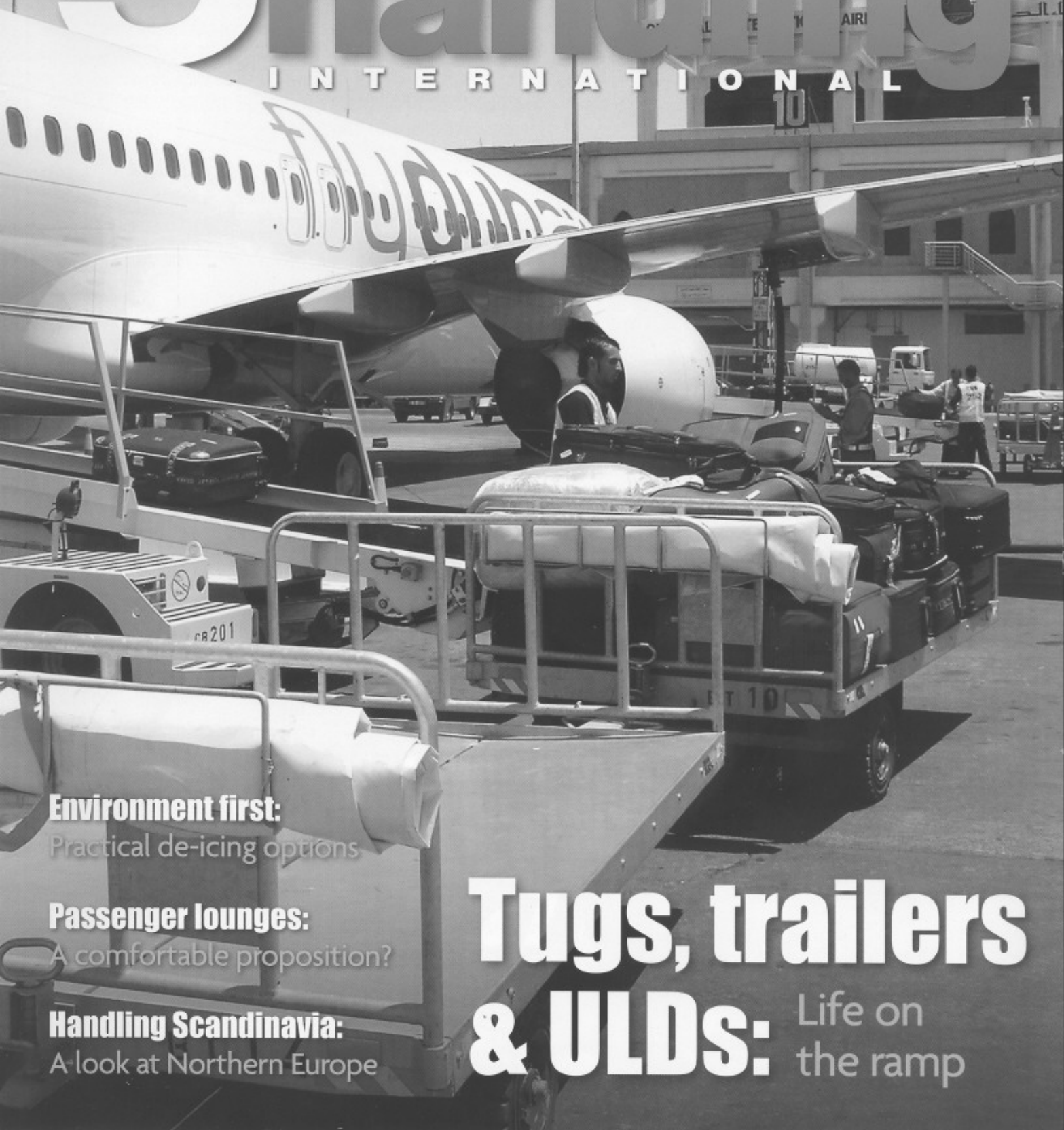


ground handling

INTERNATIONAL



Environment first:

Practical de-icing options

Passenger lounges:

A comfortable proposition?

