SafeSmart Aviation

A United Suite for MRO Safety

How one of the US's biggest commercial operators brought safety to the hangar… SEE INSIDE

SafeSmart Aviation

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SafeSmart Aviation

ABOUT

SAFESMART AVIATION

SafeSmart Aviation are a global designer, manufacturer and supplier of portable height access systems for the aviation industry, as well as work area management equipment.

In civil, military, search and rescue, and any other industry that relies on well-maintained aircraft for their operations, SafeSmart have become the most-trusted partner in identifying potential dangers for technicians, ground crew and MRO personnel whilst at work on the ground, and solving them with innovative custom designs and premium fabrication workmanship.

SELF-RELIANT, FOR THE CLIENT

SafeSmart Aviation—a division of global work platform maker SafeSmart Access—does not outsource design or manufacturing. Our in-house design team work closely with representatives and their clients, from all around the world, to draft ideas for systems that suit the contours and features of each aircraft.

An understanding of regulatory requirements for working around aircraft in each region bolsters SafeSmart's offering, ensuring that each work platform, set of steps, ladder or any other height access product is compliant, no matter where it is being used.

And SafeSmart's fabrication facilities in New Zealand and the USA operate every day to build high quality portable products that help technicians work at height without fall dangers and subsequent injury and downtime.

TRUSTED ON THE GROUND, FOR SAFETY IN THE SKY

SafeSmart Aviation's client list contains some of the world's most iconic aviation operators and manufacturers. We see ourselves as a critical factor in making sure the work area on the ground is the safest and most efficient it can be, so technicians can make sure that the aircraft itself is the safest it can be.

We have designed and manufactured for clients such as Airbus, Delta, WestJet, Bombardier, United, Qantas, Boeing, US Air Force, CHC, Air Mauritius, Sikorsky, Discovery air Defence, STARS Air Ambulance, Government of Saskatchewan, Air New Zealand, Royal Air Force and many more.

FROM THE DIRECTOR

The last few years have been exciting ones for the SafeSmart company and its capabilities.

Having designed and manufactured for many aviation operators, amongst our many clients in other sectors, we saw SafeSmart Aviation evolve and emerge as a standalone specialist division solely dedicated to MROs, maintenance contractors and other vocations that work on and around aircraft whilst on the ground.

In the last year, we have established SafeSmart Aviation as one of the most trusted partners in height access safety for the hangar, ramp and flightline, through engagements that range from communications via our new website to face-to-face events such as the iconic Farnborough Airshow in the UK.

A particularly exciting part of this journey is also seeing some of our custom projects turn into 'off the shelf' products, manufactured again and again for other clients who also saw value in them for gaining efficiency and added safety for their personnel, such as our A-Frame Aviation Platform, our Aviation Chock Trolley and our EasyRaise Platform.

Add to this, some big clients such as United Airlines coming back to us for repeat orders of custom platforms, and the future looks bright for SafeSmart Aviation.

Heading into this next chapter, we are further developing our capabilities and presence, with putting more resources into servicing the aviation sector in global MRO hotspots and making our products more user-friendly and recognisable via internal and market research and on-site product identification via our distinctive 'SafeSmart Red' rails.

Thanks to our loyal clients, we are now poised to further establish ourselves as the industry's knowledge source for Heightened Hangar Safety. I am pleased to present to you in the following the pages the innovations, successes and results that have made up the SafeSmart Aviation Story so far; it's only the beginning.

Jeff Wearmouth, SafeSmart Aviation

SAFESMART AVIATION

U.S. AIR FORCE

WESTJET

QANTAS

SIKORSKY A LOCKHEED MARTIN COMPANY

ROYAL AIR FORCE

CHC

UNITED

NAVY TE TAUA MOANA O AOTEAROA

BOEING

Emirates

CAPABILITIES

AND THE SAFESMART AVIATION CLIENT EXPERIENCE

We know that with the development of every new aircraft comes new challenges for safely accessing it during maintenance and other ground-based activities – new contours, new protrusions for avionics and other equipment and new heights.

To save excess correspondence and time, SafeSmart Aviation employs its own teams for design and manufacturing. For aircraft of any type, we have consulted with clients, designed custom platforms in-house and manufactured the resulting products in-house.

CONSULTATION

Our pre-sales service is where we stand above the rest. In each region SafeSmart Aviation serves, we have qualified representatives who specifically understand the MRO industry and its needs when working at height around aircraft.

We can visit your worksite to assess your hangar or ramp for potential dangers and advise solutions for adding safety and efficiency to your maintenance activities. We will take dimensions of the aircraft on site or via correspondence, consider all sensitive points of the aircraft and brief our design team on the best way to access a specified point or points on the aircraft.

CONCEPT AND DESIGN

Our in-house design team take into consideration all aspects of the aircraft's needs for fast and safe maintenance turnaround times and create a design that perfectly-suits the aircraft – this is whether it is for a full-surround platform or a more specific product to allow access to wheel wells, windscreens, tails, or any other maintenance point.

Using the latest design software, clients are presented with full drawings and interactive CAD files so they can explore the product at all angles prior to sign-off on manufacture.

WHEN IT ALL COMES TOGETHER

Our own fabrication facilities in the USA and New Zealand feature some of the most skilled tradespeople with experience in working with many metals—particularly aluminium—which produces workmanship at welded points and hinged features that are second to none.

Final products are chemically-treated for added weather resistance, carefully packed and shipped to anywhere in the world via our trusted freight partners.

AND THEN SOME

SafeSmart Aviation offers full post-sale support with instructional documentation for assembly and care, onsite visits to assess the effectiveness of the new system and ongoing updates on regulatory changes relating to the airfield's region.

