

## **VDG Drum Motor** Airport Baggage System Conveyor Drive

The self-contained, internally powered **VDG Drum Motor** provides safe and efficient operation with low (dB) noise levels, while optimizing space to allow more conveyor equipment in the same footprint.

Engineered for 80,000 hours of operation before maintenance, reducing operating and maintenance costs, the VDG Drum Motor delivers a superior and reliable drive solution for all types of baggage handling belt conveyor applications where run-time is paramount.

P M Hall Real Real

### IronGrip<sup>™</sup> Lagging Option:

► IMPROVES belt tracking

<u>10</u> 1031

- ► INCREASES belt traction by 40%
- **EXTENDS** lifespan of the conveyor belt



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Editor Josh Smith 920.563.1644 ► jsmith@AviationPros.com Assistant Editor

Walker Jaroch 920.563.1613 ▶ walker@AviationPros.com Assistant Editor Rebecca Kanable 920.563.1611 ▶ becky@AviationPros.com

Editorial Director Joe Petrie 920.568.8399 b joe.petrie@AviationPros.com

Group Publisher Missy Zingsheim 920.563.1665 ► missy@AviationPros.com

Associate Publisher Bill Baumann 856.210.9264 ► bill@AviationPros.com

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

List Rental Michael Costantino 402.836.6266 ⊨ michael.costantino@infogroup.com Kevin Collopy 402.836.6265 ⊨ kevin.collopy@infogroup.com

PRODUCTION & CIRCULATION Art Director Rhonda Cousin

Production Manager Carmen Seeber 920.568.8373 ▶ carmen.seeber@AviationPros.com

Audience Development Manager Debbie Dumke 920.563.1776 ► ddumke@endeavorb2b.com

INTERNATIONAL GSE EXPO Vice President-Event Operations Sue Ralston 920.563.1655 b sue@AviationPros.com

ENDEAVOR AVIATION GROUP Penny Hazeltine > Administrative Assistant



Chris Ferrell ► CE0 June Griffin ► CR0/CM0 William Nurthen ► CF0 Patrick Rains ► CC0 Tracy Kane ► Chief Administrative and Legal Officer Missy Zingsheim ► VP, Sales Operations Angela Mitchell ► VP, Accounting Amy Mularski ► EVP, Group Publisher Kristine Russell ► EVP Special Projects

Subscription Customer Service 877-382-9187; 847-559-7598 Circ.groundsupportww@omeda.com PO Box 3257 Northbrook, IL 60065-3257

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PCS AS-US VDG CONTINENTAL PAR-KAN DAVID CLAR **ITW GSE** ENGINE **DISTRIBUTORS INC STINAR** 4 Cargo & Baggage Handling **Equipment and Accessories Catering & Cleaning Equipment** 12 FAST-GLOBAL SOLUTIONS 16 **Deicing & Anti-icing** 20 **Fueling Equipment** 24 **GPUs, Air Starts, PCAs & GSE Parts/Components** 30 **Green Products** 33 **Ground Handlers & Service Providers** 35 Lav & Potable Water Carts 37 **Maintenance & Shop Equipment** 40 Passenger Boarding **Pushbacks, Tractors & Utility** 42 **AVIATIONPROS Vehicles** AviationPros.com Safety & Communications 46 50 **Editor's Note SOCIAL MEDIA & ONLINE CONTENT** LINKEDIN TWITTER INSTAGRAM FACEBOOK linkedin.com/company/ @GroundSupportWW groundsupportww Facebook.com/ In ground-support-worldwide GroundSupportWW



### **CARGO & BAGGAGE HANDLING EQUIPMENT AND ACCESSORIES**

### M-SERIES CARGO DOLLY FAST Global Solutions

The FAST M–Series caster deck cargo dolly is specifically designed for changing ramp operations, to easily transport variable size pallets and containers. Multiple position pallet stops and restraints provide versatility for ever–changing workloads. Engineered with lighter–weight, high–strength steel for increased durability, while also reducing fuel use and wear and tear. Self– adjusting braking system and tire wear indicator help maximize uptime and improve operational performance and safety on the ramp.

AviationPros.com/21243441

### TC-999 MOBILE BELT LOADER Wollard International

The TC-999 is a fast and economical way to load and unload baggage. The roller-conveyor extends around corners, stays level with the aircraft and helps boost crew efficiency. The TC-999 has unique tubular chassis that deflects impacts. Available in gas, LP, dual fuel,

**GSE BAGGAGE CART** 

Quadro offers curtains for GSE

and tug tractor fabric doors.

baggage carts, PCA lay flat ducting

AviationPros.com/21158171

**CURTAINS** 

**QUADRO**, Inc.



diesel and electric (AC and DC). Electric field retrofit kits are also available. AviationPros.com/12228876



#### GS350 Ground Support Specialist LLC

This belt-loader offers a Mitsubishi 2.4-liter fuel-injected engine and operates at a single speed.

AviationPros.com/21158950



### P6000 BAGGAGE CHUTE PAGE GSE

The PAGE GSE P6000 Baggage Chute utilizes modern manufacturing techniques making this chute easy to install. The P6000SP Service Platform can be mounted to any baggage chute for storage of chocks, safety cones, wands and includes a secure FOD bin.

AviationPros.com/12439610



### TBC 6000 TOWABLE BELT CONVEYOR Timsan

The Timsan TBC 6000 Towable Belt Conveyor offers a tow-bar, provided by a fifth-wheel system mounted to the chassis for easy steering and a brake system that is applied when the tow-bar is upright and released position. The belt forward/reverse movements are provided by hydraulic motor and the height and angle adjustment are provided by hydraulic cylinders. The electrical system is powered by a standard battery of 12V DC.

### Turn your wingwalkers



### into wingtalkers.



### David Clark Wireless Headset Systems

In busy ramp environments, a missed hand signal might mean you'll be missing an aircraft.

Our Wireless Headset Systems keep wingwalkers in visual *and verbal* communication with tug drivers during pushback operations. Helping you avoid incidents that could result in costly aircraft damage and potential injury to ground personnel.

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### **CARGO & BAGGAGE HANDLING EQUIPMENT AND ACCESSORIES**

### COMMANDER 30I E CARGO LOADER JBT Corporation

JBT Commander 30i E Electric Cargo Loaders offers configurability, an intelligent power system and accessible components. The Commander 30i uses the latest construction methods and materials, is available with iOPS monitoring and diagnostic capabilities and can be tailored to a customer's needs. The cargo loader requires less training, is quicker to deploy, has greater longevity and includes JetDock operator- assist automated docking options.

AviationPros.com/21243725

### CONTAINER AND PALLET DOLLIES Par-Kan Company

Par-Kan Company offers a wide range of both container and pallet dollies to suit various operational needs. All container and pallet dollies can be configured for side or end loading with a roller or caster deck. Each dolly features heavy duty pallet stops and VR locks. An ergonomic torsion relief tow-bar with tow-bar-activated braking system comes standard with each dolly as well as a superior powdercoat finish.

AviationPros.com/21112081

### REGEN LOADERS

TLD manufacturers electric loaders, supplying efficient technology with the reGen Loaders to many major airlines and airports. Featuring 80V technology for fleet commonality and recuperation of free energy while lowering platforms and decelerating, the efficiency of the reGen



Loaders is comparable to diesel loaders. Electric loaders now makes up 50 percent of TLD's loader production.

AviationPros.com/21160301

### TWERGO XTREME Caster Concepts Inc.

This caster offers exertion-reducing ergonomic maintenance-free rig-sealed precision ball bearing with hardened raceways and neoprene seals. No adjustment or lubrication of the swivel section is required for the life of the caster. The twin ergonomic wheel (TWERGO) reduces strain in manual applications.

AviationPros.com/21243556



#### FLEET Vanderlande Industries, Inc.

Vanderlande's FLEET is a flexible logistics solution. By utilizing intelligent automated guided vehicle (AGV) technology, FLEET replaces the need for fixed conveyors and sorting systems. Each individual vehicle within the fleet carries a single bag and determines the most optimal route through an airport. In addition, a vehicle can be given priority, which helps to safeguard the delivery of bags on time.

AviationPros.com/12378365



### ELECTRIC BELT LOADER Avro GSE

Avro "next generation" electric belt loaders offer leading– edge performance, design and functionality. Designed to exceed expectations and deliver extraordinary ROI, each loader features standard functionality such as hydraulic steering, Curtis controller with self– diagnosis functionality, vacuum assist hydraulic brakes, complete telematics (Avro Tracker) for remote diagnostics and monitoring, along with the company's managed maintenance program (Avro Care).



In these challenging times, the mission is still critical and LAS remains fully staffed with our experienced Team members

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Our glycol management solutions improve operations, efficiency and safety, while reducing cost and environmental impact of deicing operations.



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### **CARGO & BAGGAGE HANDLING EQUIPMENT AND ACCESSORIES**

### INTELLIDRIVE DRUM MOTOR WITH IRONGRIP LAGGING VDG (Van der Graaf)

The IntelliDrive Drum Motor is a conveyor drive designed for longevity and reliability. All drive components including the electric motor, gear reducer and gears, are enclosed inside the drum. The IntelliDrive has a service life of 80,000 hours before scheduled maintenance.

AviationPros.com/21233935

### CARGO DOLLY Wilcox Ground Services

This cargo dolly offers a robust nontwisting tubular structural frame designed for superior strength. It has a 15,000 lb. capacity, locks and stops available for ULD's 1 – 11, 125" X 96" sheet and 125" X 88", 61.5" X 60.4" containers. Optional



caster covers available. Dual non–slip gripstrut walkways enhance operator safety. AviationPros.com/21243525

#### ROLLERTRACK CONVEYER Power Stow Americas, Inc.

Power Stow's belt-loader extension enables the loading and unloading of bulk baggage and cargo faster and more efficiently, and reduces physical strain. Simple, safe and logical, the system has reduced injuries by more than 50 percent and has options for up to 35 percent faster baggage handling times.



AviationPros.com/21233928

### RAMPTECH SAFETY HANDRAIL Sage Parts

The Ramptech Safety Handrail from Sage Parts has been engineered for performance, ergonomics, durability and

reliability. Along with its state-of-the-art safety

features, the Ramptech Safety Handrail is a universal product that can be installed on all major belt–loader models and brands and can be used to service most commercial aircraft. It can be installed on either or both sides of the conveyor.

AviationPros.com/21159181



### CONVEYOR BAGGAGE TRANSPORT SYSTEM R.J. Design LLC

This Conveyor Baggage System was designed to eliminate congestion under passenger loading bridges, cut down the time of passenger loading and unloading, and most of all for safety of passengers and airport ground personnel.

AviationPros.com/21234177



### MICRO ELECTRIC INDUSTRIAL VEHICLES, ACCESSORIES AND TRAILERS Metrans, LLC

Metrans manufacturers a patented, non-autonomous, electric personnel and light burden transport vehicle and 4-wheel steering trailers. They are designed to operate virtually anywhere a person can walk including offices, interior doorways, and elevators at speeds of up to 13 mph and a range of up to 40 miles on one charge. Due to their size and maneuverability, these products are well suited for airport safety, security, operations, as well as in terminal and ramp operations.

# OUR VISION For a better tomorrow

### **COMPLETE ZERO EMISSION SOLUTIONS**

The PCS GSE electrification propulsion system combines GM's advanced electric vehicle technology with PCS' integration engineering allowing for a seamless install into existing GSE and new vehicle designs.