Handling Scandinavia:

A look at Northern Europe

Tugs, trailers & ULDs: Life on the ramp



Bread and butter

A look at ramp basics: is there room for development?

On answer to the question, some suppliers within the marketplace clearly think so. Take the UK company of Pinnacle. Whilst it is not a GSE manufacturer, it works closely with those who supply GSE and as an IT specialist, it has come up with some interesting applications that have been designed to make the fleet manager's life that

little bit easier.

Trailers

For ground handlers, losing equipment such as baggage trolleys and dollies can be a day-to-day occurrence that can have very expensive consequences, with missed turnaround time slots and non-compliance to SLAs. A new system from the above-mentioned GSE tracking specialist is currently undergoing testing on dollies at London Heathrow and Air France equipment at Paris CDG airports.

Suitable for use on any non-motorised GSE, the Pinnacle system uses the Global Positioning System satellite network to pinpoint the location

of the GSE, which is accurate to a few metres. The location co-ordinates are transmitted at regular intervals, which can be configured to suit the requirements of the individual ground handler, as Simon Fowler, Managing Director of Pinnacle, explains.

"Each handler has his own specific needs. We are working with one customer who wants to locate all his baggage dollies at the start of each shift, so that they can be collected and brought back to a centralised storage area. The system can be configured to send a location message at the start of every shift, drastically cutting the



The famous black box is sited discreetly under the dolly

time it takes to find the dollies and ensuring that there is no danger of running out of dollies at peak times during the day. Other customers have asked that the system send a message when it enters or leave a particular geofenced area so that they can be alerted if equipment is being moved by unauthorised users."

The unit takes just 15 minutes to install, and can be hidden away underneath a dolly or similar equipment, minimising the risk of it being tampered with or suffering accidental damage. Once installed, it begins transmitting data immediately. With no complex software needed, all the ground handler needs is an Internet connection to start tracking their equipment. That's how simple it is.

One of the most significant features of the system is that there is no need for any complex infrastructure, such as Wi-Fi networks or RFID transmitters to be installed. The existing GSM/GPRS network is used to transmit location data, which is then viewed on a Web-based airport map. Historical locations can also be viewed.

"GSM/GPRS data costs are now so low that there is no longer any need to invest in additional wireless infrastructure, which not only reduces capital expenditure but also avoids the need to maintain a complex network," explains Simon Fowler.

Using the cellular network to transmit data does have its disadvantages, though, such as increased power consumption. As dollies and trolleys have no on-board power source, Pinnacle's system relies on an internal battery pack to provide the necessary energy to send location messages. Andy Jackson, Pinnacle's Director of Technology, explains that long battery life was a key product goal.

"The power management system was a major design challenge, but under testing we are achieving a three year battery life when the unit is set up to send four location reports every day. In addition, with every location message the unit sends a battery status check, so there should be no risk of a battery running out without prior notice. The battery pack can be changed in five minutes, so ongoing system maintenance is low."

Simon Fowler believes that the potential for the system is considerable.

"We've worked on the business model with several customers now, and can show major savings, by reducing the time spent looking for equipment, by cutting out the problem of unauthorised equipment usage, and increasing operational efficiency."

Elsewhere, French manufacturer Gate has just signed an agreement with the Dubai-based GSE company, a specialist in the distribution of airside and airport equipment. It hopes that this accord will lead to business on a greater scale in



Screen shot gives an indication of data available



Gate: new contract in Dubai

the fullness of time.

This initial partnership will focus on two types of dolly, the first of which is aimed at baggage. This trailer features a wooden platform, which will be slightly inclined in a V format to prevent bags slipping off. Much attention has been paid to tyre size and the wheels themselves can be specified as multi-directional items. The side mountings are available in different heights and they are of zinc plated steel to ensure longevity.

