

Product Hangar: Stairs/Lifts/Boarding Bridges

SUPPORTING AVIATION FROM THE GROUND UP

GROUND SUPPORT

WORLDWIDE

RAMP TECHNOLOGY TO PREVENT INCURSIONS

Ground accidents cost the airlines an estimated \$10 billion in 27,000 incidents worldwide each year, according to the Flight Safety Foundation.



INTERNATIONAL

Fraport Goes Electric At Frankfurt

E-Port is a collective effort to cut down on emissions by identifying the best areas to use more electric ground support equipment. Page 14

FEBRUARY 2015

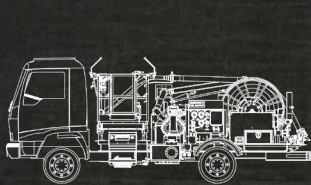


Aviation refueling equipment made

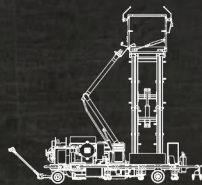


KYLE WEAVER // Vehicle Welding Team Lead

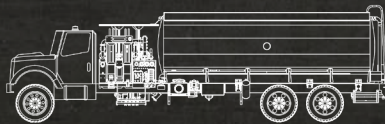
More than 40 years fueling aviation in over 30 countries



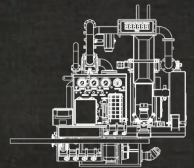
HYDRANT DISPENSERS



HYDRANT CARTS



AVIATION REFUELERS



REFUELING MODULES

BETA is committed to your mission: **Turning your fuel into profits.**TM

BETA refueling equipment is used more than any other by the world's leading suppliers of ground services and fuel. We have earned this business through superior reliability, outstanding support, and delivery. That is The Beta WayTM.

Trust The BETA WayTM to turn your fuel into profit.



RELIABILITY | SUPPORT | DELIVERYTM

betafueling.com

BETA Fueling Systems is part of the Alfons Haar Group.

+1 336 342 0306 // Reidsville, NC, USA

Editor Steve Smith
920.563.1644 steve.smith@AviationPros.com

**Associate Publisher/
Sales Missy Zingsheim**
920.563.1665 missy@AviationPros.com

Classified Advertising Michelle Scherer
920.568.8314 mscherer@AviationPros.com

**International
Sales Manager Lutz Krampitz**
+49 0 203 456 82 66 fax +49 0 203 456 85 38
info@krampitzVv.de

Germany, Switzerland, Austria, Turkey, Scandinavia

**International
Sales Manager Stephanie Painter**
+44 1634 829386 fax +44 1634 281504
Stephanie@painter-lowve.com

United Kingdom, France, Netherlands, Spain, Ireland, Italy

List Rental Elizabeth Jackson
847.492.1350 ext. 18 ejackson@meritdirect.com

Production & Circulation

Art Director Rhonda Cousin

Media Production Rep Carmen Seeber
920.568.8373 carmen.seeber@AviationPros.com

Circulation Manager Debbie Dumke
Production Director Steve Swick

GSE Expo Worldwide

Trade Show Director Sue Ralston
920.563.1655 sue@AviationPros.com

Published by:



Gloria Cosby – Executive Vice President
Gerry Whitty – VP, Marketing
Brett Ryden – Publisher, Aviation Group
Lester Craft – Director of Digital Business Development

Cygnus Business Media

Paul Bonaiuto – CEO
Chris Ferrell – President
Ed Tearman – CFO
Eric Kammerzelt – VP, Technology
Ed Wood – VP, Human Resources
Curt Pordes – VP, Production Operations

Published and copyrighted 2015 by Cygnus Business Media, 1233 Janesville Ave., Fort Atkinson, WI 53538 USA. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage or retrieval system, without written permission from the publisher.

Cygnus Reprint Services
To purchase article reprints, please contact Wright's Media at 877.652.5295 or email info@wrightsmedia.com.

Subscription Policy: Subscriptions are free to qualified businesses. Others may purchase subscriptions at these rates: US, 1-year \$45, 2-years \$85; Canada & Mexico, 1-year \$65, 2-years \$120; All other countries, via airmail, 1-year \$95, w-years \$180. Single copies \$10.

Ground Support Worldwide (USP 015-386, ISSN 1934-2861 print, ISSN 2150-4016 online) is published ten times annually in February, March, April, May, June/July, August, September, October, November and December/January. Periodicals postage paid at Fort Atkinson, WI and additional mailing offices.

Change of address or subscription information: Toll Free – 877-382-9187, Local – 847-559-7598, circ.groundsupportww@omeda.com

POSTMASTER: Please send address changes to *Ground Support Worldwide*, Cygnus Business Media, PO Box 3257, Northbrook, IL 60065-3257. Printed in the U.S.A.

Canada Post: PM40612608. Return undeliverable Canadian addresses to: Ground Support Worldwide, PO Box 25542, London, ON N6C 6B2. Canadian GST #842773848.



CONTENTS



COVER STORY

10 Ramp Technology To Prevent Incursions

Ground accidents cost the airlines an estimated \$10 billion in 27,000 incidents worldwide each year, according to the Flight Safety Foundation.



30



27

INTERNATIONAL / FEATURE

14 Fraport Goes Electric At Frankfurt

E-Port is a collective effort to cut down on emissions by identifying the best areas to use more electric ground support equipment.

27 We'll See You At The GSE Expo Worldwide

Here's what you need to know about the show, March 10-11, at the Sands Expo Convention Center, Las Vegas.

DEPARTMENTS

4 Publisher's Note

5 In The News

30 Product Profile

Aviramp Caters To The PRM Market With A Ramp Fit For All Passengers

33 Product Hangar

Passenger Stairs/Lifts/Boarding Bridges

42 Editor's Note

COLUMNS

18 Ramp Safety

Safety On The Tarmac

24 Best Practices

How To Deal With Fatigue On The Ramp



Brett Ryden

A Thank You To Staff And A Welcome To Our New Owners

By Brett Ryden

Sitting at my desk this week I was working and my phone kept ringing. Figured someone really wanted to get a hold of me ... I opened the phone to learn I was getting messages on LinkedIn to mark my one-year anniversary as Publisher of the Aviation Group at Cygnus Business Media. This prompted me to reflect on where we are and what we have accomplished in 2014.

First I have to say how incredible the AviationPros staff is at putting out cutting-edge print and digital products to support you and to help your business grow. Our editors are second to none in bringing you thought-provoking content. I especially want to thank all the incredible marketing partners (advertisers) that share their products and services in our print and digital products to help support all our readers.

The first major project we completed in 2014 was launching a responsive design (which automatically sizes content to your computer, tablet or smart phone) for our successful website, www.AviationPros.com. We have also improved our print products based on research and discussions with our readers and industry leaders to deliver what you and your colleagues need and want. How did all this happen? We invested financially and countless man-hours to improve our products for you. As I have said for many years ... "Leaders Lead" which we obviously have done and will continue to do. What has this investment led to? The biggest news of all!

Our Aviation Group and all of Cygnus Business Media was purchased by SouthComm Inc.

SouthComm is a publishing and communications company, based in Nashville, TN. The transaction, finalized at the end of 2014, included all assets including our building so the AviationPros headquarters will still be in Fort Atkinson, WI.

"From the start, we were impressed with Cygnus as both a media and technology company," said SouthComm founder and CEO Chris Ferrell. "The business' technical strength and integrated properties combine to support future growth and lend itself to the

SouthComm portfolio of businesses. Furthermore, we're pleased to continue primary operations of Cygnus Business Media in Fort Atkinson, WI, making the transition in ownership seamless to our audience and advertisers."

SouthComm is the nation's second largest publisher of alternative weeklies, one of the largest publishing companies serving chambers of commerce, and with the Cygnus purchase, a significant player in the B-to-B publishing world. The company now owns more than 30 titles targeting B-to-B and consumer audiences around the country. For more information, visit www.southcomm.com.

We are excited to move into 2015 under the new corporate ownership of SouthComm and will continue to do business under the Cygnus brand. Our clients, subscribers, and partners can continue to expect the same level of service from the AviationPros brands. The future is extremely bright, and we look forward to strengthening our brands even further.

I am proud of what we accomplished in 2014 and am actually more excited with what we have in store for 2015 and beyond. We will continue to invest in our properties to bring you the best print and digital products in aviation. Now, what can we do even better in 2015? Please contact me any time with ideas, suggestions, or comments on how we are doing or what we can do to help support you and the industry at Brett@AviationPros.com.

Com' on Aboard!

A handwritten signature in black ink, appearing to read "Brett Ryden". The signature is stylized and written over a horizontal line.

Brett Ryden
Publisher, Aviation Group

Major Events in 2015

MARCH 10-11	GSE Expo Worldwide Las Vegas, NV
APRIL 13-15	GSE Buyers & Ramp Ops Conference Milan, Italy
APRIL 26-29	IATA 28th Ground Handling Conference Istanbul, Turkey
JUNE 7-10	AAAE 87th Annual Conference & Expo Philadelphia, PA
OCTOBER 8-11	inter airport Europe Munich, Germany
NOVEMBER 17-19	NBAA Business Aviation Conference & Exposition Las Vegas, NV

Business Buzz

JBT Corporation announced the formation of an equipment finance unit, JBT Equipment Finance LLC, which will offer various financing products in the US and many countries around the world.

Dnata invested more than \$148 million in 2014 to deepen its service offering in travel, cargo, ground handling and catering. The investments included enhanced cargo infrastructure in the UK.

During Airports Company South Africa's annual Featherer, **Swissport International** was awarded "Best Cargo Handler of the Year 2014." ACSA's Feather Awards are based on feedback from passengers and other airport users. This is the first time the award went to Swissport.

Last year, **Iberia Airport Services** handled more than 78 million passengers and 330,000 aircraft belonging to Iberia and another 200 airlines at the 41 Spanish airports where it operates. The largest growth in passenger traffic – more than 10 percent – was recorded at airports in popular tourist zones on the Mediterranean, such as Ibiza, Alicante and Malaga.

Using feedback from its customers, **JLG Industries, Inc.**, modified its ES and RT scissor lift lines. For exam-

ple, the platforms and deck extension surfaces for all ES model scissors have been upgraded to diamond plate steel to enhance strength, durability and repairability.

Southwest Airlines earned a record \$1.1 billion in 2014, marking the first time profits have gone over the \$1 billion mark. Its previous best year came in 2013, when its net income reached \$754 million.

Delta Air Lines oil refinery posted a \$105 million profit in the fourth quarter. Delta expects "a pretty healthy profit at the refinery" in the first three months of this year, said CFO Paul Jacobson.

United Airlines' fourth-quarter profit fell 80 percent due to severance costs and contracts that lost value as oil prices tumbled. Without those one-time setbacks, however, the airline's adjusted profit soared. Excluding one-time charges for hedging, severance payments and other things, United Continental Holdings Inc. earned \$2 billion in 2014, an 89 percent increase over the year before.

American Airlines reported fourth-quarter net income of \$597 million, reversing a \$2 billion loss a year earlier. Excluding one-time costs such as expenses to combine American and US Airways, the company earned a record \$1.1 billion, or \$1.52 per share.

A former employee for **Shell Pipeline Co.** who oversaw maintenance of a jet fuel pipeline near Mitchell International Airport pleaded guilty to failing to follow federal law in doing his job. That negligence led to the spill of 9,000 gallons of jet fuel in January 2012 that cost \$19 million to clean it up.

Dubai International Airport became the world's busiest airport for international passengers. Some 70.5 million passengers passed through the airport last year, up 6 percent from last year. The growth put Dubai ahead of London Heathrow for the first time on a full-year basis.

Frontier Airlines will outsource 1,300 reservations and airport operations jobs in Denver and Milwaukee.

Advertiser's Index

Advertiser	Page #	Engine Distributors	44	Kato Engineering	17	Premier Engineering & Manufacturing.....	19
A T Juniper	36	FCX Systems.....	39	Lektro	38	Rampmaster.....	29
AERO Specialties	26	Flightcom	33	Liquid Controls.....	22	Rotorcraft	31
Alberth Aviation.....	39	Fortbrand	39	Mercury GSE.....	40	Servicore.....	36
ASIG	25	Global Aviation Services	38	Mototok	35	Somerset Aviation Capital.....	39
Beta Fueling Systems	2	Global Ground Support...	34	Myslik	37	U.S. Airmotive GSE	23
BKW GSE Consulting	37	Gorman-Rupp Pumps	16	Page Industries.....	43	Wasp	7
Columbus Jack	21	Harlan	20	Par-Kan	9	Xced Aviation Services...	12
David Clark Company	13	Hobart	15	PF Fishpole Hoists	32		
Eagle Tugs	28	Hydraulics Intl.....	29	Phoenix Metal Products Inc.....	23		

In Denver, its main hub, 1,160 jobs will be terminated. The carrier said that its workers will be given preferential interview and hiring opportunities with Swissport USA and Sitel, which will take over the work.

Hartsfield-Jackson International Airport says it remained the world's busiest airport in 2014 after recording a record 96.2 million passengers. The world's busiest designation can be determined by two methods: either by the total number of annual passengers or by the total number of annual flights (takeoffs and landings). For much of the past decade, Atlanta has ranked No. 1 in both categories. But Chicago overtook Atlanta in 2014 in terms of flight operations. Atlanta's claim to the "world's busiest airport" title comes just two weeks after Chicago's O'Hare International boasted the same, saying it had knocked Atlanta out of the No.1 spot.

A total of 2,293 visitors joined leading airport suppliers in Singapore for the 4th edition of **inter airport South East Asia**. The event held over three days from January 21-23 saw visitors from 49 different countries attend the exhibition. A total of 175 suppliers of airport equipment and technology were exhibiting at the event representing 27 different countries. National Pavilions were a key feature of the event with significant national space taken by Germany, UK, France,

China and Finland. The show attracted a highly international audience with 42 percent of the visitors coming from overseas, and 97 percent of visitors were from the Asia Pacific and Oceania region. Airports, ground handlers and airport operators from 39 countries were also part of the exhibition visitor profile.

New Deals

Swissport International announced the expansion of its award-winning global airport lounge portfolio. Among the new openings includes the first **Aspire Lounge** to open in Africa at Jomo Kenyatta International Airport in Nairobi.

Worldwide Flight Services has signed a co-operative agreement with **ATA Italia** to market jointly their respective cargo, ramp and passenger ground handling services in Italy.

Swiss WorldCargo, the airfreight division of Swiss International Air Lines Ltd., and its partner ground-handling companies **Cargologic AG** and **SATS** have concluded a Memorandum of Understanding aimed at further enhancing their cargo handling and information services. The MoU outlines the basis for the partners' future collaborations and alignments in areas such as quality, e-initiatives, temperature-controlled transport management and specialized handling solutions.