To request more information, please email us at cleanGSE@powertraincontrol.com





**ocleanGSE.com** 

### **CARGO & BAGGAGE HANDLING EQUIPMENT AND ACCESSORIES**



### CONTIRV20 ALL SEASON Continental Specialty Tires

The ContiRV20 All Season is the ideal tire for small tow tractors and baggage loaders, which operate as part of the ground handling fleet at many airports. No matter if summer or winter conditions, the tire perfectly works on the typical hard and flat airport surfaces and ramps, where it can get slippery when they are wet or are covered in snow or slush.

AviationPros.com/21243614



### BENDIBELT Mallaghan

The Mallaghan Bendibelt is an aircraft baggage loading system that enables baggage to be loaded/ unloaded in a safe, efficient and expedient manner with the operator in control from within the baggage hold. With a unique curvature design and key safety features, it can deliver a number of significant benefits including turnaround efficiencies, reduction in manpower costs and manual handling. Through automation, it reduces the risk of manual handling injuries and ground damage to aircraft.

AviationPros.com/21210231

#### TUG 660 LI Textron GSE

The TUG 660 Li helps make light work of ramp operations. With standard features designed to enhance performance like its AC drive and regenerative braking, this vehicle offers reliability flight after flight. A maintenance-free battery offers smooth, consistent operation, more range and



faster charging. And a full complement of options including Smart Sense anti-collision technology, and CE certification will boost productivity and the safety of crews.

AviationPros.com/21243542

#### RIP-STOP BAGGAGE CART CURTAINS Estex Manufacturing Co. Inc.

Estex Manufacturing's new FR700 Rip–Stop Bag Cart Curtains, dramatically increase the life of the curtain while decreasing the repair/replacement expense and labor cost. The unique nature of this new material prevents punctures from spreading and provides handlers the opportunity to repair

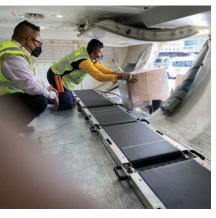


the curtain with the company's Cart Curtain Patch Kits.

AviationPros.com/21243535

### TISABAS Ramper Innovations

TISABAS reduces costs, time and injuries of ground handling operations. TISABAS is a compact motorized folding conveyor system that goes into the aircraft belly and mechanically moves baggage and cargo, replacing the need to throw bags the length of the plane. Using TISABAS substantially decreases time and operational costs while making ramp agent jobs safer, easier and more efficient.



AviationPros.com/21243531

#### CARGO PALLET TRAILER Clyde Machines Inc.

This 15,000-pound capacity cargo trailer can handle LD1,2,3,4,6,7,8,9,11 & 29 as well as 88" x 125",96" x 125" and 88" x 108" pallets. It features protected lead-on rollers and protected casters along with tine way openings, a recessed side frame and self-adjusting rear brakes.





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Magn

# EMISSION FREE eGPU FAMILY

**GPU 10** 

7400

Whether you need 28 VDC or 400 Hz power, we have an eGPU for you.

Itwgse.com/battery7400



BUSINESS JET 28 VDC



12 7400



180 kVA

The ITW GSE 7400 eGPU family offers flexibility, zero emissions, silent operation and reliable power. The eGPUs improve the working environment for operating staff and are ideal for gates with no fixed power installation, remote parking areas and hangars. A common user interface provides easy operation across the lineup.

### **Create the perfect lineup**

### **CATERING & CLEANING EQUIPMENT**

### CMC4000 TOWABLE REFUSE COLLECTION CART Par-Kan Company

Par-Kan Company's CMC4000 Towable Refuse Collection Cart is ideal for collecting refuse at the airport. This cart features lockable lids for quarantined trash collection from international flights. The cart's stainless steel containment tank is solid-welded and tested for leaks and is designed with proper slope to filter any liquids to the dump valve located on the bottom of the cart for easy clean out. AviationPros.com/21243639

### INDOOR/OUTDOOR DISINFECTING CART Wilcox Ground Services

Wilcox Ground Services' Indoor/ Outdoor Disinfecting Cart features a 50-gallon aluminum tank, Discovery Dry Cell Traction Battery, handheld spray wand, FloJet water pump and 50' Reelcraft spring retractable hose reel. Other specifications include locking casters, True Charge 2 Battery Charger, 15' attached power cord for charging, pump on/off switch, hoses and filter. Optional misting and fogging wand attachments for vehicle interiors, aircraft, etc., are also available.

### CATERING TRUCK DOLL America

DOLL is a leading manufacturer of catering high–loaders throughout the world. Resulting from its long–term experience in commercial vehicle manufacturing, DOLL is familiar with all requirements for modern catering high–loaders. The priority of the company's products is the safety of operators and aircraft, as well as the loads.

AviationPros.com/21243567

### PRIMEFLIGHTUV DISINFECTION SOLUTIONS PrimeFlight Aviation Services

The patent-pending PrimeFlightUV surface disinfection units can be used in a number of ways to help protect team members and passengers. With the ability to mount onto current systems, or stand alone with stationary or wheeled legs, these surface disinfection solutions were built to meet changing needs. Some units have multiple size configurations, or the company can build to meet specific needs to ensure they will work across an operation.

AviationPros.com/21158220



### 2019 CATERING TRUCK -SUPER DUTY F-650 Aeroservicios USA Inc.

This catering vehicle offers a 6.8L 3V SEFI V10 gasoline engine, Ford TorqShift HD 6-speed automatic double overdrive transmission, a hydraulic brake system, a 20-foot box, roll-up door and front rubber bumpers. Options include front and rear camera, tape sensor on front rubber bumper, proximity sensors, shelving generator and a 110V system air conditioning unit on the box.

AviationPros.com/21096313



A-Series Dolly

AlphaCart<sup>M</sup>

### Innovative Design Solutions for Ground Support Equipment

Arcaft Towbar

### New FAST solutions improve performance and safety on the ramp.

As a leading manufacturer of airline, air cargo and package handling solutions for today's global commerce operations, FAST Global Solutions continues to bring innovative designs to ground support equipment that help ramp agents maximize operations and maintain critical schedules.

The new FAST carts, dollies, loaders and towbars join an expansive portfolio of smartly-designed, ruggedly-built, and ultra-reliable equipment, engineered to improve performance and safety on the ramp.

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### **CATERING & CLEANING EQUIPMENT**



### MH 10X12 HIGH-LIFT Smith Transportation Equipment

The STE MH 10x12 High–Lift is capable of servicing door sill heights ranging from approximately 55 to 100 inches. Mounted on either a gas or diesel chassis, this vehicle's 12–foot van body, and smaller footprint make it an ideal choice in areas where ramp space may be tight.



### PNX-PV120 PROVISIONING VAN Phoenix Metal Products

The Phoenix PV120 Provisioning Van is a self-contained vehicle that can service aircraft with a door height from 98 inches to 108 inches. The van body is fixed with an elevating platform. A parallelogram stair makes a safe transition between the van body and platform.

AviationPros.com/10026497



### CATERING/CABIN SERVICE TRUCKS Global Ground Support

Catering/Cabin Service Trucks are available in various sizes: 18-foot wide body, 22-foot wide body, 16-foot narrow body and 14-foot narrow body. RJ 1/2 cab service is also available.

AviationPros.com/10026400

AviationPros.com/12376446

### AIRCRAFT DISINFECTION UNIT Icy Cold Aviation

Icy Cold's Aircraft Disinfection Unit (ADU) is designed to disinfect commercial aircraft up to narrow-body size. The ADU uses a bipolar ionization that creates activated oxygen from air molecules, which acts as the disinfection agent. The ADU enters through the GC and disinfects from the ventilation duct system



to the cabin's surfaces. It eliminates viruses, bacteria, germs, VOC, mold and more by using a natural process without hazards to human health.

AviationPros.com/21158956

### VICTORY CORDLESS ELECTROSTATIC DISINFECTING SPRAYER PlaneSafe Aviation Products, LLC



The Cordless Electrostatic Sprayer allows the user hours of spraying time without the hassle of dragging a cord. In addition, it is

designed to save time and labor, spray less liquid and cover more surfaces.

AviationPros.com/21159186

## E-CATERING WIESEL Kamag Transporttechnik GmbH & Co. KG

The ECW has a 156 kW electric motor that directly drives the rear axle of the vehicle without having a gearbox or converter fitted in between. The working hydraulics of the vehicle are in turn driven by a separate electric motor. It can service a large range of transfer heights.



AviationPros.com/21112657



### FLIGHT CATERING HI-LIFT Nandan GSE Pvt. Ltd.

A wide variety of chassis, designs, ancillary features, customization and functionality are available on Nandan Hi–Lifts. Features include ergonomic control systems; full cabin (2,700 to 600 mm); chassis (16 to GVW or 11 ton GVW), half cabin (1,600 to 6,000 mm) with insulated or non–insulated bodies and FRP bodies. Customization is also available with the help of four catering models: Catering Petite, Catering Superstar, Catering Champ and Catering Titan.

# **Commander 30i Electric Cargo Loader**



MAKES IT POSSIBLE. jbtc.com/aerotech



### DEICING & ANTI-ICING

### DEICECUBE GLYCOL MIXING AND DISPENSING SYSTEM Liquid Automation Systems (LAS-USA)

The LAS DeiceCube glycol mixing and dispensing system provides

user-friendly, reliable, accurate and fast mixing of glycol and water to meet all weather conditions. It can reduce glycol usage, costs and environmental impact and improve throughput. It eliminates tripping hazards and reduces operator burden of handling heavy hoses on slippery ground and enables simultaneous loading of Type I and Type IV fluids.

ilulas.

AviationPros.com/12378696

### ULTIMATE ONE SINGLE ENGINE DEICER Global Ground Support

The Ultimate One Single Engine Deicer has been changed from the inside out. Features include one engine, reduced fuel usage and lower maintenance costs with higher reliability. New products and technologies have been integrated to eliminate the need



for an auxiliary engine. The Ultimate One deicer is available with all Global options and configurations, including single operator, premium blend, AirPlus and XR.

AviationPros.com/21110566

### SAFE DRAIN STORM DRAIN INLET PROTECTION Safe Drain

The Safe Drain is a stainless steel dropin insert to stop spills, deicing or any fluid or sediment from entering the storm water system. The Safe Drain also removes hydrocarbons as well as metals. The Safe Drain fits existing storm drain inlets so there is no construction or downtime.

AviationPros.com/21243407

### ANTI-ICING AND DEICING NOZZLES Task Force Tips Inc.

TFT manufactures a wide range of antiicing, deicing and combination nozzles in manual and electric remote versions. AviationPros.com/21154104







### SERIES 9900 WIRELESS COMMUNICATION DEICING SYSTEM David Clark Company, Inc.

The David Clark Series 9900 Wireless Headset Communication System for deicing and anti–icing operations allows hands–free communication between the driver and bucket, clearly and in real time, and helps to prepare the aircraft exterior for on–schedule departure in a safe, efficient manner. AviationPros.com/12359457



### GS2100 WRAPTOR Ground Support Specialist LLC

The GS2100 Wraptor is a 45-foot working height and 2,000-gallon capacity deicer that has a single engine. A new state-of-the-art cab promotes operator comfort and visibility, as well as overall safety to the deicing operation. A new enclosed basket is also available, as well as smaller sizes of this deicer in order to fit the operation of every airport and user.



# **Tis' the Season**

All-Season traction on the ramp has never been better.

Introducing the all new GSE tire: ContiRV20 All Season.





### **DEICING & ANTI-ICING**

### OPEN BASKET AIRCRAFT DEICING MIXED REALITY TRAINING SIMULATOR KBY Software LLC

The KBY Software open basket aircraft deicing mixed reality training simulator provides a 24/7 environment for initial

entry and recurring training in dual operator open basket aircraft deicing. The system utilizes a VR headset with pass–through video stereo camera system to support student interaction with physical controls.