CASE STUDY:

FIXED WING

A UNITED HEIGHT ACCESS SUITE

AIRCRAFT
BOEING 787 DREAMLINER

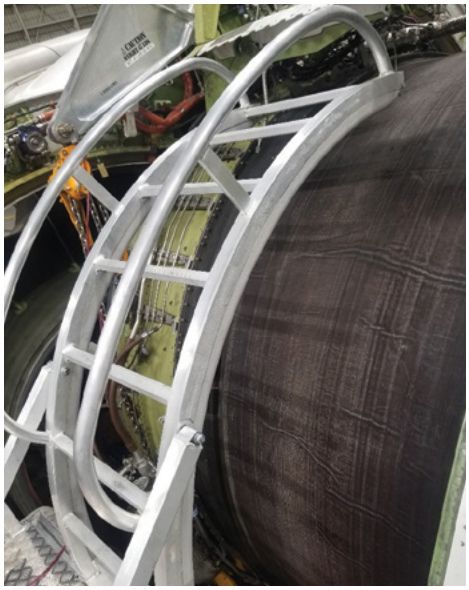
CLIENT
UNITED AIRLINES

LOCATION
LAX, USA

THE CHALLENGE

One of the USA's busiest carriers, United Airlines, purchased new Boeing 787 Dreamliner aircraft in 2016-17, and found new challenges during maintenance activities, especially with access around and over the top of the engines. A maintenance facility at LAX services these engines. And despite being detached during the process, the engines stand at over 115 inches from the ground up. Routine maintenance between flights, with the engines attached, also became an issue for mechanic welfare at height.

The contractor was continuing to use standard ladders, particularly a well-known specialised bent ladder, which while being technically compliant and providing access, was dangerously flimsy when scaled to the top. United needed a similarly-shaped ladder with the same hand-manoeuvrability, but with the addition of a non-flexing construction.



THE DESIGN

Besides the design of a non-flexing version of the previous ladder, SafeSmart Aviation found other points of access around the engine which could benefit from easier access. To integrate with the new ladders, a completely modular and adjustable system was designed and manufactured per the 787 engine's dimensions and specifications.

A combination of high-grade aluminium stairs, work platform areas, heavy duty castors and edge protection elements work together to provide close yet safe access to the turbofan, compressors, combustors and turbines, under cowlings and nacelles, right through to the exhaust nozzle. The modular system halves are easily wheeled together to create a unique bridging system over the top of the engine, too.

United's technicians can wheel two of SafeSmart's identically-mirrored arched access systems together to form one safe bridge over the aircraft's engines.

THE RESULT

Being lightweight aluminium, yet extremely strong, this system makes it easy for MROs to gain access to the engines quickly, safely, and in compliance with strict OSHA regulations. United's LAX technicians are gaining more efficient productivity through being able to scale the engines with all their tools, too, eliminating constant ascent and descent of stairs during their shifts.

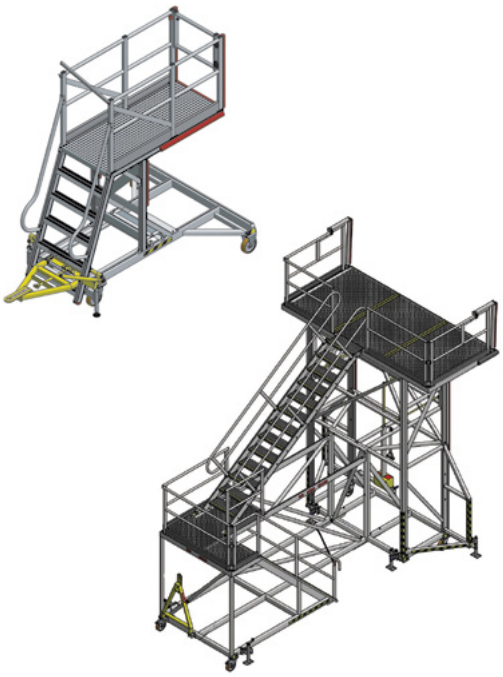
With the Dreamliner fleet being a relative newcomer in the history of commercial aircraft, there is scope to distribute this system to any operator with a similar fleet.

SAFESMART AVIATION

EXAMPLE CUSTOM PRODUCTS
FIXED WING ACCESS

CREATED FOR: **BOEING 787 DREAMLINER**

In addition to our United case study, SafeSmart Aviation has also designed and manufactured work platforms suitable to the 787 for Qantas and other airlines.



CREATED FOR: **AIRBUS A350**

Another full suite for one type of airliner. SafeSmart Aviation was approached by Air Mauritius, who needed faster and safer way to access heights around their new Airbus A350 fleet during maintenance and cleaning.

We designed this collection to provide safe technician and mechanical access to critical points of the aircraft. Applicable to every variant of the A350.


S.W.L.
500kgs

CASE STUDY:

FIXED WING

JETBLUE GAIN GROUND SAFETY

AIRCRAFT
EMBRAER E-190

CLIENT
JETBLUE

LOCATION
UNITED STATES

THE CHALLENGE

New York-headquartered low-budget airline JetBlue experienced challenges with maintenance worker safety when they were working on their fleet of Embraer E-190 aircraft.

A lack of height access GSE that would help technicians access specific maintenance points saw the workers resort to unconventional—and unsafe—ways of carrying out their tasks, with equipment not specifically designed for height access.

To alleviate this, jetBlue looked to work platform provider SafeSmart Aviation for a design consultation.