Menzies Aviation announced a number of new deals:

- Signed a new three-year passenger and ramp services contract with **Qantas Airways** covering Auckland, Wellington, Christchurch and Queenstown.
- Extended existing business between subsidiary **Skystar Airport Services** and **Jetstar Airways** in Christchurch, Dunedin, Perth, Hamilton Island and Proserpine for a further three years.
- Won a three-year contract to handle **American Airlines** flights at Heathrow Terminal 3, the carrier's biggest single hub outside the US. Under the agreement, which will cover 6,500 turns annually, the ground service provider began pushback and towing services this month with ramp-handling commencing in May.
- Reached a new agreement with **Icelandair** also at Heathrow that extended services by five years.
- Renewed a partnership with **Norwegian Air Shuttle** in Gothenburg and also won a seven-year deal with the airline to provide ramp services in Oslo and Copenhagen. Menzies already provides services for the airline at Alicante, Amsterdam, Budapest, Los Angeles, Murcia, Nice and Orlando. All totaled, Menzies will handle more than 55,000 Norwegian turns annually, which equates to 46 percent of the airline's traffic in Scandinavia
- Following the success of its award-winning

Shongololo Lounge at Johannesburg's OR Tambo International Airport, Menzies opened another lounge at the airport that will be open to any passenger. The ground service provider was granted 10 operating licenses' by the Airports Company of South Africa in 2008.

Dnata won a ground-handling contract to handle all of American Airlines' flights at Zurich International airport. Beforehand, dnata serviced US Airways and with the merger and deal, dnata will handle more than 500 flights a year for the airlines. The ground services provider will support the airlines with ramp operations, deicing, arrival services, and its newly launched integrated clean and search service.

Çelebi Ground Handling has opened two business lounges for premium airline cardholders and VIP travelers at Budapest Ferenc Liszt International Airport, including a refurbished Çelebi Platinum Lounge.

UAS International Trip Support and **EPIC Aviation** announced the formation of a strategic alliance that will create opportunities for growth for both industry-leading companies and deliver added value to their customers. EPIC Cardholders, who currently have access to over 5,000 EPIC FBOs and merchants, will realize even greater access when operating internationally through the UAS network

The logo for WASP, consisting of the word "WASP" in a bold, blue, sans-serif font inside a white oval, which is set against a blue background.

GET MOVING

QUALITY. CAPACITY. SAFETY. SOLUTIONS.



STAIRS



DOLLIES



BAGGAGE CARTS



BELT LOADERS

In your business, movement is money — whether that's moving passengers or cargo. To keep moving safely, you need high-quality, low-maintenance, time-tested ground support equipment. Our full line is always ready to roll ... not to mention raise, haul and carry.

Stop by booth 409 at the GSE Expo Worldwide in Las Vegas March 10-11 to see how the world's largest non-powered ground support equipment manufacturer can keep you moving.

320.334.2868 // GSE@WASPINC.COM // WWW.WASPINC.COM

of 3,000 locations and regional operations teams. They will be able to purchase discounted fuel on credit using their existing EPIC Card account. UAS customers will now have priority access at all EPIC locations in North America, providing value for the trip support giant which completed over 100,000 movements in 2014.

Clariant acquired deicing specialist **Aerochem AB**, a privately-owned company based in Stockholm, Sweden. Since 2008, Aerochem has been Clariant's exclusive partner for selling aircraft deicing fluids to customers in the Nordic market.

Tronair Inc. and **WASP Inc.** announced the sale of WASP's commercial towbar and tailstand product line to Tronair Inc. The commercial towbar and tailstand product line supports all major commercial aircraft fleet types from single aisle aircraft, such as Airbus A320 and Boeing 737 family, through a range of wide-body aircraft including Airbus A330 and Boeing 767, 777 and 787.

Textron acquired **Douglas Equipment** from Curtiss-Wright Corporation. Going forward, Douglas Equipment will operate as part of Textron Specialized Vehicles GSE business, which also includes **TUC Technologies Corp.** Douglas will continue to operate from its facilities in Cheltenham and Poyle, UK.

Xcēd Aviation Services closed a major GSE lease contract with a leading global ground services provider, and a major domestic airline out of Dulles International Airport. The transaction includes more than 600 pieces of new and used GSE. The transaction also included Xced providing used GSE to the ground handler on an interim basis to provide a seamless integration of service under the new contract while the new equipment was being delivered over a two-month period.

BETA Fueling Systems announced it has been chosen by **ASIG** to supply an undisclosed number of BETA HT800 hydrant dispenser trucks for their operations at Hartsfield-Jackson International Airport and O'Hare International Airport.

DatcoMedia signed two new five-year contracts with JetBlue and Virgin Australia for all their GSE under-wing support to provide its maintenance software fleet-wide. DatcoMedia also signed a deal with NAPA and Delta to provide the EBis GSE Express One Click Parts System so all parts ordered for Delta's GSE Department will be ordered through EBis GSE Express and supplied by NAPA.

Vestergaard Company's Thailand, operation delivered a new VTS unit to Bangkok Airways. For Vestergaard, the sale was the first of a locally produced VTS to the Thai market

PEOPLE

The Executive Aviation FBO

in Nice, part of Swissport Executive Aviation and a joint venture of Swissport International and Universal Weather and Aviation Inc.



announced the appointment of **Rochdi Touri** as new FBO Director Swissport

Executive Aviation. Touri brings more than 20 years of experience working in the business aviation sector in the Middle East to the position. Prior to joining Swissport Executive Aviation, he held various senior management positions in the corporate and private aviation sector in Doha and Bahrain, and with Jet Aviation in Dubai. In related



news, **Rafael Fromentin**, Deputy FBO Director, will closely work with

Rochdi. Fromentin, who joined Swissport Executive Aviation Nice in 2006 as customer service agent, was promoted to deputy station manager Nice in 2012 and successfully led the business ad interim last summer season.

In other news, **Swissport International** named **Dirk Schmitt** its CEO Cargo Services for Germany and



Austria. He will be responsible for Swissport Cargo Services Germany, an operating unit of the ground ser-

vice provider that employs approximately 400 staff and runs cargo operations at nine airports as well as several subcontracted European stations. Schmitt joins Swissport from Luxair CARGO and has spent 10 years in the aviation and air cargo industry and held various senior management positions in Europe, including a senior management position at Fraport in Frankfurt.

Menzies Aviation appointed **Neil Thomas** its finance director. Thomas joins Menzies from Ricardo Plc where he was finance director for its largest division. He has additional international and commercial experience having held finance vice president roles at SPX Corporation and Federal-Mogul Inc.

Emirates SkyCargo, the freight division of Emirates, has appointed **Henrik Ambak** to the position of senior vice president, cargo operations worldwide. Ambak joins Emirates SkyCargo after having spent the past 27 years in various roles in the air cargo industry, having worked for companies such as Novia, CSLux and Cargolux Airlines. In his new role, Henrik will be responsible for the management of all Emirates SkyCargo's operations at its hub in Dubai, comprising the Cargo Mega Terminal at Dubai International Airport and Emirates SkyCentral at Dubai World Central, as well as the operations at the more than 140 outstations across the world.



Luggage



Potable Water



Refuse



Lav Service



Fueling



Lav Service

A Great Ground Support Team Gets them Flying

Your industry demands quality, versatility, and most of all, dependable products that make you a leader in today's competitive world.

Par-Kan knows that your customer's experience begins on the ground and what happens there assures them timely departures and arrivals.

Celebrating our 25th year in business, Par-Kan has developed its Ground Support Systems division into one of the best and most recognized complete ground support equipment lines in the industry.

The Par-Kan line consists of 20 towable carts in the following categories for all your specific needs.

- **Baggage • Potable Water**
- **Lav Service • Fueling • Refuse**
- **Cargo Trailers • Pallet Carts**

Par-Kan Company constantly strives to satisfy your requirements by providing the professional service, quality, value and performance that you can depend upon and trust.

Call today for our complete support line



Ground Support Systems



Lufthansa
Airbus A380-800
Frankfurt am Main

RAMPS TECHNOLOGY TO PREVENT INCURSIONS

Ground accidents cost the airlines an estimated \$10 billion in 27,000 incidents worldwide each year, according to the Flight Safety Foundation.

By Steve Smith



For busy airports with not a lot of room to maneuver, accidents involving ground equipment happen all too frequently. While most do not cause significant injuries or damage to aircraft or the ground equipment involved, they do often result in operational delays that can be expensive in and of themselves.

Of course, runway incursions always carry the risk of something more catastrophic. So avoiding these incursions has been a priority for the FAA, airport operators and, of course, GSE operators and the airlines.

Researchers at the FAA have been surveying the industry to find companies with interest and expertise in technologies to help prevent runway incursion.

Runway incursions describe dangerous situations at airports where an unauthorized aircraft, vehicle, or person is on a runway and threatens collision with aircraft landing or taking off.

The FAA issued a presolicitation almost two years for the Runway Incursion Prevention project, which seeks to gather information to conduct possible future research dedicated to airport surface safety as U.S. commercial aviation shifts to the NextGen air traffic management system.

FAA officials are considering a research

project that will lead to recommendations for systems that warn aircraft pilots in real time of potential runway-incursions without intervention from air traffic control.

Runway incursion prevention is a long-time priority of the FAA and National Transportation Safety Board. In 2000, the NTSB recommended a requirement for all airports with scheduled passenger service to install ground movement safety systems to prevent runway incursions.

These systems, NTSB said, should provide a direct warning capability to flight crews and demonstrate through computer simulations that the systems will, in fact, prevent these kinds of incidents.

Since then The FAA's Runway Incursion Reduction Program has conducted many research programs and simulations that included several prototype systems to prevent runway incursions.

Most of these projects have involved airport surface surveillance to identify and warn of aircraft or surface vehicles in the wrong places; safety logic to evaluate the interaction between aircraft and vehicles operating at airports; and visual or audible warnings to warnings and vehicle drivers of a possible runway incursion.

What are some of these systems? Here's a summary of some developments we've noted recently:

INFORM GroundStar

"Beacons," based on Bluetooth Low Energy, was a technology introduced in 2013 as the new standard for indoor tracking and proximity detection. Apple subsequently trademarked the term, "iBeacon," which further standardizes certain additional aspects of the Beacon Technology.

INFORM has applied Beacons to aviation and ground handling requirements by incorporating Beacon functionality to main product, GroundStar. Beacons can be placed at nearly any location indoors or on the apron and GroundStar is able to

What is a Runway Incursion?

ICAO formally defines it as "Any occurrence at an aerodrome involving the incorrect presence of an aircraft vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft."

The FAA also formally adopted this definition years ago.

Category A is an incident in which a collision is narrowly avoided.

Category B is an incident in which separation decreases and there is a significant potential for collision, which may result in a time-critical corrective/evasive response to avoid a collision.

Category C is an incident characterized by ample time and/ or distance to avoid a collision.

Category D is an incident that meets the definition of runway incursion, such as incorrect presence of a single vehicle/person/aircraft on the protected area of a surface designated for the landing and takeoff of aircraft, but with no immediate safety consequences.

These categories consider factors such as the speed and performance characteristics of the aircraft involved, the proximity of one aircraft to another aircraft or a vehicle, and the type and extent of any evasive action by those involved in the event.

Runway incursions can be further classified by type as Air Traffic Controller Operational Incidents, Pilot Deviations, or Vehicle/Pedestrian Deviations.

use this technology to track staff, GSE, or even passengers.

Beacons can be placed at fixed locations, such as gates and check-in counters, for example and the signal can be detected and identified by a staff member's smart phone within the Beacon's range, making it possible to pinpoint the staff member's exact location by their proximity to the Beacons.

Any GSE, dollies, tow bars, wheelchairs, catering trolleys, and others can be easily fitted with Beacons for tracking purposes: Beacons do not require external power and are small and cost effective. The Beacon sends out a signal, which is picked by a smart phone or stationary devices in proximity, allowing for subsequent calculation of its location using triangulation technology.

Exelis VMAT Devices

Last summer, the San Francisco Airport selected Exelis to provide its airport ground vehicle and aircraft surveillance solutions to enhance airport surface safety and efficiency. Exelis, will provide SFO with its Symphony® vehicle movement area transponder (VMAT) and Symphony® MobileVue™ solutions.

VMAT transmits position and uniquely identifiable call sign information for ground vehicles operating on the airport. Air traffic controllers, airport personnel and aircraft pilots can view and track the VMAT-equipped vehicles. They can also track aircraft operating near the airport and on its surface, providing a complete picture of airport surface activity. Five initial VMAT units have been deployed at SFO, with another 80 to be deployed.

"Adding these transponders will enable SFO to precisely track all vehicles on the airfield, reinforcing our overall commitment to safety and security," said Ivar Satero, SFO's COO. "We look forward to the benefits this system should provide to airport staff, during our runway construction and beyond."

SFO will complement its VMAT investment with Symphony MobileVue. Accessible via a tablet or smart phone, Symphony MobileVue is a browser-based, real-time solution that displays aircraft and vehicles on the airport surface and aircraft in the terminal area.

SFO is the sixth airport to deploy Exelis VMAT and Symphony MobileVue solutions.

I.D. System's AvRamp

I.D. Systems, Inc. executed a master license agreement and initial statement of work with a leading global airline to implement its AvRamp™ wireless vehicle management system (VMS) on aircraft ground support equipment and other airport vehicles. The agreement encompasses potential system deployments on more than 3,000 vehicles across as many as seven major U.S. airports.

The initial statement of work under the agreement, valued at more than \$500,000, calls for I.D. Systems to deploy its AvRamp VMS at one U.S. airport.

The deal for I.D. Systems followed a successful pilot deployment last year.

"We are providing a cloud-hosted version of AvRamp for the airline, reflecting the rapidly growing trend of implementing VMS as a service," said Kenneth Eh-

Discover what it's like to Xcēd.



Revolutionizing GSE leasing and asset management.

Whether you're looking for short- or long-term lease financing, traditional fixed-purchase option financing, or to trade in or refurbish your used GSE, Xcēd Aviation Services delivers unique end-to-end solutions that meet—and exceed—your specialized needs.

We're fast. We're flexible. And unlike banks and other lessors, we don't lend based strictly on your bottom line. Instead we partner with you to look at the big picture, including your underlying equipment assets.

We make it easier than ever for you to get the new or used equipment you need to help your business grow.

Contact us today to discover what it's like to Xcēd.