AviationPros.com/21087766

### PPS – PRECISE POSITIONING SYSTEM Vestergaard Company Inc.

The Vestergaard Elephant Beta deicers can be supplied with the PPS – Precise Positioning System. PPS helps constantly ensure the correct, optimal distance between the nozzle and aircraft – typically 1



meter, improving safety and reducing workload for the operator. With shorter spray distance, the highest possible ADF temperature can be kept, thereby maximizing energy transfer from fluid to aircraft. Compared to a spray distance of 2 meters, the ADF temperature can be 10 to 40 degrees C higher.

AviationPros.com/12335217



MULTI-SOLUTION GATE MSG Production AS

The Multi–Solution Gate (RS500) dual system offers complete deicing and washing functionality, while special high–resolution cameras will scan the condition of the entire airframe. The RS500 is a complete washing facility. The systems offer time and cost savings and are the greener choice where up to 95% of spent fluids used are collected and recycled in a closed environment.

AviationPros.com/21092855



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### **DEICING & ANTI-ICING**



### INTELLIMIX TECHNOLOGY Textron GSE

Intellimix Technology was designed to maximize efficiency, reduce waste and deliver the perfect blend of heat and fluid – optimizing the deicing process and reducing the opportunity for error. Intellimix offers the unique advantage of precise mixing at the nozzle and eliminates the need to flush fluids, resulting in reduced operational costs. Intellimix allows for a lower environmental impact and enhanced safety.

AviationPros.com/21243544

### TEMPEST I JBT Corporation

The JBT Tempest i was a two-year project incorporating customer feedback based on experience of more than 1,300 units in the field. Additions include automated control



of boom positioning, auto boom park and operator skill level boom speeds. Upgrades include the control system with key functions integrated into joysticks, intuitive diagnostics and excellent maintenance access for quick and easy repair. The Tempest i uses the Air First Deicing system, single–operator system and single–engine design, all targeted to safely reduce environmental impact and operational costs.

AviationPros.com/21155544

### DEICING NOZZLES U.S. Airmotive GSE

U.S. Airmotive GSE is proud to be a distributor of deicing

nozzles manufactured by Task Force Tips. A single nozzle can be used in two steps to both deice and anti-ice aircraft. The operator simply selects the desired fluid delivery system tributor of deicing

pressure, and the nozzle responds automatically. TFT backs its nozzles with a five-year warranty.

AviationPros.com/10724697

### Who is controlling your deliveries? With TCS OnPoint, it's you.





### 5K AIRCRAFT REFUELER BETA Fueling Systems, LLC

The 5K Refueler features BETA's engineered frame made with aluminum for lighter weight while tanks come in aluminum. stainless steel or a combination of the two. The side modules are designed to provide maximum protection from impact using a narrower chassis and flexible joints to protect the pipework and valves. Individual control and filter modules mount directly onto the chassis rather than a sub frame. The 5K Refueler comes standard with BETA's all-aluminum filter vessel. It also features an underwing hose reel with electric rewind; a singlefoot valve for simplicity and ease of maintenance; and more durable stainless steel pipework. Optional features include Aljac and recovery tank for fuel sampling, a stainless steel-bolstered tank and upgraded tank suspension for easier access to fuel lines and valves, tank soffit to prevent ice buildup and a second hose reel to allow for metering fuel into each wing.



### DPGUARD FAUDI Aviation GmbH

The FAUDI Aviation DPGUARD is a fully automated touchscreenoperated calculator to give out the corrected differential pressure across the filter elements (monitor filters or coalescers) in mobile or fixed filter vessels being operated at less than maximum rated flow. The DPGUARD automatically calculates the condition of the filter elements inside the vessel using the signal inputs of flow rate and differential pressure across the elements. It monitors the changing condition of the elements and provides a history so that element change times can be anticipated and abnormal conditions could be detected. The system is based upon the related joint standards as described in EI 1581, EI 1583, EI 1590 and EI 1596.

AviationPros.com/12440622

### AVIATION PUMP CART

Designed for mobility around unimproved runways at remote airport locations, the Aviation Pump Cart allows one person to easily move the pump and its hoses over rough terrain to refill an aircraft quickly from a portable fuel tank. Engineered to fit through a narrow aircraft door opening (such as a Twin Otter), the Aviation Pump Cart can be transported by fixed-wing aircraft as well as laid down and secured to the floor of the aircraft, ensuring that the pump engine will not leak fuel, even if full. The cart incorporates a robust hose hanger that can hold 50 feet (15 m) of discharge hose plus a nozzle and 12 feet (3.6 m) of suction hose. AviationPros.com/12426396

AviationPros.com/12431533

### INTELLICHECK 3 DUAL-LEVEL MONITOR



#### SYSTEM Scully Signal Company The Scully Intellicheck 3 Dual-Level

Monitor System meets the recently revised National Fire Protection Agency (NFPA 407) and Joint Inspection Group (JIG2) standards. It monitors two independent optical overfill sensors, High and High–High

Level and features Scully's patented Dynacheck circuitry, providing continuous self-checking fail-safe technology. The original Scully system was designed for the U.S. Air Force in 2003, and has been eliminating overfills for military users for over 15 years.

AviationPros.com/12434679



### NEW AND USED REFUELING EQUIPMENT ProFlo Industries, A PrimeFlight Company

ProFlo Industries has a complete inventory of new and used refueling equipment, including Avgas refuelers, Jet refuelers, hydrant dispensers and carts as well as gasoline and diesel dispensing equipment.

### LCR.IQ Liquid Controls LLC

The LCR.iQ is Liquid Controls' newest fueling register, a product based on two years of customer development and collaboration. Easy to operate, intuitive and fully configurable to automate even the most complex fueling operations, the LCR.iQ was built with the future in mind to accommodate highly sophisticated wireless automation and data transfer systems, and is compatible with critical system sensing devices.



AviationPros.com/12434355

### LED DISPLAY Tekinno Corporation Inc.

The Eagleview large LED display (LLD) is a display built for tankers. The display helps make sure operations away from the tank are safe by showing users the volume or the level of the



liquid dispensed into aircraft of other equipment. It can be seen from 100 feet away, night and day, in sunny or rainy conditions and during harsh winter.

AviationPros.com/12397689

### M4000 NEXT-GEN SELF-SERVE FUELING TERMINAL QTpod

The M4000 Next-Gen Self-Serve **Fueling Terminal** offers many features and enhancements previously not available on any aviation selfserve fueling terminal. Multiple options for payment processing communications, including cellular, Wi-Fi and Ethernet; web-based software management application, a new and substantially improved user interface and the ability to control up to



eight pumps are just of few of the new features on the M4000.

AviationPros.com/12434602

### **GROUND SUPPORT SPECIALIST** High Quality Deicers. Economically Priced.





Contact GSS for more information Office: +1 662 342 1412 | Email: Luke@gssonline.com Website: www.gssonline.com

### MODEL 43-46 AUTOMATIC CONTROL VALVE Cla-Val Company

The Cla-Val Model 43–46 is an automatic control valve typically installed on the discharge side of a filter vessel. Its purpose is to limit the maximum flow rate through the filter vessel, preventing the filter vessel from exceeding its maximum flow rate while providing water defense shutdown capabilities. It offers redundant shutdown capability in water defense applications with the ability to shutdown hydraulically by a signal from a Cla-Val Float Control installed in the

sump of the filter vessel or electronically when water is detected. This

would be via electronic water detection technology offered by others. It also maintains a minimum differential across the valve to ensure positive shutdown if a water slug event takes place.

AviationPros.com/21159945

### ATMOS PORTABLE TIGHTNESS MONITOR Atmos International

Atmos Portable Tightness Monitor is a field portable version of the Atmos Tightness Monitor system. The product is supplied in two Peli cases and can be quickly connected to the hydrant pipeline by the operator. Following completion of the test, it can be quickly disconnected and moved to other hydrant segments for further testing. The hardware can be connected to the



hydrant via a coupler on a refueling point or via a low point drain. Atmos Portable Tightness Monitor is a cost-effective alternative to retrofitting the appropriate instrumentation and automation needed to test airport hydrants in airports that lack a fixed leak test installation. Compliant with EI 1540, EI 1560, JIG2 and JIG4.

AviationPros.com/21227976



### "BD" HOSE BEADS ELAFLEX HIBY GmbH & Co. KG

For some years, hose beads or other accessories have been increasingly fitted on aircraft reel or deck hoses that have not been specifically developed for the use on the airfield. The Energy Institute has released the standard EI 1522 "Minimum Requirements for Aviation Fuelling Hose Accessories." ELAFLEX provides "BD" hose beads for aircraft refueling hoses that meet the standard.

AviationPros.com/21096739

### AVIATION FUELING DISPENSERS AND EQUIPMENT Sparling Corporation

Sparling Corporation provides

engineered diagrams and design, product fabrication, onsite installation, system testing and training, complete turnkey systems

and more. The company can provide drawings for foundations and electrical service, and SPCC Plans. Its staff of qualified technicians can perform both in–shop and onsite repairs, upgrades and inspections.

AviationPros.com/12434590



### ONPOINT DENSITOMETER Total Control Systems

Get real-time, accurate measurement of your fuel density via the TCS OnPoint Densitometer. Display volume, mass and density simultaneously while automatically controlling the density limits. The device will aid fuel management and environmental compliance.

AviationPros.com/21215752

#### WATER BARRIER FILTERS Parker Velcon

Parker Velcon's new Water Barrier Filters serve as allies in the battle against water in aviation fuel. CDF-X and ACO-X filters block water before the aircraft without using SAP. CDF-X is qualified to EI-1588 and is a direct drop-in replacement for all 2" SAP monitor cartridges. ACO-X filters are designed for the company's VF-61, VF-62





and VF-609 filter housings and similar competitors' housings. ACO-X meets the effluent fuel quality and structural requirements of EI-1588. There are no additional parts required to install, no piping changes and no operational changes.

### HEIGHT ADJUSTABLE FUELING STAND 21147 WAAG

This height-adjustable fueling stand uses hydrant cart plumbing to fuel the aircraft. No stand certification is required. This stand can fuel E-175, E-190, B-737 and B-737 MAX aircraft when in the down position.

In the up position, the stand can fuel A–320 aircraft. Additionally, a nozzle lift fueling stand for wide–body aircraft is coming soon. The stand will use hydrant cart plumbing and will not require certification.

AviationPros.com/21242243

#### EMR4 Veeder-Root Commercial-Industrial Products Group

The EMR4 is an electronic meter registration. The EMR4 is a globally certified electronic register for any type of custody transfer application.

AviationPros.com/12434626

### RAMPSTAR Engine & Accessory, Inc.

The Rampstar is an EAM custom 10,000–gallon rear engine aircraft refueler chassis. Several models are available.

AviationPros.com/21158960





### REFUELING PUMPS Gorman-Rupp Company

Gorman–Rupp O Series self–priming centrifugal pumps with hydraulic motors can move the same rates of fuel as the company's power take–off (PTO) models. Model O3H1–HYD provides an alternative to PTO power requirements. Close–coupled to a hydraulic motor, they are an efficient compact solution ideal for handling aircraft fuels.

AviationPros.com/21242255



### One Engine, Reduced Fuel Usage, Lower Maintenance Costs, Higher Reliability

While the Ultimate One looks exactly like the Deicers produced by Global for the last 30 years, the internal design and components are completely new. We've integrated new products and technologies to eliminate the need for an auxiliary engine. This design reduces fuel consumption and reduces annual maintenance while increasing reliability. The Ultimate One deicer is available with all options and configurations; AirPlus, Premium Blend, Midas, Single Operator and XR Extra Reach.