MAINTENANCE POINTS THAT REQUIRED BETTER HEIGHT ACCESS:

- Auxiliary power unit (APU – tail-mounted, at 34" wide and 11' off the ground).
- Cargo door and engine pylons.
- Wheel wells.

SafeSmart visited the worksite and took specifications for dimensions from the E-190. And assessing the work area, SafeSmart identified whether the resulting design would need to be hand-portable or towable.

THE DESIGN

SafeSmart has produced work platforms for Embraer aircraft before, but the E-190's contours and access points were a little bit different. For all three access points—informed by previous projects—a new design was conceived from scratch.

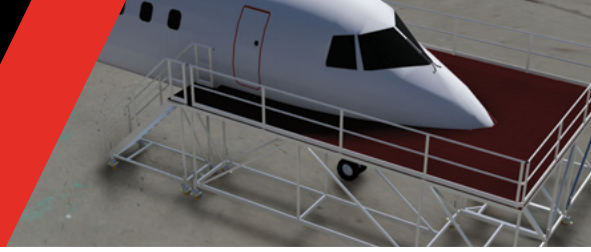
Made from high grade aluminium for strength, weather resistance and portability, a suite of three platforms were designed and built in-house.

THE RESULT

JetBlue's technicians are now experiencing a far shorter turnaround time on set scheduled tasks, thanks to the ease of which each platform in this suite and be deployed and removed.

And now JetBlue can confidently confirm that tasks around the E-190 are carried out to OSHA requirements.

EXAMPLE CUSTOM PRODUCTS
FIXED WING ACCESS

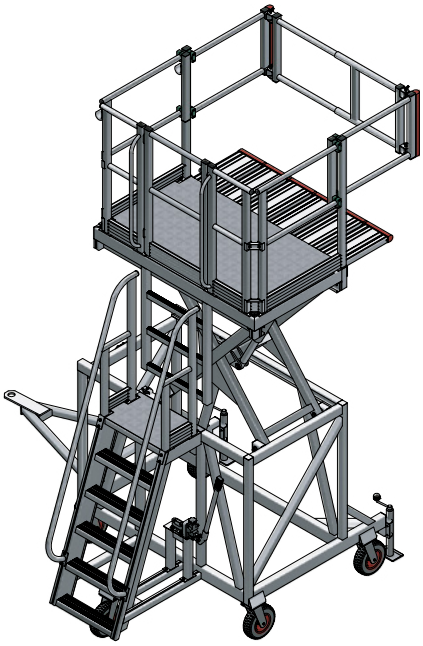


CREATED FOR: **EMBRAER E-190**

Wing/APU Access – Features:

1. Hydraulic hand lifting mechanism/foot pump actuated, in scissor style, with height lock.
2. Vertical retractable fall protection railings, with stops for varying heights.
3. Foldable work bench.
4. Modular adjoining stands to connect for under-wing use.
5. 4 x robust castors with t-handle release and step brakes.
6. Tow hitch.

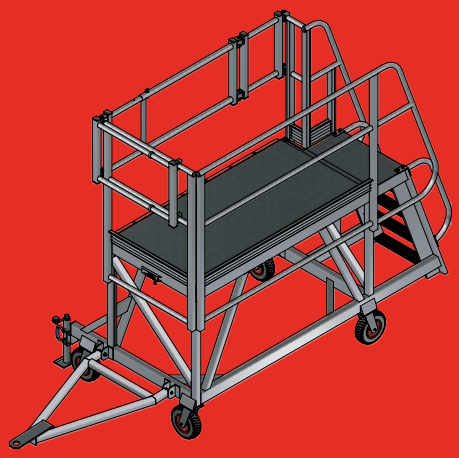
Cargo Door and Engine Pylon Access – Features:



1. T-shaped platform with catch tray underneath.
2. Stand ladder for lowered platform/vertical ladder for raised platform.
3. Stand features a lowered height of 4′ with a maximum raised height of 8′.
4. Platform 3′ long and 6′ wide.
5. Platform extends 1-1/2′ from the 6′ front edge.
6. Lifting mechanism: hydraulic hand/foot pump actuated scissor style.
7. Vertically-retractable fall protection railings with stops to allow for different railing heights.
8. A foldable work bench for ease of use.
10. 4 x free castors with T-handle release mechanism and step brakes.
11. Tow hitch.

Wheel Well Access – Features:

1. Fixed platform height of 54″.
2. Telescopic handrail with pin and hole at various settings to avoid fuselage contact.
3. Brace-free design to ‘straddle’ 60″ diameter wheel and door.
4. Sliders on side to allow snug access around landing gear.
5. 10″, foam filled castors.
6. Folding outriggers under sliders for stability.
7. Tow bar hitch.
8. Foot-operated floor locks x 2.



EXAMPLE CUSTOM PRODUCTS
FIXED WING ACCESS

CREATED FOR:
BOEING 737

A full suite to replace the client's ageing and cumbersome platforms – many were heavy steel and susceptible to weather-based corrosion. Our client, Airwork, in New Zealand, and their fixed wing division were also experiencing non-compliance for hand rail height since the regulations changed.

SafeSmart's in-house engineers researched the new requirements and had the in-house design and fabrication teams develop these products to suit the aircraft perfectly.

THE SAFESMART GROUP:
ACCESS ALL AREAS

SAFESMART ACCESS—THE PARENT COMPANY OF SPECIALISTS SAFESMART AVIATION AND PROSCAF—HAVE BROUGHT ADDED SAFETY AND EFFICIENCY TO A DIVERSE RANGE OF WORK ENVIRONMENTS WHERE WORK IS DONE AT HEIGHT.