425 North Martingale Road,
6th Floor,
Schaumburg, Illinois 60173
844.213.9233
solutions@xcdaviation.com

XCĒD

AVIATION SERVICES

A Sasser Family Holdings Company

www.xcdaviation.com

AviationPros.com/company/11535271

rman, chairman and CEO. "This helps reduce the customer's upfront capital investment, decrease the customer's IT workload, and make customer support easier and more effective."

AvRamp is the airport version of I.D. Systems' patented wireless VMS technology. The system's ability to help control who drives what vehicle and encourage good driving habits can significantly enhance safety in an airport's area of operations. AvRamp can also decrease GSE fleet costs by reducing fuel usage and improving maintenance management, and improve operational efficiency through GPS location tracking, two-way text messaging, and asset utilization analyses

The system provides a wide range of safety, security and operational management functions for airport vehicles, including the following:

- An automatic, on-vehicle driver authentication system — which meets U.S. technical standards for airport access control — to secure equipment with direct access to aircraft and reinforce safety training requirements.
- An electronic vehicle safety inspection checklists to help expedite repairs and prevent unsafe vehicle operation.
- Vehicle speed management and impact sensing to help prevent vehicle accidents and provide analysis if and when accidents do occur.
- Real-time equipment visibility on a detailed software map of the airport to help optimize the dispatch and utilization of vehicles and operators.
- Geo-fencing (electronic boundaries that define "off-limits" areas) to mitigate vehicle runway incursions and prevent vehicles from entering unauthorized areas.

Airberlin Technik's Camera-guided Parking System

While not quite in the same league as the other concepts mention above, the airline's idea puts technology where it may count the most – at the gate.

Airberlin Technik announced last year plans to develop anti-collision monitoring technology for the maneuvering aircraft on the ground in collaboration with WheelTug plc and FTI Engineering Network GmbH.

The so-called "Pilot Ground Situation Awareness System" should enable pilots to maneuver unaided on the ground using cameras on the fuselage and vertical stabilizer as well as sensors placed on the wing tips. Until now, pilots have relied on either visual signals from the ground crew or push-back vehicles to move aircraft to and from the stand. The PGSA is

being developed as a retrofit and should primarily increase the efficiency of ground operations.

The development, design and certification of the PGSA will be done by airberlin technik and FTI, a specialist in camera systems. WheelTug will provide the new system to its customers along with its electronic nose wheel drive system. ✈️



WIRELESS

**IMPROVE EFFICIENCY DURING
GROUND SUPPORT OPERATIONS
WITH DAVID CLARK WIRELESS SYSTEMS**

David Clark Company Series 9900 Wireless Headset Communication Systems provide clear communication, greater mobility and enhanced efficiency for ground support crews during ramp and maintenance operations. Rugged components, including wireless gateways, belt stations and headsets, allow communication without being tethered to the aircraft or equipment, up to 300 feet from the controller or gateway.

For more information
call **800-298-6235** or
visit **www.davidclark.com**


Made In USA

© 2015 David Clark Company Incorporated
© Green headset domes are a David Clark registered trademark.
WWW.DAVIDCLARK.COM

AviationPros.com/company/10017163

Fraport Goes Electric At Frankfurt

By Steve Smith



Flying begins on the ground. That's a great way of promoting the ground handling industry. Without the ground support equipment no suitcase would make it to the conveyor belt, no passenger would get to the plane and no plane would have a full tank before departure.

Electric GSE wasn't anything new to Fraport. But in 2012, the company made a concerted effort to electrify its fleet with the plan to remove 500 tonnes of CO2 annually when compared to operating diesel equivalents.

PHOTO: FRAPORT

Russian Government Toughens Control Of Ground Handling Activities

by Eugene Gerden

The Russian government plans to design a package of measures, aimed at toughening the control over the ground handling activities in national airports and to design new standards for them.

The new measures are a response to an aircraft crash in Moscow on Oct. 20 last year, which resulted in a death of Christophe de Margerie, the chairman and CEO of French oil corporation, Total S.A, after the executive's aircraft hit a snowplow on take-off from the Vnukovo International Airport. Three members of the crew also died.

According to Arkady Dvorkovich, Russia's first deputy prime-minister, who oversees the project, implementation of the new measures is an acute need, which should reduce a stress load on dispatchers and will help to avoid their further operation errors. At the same they should improve the quality of ground handling services, provided in the national airports, as well as their safety. Among the new requirements are mandatory equipment of all the ground handling equipment in national airports with ignition interlock devices, (a mechanism that prevents the engine from being started in the case of blood alcohol concentration of the driver), as well as GPS and GLONASS systems.

In the case of GPS and GLONASS systems, it is planned that they will be installed in all vehicles in national airports, including cars of technical services and buses as well as snow-removal machines and fire engines, as

well as roadway scanning systems, that will allow dispatchers to control all the movements on landing field and close to it in the conditions of poor visibility.

It is also planned that all the Russian airports will be equipped with additional multilateration systems and new generation of radio detectors.

In addition to technical modernization, the Russian government plans to significantly toughen requirements for the training of personnel of local ground handling companies and to increase their salary, with the aim to make the jobs more attractive for potential applicants.

Finally, there are also plans to introduce a new modern system of information management in all Russian airports and to computerize all the operations of ground handling.

DEMONOPOLIZATON

At the same time, the Russian government plans to continue the process of demonopolization of the national industry of ground handling services. Despite all the efforts, which have been taken by the Russian government, the Russian ground handling industry remains highly monopolized, which is reflected by the lack of independent companies.



Christophe de Margerie

We'd very much like to take credit for it, but we found the phrase on the Fraport website while we researched E-Port, an effort undertaken in part by the ground service provider at the Frankfurt Airport to cut down on emissions by using more electric ground support equipment.

Superlatives such as "busiest airport" don't quite do justice like the annual figures about ground handling at the airport:

- Two million tons of cargo.
- 58 million passengers.
- 100 airlines.
- 295 destinations.

Moving that much product and that many people requires a lot of ground support equipment. The ground service provider has certainly operated many types of electric ground support equipment in the past. In 2012, however, the company made a more concerted effort to electrify its fleet with the plan to remove 500 tonnes of CO₂ annually when compared to operating diesel equivalents.

Fraport identified several general ar-

reas to incorporate electric GSE:

PASSENGER STAIRS: Electric stairs allow passengers to enter and leave the airplanes of the Boeing 737 and Airbus A320 class, with the batteries being charged by solar panels on the roof. The reduction in CO₂ and exhaust gases is obvious, but maybe greater than you may think. The reason: Due

to the short distances, diesel-powered equipment had engines to run almost constantly, particularly in cold weather. In cases of low solar radiation, the batteries can be charged at regular stations. Even the lighting of the stairs utilizes very economical LEDs.

CARGO LIFTS: Heavy-lifting pallet forklifts ensure the food and baggage

Total cost of the project is not disclosed, but, according to some sources close to the Russian Ministry of Transport, it may reach \$300-400 million. It is planned that a significant part of funds will be invested in the purchase of new ground handling equipment for national airports, mostly from abroad, as the domestic producers are currently unable to meet the local demand. It is also planned that execution of all the ground handling activities in Russian airports will be controlled by the experts of the Russian Federal Transportation Inspection Service and Federal Air Transport Agency. Implementation of the project will be personally controlled by Russia's Prime Minister Dmitry Medvedev. 🌐

Eugene Gerden is an international freelance writer covering the global aviation and ground support industry. He writes for numerous industry publications and can be reached at gerden.eug@googlemail.com.

INTRODUCING A WHOLE NEW PHILOSOPHY OF SOLID STATE FREQUENCY CONVERTER DESIGN



Aircraft are getting bigger, but as exciting as these new giants are, we all know that "bigger" also means "more power." That's why our R&D team has created the Hobart PoWerMaster® 2400. With its future-proof 400% overload capacity, Plug & Play voltage calibration and exceptionally clean power, the 2400 represents a whole new philosophy of customer-centric ground power equipment design. And we can't wait for you to see it.

Discover the Hobart PoWerMaster® 2400 at www.ITWGSE.com.

Headquarters: 11001 US Hwy.
41 North Palmetto, FL 34221 U.S.A.
Phone: 941.721.1000 • Fax: 941.721.1087
sales@itwgse.us • www.itwgse.com



PLUG & PLAY
UNIQUE VOLTAGE QUALITY

HOBART is part of ITW GSE—the world's leading supplier of ground support equipment.



It's all about connections

AviationPros.com/company/10017414

Visit us at GSE Expo Booth #301



Aircraft towing with the TaxiBot was one of the original purposes of the E-Port project. Recently, Fraport also started to test a hybrid electric tractor developed by Kalmar Motor AB.



E-PORT AN Elektromobilität am Flughafen Frankfurt

The E-Port program is a joint effort that also includes Lufthansa and the German government.


is able to board aircrafts, carrying loads of several tons at a time and consuming significant quantities of fuel. However, Fraport is now making use of zero emission. electric drive machines, able to stem loads of up to seven tons to a loading height between 1.90 meters and 2.60 meters with a speed of up to 15 km/h.

AIRCRAFT TOWING: Maybe the largest source of wasted jet fuel is the traditional notion of taxiing an aircraft under its own power. While aircraft makers have made their new planes much more fuel-efficient that efficiency comes in the air on the tarmac. In turn, diesel-powered tractors can certainly do the job, but the 2,000-horsepower engine required to tow an aircraft also produce a fair share of CO₂ emissions.


Hence, Fraport's use of the TaxiBot, a piece of equipment we've written about before after being invited to France to witness it in action.

TaxiBot, a semi-robotic pilot-controlled vehicle, is designed to transport airplanes from airport gate to the runway and back, without using the airplane's engines. Since 2009, Both TLD and IAI, in cooperation with Lufthansa LEOS, have been developing the TaxiBot, with the support of both Airbus and Boeing.

On a related note, the Boeing 737 is now officially certified for TaxiBot dis-



GRpumps.com



PUMPS FOR FUEL TRANSFER

AVIATION REFUELING TRUCKS ■ GROUND SUPPORT FUELING STATIONS

Gorman-Rupp has been a part of accelerated aircraft fueling and defueling for over 50 years. We have been able to keep pace with technology and design in this ever-changing world of faster, more complex aircraft.


Our original designs have set the standard around the world with thousands of units operating in the field for virtually all major airline and fuel suppliers.

We offer a complete line of ground service pumps and related equipment, consisting of standard centrifugal and self-priming pump models, directional valves, educators and a host of other piping accessories.

Contact Gorman-Rupp today to see how we can fulfill all of your aviation fueling needs.

GORMAN-RUPP PUMPS
P.O. Box 1217 ■ Mansfield, Ohio 44901
PH: 419.755.1011 ■ FX: 419.755.1251 ■ grsales@gormanrupp.com

502 © Copyright, The Gorman-Rupp Company, 2015
Gorman-Rupp – Mansfield Division is an ISO 9001:2008 and an ISO 14001:2004 Registered Company



AviationPros.com/company/10208885



ferry Fraport ground staff around the airport. A fleet of Mitsubishi i-MiEV (MiEV is an acronym for “Mitsubishi innovative Electric Vehicle”) is a five-door hatchback electric car produced by Mitsubishi Motors. All the car needs to recharge is a cable with a standard 2-pin Europlug. Connected to a conventional 233 V socket, the battery can be fully

charged in six hours.

Fraport isn't alone in its efforts. The E-Port program is a joint effort that also includes Lufthansa and the German government. Just last year, the E-Port project won a GreenTec Award, which is among the world's largest independent environmental and economic prizes. ✈️

patch towing, by the European Aviation Safety Agency (EASA) and the Civil Aviation Authority of Israel (CAAI). The Supplement Type Certificate (STC) was issued for Boeing 737 aircraft.

In addition, Kalmar Motor AB is currently completing construction of the world's first hybrid electric tractor designed specifically for wide body aircrafts. The TBL 800 eSchlepper began testing last January with partner Lufthansa LEOS.

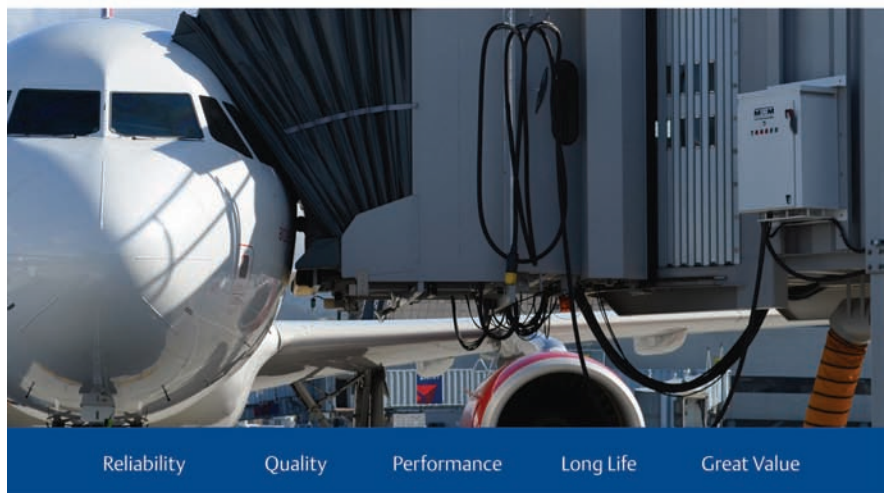
This hybrid tractor combines a lithium-ion battery system with a diesel engine. The TBL 800 has its own on-board charger, so it simply needs to be hooked up to an electric point in the tractor parking area or workshop. The diesel engine is used only for charging, to ensure that the battery never becomes fully discharged, and is expected to run for less than 30 percent of the time.

Other electric vehicles in operation under the E-Port project include cars to



Other vehicles in operation under the E-Port project include electric Mitsubishi i-MiEV to ferry Fraport ground staff around the airport.

400 Hz Ground Power Solutions



KATO Engineering and MCM

Partners for over twenty years to provide innovative and reliable solutions for your 400 Hz ground power support needs.

KATO Motor Generator Sets

A quality American made product you can trust to last, along with having the security of knowing we stand behind our products.

MCM 400 Hz System Supplier

MCM proudly features Kato motor generators for 400 Hz central systems in all the assembly facilities of the US's largest commercial aircraft manufacturer, major airports and military installations in the US and around the world.

To discover more about the solutions you want, stop by

MCM Booth # 317
GSE Expo Worldwide

Everything you need to make it happen - one simple partnership - one solution.



For product information:
www.mcmeng.com
www.katoengineering.com



The Emerson logo is a trademark and service mark of Emerson Electric Co. Kato Engineering ©2013 Kato Engineering

EMERSON. CONSIDER IT SOLVED.