In contrast, the second dolly has been specially conceived for the transportation of pallets or containers. This unit features a bed of steel rolls, the whole platform being mounted on pairs of wheels which will allow the transportation of significant loads. It's also worth noting that both dollies can be hooked up at either end.

Gate believes that the superior finish of its items of GSE will endear them to harsher operating climates and conditions. It points to a long list of satisfied users, including Bahrain Airport Services, Gulf Pearl, Airbus and Goldair.

Tractors

Charlatte is one of the few manufacturers in the marketplace which has specialised in the electric baggage tractor; in fact, it can point to 25 years of expertise in this area. Whilst the use of such tugs tends to be confined to the airport environment, an increasingly large number of sales are focussed on other sectors, such as the automobile and rail

industries.

As Thomas Baillet points out for Charlatte, a tug is best characterised by its pulling (or traction) power and in its drawbar tonnage. The two are, of necessity, interlinked. The importance of the alternative-powered tug has grown immeasurably in recent times, in line with the ongoing concerns over the environment.

From an ecological perspective, the battery-powered tug offers lower running costs all round. The traditional diesel-powered version is expensive to maintain in comparison, he avers. This GSE is offered very much according to customer desire (and, in these uncertain times, budget): with cab or without, heated cab, a more powerful engine and so on. Charlatte has a list of options to cover all eventualities.

In Italy, Fresia's Furio Rossi underlines the factory's philosophy, namely that of differentiating its product from the competitors.

"We at Fresia have always opted to be a bit different from everybody else so that we don't get caught up in price wars. That is why we never started making so-called standard type baggage



Charlatte cites lower running costs for its electric tugs



TLD becoming a byword for environmentally-friendly GSE

tugs, where the ultimate goal is to outsource the cheapest parts possible to make the cheapest tractor possible. That seems to be the principal deciding factor.

"We've got our own range of 4x4 vehicles, because everything we make to tow is configured with four wheel drive and that seems to suit a lot of specific needs and when the customers are actually looking for a tractor to do a specific job, that's where we can compete.

"A simple example is our F40T tow tractor. It is the size of a baggage tug and yet has four wheel drive, meaning that with only 3,500 kilogrammes of gross vehicle weight we still can offer 2,800 kilogrammes of drawbar pull. It has four wheel independent suspension and a wheelbase of only 1600 millimetres. Essentially, this allows

it to have extreme manoeuvrability and yet be able to tow up to 65,000 kilogrammes. Some clients like to use this as a baggage tug because instead of only being able to tow two or three trailers, it'll tow seven trailers with ease. In this, it is particularly appreciated by cargo-oriented handlers who have to deal with heavy trailers.

"Another thing about this tractor is that it's available with an optional four wheel steering, which sets it aside from all competitors in terms of handling. Hence for those driving inside very tight places and who need to be able to move in extremely

Goldhofer
AIRPORT TECHNOLOGY

AIRBUS A380

26
A 380

www.goldhofer.de

Goldhofer - the real solution to enable a quick, safe, flexible and economical ground handling of aircraft.

inter airport europe
The world's premier airport exhibition
Munich Trade Fair, Germany
6-7-8-9 October 2009

Goldhofer Aktiengesellschaft
Donaustraße 95 • D-87700 Memmingen
Phone +49(0)8331-15 302
Fax +49(0)8331-1570 302
airport-technology@goldhofer.de

TOWBARLESS AIRCRAFT TRACTORS



Tractors, Trailers & ULDs

reduced areas, it's an asset. With the optional permanent four wheel steering (or counter steering), this tractor will actually have a turning radius of just two metres. Further to that, we can also offer a more sophisticated four wheel steering which can be controlled from inside the cabin which gives the options of front only, front/ rear counter steering and even crab steering. With this option, you can do virtually anything.

"If the F40 isn't enough, then we also offer the F60, which is essentially the same thing but with a boosted ballast and reinforced tyres. This provides all the same qualities in handling but has a weight of 4,200 kilogrammes, boosting the drawbar pull to 3,360 kilogrammes, meaning it is capable of towing 85,000 kilogrammes."