QUALITY ASSURANCE: SINCE THE BEGINNING.

SafeSmart Access has been designing and manufacturing work platforms for many decades. Out drafting and fabrication teams are highly-skilled at what they do, and not only collaborate to build robust and effective systems, but also cater to customers with compliance in mind.

ACROSS THE SEAS: ACCESS TO ACCESS ANYWHERE.

SafeSmart Access services the globe in mining, infrastructure, energy and resources, transport, warehousing, distribution, commercial maintenance, construction and many more industries. Our global branch locations are positioned to not only service the countries they reside in, but to also service their adjacent global regions.

- United States/Americas – www.safesmartaccess.com
- Australia/Australasia – www.safesmartaccess.com.au
- New Zealand/Pacific – www.safesmartaccess.co.nz
- UK/Europe – www.safesmartaccess.co.uk
- Canada – www.safesmartaccess.ca

So, no matter what your industry or height access challenge is, get in touch with your nearest branch and start Reaching New Heights.

SAFESMART ACCESS

Reaching new heights

SAFESMART AVIATION


VH-CGF
02 8844 4500

CASE STUDY:

ROTARY

A SMART SPLIT TAIL PLATFORM

AIRCRAFT
AW139

CLIENT
HNZ GROUP

LOCATION
NEW PLYMOUTH, NEW ZEALAND

THE CHALLENGE

HNZ (Helicopters New Zealand) was facing a challenge around safely accessing the tail rotor on their AW139 aircraft for maintenance work. Significant space constraints and various maintenance configurations required a custom solution, and HNZ commissioned SafeSmart Aviation to design and build this for them.

THE DESIGN

SafeSmart designed and built a split tail dock that could be wheeled in from either side of the aircraft and joined together, with detachable mobile stairways that could be mounted at several points on the tail dock or used as a standalone platform for working on other parts of the aircraft. Height-adjustable castors allowed the platform to be raised and lowered depending if the helicopter was jacked or not.

Like many of SafeSmart's platforms, this system for HNZ Group is easily wheeled by hand up to the aircraft and secured into place via foot-lockable castors.

THE RESULT

SafeSmart Aviation's custom capabilities allowed HNZ to procure a solution that fitted within the multiple constraints of the working environment, while also making a safer and more efficient workflow for the engineers.

SAFESMART AVIATION

EXAMPLE CUSTOM PRODUCTS
ROTARY ACCESS

CUSTOM MAINTENANCE STAIRS: ANY SHAPE OR SIZE

Our in-house custom shop can design and build a work platform to suit any rotary aircraft. We consider the relative fragility of the machine's components when in drafting stage so that the platform is a perfect fit that creates gapless on-foot access without the system touching the aircraft.

And many of our systems are hand-maneuverable thanks to lightweight yet robust marine grade aluminium construction.

WIDE MAINTENANCE STAIR

FEATURES & BENEFITS

- Cantilever design allows for unobstructed access to aircraft
- Perfect for use on helicopters & fixed wing aircraft
- Flat packed design for easy transport

CREATED FOR: **SIKORSKY BLACK HAWK, US ARMY**

Originally custom designed for the US Army's Black Hawk during refurbishment. Also applicable to all variants such as the Sea Hawk, Pave Hawk, Battle Hawk, Desert Hawk and others. Side, top engine bay and tail access.

BLACK HAWK FULL SURROUND ACCESS PLATFORMS

FEATURES & BENEFITS

- Full surround platforms for heavy maintenance on aircraft
- Platforms are re-configurable for different maintenance programs

CREATED FOR: **EUROCOPTER, AMBULANCE NEW SOUTH WALES, AUSTRALIA**

The Eurocopter in this instance required dual-level access for maintenance tasks around the engine bay and lower rear of the fuselage. This platform's design can be modified to suit any similar rotary aircraft.

CASE STUDY:

ROTARY

HELPING THE OSPREY FLY

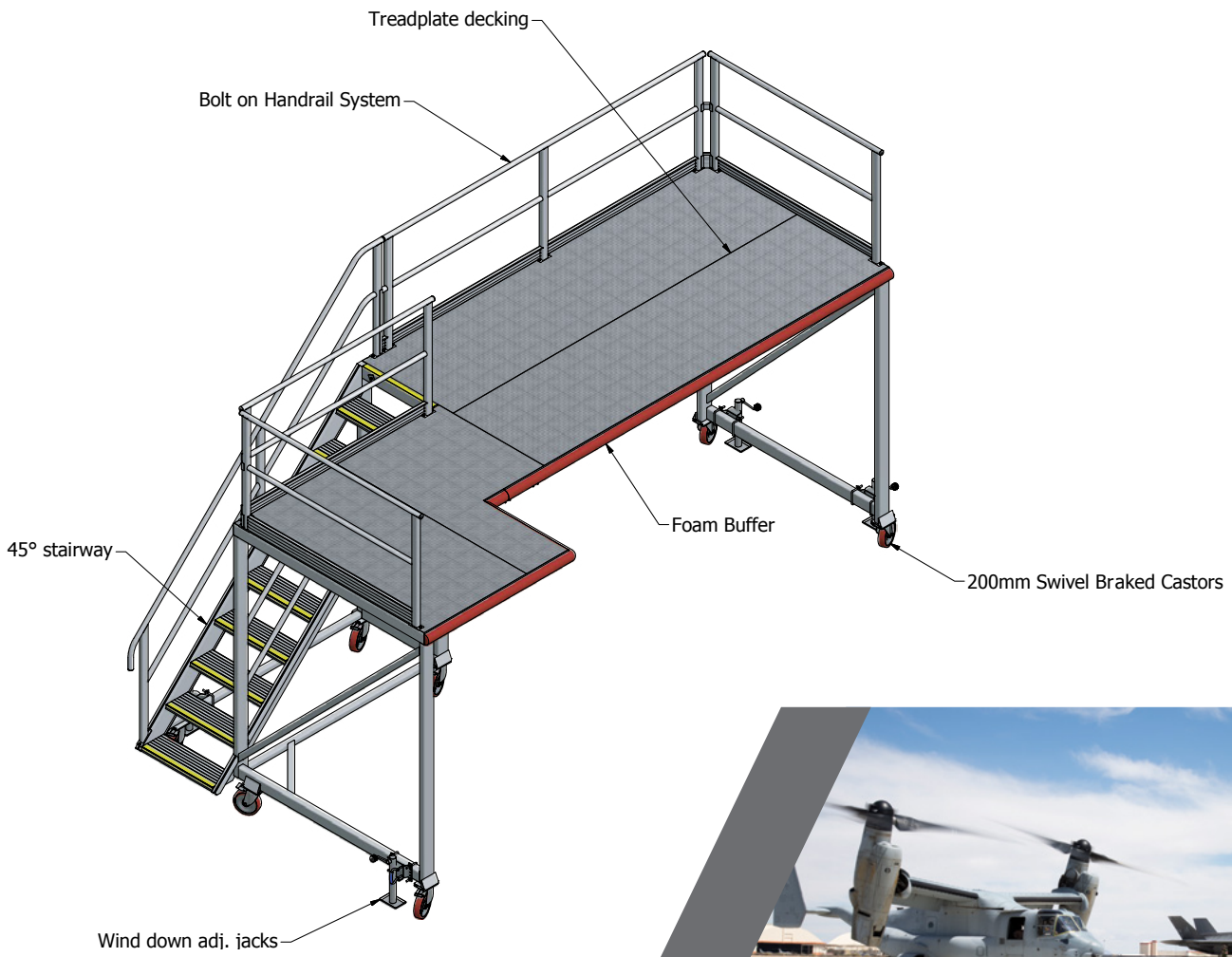
AIRCRAFT
BOEING MV-22 OSPREY

CLIENT
US MARINES

LOCATION
AIR STATION MIRAMAR, SAN DIEGO CA

THE CHALLENGE

Marine Corps Air Station Miramar, San Diego CA, houses the 3rd Marine Aircraft Wing. Amongst a vast array of aircraft to be seen at the base—F/A18D Hornet, Sikorsky CH-53E, C-17 Globemaster and the F-35, to name a few—is the Bell Boeing MV-22 Osprey, a V/STOL military transport aircraft.



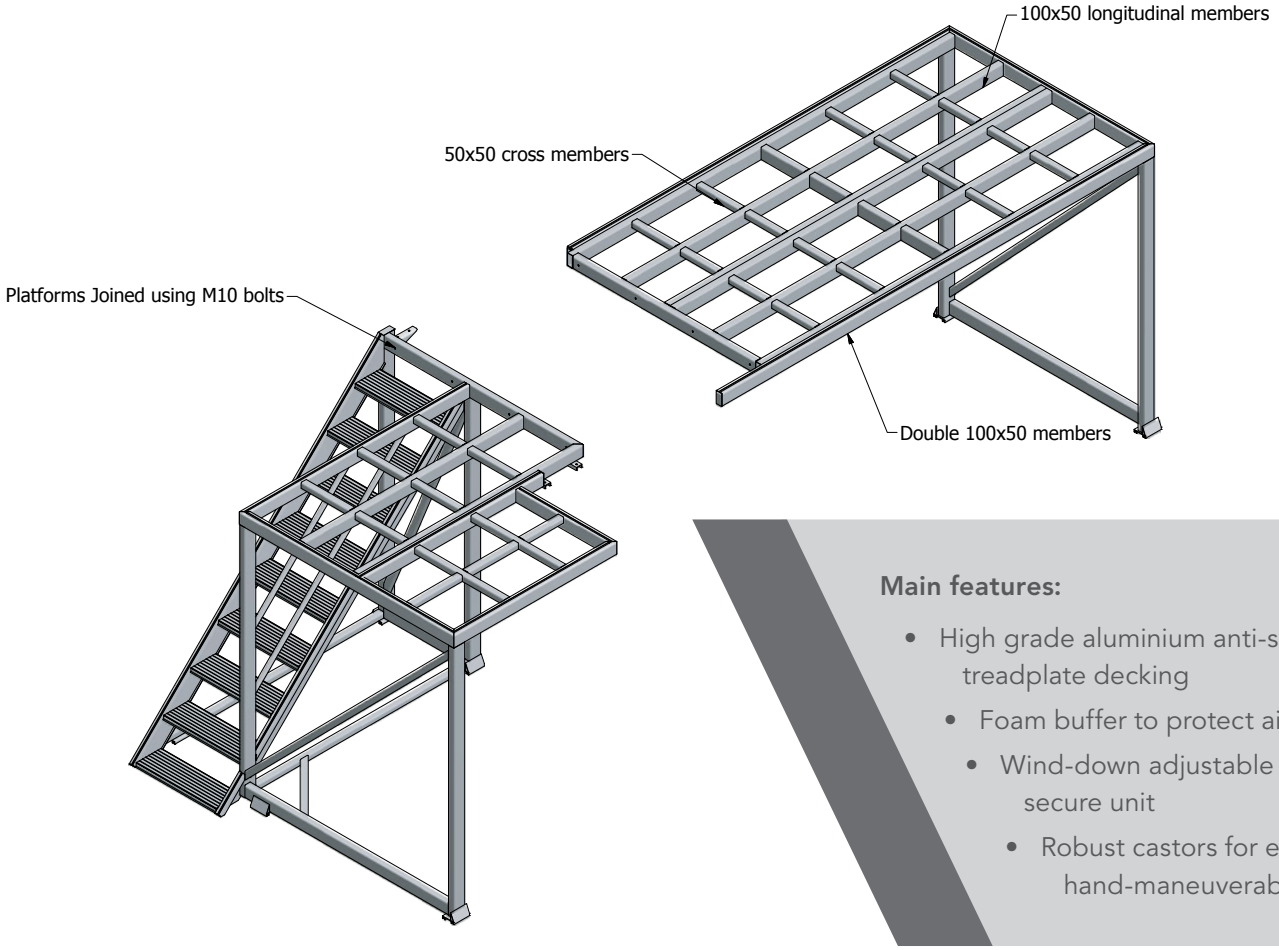
A common story amongst many ground crews and MROs is the use of standard store-bought ladders for access to heights. The technicians in the Osprey Squadron were looking for a more efficient and safe way to access the unique tiltrotor engines during maintenance that also complied with ANSI and OSHA regulations.