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Plus!		OPERATOR	<b>XRREACH</b>	
	Plus!			

#### SC18 SOLID RUBBER TIRE Continental Specialty Tires

Fough and long lasting, this solid rubber tire ensures constant propulsion on any surface thanks to its proven tread pattern. It is extremely stable, puncture-resistant and maintenance-free. The SC18 has a high loading capacity and is extremely economical. It is ideally suitable for airport vehicles and heavyduty transport vehicles. It offers lower heat generation, less fuel consumption and a smoother ride.

Aviationpros.com/21243616

### START PAC GREEN

The Start Pac Green is a unique modular battery-powered ground power unit to replace diesel- and gas-powered units. Features include a larger battery bank for powering up aircraft systems for extended periods of time; a smaller battery bank for engine starting; the starting battery bank can be removed from the

ground power unit when a portable unit is required, and built-in battery chargers to replenish both battery banks.

#### Aviationpros.com/21112662

### JETGO 900 AERO Specialties

The AERO Specialties JetGo 900 is a groundbreaking development in the company's line of JetGo aircraft ground power units. Utilizing modern production methods and materials, AERO Specialties has created this 28V GPU. The all-new futuristic design, active aircraft safety features and reliable



performance ensure that the JetGo 900 is a quality choice for 28V ground power requirements.

#### Aviationpros.com/21214118

### BANDED POWER CABLE ASSEMBLIES

PAGE GSE is proud to introduce its safe, robust, banded 400 Hz and 28V DC cable assemblies. These ergonomically designed connectors incorporate cutting– edge technology unique to the GSE industry.



#### viationpros.com/21233948

### B GSE COOLJET

### COOLJET HOSE RETRIEVER B GSE Group, LLC.

The CoolJet Hose Retriever from B GSE Group easily deploys and retracts with minimal effort by the operator. The unit deploys only the needed amount of hose, allowing more cooling to be delivered to the aircraft due to reduced temperature losses, pressure losses (from length and kinking) and hose wear. It removes a rolling hose basket or reel from the ramp along with its attachment yoke, and it elevates and protects the hose during storage. The hose retriever facilitates PCA usage, which reduces APU run-time.

Aviationpros.com/21088001



### BOOM AIR HOSE MANAGEMENT SYSTEM Twist Aero

The Boom Air Hose Management System is an automated hose delivery system, which connects into the pre-conditioned air unit and delivers heated or cooled air to the plane. The unit enables the operator to only deliver the amount of hose needed to the aircraft via a handheld remote. This reduces kinks and other hoserelated issues, resulting in optimum airflow to the aircraft. To date, there are more than 400 systems installed in the U.S., Canada and Europe.





### GPUS, AIR STARTS, PCA HOSE & FITTINGS U.S. Airmotive GSE

U.S. Airmotive GSE has been serving the aerospace industry since 1963 with its extensive inventory and off-the-shelf same-day delivery. A one-stop shop for PCA and heating hose, in both lay flat and accordion styles. Air start couplings, duct and cover, lav hose, couplings, and AC/DC attachable plugs and cable assemblies are also available.

Aviationpros.com/10026590



### 3400 PCA ITW GSE

The smart ITW GSE 3400 PCA supplies fresh air into parked aircraft. It delivers exactly the amount of cold air required and not more. Thereby, it uses much less energy than other PCAs. The 3400 PCA also enables users to exploit the available power at an aircraft stand in a smarter way. Without major investments, users can utilize ITW GSE's Intelligent Power Management to add equipment and reduce complexity at existing stands.

Aviationpros.com/21158598

### ADVANCED TECHNOLOGY ENGINES Engine Distributors Inc.

Engine Distributors Inc. offers a line of LSI industrialized Ford engines, which are available and serviced through a global dealer network. The line of EPA- and CARB-certified 1.5-, 2.5-, 3.7- and 6.2-liter engines range from 20 to 200 horsepower. They are available in gasoline, LPG, CNG, natural gas and dual fuel. The company offers a five-year, 5,000-hour warranty for the GSE market.

Aviationpros.com/12275602

### D70 OVER-MOLDED BATTERY CONNECTOR (EURO) Anderson Airmotive Products Co.

The Anderson Airmotive Products Co. Series D70 Over-molded Battery Connector (Euro), per the DIN43589-1 specification, provides users with a true watertight configuration for fast battery charging systems. A firstof-its-kind connector that is over-molded on the cable provides users with an IP65 solution that ensures performance in severe battery environments. Key features include compatibility with other DIN43589-1 battery connectors; silver-plated copper alloy contacts for electrical performance; manufactured with durable synthetic rubber for long life; provides up to four auxiliary contacts; tailorable to user needs for cable gauge and cable assembly length.

Aviationpros.com/21233941

#### BANJO MOUNT Caster Concepts Inc.

The Aerol Banjo Mount running gear concept comprises a wheel mounted on a stub axle fitted to a shock absorption unit that can be bolted to the side of ground service equipment. The Banjo Mount is designed for loads up to 1,000 pounds per wheel in increments of 125 pounds.



### ZEPHIR PCAS

ZEPHIR PCAs are designed and engineered to deliver optimum airflow to each aircraft, with an increased efficiency of up to 35% using two inverter compressors with four phases and a high-quality direct drive centrifugal blower (VFD)



consuming minimum energy. They fit any platform layout and can be installed on any passenger boarding bridge.

Aviationpros.com/21096708



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#### RHEINMETALL EMSU Rheinmetall Landsysteme GmbH

Rheinmetall is proud to introduce this 100-percent electric air start unit. The Rheinmetall eMSU represents a zero-emission solution that meets green initiatives. The new eMSU air start unit offers an airflow capability of 250 ppm and performs in any climatic conditions. This eco-friendly solution comes with



a fast battery charging system and high–quality components with low maintenance requirements.

#### Aviationpros.com/21233943

#### HAND CRANK PCA DUCTING REELS Reelcraft Industries, Inc.

Reelcraft's PCA reels handle 75' of 14" I.D. preconditioned air ducting and are designed for ergonomic handling of air ducting. When properly installed, Reelcraft's PCA reels supply continuous clean pre-conditioned air to stationed aircraft, keeps expensive PCA ducting protected and improves safety on the tarmac. Aluminum construction and a safety yellow, baked-on powder coat finish combine to provide corrosion resistance. Heavy duty casters are available for easier mobility.







### 400 HZ SINGLE JACKET CABLE

#### Philatron Wire & Cable

This 400 Hz Single Jacket Cable Assembly is UL listed and offers a double belted reinforced neoprene jacket and +125°C rated flame– resistant conductors to help prevent overheating, shorting and fire. The assembly offers -40°C degrees performance below zero. Additional features include M Class extra– flexible copper stranding, anti– corking design, tough rock–hard replaceable nose, silver–plated copper contacts and a modular design. The assembly is ISO/IATF certified.

Aviationpros.com/21242245



#### WG ENGINE SERIES Kubota Engine America

Kubota's spark ignited engines range from 0.74 to 3.8 liters and power outputs of 23.5 to 97.9 horsepower. The WG engine series is based on the industrial diesel engine line and equipment manufacturers now have multiple fuel options.

Aviationpros.com/21154161



#### 28VDC GROUND POWER UNIT Current Power LLC

#### Current Power LLC is a leading manufacturer of 28-volt DC power supplies for corporate, military and commercial customers. The company is known most for its 600 and 400 amp mobile units. These units

provide 2,000 and 1,200 amp peak starting current and its exclusive re-connectable input which makes a single model useable around the world, on any 50 or 60 Hz power.

Aviationpros.com/2124356



### UFC-45M Unitron Power Systems

Unitron's UFC-45M is a solid-state mobile ground power unit that has one of the lightest weight-to-power ratios in the market. It is designed to be easily maneuvered by a single person within an aircraft hangar or ramp environment. Unitron offers a wide variety of units, from 400Hz, 28VDC, 270VDC, combination AC/ DC with power ratings ranging from 20kVA up to 400kVA.



### PEERLESS GEAR'S 2600 TRANSAXLE SERIES Peerless Gear

Peerless 2600 series hydraulic final drives provide performance, durability and ease of operation for commercial riding vehicles. Peerless 2600 series final drives coupled with a Peerless FDM–718 series hydraulic motor can provide up to 1,200 ft. lbs. of axle torque.

Aviationpros.com/21112582



### MOBILE REACTIVE LOAD BANK ALB-I-56DW (0-56 KVAR\_400 HZ AC) DEKAL Load Banks L.L.C.

The ALB–I–56DW is an unique testing equipment unit for civilian and military applications. It allows any operator to perform extensive load test and captures a real-time PDF data table to verify values simultaneously. The unit complies with MIL-C–81790 specification, is suitable for workshop or airside operations and is backed up by a two-year warranty. It is designed to be either mobile (enclosed wheels) or fixed with threads on each bottom corner.

Aviationpros.com/21233924



#### PCA HOSES AmCraft Manufacturing Inc.

AmCraft Manufacturing fabricates pre-conditioned air (PCA) hoses. The company offers both Wire Supported Hoses and Lay Flat Hoses. Both are intended to assist with the movement of conditioned air (either cool or warm). AmCraft manufactures a complete line of standard size hoses, hose sections and hose accessories, too, and the company can also customize hose configurations to fit specific needs.

Aviationpros.com/21112425



### S POWER M-B-DC Hitzinger GmbH

The mobile version of the Hitzinger S POWER provides high voltage quality and highest level of supply security anytime, anywhere. The S POWER M is available either for indoor use (S POWER M–S) or outdoor use (S POWER M–B). The latest 28 VDC technology can be added to all available S POWER units. Due to the latest inverter technology, the unit fulfils all technical requirements and overloads and is still very lightweight and compact.



### STAND, DIESEL AND ELECTRIC MOBILE ACUS Verde GSE

Designed with multiple systems and ease of maintenance, Verde's line of ACUs support any military fight, select cargo and bomber aircraft. Verde's ACUs support the F15, F16, F18, F35, P–8, C130J, B1B, T50, FA50 and EFA Typhoon Mirage. Features include pressure from 1–13 PSIG, 25–90



Nominal tons, 18–55 grains of moisture and airflow from 34–600 PPM. Aviationpros.com/21113714

### PCAT LOAD BANK Hall Technical Services

The Hall PCAT Load Bank is used for maintenance testing without an aircraft and will aid monthly checks. The load bank can be used on many aircraft types, and can simulate various aircraft types using the restrictor nozzle to set specific inches of water. Charts are provided on the PCAT Load Bank. No extra tools are required to utilize the load bank. Determine end



of hose discharge status on any PCA unit. The load bank uses standard 8" ATA flange hookups, is portable and simple to use. It includes an adjustable restrictor nozzle to simulate various aircraft air requirements.

#### Aviationpros.com/21154158

### 400HZ PHASE ANALYZER MCM Engineering, Inc.

The MCM Power Analyzer is an easy way to test aircraft cables and the 400 Hz power source. Sturdy and lightweight, machined anodized aluminum is made to be stepped on to make insertion and extraction effortless. Checks phase rotation, E/F



interlock and indicator lights show the presence of power on each phase.

AIRCRAFT 400 HZ ALTERNATOR WEG Electric Corp.

WEG 400 Hz alternators are especially designed for aviation ground power units driven by reciprocating engines. The robust and compact flying lead configuration allows for seamless and flexible integration into GPU package designs while ensuring long-term reliability in the field.

Aviationpros.com/21242241





### 400 HZ ALTERNATORS AND MOTOR-GENERATOR SETS Kato Engineering, a Nidec Brand

Nidec's Kato Engineering 400 Hz and Motor-Generator sets offer reliable ground support power solutions.

