's cabin is equipped with two seats, and comfortable all-round glazing ensures high visibility of the work and traffic area. Sliding windows on the left and the right, an ergonomic driver's seat, heating, ventilation and

an air-conditioning system, along with the height-adjustable and tilt-adjustable steering column all come as standard features.

But Tim van der Noll's praise is not just reserved for the machine. "We have had a very good experience with the service offered by Aebi Schmidt Nederland. The colleagues who work in the service depot in Leimuiden also adapted the machine to cater for our specific wishes. They have always responded flexibly to additional requests for changes to be made, and they actively give their input too. This is a definite plus point for us." A successful debut then for the Cleango in Westland.



Schmidt - Kehrtechnologie

**60 years of success in series –
60 years of expertise in sweeping technology made by Schmidt**

Get on board and run ahead, e.g. with the most environmentally friendly compact sweeper on the market, the Schmidt Swingo 200* Koanda with Koanda air circulation and pressurized water recirculation system and new control lever. Let yourself be inspired by the „footless driving“ and experience sweeping technology that sets new standards.



Schmidt Supra 4002

When reliability and performance counts

Schmidt Supra 4002 for biggest snow sport resort in the UK

Much snow is desirable, especially in winter sports regions. But even there snow clearing of streets is imperative. To keep roads to the Glenshee ski center in Scotland clear and guarantee free access, Tayside Contracts decided to order a Supra 4002 snow cutter blower for use at the Glenshee Ski Centre in Scotland. Tayside Contracts is a commercially based local authority contracting organisation providing catering, cleaning, roads maintenance, vehicle maintenance and winter maintenance throughout the Tayside area of Scotland.

With an impressive 22 lifts and 36 runs, Glenshee is the largest ski centre in Scotland and the UK's largest snow sports resort. The ski centre is located in Aberdeenshire, to the north of Spittal of Glenshee, on the A93 road between Blairgowrie and Braemar in the southern Highlands of Scotland. Every winter this area is affected by bad weather and efficient winter equipment is vital to being able to treat the roads.

The latest generation Supra 4002 can cut 3,500 tonnes of snow per hour, which can be thrown a distance of up to 40 metres and operates at a cutting speed of up to 40kph. Furthermore, it comes with the route guidance system that allows the machine to follow a pre-programmed route. This is a key feature, especially in white out conditions, as the system memorises not only the route but also the edge of the road, thereby helping the driver and providing extra safety.

The new snow blower replaces a 1985 Schmidt VF5 which will be kept as back up to further enhance Tayside Contracts snow clearing capabilities.

"We delivered the Supra 4002 in November in time for the winter season. It will help Tayside Contracts keep the roads within Tayside, and in particular the A93 to Glenshee, open during periods of inclement winter weather, therefore, helping to boost winter tourism," says David Carswell, Area Sales Manager Scotland & Republic of Ireland.

Also on airports, the Schmidt Supra series is an ideal “partner” to fight against snow.

The speed and operating capacity are a good fit for the conditions and events airports have to deal with. Also 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.



+ Articulated vehicle steering:

- The advance force acts in every steering position
- Vehicle follow precisely the operating track of the cutter-blower head
- Snow cutting in narrow curves also possible in hard packed snow

+ Fuel tank volume of approx. 530 l:

- Allows an operation of around 8 hours

+ Comfortable, ergonomically cabin build according to the latest occupational health

+ Optional trac system

+ Clearing capacity: up to 5.000 t/h

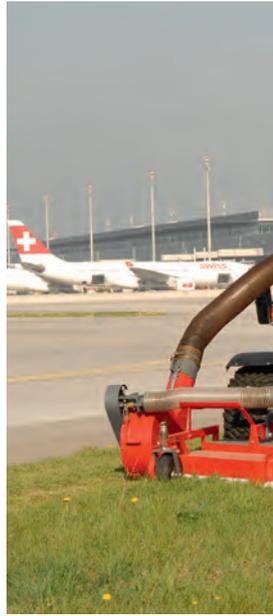
+ ECO-mode



Aebi's vehicle portfolio

Every day a new challenge

**Aebi's vehicle portfolio convinces
with solutions for airport operations**



The Aebi brand offers a varied vehicle and equipment portfolio from 9 to 156 HP for the maintenance of airfields, aircraft stands, green spaces or public traffic areas around airports. Being a Swiss traditional company, Aebi has been manufacturing innovative implement carriers and vehicles for more than 130 years. Originally developed for the cultivation and maintenance of extremely sloping and particularly challenging terrain in mountain regions, more and more municipalities and special service providers rely on the high quality and the advanced technology of the "red Ferraris" from Switzerland.