And the access product needed to be quick to install and pack down for use in remote combat zones. With experience with both fixed wing and rotary aircraft maintenance platforms, SafeSmart Aviation were commissioned with the task of solving the issue.

THE DESIGN

The Osprey is very expensive, at an approximate unit cost of US$72.1 million, so the fragility of the aircraft's nacelles was a big concern. SafeSmart Aviation took specs and custom-designed a hand- maneuverable two-piece aluminium platform that allowed access to the engines at various heights, accommodating any pitch angle. As a full-surround design, the platform follows the contour of the aircraft closely, creating easy access without the risk of bumping the aircraft's skin.

For added ease of use, this platform is enhanced with optional pneumatic and electrical movements.



Main features:

- High grade aluminium anti-slip treadplate decking
- Foam buffer to protect aircraft skin
- Wind-down adjustable jacks to secure unit
- Robust castors for easy hand-maneuverability

THE RESULT

A compliant, safe and efficient way for technicians to circumnavigate the engines without repeatedly ascending and descending. A Marines spokesperson has said that the 3rd Marine Aircraft Wing is already benefitting from the platform's delivery, with faster maintenance turnaround times between missions. Further interest in the Los Angeles platform maker's products is now apparent throughout the armed forces, especially with the continued rollout of the F-35 Joint Strike Fighter.

CREATED FOR: **AUGUSTA WESTLAND AW 139, AMBULANCE VICTORIA , AUSTRALIA**

Specially-designed to give close "u-shape" access around the AW 139's tail during rotor checks and maintenance. SafeSmart's platforms can be configured to suit any height, length or size helicopter tail.

AW139 ACCESS PLATFORMS

FEATURES & BENEFITS

- Large, uninterrupted work space under platform allowing access to doors whilst the platforms are in position
- Power and air lines to platform available as an option

AW 139 ROTOR MAINTENANCE STAND

FEATURES & BENEFITS

- This platform allows the service people to walk completely around the rotor, carrying heavy equipment, tools or replacement parts
- Large deck caters for a forklift or gantry crane to lift heavy parts onto the platform

500KG
WEIGHT RATING

Ensure safe, easy and hassle free access for maintenance on helicopter tail rotor

CREATED FOR: **BELL 412, WESTPAC RESCUE, AUSTRALIA**

A dual-level platform suitable for accessing rotors and maintenance point panels on the lower rear of the aircraft. Configurable for any model of Bell helicopter.

BELL 412 SIDE MAINTENANCE STAND

FEATURES & BENEFITS

- Side platforms developed for most helicopters (bell 412 high skid pictured)
- Platform also has a cantilever to allow for skid floats
- Light weight & easily manoeuvred into position with one person
- Easy roll castors are suitable for most helicopter maintenance areas
- Fully handrailed and fully compliant

CREATED FOR: **MBB/KAWASAKI BK117, STARS RESCUE, CANADA**

A twin-mirrored system that is easily wheeled by hand up to the aircraft, with dual-level access to junction of fuselage and tail and top engine bay.

BK-117 SIDE ACCESS PLATFORMS

FEATURES & BENEFITS

- Flip-up upper platform allows the operators to stand at dual levels
- Trussed frame design for optimum strength