AviationPros.com/company/10453646

Safety On The Tarmac

Attention to detail, careful training and a focus on preventative maintenance can reduce, if not eliminate, injury to personnel and damage to equipment on the ramp.

By John Hoeper

Movement is a beautiful thing. Airport personnel lift, shift and maneuver countless pieces of cargo and luggage daily to keep packages and people moving from point A to point B. But the process isn't flawless. With so much movement, there's ample chance for equipment damage or bodily injury.

Day after day, airport personnel expose their hands and fingers to pinch points, and put their backs through lots of twisting, lifting and straining. On top of that,

equipment can fail, break away and become a hazard to employees or aircraft.

In other words, accidents can happen.

This is what makes prevention so

important. Most companies have stringent safety rules and guidelines that go above and beyond what's mandated. They know they're liable and they care about their employees, so they adopt specific requirements to protect employees and others, as well as their reputations. These safety guidelines slightly differ from company to company, based on differences in operations.

After more than 35 years of working with ground support equipment and the



Crew access stairs with automatically locking X-braces increase safety by eliminating a task that could be forgotten by inexperienced ground crews.



Dollies that incorporate casters with 360-degree rotation allow ground support personnel to easily rotate containers in any direction without bending or stooping for easier unit transfer.

people who use it on a daily basis, we've identified three of the most common causes of injury in ground operations: overall ergonomics, misuse of equipment and lack of maintenance.

Let's break these down for a better idea of what to look for to prevent injuries and damage on the tarmac.

ERGONOMICS

Ramp agents lift and twist all day while loading and unloading baggage, luggage or freight. This is why transfer points and heights have become an industry focus. Equipment manufacturers hone in on target heights and dimensions, aiming for heights of about 21-24 inches (53-61 centimeters) so the majority of operators can keep their backs straight when lifting and transferring to and from conveyors or baggage handling systems.

Even little tweaks, down to the rollers or casters, help ground support crews transfer materials more easily. For example, if a company can only perform side load transfers, rollers might be best because it's easier to move heavy loads over rollers. But rollers limit movement. Once a container is on the dolly, it is limited to simply forward and backward motion. Casters, on the other hand, are multi-directional, so operators can rotate containers in any direction once it is loaded, relieving stress placed on the operators, accommodating applications where that is required.

Beyond the movement of cargo, the International Air Transport Association carefully spells out restrictions on sharp edges and pinch points. The association requires no more than a 1/4-inch gaps between belted conveyors, pulleys and rollers to protect hands and fingers from injury.

Attention to detail on the most accessed parts, such as towbars, can impact the safety of employees. Addi-

MODEL MT65P21 "EXPRESS HEAT" DEICER

The "Premier" Model MT65P21 "Express Heat" Deicer utilizes the Versalift Extended Reach Model VST6000 Aerial lift, providing 65' of working height. More important, the MT65P21 incorporates the **Premier** boom forward design to provide the maximum amount of reach off the front of the vehicle utilizing the rapid deploy down riggers. During mobile operations, side reach of 34' and vertical reach of 46' can easily be accomplished.

Premier
ENGINEERING & MANUFACTURING, INC.
Simple, Dependable and Affordable

"Express Heat" reliability, easy access maintenance, extend reach capabilities, and lowest cost of operation is why we are the "Premier" deicer manufacturer.

Tel - 715-735-6440, www.premier-deicers.com

AviationPros.com/company/10017675

Visit us at GSE Expo Booth #401

RAMP SAFETY



tionally, towbars can feature a toe guard and a towbar hold-up option. Toe guards help protect an employee's foot if the bar drops, they also keep the lunette towing eye from becoming degraded from dragging on the ground.



(Left) Always follow the capacity limits on each baggage cart's label to avoid potential damage or injury. (Right) Look for spring-loaded towbars that won't hit the ground to minimize damage to the lunette/towing eye while helping protect ground support personnel from foot injuries.

HARLAN GLOBAL



HTSBEL TransConE Cargo/Baggage Tractor, HLE Charger Cargo/Baggage Tractor, Freedom Hybrid Cargo/Baggage Tractor and HBLE Express Belt Loader — Now available with Lithium Ion Battery Packs!

For more information, make plans to visit us at the **GSE EXPO, Booth 700** or call us at 800-255-4262 or 913-342-5650 and visit our website at www.harlan-corp.com

A WORLD OF PARTS



Bearings, Belts, Brake drums, Brake shoes, Brake Pads, Brake Calipers, Drive Train components, Cables, Fuel caps, Gaskets, Horns, Light Assemblies, Master Cylinders, Misc. Engines Parts, Steering Assemblies, Rollers, Pulleys, Tie Rods & Tie Rod Assemblies, Water Pumps, Personalized Packaging & Labeling and a Whole Lot More!

Contact Harlan Today - (800) 255-4262 • sales@harlan-corp.com • www.harlan-corp.com

The towbar hold-up has become increasingly common in the past five years with many companies standardizing the design. The spring-loaded towbars hold the entire towbar off the ground when it is dropped. This ensures optimal safety for ground support personnel while also eliminating potential towbar damage.

EQUIPMENT MISUSE

Airlines commonly require extensive equipment manuals, including operators' manuals, training manuals, and train-the-trainer documentation. Despite having a wealth of training materials from manufacturers on product maintenance, pinch points, transfer areas and capacities, it's not unusual for personnel to miss, or misunderstand, portions of the training. This can lead to painful mistakes.

Manufacturers should visit sites to see how an operation works before designing new equipment, ensuring the best equipment for the particular operation. These manufacturers know that it's good to check in on a company's maintenance routines and facilities, to see the equipment at work in their environment and identify weak points to improve.

For example, ground support personnel may be positioning a ULD in a less than ideal formation or transporting a dolly or other piece of ground support equipment with a forklift in a way that will eventually damage the equipment. Small modifications or slight re-engineering could boost the efficiency and safety of personnel using the equipment in an adapted way. Manufacturer representatives who are willing to spend quality time on site to examine the process will recognize the misuse. That person can then make suggestions for how to enhance a product specific to that operation, update a proposal drawing for the engineers to go over, and devise a service bulletin.

Even simple things, such as adding a bolt, protector plate or tineways (forklift pockets), will boost the unit's longevity and reduce repairs. This is why it's important to find a manufacturer that offers customization and is able to quickly deliver special requests.

One of the most common types of equipment misuse is overloading. Over-

loading a baggage cart, for example, can increase the risk of the unit rolling over and possibly causing injury. A unit's capacity needs to be labeled properly and employees need training stressing the importance of never carrying more than the unit specifies.

Pushing the limits of equipment on an airport or cargo ramp is not a good

idea. In the same regard, upkeep of the product cannot be ignored, either.

LACK OF MAINTENANCE

We've all squeezed out a few extra miles on our car before getting an oil change. Maybe we don't check tires as often as we should and, for the most part, we prob-

SINGLE ACTING ALLIGATOR AXLE JACK

- Our Single-Acting Alligator Axle Jack is designed for normal Wheel/Tire and Brake Changes. The cylinder head is mounted on a T-frame with three casters and comes with Manual and Air Powered Pumping Units. Also available with an Optional Pressure Gauge Assembly.

- The Evac-U-Tract feature utilizes the air or nitrogen supply that is being used to raise the jack. Once activated, the air supply automatically retracts the ram back down inside the cylinder assembly. This retraction will facilitate the easy removal of the axle jack out from under the aircraft jacking point. This same retraction permits the use of the cylinder rain cover which protects the cylinder assembly from physical and environmental damage.



**MODEL #5007-56
50 TON CAPACITY**



ISO 9001:2008

Columbus JACK/Regent
"The Strength of Experience"

2222 S. Third St., Columbus OH 43207
Ph: (614) 443-7492 Fax: (614) 444-9337

sales@columbusjack.com ■ www.columbusjack.com

AviationPros.com/company/10134078

RAMP SAFETY



High-tech equipment, such as this plasma laser cutter, ensures consistently precise components for safer ground support equipment.

ably don't keep close tabs on our fluid levels. Despite all that, things seem to generally work OK.

Don't build off the lesson your car might give. You can only go so far before damage sets in. And, in a cargo ramp or an airport setting, the chance of someone getting hurt increases. Consider what can go wrong with ground support equipment: brakes can be out of adjustment, towing eyes can wear, springs can stretch, rust can form. Now, consider the impact of those problems.

Many places do a maintenance once-over each year. That's not enough. What's worse, many only service equipment once it has been red-tagged and is completely out of service. When an operation uses the equipment to that point, there is more chance for failure that could result in expensive damage or dramatic injury.

Some manufacturers build their products with a longer intended lifecycle. They use high-grade components and thicker steel, and they test the products intensely to identify any weak points. While this kind of manufacturing greatly



FlightConnect

SIMPLICITY IN INTO-PLANE FUELING

FlightConnect is an aviation fueling system that captures into-plane fueling data on the tarmac and wirelessly uploads it into a spreadsheet (or another type of accounting software) in your office.

- **SIMPLE**

Fuelers follow guided, configurable fueling screens. Data uploads into accounting software sorted and indexed.

- **SINGLE-SOURCE**

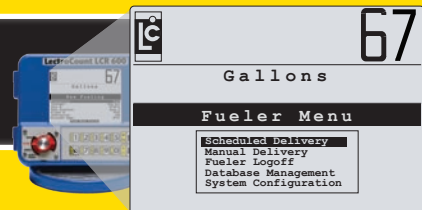
No external device required. All fueling commands on LectroCount LCR 600.

- **STREAMLINED**

Automated data capture and wireless data transfer.

- **SAVINGS**

No "per transaction" fees applied.



LCR 600 FlightConnect Fueling Screen

"It truly couldn't be any simpler."

Joe Freeman, Facilities and Maintenance Manager for Million Air of Addison Airfield

Spreadsheet with FlightConnect Fueling Data

ID	Date Time	Owner	Unit #	Fueler	Reference	Begin Delivery
1365931	09/22/14 11:17:35	LC	1	00	09221206	09/22/14 11:17:00
1365932	09/22/14 11:56:31	LC	1	00	09221379	09/22/14 11:56:04
1365937	09/22/14 14:54:04	LC	1	00	09271003	09/22/14 14:53:23
1365938	09/28/14 14:58:19	LC	1	00	09281004	09/28/14 14:57:04
1365939	09/28/14 15:24:19	LC	1	00	09281005	09/28/14 15:24:03
1365940	09/28/14 15:24:52	LC	1	00	09281006	09/28/14 15:24:25
1365941	09/28/14 15:25:32	LC	1	00	09281007	09/28/14 15:25:11

Come visit us in Booth 312 at the 2015 GSE Expo and experience FlightConnect

M-80 Positive Displacement Flowmeter with LCR 600

Simplify your fueling operations with FlightConnect. Contact us at lc-info@flightconnect.com or 847-612-6396



helps to avoid premature failure, routine maintenance should still be a priority.

Manufacturer manuals contain information on maintenance requirements, which should be followed routinely rather than read only once equipment breaks down.

PREVENTION

Human error exists in any industry. IATA and equipment manufacturers do what they can to make equipment and processes as foolproof as possible to overcome the element of human error. For example, IATA requires equipment labels to indicate the capacity and dangers, such as pinch points or areas on ramp equipment not intended for walking, to ensure safety.

Some companies take it further, specifying equipment to be manufactured with more visual reminders, such as manually engaged locking mechanisms on vertical restraints so operators have a reminder of a task they need to perform.

Yet other companies prefer to have GSE manufacturers use a more automated design. So, in the same example as above, the manufacturer would use spring-activated locking mechanisms to avoid an operator needing to remember to engage the mechanism. There's no right or wrong, necessarily, but rather finding a product that suits specific needs, situations and employees.

Paint and warning decals are another way manufacturers can indicate dangers or reminders. A safety yellow or red applied on certain warning areas (towbars, hitches, pallet stops) is a great visual aid to remind people of stored energy, large springs, or potential for injury if not used cautiously or properly.

There is clearly a lot of room for error surrounding ground support equipment. However, with attention to detail, careful training and a focus on preventative maintenance, a lot of equipment damage or injury to personnel can be reduced, if not eliminated. Time and attention is a small price to pay for safety on the tarmac. ✈️

About the author:

John Hoepfer is the vice president of engineering for WASP Inc. He has more than 27 years of experience in ground support equipment design and manufacturing.

NEW CRUSH PROOF LAVATORY DUMP HOSE

You can Run over it, Smash it or Drag it and STILL USE IT!

CRUSH PROOF LAV HOSE

WATER HOSES, COUPLINGS AND FITTINGS

LAV COUPLINGS AND FITTINGS

GSE PRODUCTS

GSE PARTS

ATTACHABLE PLUGS AND RECEPTACLES

AC/DC CABLE PROTECTOR COVER

JET STARTER HOSES AND COUPLINGS

NEW FULLY WELDED PCA HOSE

SERVING THE GSE INDUSTRY FOR OVER 50 YEARS

HOSES: LAVATORY DRAIN-BLUE & POTABLE WATER-PCA-AIR/HEAT-JET STARTER
 COUPLINGS FITTINGS AND CONNECTORS • CASTERS • WHEEL CHOCKS • DAVID CLARK
 LAV METERS • PARTS FOR TUG • HOBART • TRILECTRON • PARKAN • FMC • CLYDE

CONVEYOR BELTS • SAFETY VEST • DIRECTIONAL WAND • TOW BARS • CARGO NETS
 STRAPS • TIEDOWN RINGS • MATERIAL HANDLING AND MORE



U.S. AIRMOTIVE GSE
 YOUR ONE STOP SOURCE SINCE 1963

MAIN FLORIDA OFFICE

P.O. Box 660474
 Miami Springs, Florida 33266
 Tel: 305.885.4992 Fax: 305.885.9537
 Email: sales@usairmotivegse.com

CALIFORNIA SALES OFFICE

2110 Artesia Blvd. # B209
 Redondo Beach, California 90278
 Tel: 310.327.8407 Fax: 310.327.8439
 Email: paula@usairmotivegse.com

www.usairmotivegse.com

AviationPros.com/company/10017906

Visit us at GSE Expo Booth #711

WE HAVE STAIRS

FROM RJ TO A340 CHASSIS MOUNTED AND TOWABLE



**PNX-CMPPS96/150
 NARROW BODY STAIR**



**ALSO:
 LAVATORY AND WATER SERVICE
 CARTS & TRUCKS
 MAINTENANCE LIFTS
 BELT LOADERS**



3000 INDUSTRIAL AVENUE 3
 FT. PIERCE, FL 34946
 PHONE: (772) 595-6386 / FAX: (772) 595-6389
 EMAIL: phoenixgse@earthlink.net
 WEBSITE: www.phoenixgse.com

AviationPros.com/company/10117661

How To Deal With Fatigue On The Ramp

There are two steps to managing fatigue – proactively to try to avoid ramp agents from suffering fatigue in first place, and then reactively when they are showing signs of fatigue.