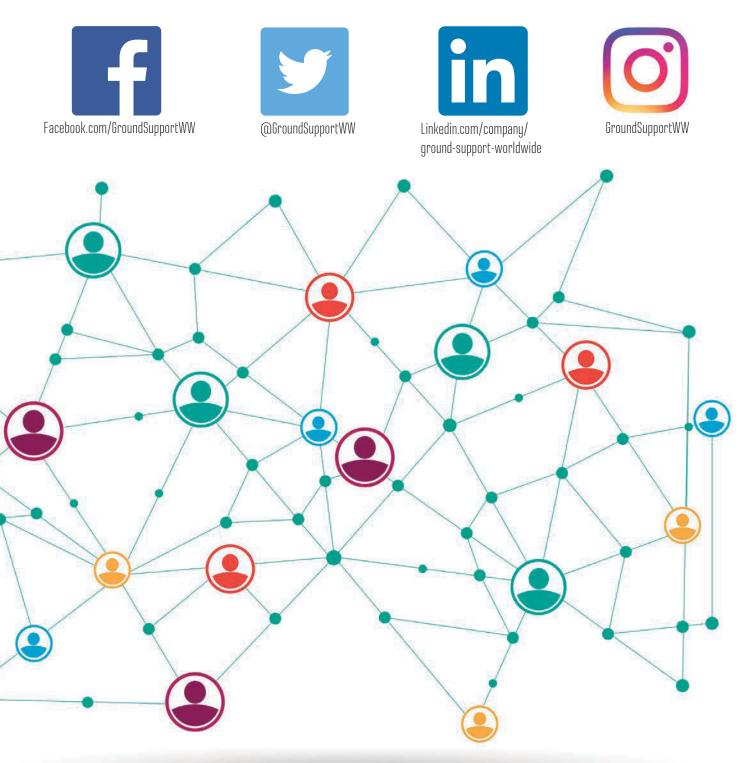
Aviationpros.com/21242254



#### RAMPTECH PCA ADAPTOR Sage Parts

The Sage Parts patented Ramptech PCA Adaptor is designed to be lightweight, fit any aircraft and any locking configuration, and is maintenance-free. Thanks to this design, the Ramptech PCA Adaptor avoids excessive wear and tear to the ducting caused by dragging the assembly back and forth from storage to the aircraft.

# Stay Connected with Us!





### **GREEN PRODUCTS**

### 7400 400 HZ BATTERY EGPU

Zero Emission

400

The ITW GSE 7400 400 Hz Battery eGPU provides silent and easy operation plus low operational costs. The 7400 400 Hz Battery eGPU allows users to reduce emissions by 90 percent and NOx by 95 percent. This eGPU recharges from any 50/60Hz socket and is available in business jet 28 VDC, narrow-body 90kVA and now wide-body 180 kVA.

1

AviationPros.com/21243350

### FURY X7 GSE CHARGER Motive Charge LLC

The Fury X-7 outdoor charger is built for the rugged application and environmental conditions specific to ground support equipment. It is built with the latest Silicon Carbide transistor technology and full communication capabilities for optimal charging and cloud data management. It also has the flexibility to charge multiple voltages, capacities and any battery chemistry, including lithium–ion.



### **EAGLE EJP-12**

**Eagle Tugs, a Tronair Company** Powered by dual AC electric drive motors, the eJP–12 features Zero Degree Technology for enhanced turning capabilities. Operators



are able to position aircraft precisely as the motors independently turn to reduce the space required to maneuver. The eJP-12 is designed to safely and efficiently move regional and large cabin business jets in all weather conditions.

AviationPros.com/12434197

### U-CHARGE U27-36XP BATTERY MODULE Lithium Werks, Inc.

Lithium Werk's U27–36XP Iron Phosphate battery (36V/50Ah, Group U27) can be used to make packs from 36V–850V to propel ground support equipment such as pushback tugs and mobile stairs. With thousands of cycles and zero maintenance, it can help reduce emissions and meet clean air initiatives.

AviationPros.com/21134252





### ACT QUANTUM GSE CHARGER Advanced Charging Technologies (ACT)

The ACT Quantum GSE Charger is an industrial battery charger with a UL-certified, Type 3R outdoorrated design optimized for airport operations and ground support equipment. It is designed with Wi-Fi connectivity for remote monitoring, control and seamless integration with ACT's bi-directional, cloud-based data management platform, ACTintelligent. It features conventional, opportunity and fast charge capabilities all integrated into a single, modular design. The charger also supports openCAN communication protocol enabling support for lithium-ion battery charging applications.

AviationPros.com/21233934



### ONECHARGE LI-ION BATTERIES OneCharge Inc.

OneCharge Li–ion Batteries for GSE are guaranteed to work in both hot, cold and harsh outdoor environment. They come Wi–Fi connected for remote trouble–shooting capability and superb data analytics.

### **GREEN PRODUCTS**

#### ALTUS II Minit Charger, LLC.

Minit Charger is a provider of GSE fast charging and battery management web-based applications. Minit Charger web-based applications provide managers visibility to charger and battery performance



in real time. Real-time notifications and alerts, via test or email, are transmitted when either the charger or battery have exceeded parameters or in a fault condition. Cradle-tograve battery management and data enables the user to make smart decisions about battery size, type and manufacturer.

AviationPros.com/21242249



#### SKYLINK PosiCharge

SkyLink is a cloud-based business intelligence platform that collects energy consumption, usage, safety and performance data from PosiCharge fast-charging systems. Asset management is centralized, intelligent and scalable to a user's needs. Receive real-time data with actionable intelligence on the status, condition and energy usage of the chargers. Quickly identify, fix and troubleshoot issues without negatively affecting operations. SkyLink's clean, simple and user-friendly interface makes it easy and effective for users to know immediately when interventions are necessary, leading to savings.

AviationPros.com/21233915

#### / GSE ELECTRIFICATION PROPULSION SYSTEM Powertrain Control Solutions

The PCS GSE Electrification Propulsion System combines GM's advanced electric vehicle technology with PCS' integration engineering. The result is a complete lithium battery and drive system capable of up to 200 horsepower that installs seamlessly into existing GSE and new vehicle designs. The system includes onboard AC charging and DC fast charging using region specific connectors for

global charging flexibility. The system is compatible with widely used PCS GSE components including the shifter and parking brake.

AviationPros.com/21243383

### NEXSYS TPPL BATTERY Allen Energy

The EnerSys NexSys battery uses Thin Plate Pure Lead (TPPL) technology to offer exceptional performance with zero maintenance. The benefits of the NexSys battery include no watering, fast charge rates, cold temperature performance, excellent cycle life, shock and vibration resistance, light weight and high energy density.



### **GREEN PRODUCTS**

### PURE BATTERIES / WI-IQ BATTERY MONITORING DEVICE

EnerSys

Virtually maintenancefree NexSys PURE batteries from EnerSys never require watering, reducing maintenance costs and downtime.

NexSys PURE batteries are also ideal for opportunity charging, offering ground crews the flexibility to charge between flights. The Wi-iQ battery monitoring device captures key operational data to identify potential issues before battery failure and unplanned downtime occur. Its slim design facilitates installation on the battery harness and issues visible and audible alerts to notify operators of important operational parameters.

AviationPros.com/21242253

### PLUG-IN HYBRID BETA DEICER

The Vestergaard Company Plug-in Hybrid BETA Deicer is equipped with an OEM lithium-ion battery, which



charges either via an on-board charger or via a generator on the PTO of the chassis diesel engine. Electric motors run movements, spraying and low-speed maneuvering around the aircraft with the diesel engine turned off. With a fully charged battery, the plug-in hybrid deicer will be able to deice 15–20 aircraft without running the truck's chassis engine. Fluid is heated with diesel in the current version, however, as soon as the desired temperature is reached, the heater turns off, and temperature drop is only about 1 degree Celsius per hour.

AviationPros.com/21141504

### COMET 6E AIRPORT TRACTOR MULAG Fahrzeugwerk GmbH u. Co. KG

The electrical MULAG airport tractor Comet 6E has a durable drive concept which makes it economical to use as a powerful and agile electric tractor in the field of high-performance applications, for example cargo. The Comet 6E performs even under high loads, with a drawbar pull of 22 kN and a trailing load of 17.t at 30 km/h (50t at 6 km/h), reaching up to 30 km/h with a traction battery of 1550 Ah.



AviationPros.com/21158954

### LITHIUM-ION BATTERY PACK Averest, Inc

The Averest–Flux Power lithium battery has revolutionized the airport GSE industry by providing airlines and handlers a clean, safe, innovative and affordable lithium–ion option. This modular lithium–ion pack can be seamlessly integrated with most eGSE brands, while reducing total cost of ownership.



AviationPros.com/21242236

### SHERPA E Goldhofer Airport Technology

Goldhofer's optimized Sherpa E battery-powered cargo tow tractor offers a wider range of performance and a longer life cycle in service, as well as faster, more flexible charging options and longer servicing intervals. The updated model comes equipped with a direct drive motor with a



maximum torque of 1,050 Nm. The electric energy is supplied via a modular battery system with intelligent temperature management. The tow tractor, which can be individually configured to customer requirements, can be charged using almost any standard charging infrastructure. The Sherpa E, with its IonMaster technology, offers a battery capacity of 35 or 70 kWh for a draw bar pull of 25 to 45 kN.

AviationPros.com/21203234



Savings in Mind with Replaceable EcoNose Feature



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### **GROUND HANDLERS & SERVICE PROVIDERS**



### GSE SALES, RENTALS, LEASING Davin Inc.

Davin GSE specializes in sales, rentals and leasing of both new and used ground support equipment.

AviationPros.com/21243527



### TRANSPORTATION AND SHIPPING SERVICES Air Ocean Pros

Air Ocean Pros is a full–service transportation provider dedicated to the ground support equipment industry. It is experienced in moving equipment for the airlines from airport to airport anywhere in the world.

AviationPros.com/12376784

# XCED

A Sasser Family Company

### LEASE, RENT AND PURCHASE GSE Xced Aviation Services

Xcēd is a source for on-demand wide- and narrow-body ground support equipment. The company offers GSE from all manufacturers and flexible options to lease, rent or purchase based on the needs of a business. Xcēd delivers high quality new or low-hour used equipment and unmatched customer service.

AviationPros.com/21160022

### **GROUND SUPPORT** EQUIPMENT INT'L INC.

### GSE SERVICES GSE Intl Inc.

GSE Intl Inc. buys, sells and refurbishes U.S.-made ground support equipment. Specializing in RJ operators support equipment, the company provides towbarless tractors, power carts, air starts, GPUs, pushbacks, belt-loaders, stair trucks, tow-bars, hydraulic mules, catering trucks, maintenance stands, aircraft jacks and deicers.

AviationPros.com/21112408

### REFURBISHED AND REMANUFACTURED TO ZERO-TIME GSE Victory Ground

Support Equipment Victory Ground Support

Equipment buys, sells and



rents refurbished and completely remanufactured to zero-time ground support equipment (GSE).

AviationPros.com/21243618

### GSE - RENTALS/LEASE/SALES/SERVICE

**Mercury GSE** supplies new and used equipment available for rent, lease and sale. The company's 70 years of ground handling and GSE experience provides customers with the facts needed to make the right purchasing decisions.



Mercury carries a variety of equipment from the industry's leading manufacturers and maintains a full stock of inventory.

AviationPros.com/21159208

### SECOND-HAND GSE Air Business GSE

Air Business GSE offers refurbished second-hand GSE with a six-month warranty.