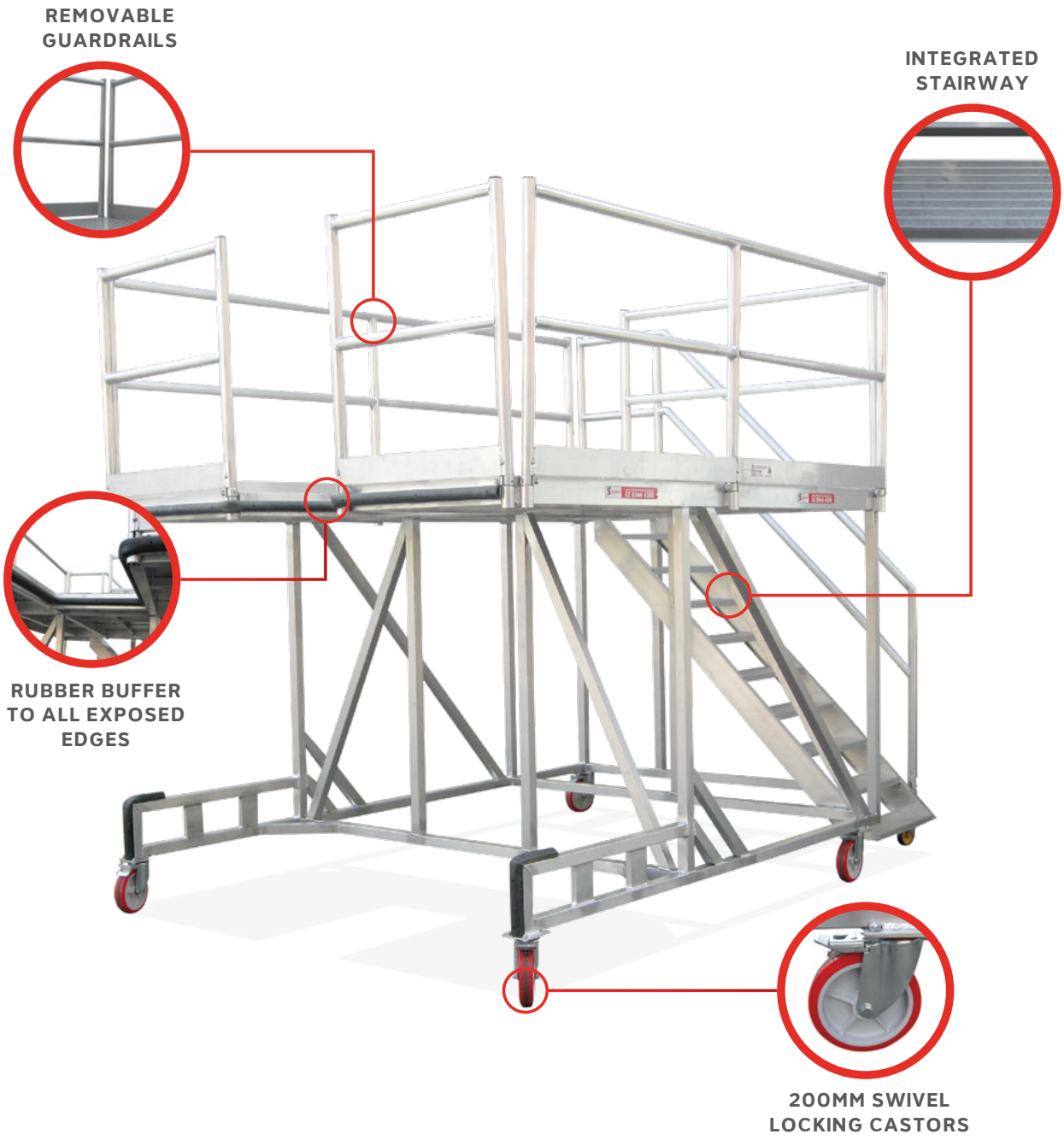
CREATED FOR: **ALL ROTARY AIRCRAFT**

Dual purpose side platforms. Customizable for any rotary aircraft.

ALL AIRCRAFT

FEATURES & BENEFITS

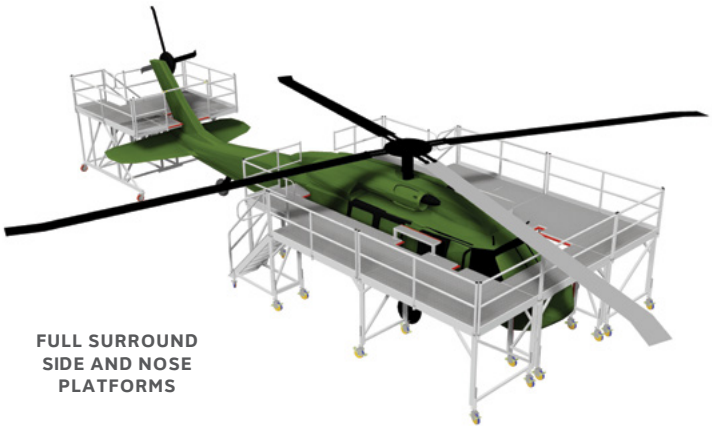
- High-grade aluminium
- Rubber buffers for protecting aircraft skin
- Made by SafeSmart in-house



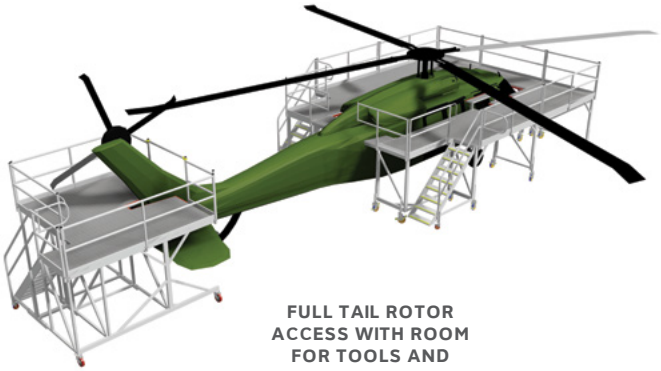
CREATED FOR: **ALL ROTARY AIRCRAFT**

Side and tail work platforms, designed and customizable for any rotary aircraft.