By Ian Bell

We have all seen the road advertisements that highlight fatigue. But if this is a risk on the roads, why would it not be a risk at work?

EDUCATION

IDENTIFY POTENTIAL FOR FATIGUE

SAFETY MANAGEMENT SYSTEM



FATIGUE POTENTIAL ASSESSMENT

Well, let me tell you it is a very real risk at work. However, in all but a few specific industries, it gets little recognition and managers and supervisors are rarely trained to be able to recognize it or manage it. They need to be.

Let's start by identifying what causes fatigue. Fatigue is simply not enough sleep! Nothing more.

This is generally referred to as "sleep debt." Just like a bank overdraft or a mortgage where the only way to reverse the debt is to pay in funds, fatigue, then needs to clear a sleep debt, with sleep. Some road safety advertisements talk about a power nap. This is a brief sleep of, say, 15 minutes which lowers fatigue enough to help a driver stay alive to get to a safe location nearby where they can sleep. It is not designed to allow someone to drive for another four hours or more. It does not compensate for a good night's sleep.

Fatigue is more than just feeling of being tired and drowsy. It is exhaustion – either mental or physical – that impacts adversely on a person's ability

to work safely. While they may not appreciate or see that they are fatigued, generally, someone in the workplace has noticed a change. This can be as simple as someone making a mistake that they would not normally make in a routine that they have carried out many times. Or not paying attention. Or "zoning out." Or simply falling asleep.

Fatigue is a health and safety risk in the workplace. Both the worker and the employer have a responsibility to manage fatigue in workers within their duty of care.

The employer must, as far as is reasonably practical, ensure that workers are not exposed to health and safety risks. This is a very encompassing concept, which is why organizations have safety management systems in place that deal with fitness to work among

MITIGATION STRATEGIES AS SHOWN IN SMS

LOW:
OK TO CONTINUE

MEDIUM:
MINOR ACTIONS REQUIRED

HIGH:
MORE SEVERE MITIGATION REQUIRED

EXTREME:
MITIGATION ACTIONS UP TO STAND DOWN

other elements.

The employer must provide a safe workplace, must maintain a workplace free of health and safety risks and must monitor the health of the workers and the conditions of the workplace. Now here is the difficulty – “the duty of care that employer and their representatives have is not removed by a worker’s preference for a certain shift pattern for social reasons, their willingness to work extra hours or come to work fatigued. The employer and their representatives must adopt a risk management strategy to manage risk in these circumstances,” according to Worksafe Victoria (Australia). Just as they do with all other risks in the business.

The worker (and yes, we are all workers!) must take reasonable care of his or her own health and safety and must not adversely affect the health and safety of others. They must adhere to reasonable instructions from their employer and co-operate with any fatigue management processes and procedures the organization has. Every worker has a duty to inform their supervisor if they are feeling fatigued so their supervisor can assess the tasks and/or hours allocated and review how to manage the worker within the fatigue risk management processes they have. Just as they do with all other risks that they may be exposed to.

Shift work is difficult to manage while trying to integrate with the social lives we all crave, generally with non-shift workers. This is a challenge for shift workers, but one they need to take into account to ensure that they can get enough good quality sleep.

The company directors and senior managers also have to exercise due diligence to ensure the workplace is free from health and safety risks and that such risks are understood and managed appropriately. For fatigue, this generally means ensuring that there are good processes and training in place to identify fatigue, monitor it and manage individuals and situations accordingly. Just as they have to do with all other risks in the business.

‘DUTY OF CARE’

Not surprisingly, we all have a “duty of care” to ensure – to the best of our ability

– that people work safely at work and also get to and from work safely. It is not enough to care for people at work and allow them to get in a car and attempt to drive home if they appear to be unfit to do so.

So, by now, you should be realizing that this is just another individual and business risk, but one that probably has not had a lot of focus in many industries

to be properly managed. The good news is that this problem is actually not that hard to manage.

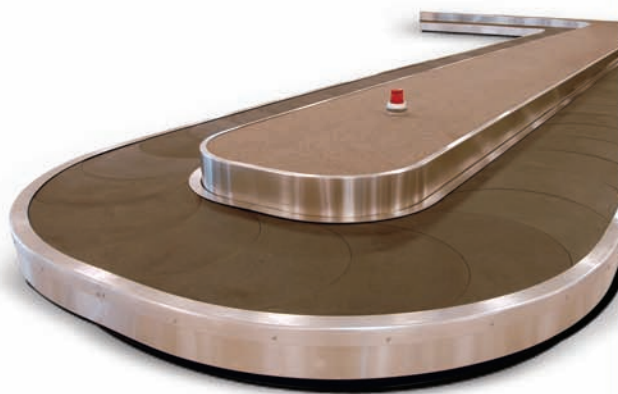
In the aviation industry, fatigue risk management is very evident with flight crews, but not so evident in ground crews. Now when I conduct an incident investigation, I consider fatigue as a possible factor, just as I do competence, maintenance, design, behaviors, etc.

EXCEPTIONAL[®]

SERVICE FROM THE GROUND UP.

Professionals that get the job done right.

From conducting routine maintenance to responding immediately to a mechanical emergency, when time and reliability are critical, you can count on ASIG to deliver. Our Technical Service department is made up of a team of highly skilled and trained specialists. Because programs and procedures are only as effective as the people providing the actual services, ASIG emphasizes hiring the most qualified electricians, mechanics, HVAC and technical specialists. Proprietary asset management software and national bulk purchasing programs for parts and supplies allow us to provide timely, efficient and reliable service while maximizing our customers’ budgets. Our programs cover routine and preventive maintenance for fleet vehicles, GSE equipment, baggage handling systems, jet bridges and other airport facility equipment such as escalators, moving sidewalks, terminal doors and more.



For professionals that get the job done right,
call or visit us online today.

407.648.7373 • www.asig.com

Fuel | Ground | Technical

AviationPros.com/company/10017012




AIRCRAFT SERVICE INTERNATIONAL GROUP[®]
BBA Aviation
© 2012 ASIG

GSE Maintenance | Jet Bridges
Deicing | Baggage Systems
Fleet Maintenance | Airport Equipment

BEST PRACTICES

Understanding fatigue and how to manage and monitor it is part of the proactive controls that can be implemented to achieve improved safety performance.

How should we manage fatigue? There are really two steps – how to manage proactively to try to avoid workers from suffering fatigue in the first place, and how to manage reactively when workers are showing signs of fatigue.

The first role is somewhat easier than the second.

MANAGING PROACTIVELY

Managing fatigue proactively is about setting up the workplace appropriately including the following:

- Resourcing it properly (for normal operations and conditions).
- Arranging the work properly (setting up shift lengths and patterns so that people have reasonable sleep opportunities).

- Educating workers in fatigue, the responsibilities and about getting enough sleep, showing the impacts of not getting enough sleep without being disturbed and reporting to their supervisor when this is not the situation.
- Having a safety management system that includes fatigue risk management as part of the overall fitness to work process.
- Consult and, where necessary, guide discussions on shift roster patterns to prevent “short turnarounds” so that days off can be maximized because this may create a roster that results in greater fatigue.

MANAGING REACTIVELY


Managing fatigue reactively (i.e. when a worker comes to the supervisor informing him/her that they feel fatigued) is about having procedures or protocols in place to accomplish the following:

- Encourage workers to report potential fatigue (i.e. “I did not have a good night last night. I was up with my ill daughter for a lot of the night.”)
- Assess the potential for fatigue in workers (by noting changes from normal) and performing a more formal quantitative assessment when required.
- Manage the extra hours or call-ins and the allocation of this amongst individuals noting that there are generally some individuals who may want to work a larger number of extra hours to another person.
- Use a fatigue management process to assess the level of potential fatigue and implement suitable management strategies – depending on the level of fatigue, this may be as simple as having a cup of coffee; allocate a buddy or make others in the work team aware so they can help; reallocate safety critical activities to others in the group; or in extreme cases, stand the person down so they do not harm themselves or others and ensure they have a safe way of getting home to sleep.
- Have systems in place to deal with people who seem not to be able to manage their personal life so that it impacts on their work hours because they may also be impacting on the safety of their work colleagues. ✈

What a turn-on!

Discover the clean power of Eagle electric tugs



Effortlessly handle aircraft up to 165,000 lbs. with Eagle Tug's innovative eXL-16 and eTT series electric tugs! All-wheel drive, precision 4-wheel steering, vehicle inching controls at both hitches and seating for three. 



+1 208-378-9888 | www.aerospecialties.com 



About the author:



Ian Bell, director of Global Safety Partners, has a long history in the aviation industry first with Trans Australian Airlines and Australian Airlines (the forerunners to Qantas). He spent 11 years in airlines' operational roles before joining the Shell Company of Australia where he spent 23 years in a range of senior management roles including having primary operational responsibility for the Shell Aviation operations throughout Australia and Papua New Guinea. Ian has also been involved with the Australian Aviation Ground Safety Council, which is intently focused on improving ground safety performance in airports across the Australasian region. He can be contacted at globalsafetypartners@gmail.com



WE'LL SEE YOU AT THE GSE Expo Worldwide



Presented by
GROUND SUPPORT
WORLDWIDE

Here's what you need to know about the show, which takes place, March 10-11, Sands Expo Convention Center, Las Vegas.

By Missy Zingsheim

As we gear up for our GSE Expo Worldwide next month, I wanted to share with you some of the changes we have put in place. We reached out to the industry and wanted to make this your show and create a community that fosters that:



BIG TOW.



LITTLE TOW.

What are you trying to pull? Eagle Tugs offers an array of tow tractors that will meet all of your aircraft and cargo handling needs. From narrow-body aircraft tugs to Bob Tail high-speed cargo tractors, Eagle Tugs has you covered. Visit www.eagletugs.com for more information or call us at 800-671-0431 (+1 734-442-1000).



AviationPros.com/company/10017216
Visit us at GSE Expo Booth #309

- **Name Change To GSE Expo Worldwide:** Our show names over the last few years didn't properly relay who we are or what the show focus was. We don't think that we can make it any more clear starting this year. We have found that the name change has sparked up interest from new exhibitors and attendees who understand what the show is about and how it fits their businesses.
- **Focus On GSE:** We've eliminated the maintenance sector of the show so there is no longer a skills competition. Although that may affect the number of booths on the floor or the number of attendees in the door, you can be assured that everyone there is focused primarily on just one thing: Ground Support Equipment.
- **It's All About The Expo:** We will not have show-related education, a keynote speaker or musical entertainment. We want to maximize exhibitors' time for prospecting and networking and don't want anything to interfere with that. We want to keep everyone on the show floor. We will still have our Opening Night Reception for networking on Tuesday and we will also have coffee and lunch right on the floor both Tuesday and Wednesday. The Ground Support Leaders of the Year Awards presentation will take place during the Tuesday reception, but will still allow for at least 30 minutes of networking.
- **GSE Expo Worldwide** is now presented by *Ground Support Worldwide* magazine.



PROMOTIONAL EFFORTS

- **GSE Expo Worldwide** dedicated promo section added to our *Ground Support Worldwide* eNewsletter.
- **Contracted** with international consulting firm GoExport to invite Latin American buyers to attend, offer translation services on site and facilitate private meetings with exhibitors through matching service.

We hope to see you in March at your show!

As always, thanks for reading!

REGISTRATION HOURS

Tuesday, March 10, 9 a.m. - 5 p.m.

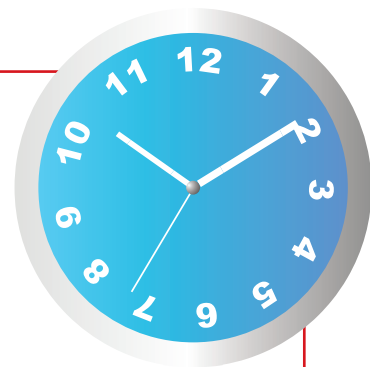
Wednesday, March 11, 9 a.m. - 3 p.m.

EXHIBIT HALL HOURS

Tuesday, March 10, 10 a.m. - 5 p.m.

Wednesday, March 11, 10 a.m. - 3 p.m.

Exhibitors will have access to the show floor beginning two hours before show opening on Wednesday and 30 minutes after show close.



SCHEDULE AT A GLANCE

Sunday, March 8

1-5 p.m.

Move-In By Appointment Only

Monday, March 9

8 a.m. - 5 p.m.

Exhibitor Move-In

11:30 a.m. - 7 p.m.

2nd Annual GSE Leaders

Golf Invitational

Revere Golf Club, Henderson, NV

Tuesday, March 10

8-10 a.m.

Exhibitor Move-in

9 a.m. - 5 p.m.

Registration Open

10 a.m. - 5 p.m.

Expo Open

10-11 a.m.

Networking Coffee Break

12 noon - 1 p.m.

Lunch with Exhibitors

4-5:30 p.m.

Opening Night Reception with

Ground Support Leaders of the

Year Awards

Wednesday, March 11

9 a.m. - 3 p.m.

Registration Open

10 a.m. - 3 p.m.

Expo Open

10-11 a.m.

Networking Coffee Break

12 noon - 1 p.m.

Lunch with Exhibitors

3 p.m.

Exhibitor Move-Out

All GSE Expo Worldwide Events take place in Hall A at the Sands Expo and Convention Center.

There are no additional costs for reception, breaks and lunches.

THE DATA IS IN

The Rampmaster Refuelers Engine Management System (EMS)
Delivers Unparalleled Savings for Every Gallon of Jet Fuel Pumped.

An Independent Study by WVU's Center for Alternative Fuels,
Engines and Emissions has Confirmed that

EMS DRIVES UP TO

78%
DIESEL FUEL
SAVINGS

See how EMS is innovating refueling at www.rampmasters.com/EMS

RAMPMASTER
CHAMPION OF EXCELLENCE

AviationPros.com/company/10017697



Hydraulics International, Inc.
OXYGEN & NITROGEN SYSTEMS

**INCREASE SYSTEM REFILL CAPACITY
UP TO 50% AND ELIMINATE CASCADING**

Primary use for filling or topping off...