### **GROUND HANDLERS & SERVICE PROVIDERS**

### GROUND HANDLING SERVICES Airport Terminal Services Inc.

Servicing more than 150 customers in more than 40 airports with 350,000 departures annually, ATS has an established reputation as a ground handling service



provider. Providing services such as ramp handling, customer service, cargo, cabin cleaning, aircraft fueling, deicing, meet–and–assist services, passenger lounge operations, and more, ATS represents the major global brands in air travel and fully understands the intricacies of the complete airline operation.

AviationPros.com/12434683

### GSE STOCKING DISTRIBUTOR AND SERVICE CENTER Carolina GSE Inc.

Carolina GSE can set up a hangar with high quality GSE. The company is a global stocking distributor for all Tronair ground s



distributor for all Tronair ground support equipment and spare parts. AviationPros.com/21148901



### GSE SOLUTIONS TCR International

TCR International offers GSE rental and GSE supply, including full–service rental, telematics and green GSE.

AviationPros.com/21242240



### GROUND HANDLING SERVICES AccuFleet International, Inc.

AccuFleet International's ground handling services include aircraft marshalling and towing; air start; baggage and cargo handling; cargo line hauls; cooling and heating; lavatory and potable water service; and ramp-to-flight deck communication. In tandem with its ground handling, or as a stand-alone service, the company also provides cabin cleaning and passenger service.

AviationPros.com/21161080

### **FORTBRAND** QUALITY • TRUST • RELIABILITY

### GSE SERVICES Fortbrand Services

Fortbrand Services is a complete source for ground support equipment. Since 1983, Fortbrand Services has been providing rentals, leases and sales of new and used ground support equipment to airlines, airports, ground handlers, FBOs, MROs and more. Fortbrand is a turnkey solutions provider to obtaining the equipment needed to run an operation.

AviationPros.com/21233946

#### All of that equipment on the tarmac...



### GSE MAINTENANCE PrimeFlight GSE Maintenance

PrimeFlight GSE Maintenance is a GSE maintenance service provider based in North America. The company's 320 technicians at more than 80 airports have the sense of urgency required to serve aviation industry maintenance needs.

AviationPros.com/12376866



### GSE LEASING AND FINANCING Somerset Capital Group

Somerset Capital is an independent leasing organization, based in the United States with operations in the U.S., Canada, the United Kingdom, Singapore and Taiwan. Somerset has funded more \$200 million of equipment in this space and has leased everything from refueler trucks to deicers to buses.

### LAV & POTABLE WATER CARTS



#### E-ZVTS VACUUM TOILET SERVICE UNIT Vestergaard Company Inc.

Vestergaard Company's E-ZVTS is a gasoline-electrically driven vacuum toilet service unit with all the features of the ZVTS. such as the vacuum system, fast and high performing operations and with a very high level of safety for both aircraft and ground crew. The E-ZVTS creates less airborne particles in the congested gate environment and no exhaust filter regeneration. The gasolinepowered chassis drives a generator, which in turn drives all functions on the E-ZVTS. As there are no hydraulic pump, pressure or hoses, the unit has minimal maintenance. Designed for warmer climates, the E-ZVTS can be fitted on different standard truck chassis to fit various operations.

AviationPros.com/12378371

### POTABLE BOTTLED WATER CART Alberth Aviation

Alberth Aviation manufactures a Potable Bottled Water Cart designed to deliver guaranteed clean water to the aircraft every time. Four standard 5-gallon water bottles make this cart easy to maintain and provide a simple way to track water sales. It is used by FBOs and flight departments worldwide.

AviationPros.com/12113126



#### SAFE-LAV AERO Specialties

Countless dollars and flight hours are lost each year due to damage caused by overfilling the aircraft lavatory system. The new patented AERO Specialties Safe-Lav carts



batching system determines and restricts the maximum quantity of fluid that can be delivered to the airframe. This product can be installed on new lavatory service carts or as a retro–fit kit to units in the field.

AviationPros.com/12356980

#### WATER AND LAVATORY SERVICE CARTS (WSC 1000 & LSC 300/700) Timsan

These diesel-engine driven carts offer optional insulated cabins for belowzero temperatures. Main users are both the Turkish Air Force and foreign military customers. They are used on military cargo aircraft.

AviationPros.com/12428419

### LAVATORY SELF-SEALING FLUSH AND FILL COUPLING AIRLINX Aircraft Services Inc.

Prevent ramp spillage with the AIRLINX newly designed V1325JS016A00 self-sealing extended long barrel lavatory service fill/flush coupling. After use, the coupling can be disconnected



from the aircraft without shutting off flow to the hose. Upon disconnection of the coupling, the integral poppet automatically closes, preventing the pressurized line from discharging blue fluid onto the ramp. The coupling can be used with or without a V8022–016A00 service plug.

AviationPros.com/21159194

### CRUSH PROOF LAVATORY DUMP HOSE U.S. Airmotive GSE

The Crush Proof Lavatory Dump Hose from U.S. Airmotive GSE offers a 100-percent urethane hose wall with urethane tubular helix to protect the hose (no wire). Additional features include one continuous

piece of urethane hose and cuff; triple urethane on cuffs for added wear; UV resistance; bending radius of 4"; and temperature resistance –40F to +195F. Standard lengths are 8', 10', 12', 15' and 20' while other diameters and lengths are available upon special request.



### LAV & POTABLE WATER CARTS

#### ELT LAVATORY SERVICE VEHICLE Eagle Tugs, a Tronair Company

Eagle is proud to introduce its new eLT Lavatory Service Vehicle. Powered by an

environmentally friendly 80V A/C electric drive, the eLT allows users to service the lavatory for regional aircraft from the ground. With an overall capacity of 300 gallons and front or rear dump operations, the eLT can accommodate a variety of operations. The eLT combines a low-profile design with an ergonomic front operator compartment to make aircraft service easy and efficient. AviationPros.com/12440030

### IPW POTABLE WATER PUMP Pacer Pumps

Pacer Pumps/Div. ASM Industries has earned certification to NSF/ANSI 61, 372, the American National Standard for Drinking Water System Components for its IPW series of self-priming centrifugal pumps, from global public health organization NSF International. The IPW



Series is a self–priming centrifugal pump with a vertical suction lift of 20 feet and a maximum flow rate of 180 gallons per minute. It is ideal for transferring and delivering potable (drinking) water.

AviationPros.com/21083123

### MIRABOWL QC Mirandy Products, LLC

Mirabowl QC is a concentrated lavatory bowl cleaner and deodorizer that has been specifically designed for flush tank treatment of all types. Mirabowl QC will not attack aluminum surfaces, while simultaneously cleaning pump systems and keeping O-rings from cracking. Mirabowl is effective, strong, pleasantly scented and safe to use. It prevents sludge buildup in a pump system – thereby minimizing pump failure rate. For deep cleaning maintenance on lavatory pump system, soak

entire pump for 12 to 24 hours then flush with steam or high pressure water.

AviationPros.com/12434758



Ramptech Lavatory Wye Drain Couplings are engineered for ease of use and highly reliable performance, without spillage or leakage. Made of impact-resistant and non-porous composite that is 40 percent lighter than aluminum wye drain couplings, these couplings make it fast and simple to remove the lavatory drain plug or "donut" from the aircraft lavatory drain nipple - allowing waste to drain at full flow into the lavatory service truck while eliminating ramp spills to ensure rapid waste removal. Further productivity and performance are provided by a high-visibility yellow collar. They are designed for a leak-proof connection on all standard 4" drain nipples and they also feature a stainless steel cam ring as well as a stainless steel retaining washer, snap ring and control shaft for extra corrosion resistance and durability.



### **MAINTENANCE & SHOP EQUIPMENT**

### B2 MAINTENANCE/CREW STAIRS Wilcox Ground Services

Wilcox hydraulically adjustable B2 Stairs, with nonslip gripstrut walking surfaces, tubular reinforced steps and platforms, are designed to make sure workers can perform their jobs safely. The unique switchback design minimizes the stair footprint and overall floor space needed. Being fully adjustable, the B2 stairs will allow maintenance and flight crew to board a variety of aircraft with little effort. Wilcox maintenance stairs are towable, designed to be indoors or outside as they are engineered to withstand 100 km/60 mph wind gusts.



AviationPros.com/21068591

#### PORTABLE ELECTRIC-DRIVEN GAS BOOSTER Hydraulics International Inc.

The Hydraulics International, Inc. (HII) Portable Electric–Driven Gas Booster is rated to 10,000–psi for breathing air/N2 and

4500-psi for Oxygen service. Ideal for filling or topping off cylinders, tires, accumulators, struts and life rafte. Its two stage and double acting design use

life rafts. Its two-stage and double-acting design uses no belts or pulleys, making it the quietest electrically operated booster in its class at only 60 decibels. Complete with safety controls, filters, gauges and valves.

AviationPros.com/10027134

### MODEL LI2800QC Start Pac

This compact, portable lithium-ion starting unit is a full 28VDC battery pack and will provide starts on electrically started turbine engines. Designed for engine starting only, the lithium technology is the lightest available on the

market, which makes this lithium GPU ideal to preserve payload when the unit is being carried out in the field.

AviationPros.com/21155548

### 2-GALLON COWL-THRUST REVERSE SERVICE BOWSER FluidTran, Inc.

The Flightmaster 2–gallon cowl-thrust reverse service pump is an open system hand-operated bowser designed to service commercial and military aircraft. The pump

handle has a medium knurl finish to provide a slip free grip. This high pressure bowser is appropriate for all MIL SPEC fluid requirements and comes fully assembled and ready for use.

> AviationPros.com/ 21242228

### MAX AIRCRAFT TAIL SUPPORT STAND Hall Technical Services

The MAX Aircraft Tail Support Stand (product number: AP1707-TSS-U-A) is designed for use with 737-800/ 900/ 900ER/ MAX8/ MAX9 series aircraft.

> AviationPros.com/ 21216631



### TIRE INFLATION CAGE Alberth Aviation

Alberth Aviation manufactures safety products designed to protect employees, aircraft and property. The Tire Inflation Cage was developed and tested for overinflation failures specifically for the aviation industry. The larger cage is now available for G650 and Global Express wheels. Additionally, the Hydraulic Wheel and Brake Dolly prevents hand and back injuries and aircraft damage.

AviationPros.com/21117271



### MINI-DUCTOR VENOM HP Induction Innovations

Inc.

Venom HP is the highest powered Mini–Ductor available. It removes seized nuts, bolts, bearings, fasteners, sensors, exterior trim, vinyl graphics and more – in seconds, safely.

### **MAINTENANCE & SHOP EQUIPMENT**

### 12-TON MULTI-STAGE TRIPOD JACK Columbus Jack, a Tronair Company

Tronair's tripod jacks meet or exceed all known commercial and military requirements and specifications, and are cycle tested, load tested and proof-load tested to ensure the jack's hydraulic and structural integrity. The automatic safety bypass valve prevents the lifting of a load greater than the capacity of the jack. Threaded rams with mechanical lock nuts prevent lowering of the jack under load in case of hydraulic leakage. They are designed and built to withstand harsh environmental



conditions, rugged use and to provide many years of continuous service.

AviationPros.com/12397990

### WHEEL MOVER Semmco Limited

Designed for the safe and efficient movement of all aircraft wheels, regardless of their size, Semmco's Wheel Mover is extremely maneuverable and easy to use. Engineered with safety–focused features to reduce manual handling risks, the Wheel Mover is fitted with a dead man's handle that automatically engages the brake when the bar is released and adjustable webbing restraints to secure any size wheel to the frame, so the wheel does not move during transportation.