Furio Rossi declares that neither of these tugs has any competition but admits that they are a little more expensive than an "average" tug. However, they can be pressed into service for towing small aircraft (unlike the standard product) and they can turn on the proverbial sixpence.

Furio has his own views on buying tugs – and offers some advice.

"A lot of handlers think they're saving money by buying a cheap tug but if you look at the overall costs, I feel that they're actually spending more. Since they may also need to tow a small aircraft, they need to go out and buy a pushback which means doubling the purchases. In turn, this means having to do maintenance on both the tug and the pushback.

"They might bear in mind the complicated maintenance on the wet-disc brakes that most tugs have. When you need to change the brakes, you need to take the whole machine apart! In our case, we've got simple calliper/ disc brakes like on an ordinary car, so when you need to change the brake pads, you simply remove the tyre and 15 minutes later, the work is completed.

"Having to stock a lot more special tyres, and the need to have both fronts and backs is another consideration. Our tractor uses standard light truck tyres which can be found anywhere – and both front and rear are the same.

"Finally, the Fresia tug is subject to a lot less breakdowns since the suspension is actually taking a lot of the shocks from running around the rough areas of the airport.

These tractors were originally designed for the Air Force so they had to comply with some pretty Draconian expectations; but when used in civil aviation, they offer plenty of advantages."

Fresia also manufactures the FIOTE, a small electric tug which benefits from four wheel drive, steering and suspension. Highly flexible, it also sits happily in the environmentalist's list.

Flexibility and adaptability are seen as key to Fresia's operation, which is why the manufacturer has successfully diversified. Its F40 baggage tug has been pressed into service to tow pleasure yachts around one factory; and since the latter's location is Turin, snow equipment is also something the yacht manufacturer has to think about. Furio relates that he has been able to attach a snow blade to this tug to kill two birds with one stone.



Fresia's F60: according to the manufacturer, it's a tug for all seasons

Cargo handlers may like to take note...

He concludes: "All in all, this year we're going to have a higher turnover than in 2008, even with the crisis, so we are quite satisfied."

For TLD, electric is certainly the way ahead although it can offer the customer a capable diesel tractor, too. The company's JST series allows a drawbar pull ranging from 4,500 pounds to 6,750 pounds, meaning that these tugs are perfectly at home pulling carts, dollies, trailers and other towable GSE, such as stairs. The tugs rely on a heavy duty frame and a cast iron body for a useful operating life.

In keeping with customer choice, no fewer than five engine options are available. These include the Yanmar 3-litre diesel, the Perkins 2.2-litre version, a Deutz 3.1-litre installation, the Cummins 3.3-litre engine and a Hyundai dual LPG/ petrol engine of 2.2-litre capacity. Automatic transmission is standard on this range and with two forward speeds, the tugs can attain up to 28mph. A range of options is available, too, including shock absorbers for the front axle, cab units and air conditioning.

In contrast, TLD's JET-16 range is quiet – very quiet. Recognising that the electric tractor is fast becoming the shape of the future, TLD has come up with a tug that offers a pulling range from 3,500 pounds to 4,400 pounds, so is largely the equivalent of its diesel-powered brother. Relying on a single piece chassis, this tug allows good levels of manoeuvrability and is extremely

user-friendly.

The big question about electric vehicles is the perennial one: how long will it take to charge? With the option of a fast charge unit fitted, the TLD tug is ready for action after eight hours. Otherwise, with the standard slow charge, it will require a 12 hour period. Again, TLD offers a spectrum of ancillaries to accompany the basic package, which includes cab provision, light protection and a diagnostic console for troubleshooting.

At Mulag, Olliver Kesey says that the company has seen a lot of GSE orders over the last 12 months, which made 2008 a very good year for the manufacturer: this translated into a turnover of more than €43m. "And prospects for the beginning of 2009 looked good," he says.