- Onboard Oxygen Bottle
- Underwater Breathing Apparatus (UBA)
- High Altitude High Opening (HAHO)
- Tires
- Accumulators
- Struts
- Escape Chute
- Life Rafts

Even if your cascade system pressure drops below 200-psi

ELECTRIC DRIVEN SERIES 2G

Weight: 145-LBS
Dimensions: 32"L x 11.5"H x 20"D
Noise Level: 60-dBa
Double acting or 2-stage design uses no belts or pulleys



PNEUMATIC DRIVEN SERIES HIHPG3

Weight: 40-LBS
Dimensions: 20"L x 12.5"H x 11.5"D
Noise Level: 78-dBa



Hydraulics International, Inc.
9201 Independence Ave., Chatsworth, CA 91311 USA
(Phone) 818.407.3400 | (Fax) 818.407.3428
www.hiigroup.com

HYD-3331

AviationPros.com/company/10017435

The equipment removes any reliance on secondary high lift equipment for disabled passengers, as all passengers can board and disembark through one point of access.

PHOTO CREDIT: Aviramp



Aviramp Caters To The PRM Market With A Ramp Fit For All Passengers

Rather than face a climb up steep stairs, Aviramp offers passengers an easy stroll up the ramp.

By Steve Smith



DFWorth is currently taking delivery of Aviramp Continental portable passenger walkways which have fully enclosed sides.

PHOTO CREDIT: Charlotte of America

ginning of last year for evaluation, before following up with two more, smaller , models that service smaller regional jets.

Corfield said he was surprised when another order came in for an international model, still under development and designed to be used on the largest of aircraft such as the Airbus A380 and Boeing 747.

GETTING STARTED

Ra'alloy Ramps got its start in 1994 by making ramps for cars and trucks all designed for easing disabled access and efficiently loading and unloading material.

A UK company manufacturing an interesting take on an aircraft boarding ramp for remote stands secured a major order last summer from Dallas Fort Worth International Airport. The deal for seven so-called Aviramps worth \$660,000 was secured by Ra'alloy Ramps.

Although designed in particular to help passengers with reduced mobility get on and off aircraft when jetways are not an option, the Aviramp allows all passengers to board together.

Traditionally, people with impaired mobility have had to be carried up and down the air stairs by handlers or taken away from other passengers and boarded on a modified truck.

One key to the Aviramp design is the gentle 8-degree slope that makes aircraft access easy for those pushing a wheelchair and for PRM.

Since the Aviramps are made of aluminum as well as steel to keep the weight down, the portable ramps can be controlled by just one operator.

Commercial airline pilot and Aviramp co-developer Adam Corfield previously worked for the low cost airline industry and he knows first-hand that a common delay on making turns in such cases was waiting for specialized equipment to help disabled passengers.

"With Aviramp costing roughly 18 percent of a traditional high lift, the airport or ground service provider gains the ability to release capital investment from sales plus eliminating a huge maintenance cost," Corfield explains. "In turn, this provides the airport and GSP an opportunity to operate with a more modern and cost effective strategy."

Interestingly, the anti-slip floor material used on all Aviramp walkways has proved so popular that it is now being purchased separately by airports and used to retread areas of their gateways and air stairs to improve PRM access elsewhere.

The buyers at DFW initially bought two different models, which service the Airbus A319 and Boeing 737, at the be-

Passenger Boarding Bridge Market To Reach \$4.2 Billion By 2020, Forecast Says

The global market for airport passenger boarding bridges will grow to \$4.2 billion by 2020, with a combined annual growth rate (CAGR) of 4.85 percent, predict analysts at market researcher Markets and Markets.

Driving the passenger boarding bridge market is increasing air travel demand and growing air passenger traffic, the analysts say. Over the last few decades the use of automated passenger boarding bridges witnessed a drastic increase as airport authorities sought to reduce passenger turnaround time.

Markets and Markets analysts outline their global boarding bridge forecast in the airport infrastructure report "Passenger Boarding Bridge Market - Global Forecast to 2020," which has 55 market data tables, 54 figures and 248 pages.

"Air travel used to be an expensive affair, often used by high income earners, executive-class business professionals, and political leaders to travel to distant places," the report says. "Only few players had been providing air transport facilities, as passenger traffic was comparatively lesser. Globalization is considered to be a major and the most important factor that has built and expanded the aviation industry as it stands today."

The research breaks down the study on the basis of drive system (hydraulic and electro-mechanical), by structure (glass walled and steel walled), by model (two tunnel and three tunnel) and by geography including North America (U.S. and Canada); Europe (The UK, Germany, and Russia); Asia-Pacific (China, Japan, and Australia); The Middle East (Qatar, Saudi Arabia, and UAE); and Latin America and Africa

Not surprising, Asia-Pacific is expected to register a higher CAGR, led by China with CAGR of 8.4 percent.



The Asia-Pacific region is expected to register a higher CAGR of 8.4 percent.

PHOTO CREDIT: JBT Aerotech

"Large scale airport modernization and development program implemented by the concerned authorities in this specific region is the major factor that will drive the demand of passenger boarding bridges, furthermore fueling the growth of PBB market," according to the report.

The report also includes profiles on the market's major players in PBB market:

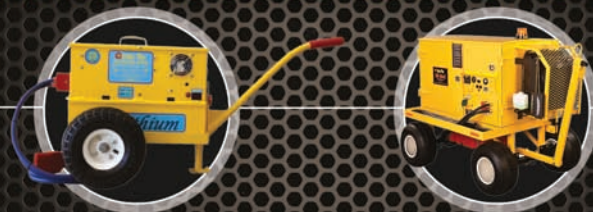
- JBT Aerotech
- MHI-TES
- ThyssenKrupp
- Adelte Group
- CIMC Group
- FMT gate support systems AB
- Hubner Gmbh & Co.
- Airport Equipment Ltd.
- Shinmaywa Industries Ltd.
- Sovam A.S.

If you are interested in purchasing a copy of the report, log to www.marketsandmarkets.com or email to sales@marketsandmarkets.com or in the United States, call 888-600-6441.

GROUND POWER

FOR UNBEATABLE GROUND POWER UNITS...

- 2400 peak amps
- 71 lbs./32 kg complete
- Built-in chargers
- 28.5v continuous
- AC Input: 110v or 220v



- Diesel-powered Hi-Brd
- GPU 28.5VDC
- 300 amps at 28.5VDC
- 3500 peak amps

...THERE IS NO SUBSTITUTE!

WWW.STARTPAC.COM

OR CALL TOLL FREE 888.901.9987



AviationPros.com/company/10135102

PRODUCT PROFILE



Aviramp is providing portable jet bridges designed to provide one point of access for all passengers including those with reduced mobility.

PHOTO CREDIT: Charlotte of America

It became involved in improving access in the aviation industry by chance after a Norwegian airport spotted its website. Eventually, the firm was contacted by Oslo Airport, which was looking for a better way to help passengers with limited mobility board and disembark aircraft.

Closer to its home base of Shropshire, UK, Ra'aloy began designing and testing ramps with UK-based airline Easyjet. The airline's ground operations staff had researched this idea of a

ramp, but were never able to find any company willing to develop such equipment.

The company's first trials in 2011, quickly delivered results:

- Passengers boarded and disembarked quicker by up to 9 minutes on a full A319 aircraft.
- Disabled travelers and passengers with reduced mobility were happy to board with all other passengers.

Aviramp Benefits

Aviramp brings all of the benefits of finger-style terminal jet bridges to remote stands. The design of Aviramp compresses 65-plus feet of ramp at an average of approximately 8 degrees of slope, depending on model.

Larger models can be fitted with optional extras such as lighting and roofing.

For the airline, Aviramp offers a new way to provide on-time turns. The equipment removes any reliance on secondary high lift equipment for disabled passengers since all passengers can board and disembark through one point of access.

- 10 year structural guarantee.
- Simple hydraulic systems powered by a small 5Kw diesel engine for single ground crew operation.
- Ultra low maintenance
- Fast track crew stairs can also be opened in an emergency offering passengers two points of escape.
- Patented double switchback ramp design allows gentle 7.5- 8-degree slopes where single ground crew can easily push wheelchairs.
- Galvanized steel chassis with lighter weight aluminum upper section gives low center of gravity for immense stability in high winds.
- Solid handrail panels prevents children from falling through the side.
- No medical lift required for disabled passengers.
- Use to load catering bars.
- No falls from steep stairs particularly for parents carrying children.
- Airline documented passenger boarding and disembarking trials show time is decreased by as much as one third.
- A fraction of the cost of medical lifts.

- Wheelchairs could be pushed up the ramp with one attendant due to gentle slopes.

The equipment also had additional benefits that went behind the PRM market:

- Children could board safely without the fear of them falling down stairs.
- General passengers preferred walking on the ramp instead of climbing and descending stairs, particularly with luggage.

Since the initial trials, many airports and airlines are operating Aviramps globally and developing the step-free airport concept.

Current customers include ground service provider Swissport in Japan, airports in Kuwait, Italy, France and the US and carriers including Qatar Airways, Jetstar and Qantas (which has just taken five units of the hand-pulled Aviramp Lite model).

Corfield comments: "Aviramp is at its central stage of global expansion, Aviramp is well-positioned to achieve its global strategic objectives with a strong product and a clear mission statement for the future. We plan to return investment into the business which in turn is great news for our operations. We have already had to expand our operations by 400 percent and move to a larger manufacturing plant." 🔄

"Day after day, we absolutely count on PF Hoists."

- 500 lb. Manual or Powered
- 500 lb. Military & Heavy Duty
- 550 kg. Powered or Manual
- 200 lb. Manual
- 100 lb. Battery Hoist

PF FISHPOLE HOISTS
SALES • SERVICE

1505 S. 93rd St, Unit B1, Seattle, WA 98106 USA
206.767.3887 • Fax 206.767.4006 • pffishpolehoists.com

AviationPros.com/company/10017652



**Passenger Stairs/
 Specialized Chassis**
**SCHOPF Maschinenbau
 GmbH**

SCHOPF PS 560 A/B is based on a specially developed airport vehicle chassis to service aircraft with door sill heights between 1.9 and 5.8 meters, powered by a diesel engine with hydrostatic drive. Also available as VVIP/VIP version. Options include all-weather-canopy, sun roof, auto-leveling system, etc. SCHOPF stairs are in service at civil airports worldwide and with military forces in various countries.

aviationpros.com/10025049



A-380 Passenger Lift
**Ground Support Specialist
 LLC**

The GS260 is an electrically powered disabled passenger lift that will service aircraft up to the A-380. This proven and simple design allows for single-person operation. These highly reliable units have an excellent track record and require minimal maintenance.

aviationpros.com/10222703

Towable Stairs

Wasp Inc.

WASP's Towable Passenger Stairs include models for regional aircraft (62-96 inch sill height), narrow-body aircraft (86-134 inch sill height), wide body aircraft (132-160 inch sill height). Features Morton® non-slip surfaces; 12V timed lighting; ready-to-use towbar, movable by hand; movable platform handrails; auto-locking deck stabilizer; hydraulic stair stabilizer; and optional canopy.

aviationpros.com/10026635



A380 Boarding Bridge

ThyssenKrupp Airport Systems

ThyssenKrupp Airport Systems Inc. manufactures state-of-the-art A380 Passenger Boarding Bridges. The ThyssenKrupp solution applies two, or more, bridges at the lower and upper decks to service doors L1/L2 and U1. The A380 bridge is available in steel or glass.

aviationpros.com/10025952

**Eliminate Ramp Damage
 with Wireless Headset Solutions**

*Portable
 wireless
 headset
 system*



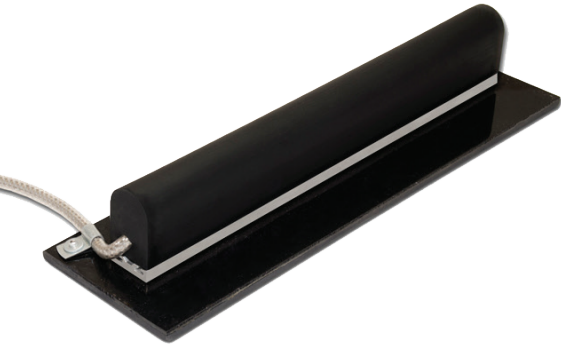
pushback | maintenance | deicing | aircraft movement | cargo

More than 4,000 times per day, Flightcom wireless headset systems prove their performance and reliability at many of the world's busiest airports. Discover how you can eliminate ramp damage and increase safety.



800.432.4342
sales@flightcom.net
www.flightcom.net/wireless

AviationPros.com/company/10017282



Contact Detection Tapeswitch Corporation

Tapeswitch Corporation is the leading manufacturer of safety edges for contact detection applications and passenger boarding bridges.

aviationpros.com/10441788

Electric-Powered Stairs NMC-Wollard Inc.

Popular CMPS - 170 Stair, with a reach up to 170.5 inches (B-767) is available with electric power. Quiet, efficient propulsion system offers a proactive option (diesel- and gas-powered units also available). Highly maneuverable unit is easy to position - operator can see door sill during approach to the airplane. Model 170 is designed to ARP 836 and shares design elements and parts commonality with several other NMC-WOLLARD products.

aviationpros.com/10857446



Reduced Mobility Aviramp

Aviramp replaces traditional air stairs with a ramp and enables passengers with reduced mobility to board aircraft without having to be loaded by hydraulic lifts or carried up the stairs.

aviationpros.com/10226261



We Lead the Industry in Innovation

Orion Deicer
880 gallons
47 Foot working height
10 minute heat time

New!

2200 XR 57 Foot
working height
NO stabilizers

New!

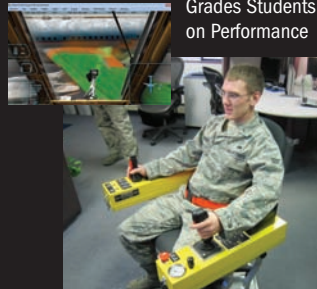
New!

GRV Glycol Recovery Vehicle
750, 1300, 2100 gallon
options

Learn about the latest from Global Ground Support, and how these new products save you time and money.