AviationPros.com/21116138

### 20-GALLON TOWABLE OIL DISPENSER WITH OVERFLOW CONTAINER U.S. Mfg. & Design Inc.

The 20–Gallon Towable Oil Dispenser With Overflow Container offers a reliable oil dispenser unit on the flight line. It offers a high capacity container and an overflow container while remaining easy to tow. A heavy duty steel frame ensures durability and safety. A standard 15-foot hose is included with the unit. All units are serial numbered and are under a lifetime warranty. Optional features include a fluid discharge meter, in–line water stop filter and a closed system kit. Like all USMDI units, customization is always available.

AviationPros.com/21110466

### 1085 WIRELESS MOBILE COLUMN LIFTS Stertil-Koni USA

The Stertil–Koni 1085 wireless mobile column lift is a powerful, portable hydraulic lifting solution with a lifting capacity of 18,500 lbs. per column. Wireless connectivity means flexibility and ease of use – connect up to 32 columns, all with no cables to trip over. The ebright Smart Control System offers a simple touchscreen interface, while the automatic mechanical locking system bolsters safety.



AviationPros.com/21159177



### MHL-216 MAINTENANCE HIGH LIFT TRUCK Stinar Corporation

The Stinar Model MHL–216 Maintenance High Lift Truck is designed and built to provide maintenance service to aircraft, but can also function in a multitude of industries. This model is available with many options to meet specific operational requirements, thus giving users a full functioning workshop in the sky.

AviationPros.com/21158985



### FLY-AWAY WHEEL CHANGE JACK GB Barberi Srl

This hydraulic jack, model number GB900-080-000, can lift a maximum load of 5,000 kg and has been designed to lift helicopters' landing gears during wheel change operations. This jack is composed of a separate body and pump, connected via a flexible hose. Is supplied in a rugged plastic case, containing jack pump and spacers.

### **MAINTENANCE & SHOP EQUIPMENT**

### EASY-LOAD NITROGEN SERVICE CARTS Newbow Aerospace, Ltd.

The Easy–Load Nitrogen Service Carts manufactured by Newbow Aerospace are primarily designed to support operator safety and maintenance efficiency during aircraft nitrogen replenishment tasks. The "easy–load" gas cylinder stowage cradle allows a single person to quickly load / off–load the heavy gas cylinders with very little manual handling requirement. The service cart is



available in 2-, 3- and 4-bottle configurations and is equipped with a dual use low and high pressure gas distribution system and auto-retract hose reels as standard.

#### AviationPros.com/21115509

### DUAL HYDRAULIC REELS Coxreels

Coxreels' dual hydraulic reels, designed for use with hydraulic tools and accessories, are offered in two configurations; the MPD and the TDMP series. The dual hydraulic reels feature single sided access for both the spring and the swivel. The supply and return lines come in the same side of the reel into an external fluid path via a removable, dual port hydraulic swivel. This same inlet and swivel side of the reel also houses an easyto-service spring cartridge motor.

AviationPros.com/21142922



### AS1932E SCISSOR LIFT Pettibone

Pettibone's AS1932E electric scissor lift offers a work height of 25.6 feet (780 cm). The ANSI A92.20-compliant mobile elevating work platform provides personnel with a reliable solution for safely working at heights in indoor or outdoor applications. It has a platform capacity of 510 pounds. Key features include a universal drive control box with motion alarm and LED screen, 3-foot platform extension with smooth foot pedal control, fold-in guard rails and large scissor arms for excellent stability and durability. A tilt sensor automatically stops the lift's operation if the tilt level exceeds 3 degrees for front/back incline or decline, or 1.5 degrees for left to right tilting. The unit



also includes a load–sensing system with pressure transducer that ceases all functions if the machine's weight limit is exceeded.

AviationPros.com/21243621



### L-100D LOAD BANK Cannon Load Banks, Inc.

This 400hz 100kw load bank is designed for testing aircraft ground power units. The load bank has eight different loads and full load can run indefinitely. The unit only weighs 45 pounds.

AviationPros.com/21242218



### OMNI-DIRECTIONAL DRIVE PLATFORM Conceptual Innovations

The Omni-Directional Heavy Duty Drive System moves up to 40,000 pounds and can maneuver in narrow aisleways. The battery-powered, wirelessly controlled platform allows manufacturers to bypass the use of expensive cranes and forklifts that only certain operators are trained to maneuver. The platform can move even the most delicate parts, such as an airplane fuselage, and position them precisely. The omni-directional platform, originally designed to transport the hull of a military vehicle, has been used by automobile manufacturers, spacecraft engineers and the marine industry.

### **PASSENGER BOARDING**

## JETWAY BOARDING BRIDGES JBT Corporation

JBT designs, manufactures, installs and provides support for airport gate equipment. Jetway Boarding Bridges come in steel, glass and smooth-sided models and are suitable for serving regional jets up to doubledecked jumbo aircraft. Other



JBT gate equipment includes JetPower ground power units, JetAire pre-conditioned air systems and the innovative iOPS equipment monitoring service.

AviationPros.com/10024665

### 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 tow-bar, a hand pump for height adjustment, as well as a battery-powered LED

lighting system with adjustable timer. AviationPros.com/12035173

### INTERNATIONAL MOTORIZED BOARDING BRIDGE Aviramp

The Aviramp International acts like a fixed finger bridge, but for remote stands. The fully mobile, motorized boarding bridge is capable of servicing a range of aircraft. The International incorporates a 360-degree, switch-back design to provide passengers a gradual slope, making ascending and



descending the ramp easier for both able-bodied and reduced mobility passengers. AviationPros.com/12393457

#### E.COBUS ELECTRIC AIRSIDE BUS Cobus Industries LP

The new e.COBUS has been designed for increased autonomy with higher capacity, and more efficient air conditioning systems for the hot summer climate. Pre-cooling/ pre-heating the passenger compartment is possible during opportunity charging between operations.



#### AviationPros.com/21228971

### APX20-DPL BOARDING LIFT Lift-A-Loft Corporation

The APX20–DPL has a maximum platform height of 21'5" with a

minimum platform height of 4'9", allowing a single unit to interface regional jets up to wide– body aircraft. The fully enclosed cabin provides comfort and two windows on each side provide natural light in the cabin.

Units can be provided



with optional air conditioning, an intercom system and fold-down seats. The APX20-DPL is equipped with an auto-close folding lift gate, which can be raised or lowered by one person. The lift gate measures 77" wide by 84" long and can accommodate two stretchers or four wheelchairs to be loaded in one lift cycle. The lift functions can be operated from either the driver's cab or by a pendent located in the van body.

AviationPros.com/12132833

#### PBB REMOTE CONTROL OPERATING SYSTEM ADELTE

ARCOS is an innovative system specifically developed to enable passenger boarding bridge (PBB) operations in a remote, safe and fast manner. ARCOS is composed of customized desk(s) located in a technical room of an airport where trained operators remotely perform docking and undocking procedures. Due to the interconnectivity of all PBBs, with one centralized and secure system, the required number of operators can be reduced by 65 percent and docking times by 20 percent.

### PASSENGER BOARDING

### PAXLIFT Baumann S.r.I.

The PaxLift Ambulift from Baumann lifts from ground level to 8 meters, and offers integrated suspension, multi-purpose use and four steering wheels for maximum maneuverability. The PaxLift has a 100KW diesel engine for a speed up to 30km/h for



ground support equipment operators. It also provides a dedicated airport passenger transport design and high lifting capacities (up to 2,000kg). Additional benefits include space for six wheelchair passengers with assistance, a compact design (3,100mm height and 2,550mm width), a small turning radius (less than 7 meters) and one–man operation.

AviationPros.com/12289607

### DPT-720 DISABLED PASSENGER TRANSPORTER Stinar Corporation

Stinar Corporation has been a manufacturer of GSE since 1946, manufacturing both chassis-mounted and towable Passenger Stairways, Catering and Cabin Service Trucks, Disabled Passenger Transporters,



Maintenance Highlifts, Lavatory Service Trucks and carts, Potable Water Trucks and carts as well as Flight Line Tow Trucks.

#### AviationPros.com/12417740

### PASSENGER BOARDING STAIRS TBD

Manufactured to withstand years of constant use in the most arduous environments with their rugged construction and superior finish, TBD's range of variable height telescopic and parallelogram powered towable and powered passenger stairs represents a wise long-term investment. Designed for rapid but safe deployment to access wide, narrow and regional



body aircraft, TBD's passenger stairs can reach doors across any fleet composition. AviationPros.com/21076803

### APS 60 SERIES TRUCK-MOUNTED AIR STAIRS Accessair Systems Inc.

The APS 60 Series Truck–Mounted Air Stairs are available with a wide range of options including an overhead canopy along with two air–driven canopies located at both the top and the bottom of the stairs giving passengers complete protection from the elements.



Normally mounted on a Ford XL F550 series and available in gas or diesel models, the most recent edition includes an automatic wheelchair lift.

AviationPros.com/12441216

### SIDE SHIFT CAB R.J. Design LLC

The Side Shift Cab was designed to eliminate misparking of aircraft and promotes safety for both employees and passengers.







### LOADING BRIDGE CANOPIES Estex Manufacturing Co. Inc.

Estex Manufacturing Company has been supplying loading bridge canopies for 20-plus years. The company manufactures all styles of replacement canopies and its tough and dependable fabrics meet specifications NFPA 415 & 417, as well as FAR 25.853(b). Estex Manufacturing Company also supplies installation hardware kits, facia pads, adapter pads and corner pads.

AviationPros.com/21210225



### FRONTBULL AMBULIFT Bulmor Industries GmbH

The compact FrontBull Ambulift is designed for regional and small airports with an environmentally friendly electric drive. This ground support vehicle has been specially developed for boarding passengers with reduced mobility.

### PUSHBACKS, TRACTORS & UTILITY VEHICLES

### MODULAR CHASSIS AND WAGON SYSTEM Stinar Corporation

The Stinar Modular Chassis and

Wagon System offers a 48v electric chassis with a range of 40 miles and a load capacity of 5,000 lbs. The 17hp, 13kW electric motor provides ample power to allow the chassis to carry a multitude of different modular units and function as a small to mid-size tow vehicle with towing capacities of 10,000 lbs. The unit was designed with both regional airports and smaller FBOs in mind, eliminating the need for multiple tow vehicles, offering flexibility with multiple modular pieces and providing maneuverability on crowded jet ways. The new line features numerous modular interchangeable units adaptable to both the chassis and wagon systems, ranging from lavatory service, potable water and baggage to passenger transport and maintenance with a full line of options. AviationPros.com/21243370

#### CHALLENGER 150E TREPEL Airport Equipment GmbH

Trepel's electric conventional aircraft tractor allows users to handle B737 and A320 fleets while also pushing out the B767–200/300 at maximum ramp weight. The hydro–pneumatic front axle suspension provides driving comfort for



the operator. Options include open drivers stand with side safety bars and solid tires. AviationPros.com/12432218

### AP8950SDB-AL-250 TOWBARLESS PUSHBACK TRACTOR JBT LEKTRO, Inc.

JBT LEKTRO's AP8950SDB-AL-250 is an emissions-free, towbarless pushback tractor. Certified to tow virtually every narrow-body airliner from the B757 down through regional turboprops, this tug can handle them all.



AviationPros.com/12371112

### EMOVER HYDRO Systems KG

HYDRO Systems is emissions–free and electrically powered. The emover is able to push and pull several types of aircraft ranging from the E170 to the A380. AviationPros.com/21110416





### TOW TRACTORS Timsan

Timsan offers several tow tractors with drawbar pull from 17 to 120 kN. The company has several military customers including Turkish Army and military forces of Ally countries. The TIM 17 and 25 has electrical versions available.