"This progress didn't keep up because of the worldwide financial crisis which reduced incoming orders dramatically. Only with the help of an overactive second business unit (roadside maintenance equipment) was it possible to fulfill the overall target figures of the company."

It is interesting to see exactly how the global recession has affected suppliers: Mulag's experience is probably typical of most in the sector.

Oliver continues: "Before the crisis we had full order books and plenty of prospective contacts with customers worldwide. After the crisis really hit the market it became more and more obvious that some customers had a need to order GSE vehicles but didn't have the money any more to do so. Or their budget was frozen for an undefined period of time. So orders went down in a high double-digit range and have stayed there."

Despite the problems the company continued to look ahead.

"We at Fresia have always opted to be a bit different"

Furio Rossi,
Fresia



After the recession hit, Mulag's aviation side was fortunately buoyed up by its interests in other industrial sectors

"We re-designed and improved our Comet 4H hybrid tractor since we see the interest growing in electric or other alternative drive options (such as hybrid, CNG and so on). Nevertheless, the main choice of engine is still diesel. New technology hasn't been the main focus of our customers since there have to be investments to change the drive of a complete fleet of GSE. For example, CNG has to be distributed, there has to be hangar space for reloading electric vehicles and so on."

ULDs

Siemens Mobility, Fraport and Fraunhofer IML have signed a licensing agreement for the marketing of the security lock SAATS (the so-called Secure Advanced Air Cargo Transfer System). This patented checking system enables the speedy and secure transfer of ULDs into the sensitive apron area of an airport. Siemens will be the exclusive supplier of this system worldwide.

It is standard practice at airports to use so-called dolly trains to transfer cargo containers and pallets from the landside area to the critical parts. First, the incoming trucks are unloaded

on the landside and the cargo is placed in a temporary storage location. Then, the dolly train driver and the cargo have to pass through a security lock on each trip to the aircraft and likewise undergo a security check each time. The procedure is not uniform at all airports but rather is handled in a many different ways.

This new SAATS system - a solution jointly developed by Fraport and Fraunhofer IML - now enables the easy and secure transfer of ready-for-flight ULDs into the security area of the airport apron or airside. Traffic on the landside is "disconnected" from traffic on the airside. Flight-ready ULDs delivered by truck from the landside are checked immediately and are then either stored temporarily or taken directly to the aircraft by dolly train as explained above.

The user benefits from an improved cargo transfer process and a high security standard. Moreover, the number of personnel is reduced and the previously customary, recurring and cost-intensive personnel and vehicle checks are no longer necessary. As a result, the hourly cargo throughput between critical and non-critical parts is increased. This process involving a clearly defined transfer interface has been patented as

a procedure.

Security features such as particle scanning, thermophotography or measuring and weighing functions can also be integrated into the system. "SAATS makes it possible to combine the stringent security checks of the worldwide cargo hubs with an efficient process for secure and low-cost container transfer," says Bernd Ruppert, Head of the Cargo & Parcel Business Segment in Siemens Mobility.

All airports that want to process ULD units quickly and securely can use this system. SAATS can be designed as a central facility in the airport or for separate use by individual cargo handlers.

Separately, Russian carrier Polet has appointed Unitpool to supply and manage its ULD requirements. The appointment of Unitpool ensures that Polet will be fully flexible as to when and where it operates its three new aircraft, which are being delivered in the course of 2009. Secure in the knowledge that Unitpool will be able to support its ULD needs at short notice, the carrier feels this type of arrangement is preferable to upfront investment that involves the purchase of hundreds of pallets and nets. Polet prefers the flexibility and cost-effectiveness of paying for the ULDs it actually needs on a monthly basis. ☒

The 3rd Asian Ground Handling International Conference

In March 2010 the Asian ground handling community will meet in Cambodia. The Angkor Palace Resort & Spa, in Siem Reap, will host the event which will run from 22 - 24 March.

Don't miss this important event!

For more information please visit www.groundhandling.com or email jean@groundhandling.com