Training Simulator - Deicing

Grades Students
on Performance



GLOBAL
GROUND SUPPORT
An AirT Company

540 East 56 HWY
Olathe, KS 66061-4640 USA
(913) 780-0300 www.globalgroundsupport.com

ISO 9001:2008-
certified quality
management system



AviationPros.com/company/10017340



Repair And Maintenance Oxford Airport Technical Services

Boarding bridge repair and maintenance services for airports and airlines is available from Oxford Airport Technical Services

aviationpros.com/10133223



Radial Bridges Ameribridge LLC

Ameribridge provides new radial boarding bridges for the commuter aircraft operations market. Ameribridge acquired all rights to the Dewbridge product line in 2012, and is now taking the radial boarding bridge to an even higher level of service and reliability. Several design, engineering and component enhancements keep the new Ameribridge radial boarding bridge at the top of the aviation industry's list for safety, security and comfort in serving customers on commuter aircraft.

aviationpros.com/10976888

Multiple Wheelchair Lift Lift-A-Loft Corporation

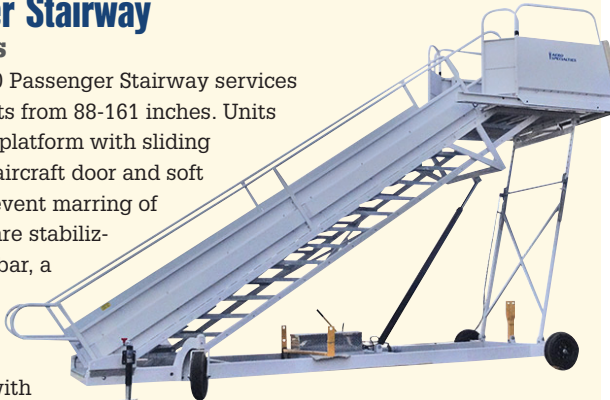
The Lift-A-Loft WBDPL provides an efficient and safe means of boarding and de-boarding passengers that require special assistance. The WBDPL can interface wide body aircraft such as Boeing 747, 767 and 777, as well as narrow body and regional jets. The unit can accommodate up to three full-sized wheel chairs and one attendant at one time.

aviationpros.com/10027162



2820 Passenger Stairway AERO Specialties

AERO Specialties 2820 Passenger Stairway services aircraft with sill heights from 88-161 inches. Units feature an extra-large platform with sliding handrails to clear the aircraft door and soft rubber bumpers to prevent marring of the aircraft. Included are stabilizer jacks, a folding towbar, a hand pump for height adjustment, as well as a battery powered LED lighting system with adjustable timer.



aviationpros.com/12035173

March 10-11 2015
 Booth# 442
 Las Vegas

March 17-20 2015
 Booth# E16
 Macao

April 14-16 2015
 Booth# 2047
 Miami • Florida

GSE EXPO
 WORLDWIDE

ground handling

AVIATION WEEK
MRO
 AMERICAS

Advantage Mototok:
**MORE SPACE –
 BETTER
 HANDLING**
 for your Operations.

10+ Years
 of
 German
 Engineering
 and Quality.



The ability to move a wide range of aircraft types becomes an ease with Mototok. Depending on the nose wheel size and the gross weight of the aircraft, you can choose one of 4 Mototok models. Regardless the size of the aircraft – Mototok excels in narrow situations: Park your aircraft safely, easily and effectively and save space in the process.

We offer units that works with the following weights:

Model	M	TWIN	TWIN	SPACER	SPACER
	528	3900	6500	8600	195
Towing	28 t	39 t	50 t	95 t	195 t
capacity	61,700 lbs	86,000 lbs	110,200 lbs	209,400 lbs	429,900 lbs



**Innovative
 remote controlled
 electric driven tugs**



Mototok America LLC
 3028 Peacekeeper Way
 McClellan, CA 95652 / USA
 Phone: +1-916-580-4977
 Fax: +1-916-641-8969

Mototok International GmbH
 Hohenzollernstr. 47
 D-47799 Krefeld / Germany
 Phone: +49-2151-65083-82
 Fax: +49-2151-624-673

info@mototok.com • www.mototok.com

AviationPros.com/company/11326680



Aluminum Stairs

Aeroservicios USA Inc.

In Aeroservicios USA Inc. we manufacture for sale, rent, or lease brand new 100 percent aluminum passenger stairs for different aircrafts:

- Aeros 95 inches-105 feet for B-737
- Aeros 135 inches-147 feet for A-320
- Aeros 95 inches-145 feet from B-737 to A-320

Its hydraulic extension is managed through a manual pump. LED lights. For all equipment.

aviationpros.com/12033792

Baggage Chute P6000

Page Industries

PAGE being the innovator of the first BAGGAGE CHUTE in 1997 offers the next generation P600 Baggage Chute. The new P6000 utilizes modern manufacturing techniques and materials making this the best and most advanced BAGGAGE CHUTE available. PAGE – Your Conduit to Performance.

aviationpros.com/12036633



Towable Stairs

Clyde Machines Inc.

The Model 15F2820 Towable Passenger Stair has a platform range of 88 feet by 161 feet. Upper platform size is a large 76 feet by 50 feet to allow the aircraft door to fully open when stair is in position. Other features: LED lighting with timer, on-board battery charger, battery level indicator. Optional solar-charging kit.

aviationpros.com/10441075



New 28,5 VDC Power Generator

Produced by: AeroPower MANUFACTURING
www.APmanufacturingINC.com



easy access + quiet systems + friendly Safe PLUG

Removable Panels



easier to use
simple to maintain

Ask for our Leasing program



Distributed by:
Servicore G.S. Corp, Miami, FL. U.S.A.
Ph: 305-888-0189 | www.GSExp.com

AviationPros.com/company/10017767

www.juniper-liverpool.com



The Juniper Universal 2x25 Gallon Compressor Wash Rig for military applications.

Part number: JMP/HER/D/1144/C600 NSN: 4940-99-849-9712

Covering the C130 Hercules, C130J, P8 Poseidon, P3 Orion and A400M.

For details of tooling for this rig please visit the website



Tel: +44(0)151 733 1553
Email: gse@juniper-liverpool.com

AviationPros.com/company/10017987



Disabled Lift HAI Aviation Services Division

The DPL99 Disabled Passenger Lift provides access to aircraft up to 126 inches (3.2 meters). The DPL99 has a proven record of reliability and ease of operation that makes it the best choice for your ground level boarding operation. Simplicity, reliability and ease of operation.

aviationpros.com/10027620



COBUS 3000 Cobus Industries LP

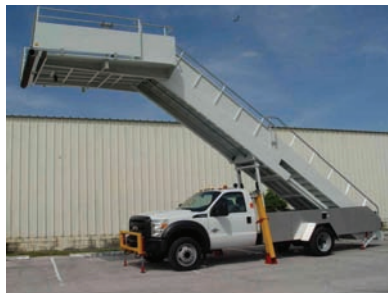
The COBUS 3000 Airport People Moving Bus is used at more than 350 airports around the world to transport airline passengers between terminals, concourses, and aircraft parked off-gate on hardstands. Power options include diesel (only 1 US gallon per hour), CNG, and now also full electric operation. Manufactured in aluminum, the COBUS is offered with a life expectancy of 25 years.

aviationpros.com/10237231

Truck-Mounted Stairs Phoenix Metal Products

Phoenix Metal Products, Inc. has added a new passenger stair to complete their full line of stairs. Available now is the model PNX-PAS228 Truck-Mounted Passenger Stair with a door sill height from 96 inches down to 228 inches up. The chassis is a Ford F450 SD with six stabilizers.

aviationpros.com/10219299



J&B Aviation BAG CHUTE

P/N JB-1851

WE
 KNOW
 A TON
 ABOUT
 STEEL

MANUFACTURED BY
 METALWORKS

CONTACT BRUCE WARNE
 PHONE: 916-849-7004
 EMAIL: BRUCE@BKWGSE.COM

AviationPros.com/company/12043653

NO FOD LEFT BEHIND

Compare the **FOD*BOSS** to your current FOD removal equipment

- | | |
|--------------------|--------------------|
| 1) Performance | 4) Easily stored |
| 2) Speed | 5) Easily operated |
| 3) Easily deployed | 6) Easily emptied |

No moving parts-chains, bearing, sprockets, shafts
 No replacement bristles

8 ft, 16 ft and 22 ft swept path options available

Compare overall Operational costs: reduction in fuel costs, reduction in operator costs, reduction in maintenance costs: filters, oil, grease, tires, parts, bristles, labor

The **FOD*BOSS** picks not flicks.

For a demonstration of the **FOD*BOSS** at your location or peer references of the **FOD*BOSS** Please contact us

It is all about: **PROVEN PRODUCT PERFORMANCE**



KEEP YOUR AOA CLEAN AND SAFE-COST EFFECTIVELY



MYSLIK, INC.
 22751 SUNRISE DRIVE
 MORRISON, CO 80465

SPECIALIZING IN SNOW, ICE & FOD CONTROL PRODUCTS

AviationPros.com/company/10287496



Wheelchair Lift System AccessAir

This is a unique engineering development AccessAir being the 1st in the world to have developed this design on a telescopic stair to better serve passengers. Our system consists of a telescopic ramp being able to go up and down the stairs at any of the elevations that the APS stairs is positioned at. The system will follow all ADA and OSHA regulations. This system will enable the boarding and de-boarding of the wheel chair passenger without having to use some other vehicles or extra personnel. The recently developed wheel chair lift system is efficient, compact, adapted to today's need, And avoids need to purchase additional equipment. Disabled passengers movements will be easier, no extra personnel needed

aviationpros.com/12038629

Durable Stairs Wasp Inc.



Heavy-duty stair frame can support 2,500 pounds (1,134 kilograms). The stairs can easily be towed into place and then adjusted to the best height, from 85 inches (2.2 meters) to 152 inches (3.9 meters) with a single-lever hydraulic system. An automatically latching "X" brace securely locks the stairs at the needed height, eliminating potential errors that can occur with manual locks. For added safety, the stairs feature a Morton non-slip walk surface and are illuminated with a battery-powered lighting system.

aviationpros.com/12032069

Are you happy with your GSE MX service provider?

You should be!

"We called on Global when our primary GSE service provider was unable to help us on Sunday. Bruce was able to get both push backs diagnosed, parts sourced and in service within two hours."
AA Team - CMH

"Global helped us meet Delta's Rules of the Road by influencing our commitment to have employees who are motivated every day to serve our customers and exceed their expectations."
AL C. - Station Manager, IND

Proprietary Predictive MX System
Consistent, reliable service at a fair price
100% PM compliance, guaranteed
Delivering the lowest Total Cost for GSE MX

Global Aviation SERVICES

Choose the team that's **Raised the Bar** on GSE MX Service.

www.globalaviationservices.com

AviationPros.com/company/10018172 Visit us at GSE Expo Booth #336

The **most reliable** towbarless tow vehicles **in the world.**



It's not just a tug. **It's a**

LEKTRO

www.lekthro.com

US 1-800-535-8767

INTL 1-503-861-2288

sales@lekthro.com

AviationPros.com/company/10017532 Visit us at GSE Expo Booth #415

Boarding Ramp

Keith Consolidated Industries

The BAR Ramp is a universal ramp designed to serve larger sized aircraft such as the MD80 up to the 757. The ramp allows for a seamless boarding process for all passengers.

aviationpros.com/10027352



ALBERTH AVIATION

TOOLS & EQUIPMENT DESIGNED BY MECHANICS FOR MECHANICS

BOTTLED WATER CART

4 or 6 Bottle Option



This potable water cart provides a guaranteed method of receiving clean water for your aircraft every time. It reduces the risk for contamination, is easy to maintain and provides a simple way to inventory and track water sales. This cart is a proven product with FBOs worldwide.

See all our tools, equipment and videos on our website.

Manufacturer of select tooling & GSE

www.AlberthAviation.com
832.934.0055 • 800.821.9811

AviationPros.com/company/10016971



FORTBRAND
SERVICES INC
www.fortbrand.com

516 576-3200
info@fortbrand.com

SALES RENTALS LEASING FINANCE CONSULTING

AIRCRAFT TOW TRACTORS

TLD-TPX-200MT towbarless
TLD TMX-150-16 (35,000 lbs GVW)
Equitech B-250 (32,000 lbs GVW)
Eagle TT-12 (12,000 lbs DBP)
Eagle TT-8 (8,000 lbs DBP)
NMC-Wollard 6,000 lbs DBP cargo tractor

BAGGAGE TRACTORS

Tug MA50, gas + diesel
Harlan HTC 50, gas

MAINTENANCE STANDS

B-4 stand - 37"-87"

CONVEYORS

NMC-Wollard TC-888, diesel
Tug 660, gas

AIR STARTS

TLD 150 PPM
GPU
TLD 90Kva, 120Kva & 140Kva
Hobart Jet Ex 5D 28V

DEICERS

Premier MT35P18, open bucket

PASSENGER STAIRS

Phoenix Metal PAS200 wide body
Clyde 15F2820 narrow body, towable

AIR CONDITIONERS

TLD 802 115-ton
TLD 804 65-ton w/heat
TLD 302 30-ton w/heat
Trilection DAC200 20-ton w/heat

FOR SALE OR LEASE

AviationPros.com/company/10017302

Experts in Aviation
Ground Power



FCX
SYSTEMS

www.fcxinc.com

sales@fcxinc.com • (304) 983-0400

AviationPros.com/company/10017265



**FINANCING & LEASING OF
NEW & USED AIRCRAFT
GROUND SUPPORT EQUIPMENT**

SALES, RENTALS, PURCHASE, TRADE-INS & APPRAISALS

We are GSE experts with over 30 years of GSE experience.
Let us work together on your next GSE requirement.

Contact Neil Bennett:

Phone: 253-358-0330 * Email: neil.bennett@somersetcapital.com
www.somersetgse.com

OAC, Terms & Conditions apply

AviationPros.com/company/10017127

Visit us at GSE Expo Booth #618

PRODUCT HANGAR

Disabled Passenger Vehicle DENGGE Airport Equipment

Dengelift is a self-propelled unit with automatic transmission and diesel engine. Provides a minimum front service height of 1,300 mm up to 5,800 mm. Operator friendly dashboard and control panels. Practical electrical and hydraulics installation. Easy to maintain and repair. The vehicle is an individual unit completely custom made and with single complete warranty. Winner of the most innovative product for the ramp at the 2013 inter airport Europe.



aviationpros.com/11245361

Full GSE Line Phoenix Metal Products

Manufacturer of a large line of GSE equipment, from small lavatory and water carts to 1,000-gallon trucks. Passenger stairs from RJ to A340 truck-mounted. Baggage loader and aircraft maintenance lifts.



aviationpros.com/10441312

Wheelchair Lift Uberlift

Uberlift safely lifts disabled passengers over the stairway of regional aircraft. When in the down position, the two-person lift provides crew and passengers clear walk through access to stairs, saving valuable turn around time.



aviationpros.com/10364793

Mercury GSE Ground Support Equipment

www.mercurygse.com

for current stock of air starts, bag tugs, beltloaders, bobtails, crew and passenger stairs, gpu's, loaders — main and lower deck, tow tractors and other items.