AviationPros.com/12428428



### 27,000LBF MDP – DIESEL AIRCRAFT PUSHBACK Avro GSE

Avro "next generation" aircraft pushback tractors offer leadingedge performance, design and functionality. Designed to exceed expectations and deliver extraordinary ROI, each pushback features standard functionality such as hydraulic steering, front and rear towing couplers, four-wheel drive and steering, complete cab enclosure including windshield and wiper kit, Curtis controller with self-diagnosis functionality, vacuum-assist hydraulic brakes, complete telematics (Avro Tracker) for remote diagnostics and monitoring, along with the Avro Care managed maintenance program.



### STINAR MODULAR MODULAR CHASSIS & WAGON SYSTEM

NO MORE NEED FOR MULTIPLE EXPENSIVE TOW VEHICLES

SERVICE EVERYTHING WITH A SINGLE STINAR MODULAR SYSTEM

THE PERFECT SYSTEM FOR REGIONAL AIRPORTS, FBO'S, & MRO'S

AMAZING MANEUVERABILITY ON CROWDED JET WAYS

PERFECT FOR IMPRESSING YOUR LUXURY PASSENGERS



- Maintenance
- Potable Water
- High Lift

- Flush & Fill
- Baggage
- Passenger Transport
- Lavatory Service
- Refuse Dump Box
- More Inventory In 2022

### **PUSHBACKS, TRACTORS & UTILITY VEHICLES**



### EAGLE TTR SERIES Eagle Tugs, a Tronair Company

The Eagle TTR Series is the next generation of Eagle tractors, implementing clean–burning Tier 4 technology and improved design features. The Eagle TTR–6, 8 and 12 tractors were designed to tow or push rotorcraft and light to super mid– size business and regional jets in all weather conditions.

AviationPros.com/21112080

HARLAN

#### MODEL HTSB TRACTOR Harlan Global Manufacturing, LLC

The Harlan Model HTSB is available with the latest model U.S./Euro emission-compliant engines. This compact, shorter wheelbase, lowprofile design is robust with excellent all-around visibility. Designed for cargo and baggage applications, this unit can also be utilized for pushback of small aircraft (with the front hitch option package). Some options include complete cab assembly, heat/ defrost, mirrors, beacons, variety of hitches and suspension-style seats.

AviationPros.com/21159192

### MARK III LOW-PROFILE TOW TRACTOR

**Trowin Industries Inc.** The Mark III Low–Profile Tow Tractor has recently been refined to include the Cummins QSF2.8 T4 Final diesel engine. This engine choice joins the gas, LPG, CNG and electric options available. The Mark III can be rated from 3,000 to 6,000 DBP and has a wide array of options available.



AviationPros.com/21156504

### TPX-100-E

The TLD TPX-100-E is a fully electric towbarless tractor designed for the pushback of most commuters, and singleaisle aircraft up to 100 tons. The TPX can now be fitted with a remote



control feature, allowing single-person operation over the entire pushback event to offer a faster, safer, more environmentally friendly experience. The ergonomic cabin also offers protection from the elements to deliver flexibility for the operator.

#### AviationPros.com/21112102

### AV50E LITHIUM ELECTRIC BAGGAGE TRACTOR A&V Rebuilding, Inc.

A&V Rebuilding is now offering zerotime baggage tractors repowered using a specifically engineered lithium electric drive system. These electric tractors are built on the platform operators are accustomed to, so additional operator training is minimal. The A/C drive



system is designed for use exclusively with lithium batteries. There are multiple charging options available and lithium A/C repower kits are also available for existing fleets.

AviationPros.com/21159207

#### BOB TAIL TRUCK Aeroservicios USA Inc.

This Bob Tail Truck is built on a new F–350 chassis, and offers a gas engine. Ideal for towing GSE long distances, the truck has a capacity 55,000 or 75,000 pounds, LED and beacon lights, dual back–up cameras, speed limiter and many more options.



### PUSHBACKS, TRACTORS & UTILITY VEHICLES



### TOWBARLESS TOWING TRACTORS Kalmar Motor AB

Kalmar Motor AB offers a full range of aircraft towing "towbarless" tractors and all models are available as electric (EL), electric with range extender (ELRE) or diesel powered.

AviationPros.com/12434600



### PHOENIX E Goldhofer Airport Technology

The Phoenix E from Goldhofer is a towbarless, future-oriented, zero-emission aircraft tractor. The company's wide range of vehicles can be individually configured for an individual customer's use. Regardless of battery-configuration, the vehicles are capable of handling all common passenger and cargo aircraft on the market, from the ERJI70 to the B777.

AviationPros.com/21242250



### TUG ALPHA 1 Textron GSE

The TUG ALPHA 1, is a narrowbody pushback, purpose-built for productivity, safety and operator experience. Equipped with an exclusive center-drive design for superior tow bar visibility, ground access maintenance points and ergonomic operator controls, the TUG ALPHA 1 is loaded with features. With three models, including lithium for performance, energy efficiency and cost savings, the TUG ALPHA 1 has everything needed to keep operations moving.

AviationPros.com/21243545



### MOTOTOK 8600 NG Mototok America LLC

The Mototok 8600 NG is a small electrical towbarless pushback and MRO aircraft tractor with up to 210,000 lbs. towing capacity.

AviationPros.com/21233926



### COMET 4 FC MULAG Fahrzeugwerk GmbH u. Co. KG

This airport towing tractor offers a hydrogen fuel cell drive and up to 30t trailing load (drawbar pull 20 kN), 30 kW axle integrated AC motor with 15 kW continuous power and a driving speed up to 18 mph. Ideally suited for baggage tasks and cargo tasks, the tractor features a zeroemission powertrain to implement the increased environmental requirements for GSE while still having high availability and short refueling times.

AviationPros.com/21233938



### MODEL M150 PUSHBACK AND TOW TRACTOR Wollard International

The Wollard International Model M150 Pushback and Tow Tractor offers diesel (Tier 4 and Stage V), gasoline and electric power options. With a drawbar pull of 10K – 16K, the M150 provides four–wheel steer and four–wheel drive. The tractor offers wet mesh internal brakes. At 167" long, 80" wide and 59" high without cab or 84" with cab and beacon, seating for up to three is provided and a climate–controlled cab is available. Multiple hitch and commissioning options are available and a one–year warranty comes standard.

### GROUND SUPPORT HEADSET COMMUNICATION SYSTEMS David Clark Company, Inc.

The David Clark Company Series 9900 Wireless Headset Communication System is currently being used by ground crew personnel in hundreds of airports for leading carriers in the United States, Europe and Asia. The system is ideal for pushback operations, aircraft towing, maintenance and deicing/anti-icing operations. The Series 9900 system enhances the safety and situational

> awareness of ground personnel to protect against potential injury, incidents and costly aircraft damage.

> > AviationPros.com/21158250

### SPEED CONTROL SYSTEM Adveez

The speed control system (SCS) automatically and smoothly slows down electric GSE to improve safety in specific areas. With a fast deployment and installation, it is designed to be sabotage-proof and specific to airport GSE fleet. Easy to maintain, it increases the overall safety for pedestrians and decreases the accident rate on the apron. SCS operates as a standalone system or part of a larger asset and user tracking offer with data capture.

AviationPros.com/21154175

### AVIATION RAMP BARRIER SET Traffic Cones for Less

This all-in-one set consists of two traffic cones connected by an integral cone bar. The whole barrier moves as one, is easy to position and can be adjusted with one hand. The kit is customizable. Additionally, users can mark equipment with custom branding by utilizing traffic cones custom-colored to a company's colors,



wing tip marker sets branded with a company's logo and branded indestructible marshalling wands.

AviationPros.com/21233919



Access' Advanced is a user-friendly and powerful telematics device that helps manage a fleet with safety at the forefront. It can be quickly installed on any brand of powered equipment to verify safety and compliance, control access, track operator certification, monitor inputs (abuse, load, weight, run time, hydraulic usage, etc.), proactively report safety incidents, trace location and send messages to the operator. Advanced communicates wirelessly to the company's business intelligence platform, AssetPro 360, for real-time reporting.

AviationPros.com/21159212

### WIRELESS HEADSET SYSTEMS Flightcom Corporation

The Flightcom Wireless Headset

Systems provides immediate and hands-free, real-time communication. It does not have any wires or clumsy belt stations – the headsets are completely selfcontained. Enjoy range of up to 1,600 feet, automatic



superior noise cancelling gates, and the new listen-thru feature for enhanced situational awareness and overall safety. Widely deployed for pushback, deicing, aircraft movement, maintenance, cargo loading/ unloading, training and more.



SAFEDOCK ADVANCED VISUAL DOCKING GUIDANCE SYSTEM (A-VDGS)

### ADB SAFEGATE

Safedock A-VDGS, together with SafeControl apron management software maximizes safety and efficiency through precise parking of aircraft and integration with other systems for customized control and monitoring of apron activity.

AviationPros.com/21154122



#### BATTERY-OPERATED BARRIERS Battery-Operated Barrier

Designed to be instantly deployed anywhere, Battery–Operated Barriers can be used anywhere anytime, for short– or long–term applications. With the solar panel, they are completely self–contained and operate with radio control, keypad/card or RFID. The units are available with wheels as well.

AviationPros.com/21242233

### ANTI-STATIC/ANSI CLASS II SAFETY VESTS R&R Industries

R&R Industries manufactures Anti-Static/ANSI Class II Safety Vests. This hi-visibility apparel includes t-shirts, hoodies, rain gear and jackets. Available in lime or orange, the V265 vest comes in sizes small through 7X. The company decorates in house with screen-printing, heat transfer and/or en



heat transfer and/or embroidery.

AviationPros.com/12410301

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### **Ground Handling's Involvement in a Successful Industry**

Whether helping the industry recover from the pandemic or meeting environment goals, ground service providers play a key role in both commercial and general aviation.

s the air travel industry continues its recovery from the COVID–19 pandemic, a strong focus has been placed on the long–term environmental and economic sustainability of the industry. In both regards, ground handling will play a key role in aviation's future.

From the economic side, the Airport Services Association (ASA) and Airports Council International (ACI) recently presented a working paper titled "Ground Handling as a Key Component of the Long-Term Resilience and Sustainability of the Aviation System." In the document, officials call out the importance of ground service providers as part of the economic and social sustainability of the aviation "ecosystem."

ACI advocated for this on behalf of its members as part of a larger message regarding a practical approach to aviation's recovery at the International Civil Aviation Organization's (ICAO) High–level Conference on COVID–19 (HLCC) in October. And in response to its call for continued high levels of safety, ACI reports that the HLCC will work to build better oversight of ground handling activities.

From an environmental standpoint, the use of electric ground support equipment (eGSE) and equipment powered by alternative fuels has taken on increased importance as airports and airlines declare individual goals to reduce carbon emissions. And ground handlers are becoming increasingly familiar with sustainable aviation fuels (SAF) as additional airlines pledge their support for the adoption of SAF.

Further, the Aircraft Owners and Pilots Association (AOPA), Experimental Aircraft Association (EAA), General Aviation Manufacturers Association (GAMA), Helicopter Association International (HAI), National Air Transportation Association (NATA) and National Business Aviation Association (NBAA) signed onto a letter to the United States Congress to increase funding for the Alternative Fuels for General Aviation program.

In the letter, the organizations note the importance of identifying a safe, high-octane unleaded replacement for avgas and that funding requested for the Alternative Fuels for General Aviation program is "consistent with the spirit of the recent White House announcement on SAF," in which alternative fuels for general aviation was emphasized.

Much work in terms of recovery and environmental improvements remains for the aviation industry. And like with many other industry initiatives, stakeholders from all aspects of aviation need to do their part to help meet these goals.

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