The smallest representative of Aebi's vehicles, the Combicut, is perfectly suited for mowing green spaces, but can be fitted with a brush, snow plough or snow cutter in no time. Owing to the hydrostatic drive and the active steering, the single-axle machine can be moved and steered without any effort.





Using the Aebi Terratrak, which is available in four model variants from 50 to 109 HP, aircraft can be coupled to the front or rear and shunted precisely and quickly. The permanent traction of the wheels and the significantly improved braking action considerably enhance the safety and the driving pleasure. The powerful implement carrier is also suitable for transport operations, green space maintenance with front-mounted mower, cleaning operations with front-mounted brush or winter service operations with demountable plough and spreader and can additionally be used as a stationary power source for leaf blowers, water pumps and the like.

The Aebi MT transporter is also a true quick-change artist. Three model variants and two different cab widths (1.60 or 1.70 m) are available. Boasting up to 115 kW (156 HP) and a 6-cylinder VM turbo diesel engine (Euro 6), the top-of-the-range model, the MT750, brings decent performance on the road. The maximum payload is 4.8 tonnes – a benefit that pays off. Coming equipped with an all-wheel drive including reducing gear and differential lock, the Aebi MT also cuts a dash in off-road terrain. A solid ladder frame made from C-channels, multiple hydraulic PTO options and high axle loads permit a great variety of demountable equipment. An ergonomically designed 3-seat or 2-seat driver's cab ensures comfortable driving. In addition to a crane, roll-off tipper or skip loader for transport operations, the Aebi MT provides a base for an almost limitless variety of demountable equipment, including spray bars or brushes for cleaning operations, front-mounted flail mowers for mowing operations, special equipment for waste transport or sewer cleaning, fire-fighting or military equipment for civil defence, not forgetting snow ploughs and spreaders

for winter service operations. Because all these options are not yet enough, Aebi will be presenting in spring 2016 another option: the Aebi MT with a semi-trailer as well as in combination with a Schmidt TSS (combined towed sweeping & spraying unit).



The image shows an orange Aebi MT truck parked on a paved area in a snowy mountain setting. The truck is equipped with a red hydraulic crane and a semi-trailer. On the semi-trailer, there is a compact tractor with a snowplow attachment. The background features snow-covered buildings and trees under a clear blue sky.

AEBI

A brand of **ASH**

- + More payload - up to 7 tons
- + More flexibility - compact gear unit or transporter with semi-trailer
- + More power - 156 HP (Euro 6) and 500 Nm of torque
- + More driving pleasure - all-wheel drive and air brake system

Aebi MT

City. Countryside. And More.

For all those who want more - Compact narrow-track transporter, agile fast runner and all-purpose carrier vehicle. All combined in one vehicle? No Problem! The "Aebi MT" transporter series by Swiss traditional company Aebi meets wide-ranging requirements and, by offering the new semi-trailer option, combines the benefits of a compact transporter with the versatility of a large tractor-trailer combination.



AEBI

A brand of **ASH**

- + Powerful and clean engines
- + Variable-speed hydrostatic drive
- + Convenient operating concept
- + Vibration damping
- + Ergonomic cockpit
- + Swiss Quality

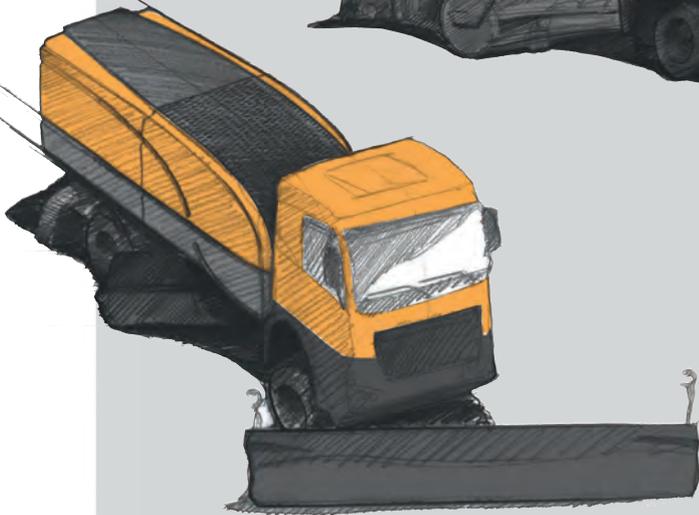


Terratrac Aebi TT206/211/240/280



Welcome to your new comfort zone.

For challenging applications – at any time of the year
Equipped with a great variety of attachments, the Terratrac models are highly versatile in application. This multi-purpose use allows for all-year application, increases the operating time and guarantees economical operation.



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