SALES LEASE RENTAL APPRAISAL

WE BUY SURPLUS GSE

PH: (562) 653-0654 FAX: (562) 653-0665
E-MAIL: dtaylor@mercurygse.com
12519 Cerise Ave., Hawthorne, CA 90250

AviationPros.com/company/10017592

Passenger Step Ladder Nandan GSE Pvt. Ltd.

Nandan's Step Ladder is manufactured on commercial chassis and can be used from 2.5m to 5.8m. The aluminum non skid steps make the climbing comfortable and ergonomic. Controls are world-class with many safeties built in. We also make towable step ladders.



aviationpros.com/10027517



KEEP CALM AND DOWNLOAD GSP APP



Get Your Exclusive Content-
Download the FREE GSP App Now!

Note: The GSP App is available to download for Apple and Android™ tablets only, not compatible with smartphones.

Apple, the Apple logo, and iPad are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc. Android is a trademark of Google Inc.

DAVIN Inc.

**SALES, LEASING,
FINANCING**

**631/499-6363
Fax: 631/499-4222**

www.DavinGSE.com

AIR CONDITIONERS

1991 TLD, Ace 802-620, F600 mounted 110-ton unit.
2006 TLD Ace 302-H-CUP 24-Ton Cooling, with Heat Option.
(2) 2007 TLD Ace 802-H-CUP 115-Ton Cooling with Heat Option

AIR START UNIT

2007 Tronair, SA280G2 Stored Air Start. 260lb mass usable air
1992 S&S Model TMAC-250 PPM, powered by Detroit diesel.

BAGGAGE/CARGO TOW TRACTORS

2010 TUG, MA-40-27LP Ford LPG w/cab.

2001 TUG, MA-30-1 Ford 300 gas, w/cab (2 avail)
2003 TUG, MT-8-1 Ford gas 8K DBP, w/cab (2 avail)
2008 Harlan HTAB-40, Cummins diesel, w/cab (2 avail)
2003 Harlan HTAG-80 Ford gas 8K DBP, w/cab (2 avail)
1997 Toyota, Model 2-02TD25 diesel engine.

BELTLOADERS

2007 NMC-Wollard, Model TC-888 4-cyl. Deutz diesel engine.
2002 TUG, Model 440E, 48 volt electric with built-in charger.

CONTAINER LOADER

1988 LANTIS, Model 818-218-161-125, High & Wide 161" elevator.
2006 FMC/JBT Commander 15i with wide option.

GROUND POWER UNITS

2005 Hobart, Model 120CU24P5, 120 KVA
2008 TLD, Model GPU4090-T-CUP, 90 KVA
2001 Hobart, Model Jet-Ex5D 28.5 VDC

HEATERS

1997 Air-A-Plane Model 5050D, Deutz diesel engine.
1994 Air-A-Plane, Model 5050GF, Ford 300 gas engine

PASSENGER STAIRS

2012 NMC-Wollard, Model CMPS170, 77.5" to 170.5" like new.
2001 Stinar, Model SPS-3518 GMC diesel 96" to 228"
1998 Stinar, Model SPS-7026 Ford F-Series diesel 184" to 314"

PUSHBACK TRACTORS

1998 NMC-Wollard, Model 140, Perkins diesel, 10K DBP.
2005 FMC, Model B400 Deutz diesel, 4WS, w/cab, 35K GVW
2000 S&S TUG, Model GT-50DZH, Deutz diesel, 60K GVW
2010 JBT, Model B1200 Cummins Diesel, w/cab 100K GVW

GS 350 BELT LOADER

*Designed for Today's Aircraft, Durability,
Ease of Operation, Ease of Maintenance*



- 20 Year Life Cycle
- Custom Chassis
- AASA (Active Aircraft Strike Avoidance System)
- Integrated Rear Belt Access Stairs
- Front Belt Access Stairs
- Safety Under-carriage Belt Screen
- Replaceable Front End Cap
- Gas Spring Assisted Handrails



Active Aircraft Strike Avoidance System uses both sonar and radar to detect an object up to 25 feet away and automatically restricts speed or stops to avoid a collision.

662-342-1412

WWW.GSSONLINE.COM

Ground Support Specialist

GSA Contract Number: GS-30F-038BA

www.ShipEMR.com



920 Bond Street / Suite 208 / Bend, Oregon 97701
Toll free: 855.811.1080 / Local: 541.550.7158 / Fax: 541.550.7138

MC# 847359 | DOT# 2478260 | SCAC# EMRO

LAND • AIR • SEA

For all your transportation needs.

CONTACT: Joey Mazzone
GSE TRANSPORTATION SPECIALIST

TOLL FREE: 855.811.1080
Joey@ShipEMR.com



"Consider It Done."™

Midway Runway Specialists, Inc.

At Halifax International Airport - Canada



Specializing in:

Buying, Selling and Refurbishing GSE

Also, Cleaning Airports of Derelict Ground Support and Maintenance Equipment

Dean: (902) 717-3430

Use us for your GSE needs



- Electronic Repair
- Equipment and Training
- Replacement Parts

(305) 888 01 89
(305) 851 81 44
Cualquier asesoria tambien en español

GPU - ASU - ACU - LOADERS - ENGINES
BAGGAGE TRACTORS - BELT LOADERS
TRANSMISSIONS - RAMP ACCESSORIES
www.SGSequipment.com

JACKS 3 Ton to 100 Ton
B-1, B-2, B-4, and B-5 Work Stands,
Wheel & Brake Dollies, Tow Bars,
Maintenance Stands, Engine Stands, etc.
Overhauled, Reconditioned like New

AIRCRAFT PARTS &
GROUND SUPPORT EQUIPMENT, INC.

Tel: 305-871-2192
Fax: 305-871-6081
pdsge@bellsouth.net



Tire Cage

832-934-0055 • www.AlberthAviation.com



Steve Smith

A Busy And Dangerous Place

Organizations such as IATA are making headway in developing SOPs that can help to ensure safety.

By Steve Smith

Airport ramps are busy and dangerous places, confined areas in which aircraft, vehicles and people are in constant motion in all types of weather. Turnover among personnel typically is high, training can be spotty, and standard operating procedures may be nonexistent or ignored. Often, the focus on schedule overshadows concerns about safety.”

Sums up life on the ramp quite nicely, don't you think? Too bad then that the words are from the introduction to a feature on incursions printed in Flight Safety Foundation's magazine almost eight years ago.

What's changed? Busy, dangerous place? You bet. All types of weather? It's all under a great, big sky. High turnover? Spotty training. Yes and yes.

In this month's cover story, we take a look at ways technology can help to stop accidents between GSE and aircraft. The reporting for our introduction above highlighted a study done by the Foundation that for the first time looked to quantify the problem. Since then, most numbers you read go back to this data that put a price tag on ramp accidents at \$10 billion from some 27,000 accidents annually.

INJURY RATE

But take a look at another number from the Foundation's original report: About 243,000 people are injured each year in these accidents. That's an injury rate of 9 per 1,000 departures.

More recently, a *USA Today* story written last December added that 99 people were killed in ramp accidents since 2001, according to data compiled by the SEIU.

The story went on to include a litany of fatalities and injuries, including the following:

FATALITIES

- Southwest baggage cart driver killed by a shuttle bus at IAD in 2012.

- United baggage handler killed after belt loader collides with jet at DCA 2005.

INJURIES

- US Airway worker breaks left leg and ankle after falling 10 feet from a boarding bridge at SOF in 2012.
- Delta worker receives head injuries after falling 7 feet from a belt loader at LAX in 2010.

There's considerably more on this list, but you get the message.

One item, however, does seem to have changed since the Flight Safety Foundation published its article, "Defusing The Ramp."

IATA, for its part, has made considerable strides in developing standard operating procedures with its international safety programs and operations manual. Plus, a couple of years ago the organization started its Ground Damage Database to help categorize the accidents that have happened to lend some certainty to halting the accidents that haven't happened yet.

No doubt, \$10 billion is a lot of money, and worse, that tally represents an utter waste of a finite resource. But ramp workers lives and their well-being are just as precious.

The photo used on the cover of our December 2014/ January 2015 issue should have been credited to EPIC Aviation LLC.

EDITORIAL ADVISORY BOARD

AeroVironment/PosiCharge – Ryan Gibson
AGERanger.com – Darryl Clark
Aviance – Alain Chappler
Charlotte of America – Rob Lamb

Delta Air Lines – Joe Fuqua
Elite Line Services, Inc. – Dewey Kulzer
Fortbrand Services – Fred DiBenedetto
J&B Aviation Services – David Janis

JBT AeroTech – Jim Cherrett, Virginia Salas
Sage Parts – Michael Bloomfield
Triton Technologies LLC – Debra Guinand
United Airlines – Jody Cope

PAGE Industries the GSE Leader in Breakthrough Technology



The most revolutionary 400 Hz Cable Assembly to be introduced in the past 20 years with such features as broken neutral detection, thermal protection and the new incredible **HARDNOSE™** Cable Plug.



PAGE Industries has been listening to their customers to determine, design, and introduce what the airline industry wants and needs. PAGE, known as the industry leader in innovation and for bringing new products to market, is introducing this year their completely unique PCAir Connector with a built-in swivel, "high flow" screen and the industry's best and only "snap-in" gasket; a stronger, better and easier to install Baggage Chute; and a new digital 400 Hz Reactive Load Bank capable of testing two 90kVA loads at a 0.8 pf.

Please visit PAGE Industries' Booth #515 at the GSE Expo in March to see the unveiling of
PAGE's newest product innovation, the **BAGGAGE CHUTE SERVICE PLATFORM**

Phone: 1-707-469-7243 • Toll Free: 1-800-465-PAGE • FAX: 1-707-469-7244 • Web: www.pageindustries.com
ADDRESS: 2050 Cessna Drive, Vacaville, CA. 95688 • CONTACT: sales@pageindustries.com

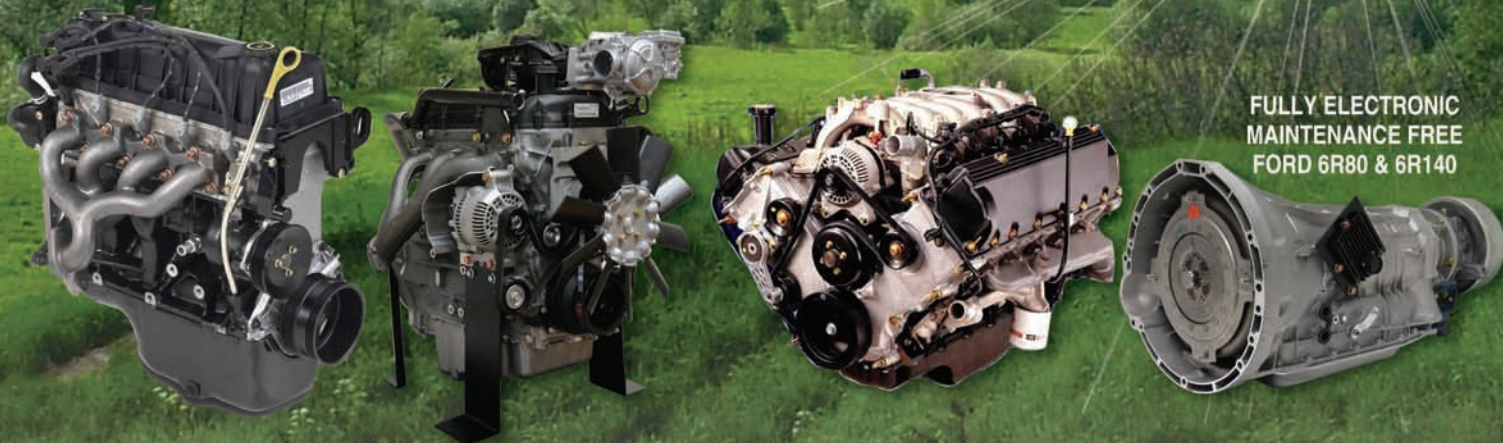
Go Green

With Ford Advanced Technology Engines.

A Green Alternative to Diesel from



YOUR Tier IV Solution



FULLY ELECTRONIC
MAINTENANCE FREE
FORD 6R80 & 6R140

Reliable — Durable — Clean — Green.

Featuring a complete line of EPA and CARB Certified 1.6, 2.5, and 6.8 L LSI Engines ranging from 20 to 200 hp. Available in Gasoline, LPG, CNG, Natural Gas and Dual Fuel. Our engines are the solution to high priced Tier 4 Diesels. Secured Volumes, Longer Life Cycles, Dry Fuel and Flex Fuel Valve Trains – You Can Find It At EDI. Performance you can count on!

Contact One Of Our Distributors Today!

Our line of LSI industrialized Ford engines are serviced through a Global Dealer Network.

Anderson Industrial Engines Co.

Omaha, NE 402-558-8700

Southwest Products Corp.

Phoenix, AZ 877-779-3581

Diesel Power Equipment

Chicago, IL 877-876-3732
Farmington, MO 800-876-3732

Engine Distributors Inc.

Archdale, NC 800-220-7080
Blackwood, NJ 800-220-2700
Ft Lauderdale, FL 800-257-6605
Holliston, MA 800-220-2700
Jacksonville, FL 800-342-3575

Engines, Inc.

Jonesboro, AR 800-562-8049

Powertech Engines Inc.

Fresno, CA (800) 750-1776
Fullerton, CA (800) 784-1776

Perkins Pacific

Ridgefield, WA 877-877-3311

McDonald Equipment Co.

Willoughby, OH 800-589-9025
Portland, MI 800-445-5273

M. G. Bryan

Equipment Co.
Grand Prairie, TX
972-623-4300

**D A C Industrial
Engines Inc.**

Dartmouth, NS, Canada
902-468-3765

Marindustriel

Montréal, QC, Canada
514-342-2748

Oakville, ON, Canada

800-866-3831

Simson Maxwell

Edmonton, AB, Canada
800-374-6766

Calgary, AB, Canada

800-374-6766

Port Coquitlam, BC, Canada

800-374-6766

Nanaimo, BC, Canada

800-374-6766

Prince George, BC, Canada

800-374-6766

All Marine Spares

Mona Vale, N.S.W., Australia
61-2-99972788

Compagnia Tecnica Motori S.p.A.

Milano, Italy
+39 0245058238

Fornaut Ehm Sa

Le Pre St Gervais, France
01133148450394

Power Torque Engineering Ltd

Binley, Coventry, UK
011-44-247-663-5757

Sauer Motive Systems

Sauer and Sohn KG
Dieburg, Germany
011-49-607-120-6330

Engine Distributors Inc. • 400 University Court • Blackwood, NJ 08012
Phone: (856) 228-7298 or (800) 220-2700 • www.edi-dist.com