MORE CONCEPTS



FULL SURROUND SIDE AND NOSE PLATFORMS



FULL TAIL ROTOR ACCESS WITH ROOM FOR TOOLS AND PARTS

POWER & AIR SUPPLY LINES AVAILABLE

TOOL TRAYS/ SHELVES AVAILABLE

UNPARALLELED ACCESS CALL US FOR MORE DETAILS

CASE STUDY:

WORK AREA MANAGEMENT

A SAFE RESTORATION

AIRCRAFT
BOEING B-52 STRATOFORTRESS

CLIENT
UNITED STATES AIR FORCE

LOCATION
TINKER AIR FORCE BASE, OKLAHOMA CITY, USA

THE CHALLENGE

In a very special project, the USAF were restoring "Ghost Rider", a B-52H bomber that had been sitting in storage in the Arizona desert for several decades, at Tinker Air Force Base, in Oklahoma.

During the nine-month restoration, fragile componentry needed to be removed, to allow technicians full access inside bomb bays and wheel wells.

This included the bomb bay doors.

These curved aluminium doors required careful handling when separated from the aircraft – even a slight deformity would render the doors incompatible with the contour of the aircraft's fuselage shape, and therefore void for use. The USAF's previous solution had been a shelf unit with webbing straps that allowed for fuselage curvature. However, these straps were rotting, posing a risk of the doors falling.

THE DESIGN

SafeSmart Aviation took measurements and weight specifications from the B-52's parts, and custom-designed a rack that suited the bomber exactly – a curved shelf system with protective foam. Specifications were also taken from the aircraft's existing wheeled base chassis, so SafeSmart's lightweight unit could be mounted onto it via engineered connection points.

THE RESULT

The USAF could place the bomb doors on the trolley safely, securely, quickly and easily, for transporting around the base. For other B-52s at Tinker, the system also keeps the flight line tidy during maintenance.

And thanks to assistance by suppliers like SafeSmart Aviation, the project was delivered 90 days early, and Ghost Rider was amazingly recommissioned into full military use, to full operational flying status.

SafeSmart Aviation has also provided custom products to the US Army and Marines. Now, The US Air Force also see SafeSmart as a trusted partner in safe height access solutions for the hangar and ramp.

EXAMPLE PRODUCTS
WORK AREA MANAGEMENT

MAKE YOUR WORKSPACE TIDIER: AND SAFER

Due to the popularity of our custom workshop, SafeSmart Aviation have been commissioned to design and create systems outside of the height access scope. Being well-versed in safety regulations for MRO and ground support environments, we are always looking for ways to eliminate trip hazards, make the hangar more efficient and help with smarter storage solutions for aircraft components, tools and more.

CREATED FOR: **INTERNATIONAL AIRPORT LINE BAYS, AUSTRALIA**

A major global airline commissioned SafeSmart Aviation to design a hand-pushed trolley to specifically accommodate wheel chocks and safety cones, so they could quickly store small GSE and move it to the next aircraft without deploying a large motor vehicle.

Made from weather-resistant high-tensile aluminium, the first unit resulted in more orders, including from other global aviation operators.

- **Slashes Time:** One person can quickly and easily move around an aircraft and place or remove chocks and cones.
- **Slashes Manpower:** One person can complete the task in the same amount of time it would take 4 people previously.

CREATED FOR: **ALL ROTARY AIRCRAFT OPERATORS AND MRO COMPANIES**

This design can be specially-modified to suit any type of rotor blade. Rotor blades are protected thanks to a selection of padding types available for the support arms, and one-step foldaway means that the stand is out of the way during use.

High grade castors and lightweight aluminium provides easy hand-wheeling and weather-resistance. Also available in non-collapsible configuration.

CASE STUDY:

FIXED WING

KEEPING SKYWEST BEST

AIRCRAFT
EMBRAER CRJ 200, 700 AND 900

CLIENT
SKYWEST AIRLINES

LOCATION
ST GEORGE, UTAH, USA

THE CHALLENGE

Utah-based SkyWest—one of North America's busiest domestic short-hop small capacity airlines— acquired new aircraft in the form of the Embraer CRJ 200, 700 and 900. SkyWest bolstered the fleet with this aircraft to help accommodate the demands of the corporate market, as a partner with United Airlines, Delta Airlines, American Airlines and Alaska Airlines.

SkyWest's busy schedule required an aircraft that was fast (top speed of Mach 0.78) and was able to be maintained in a fast turnaround time. The fleet already featured aircraft from the Embraer offering that was similar—35-40-seater with rear-mounted engines—to the CRJ series, along with maintenance platforms to suit. However, minor differences in engine position and fuselage shape meant that new platforms needed designing and building in order to still comply with ground support health and safety requirements.

THE DESIGN

SafeSmart Aviation went to the site and took measurements and specifications of the CRJ200; dimensions taken were also applicable to the 700 and 900. Within a matter of days, a design was ready, and the client was happy to sign off on their customized maintenance platform, complete with highly durable aluminium construction, easily manoeuvrability by hand and a new level of access that gets technicians up to the engines at the perfect height, all without the unit coming into contact with any part of the aircraft.

The platform also features enough space to hold tools, to save the technicians the time-wasting and painstaking task of clambering up and down in order to swap tools. The platform was also designed to be easily folded and safely placed well away from the aircraft when not in use.

THE RESULT

Delighted with the experience, SkyWest now look to SafeSmart Aviation for new ways of making the ramp and hangar safety, all while increasing efficiency.

EXAMPLE PRODUCTS
FIXED WING, ROTARY, MILTARY, CIVIL & MORE

We Can Design and Build Anything

CREATED FOR: **AIRBUS A380, SYDNEY, AUSTRALIA**

A380 Dual Level Oil Check Stand

A380 DUAL LEVEL OIL CHECK STAND

FEATURES & BENEFITS

- Different platform levels, for inboard and outboard engines
- Storage tray under platform to catch oil
- Unique lever actuated locking system and tow bar

CREATED FOR: **FA/18, AUSTRALIA**

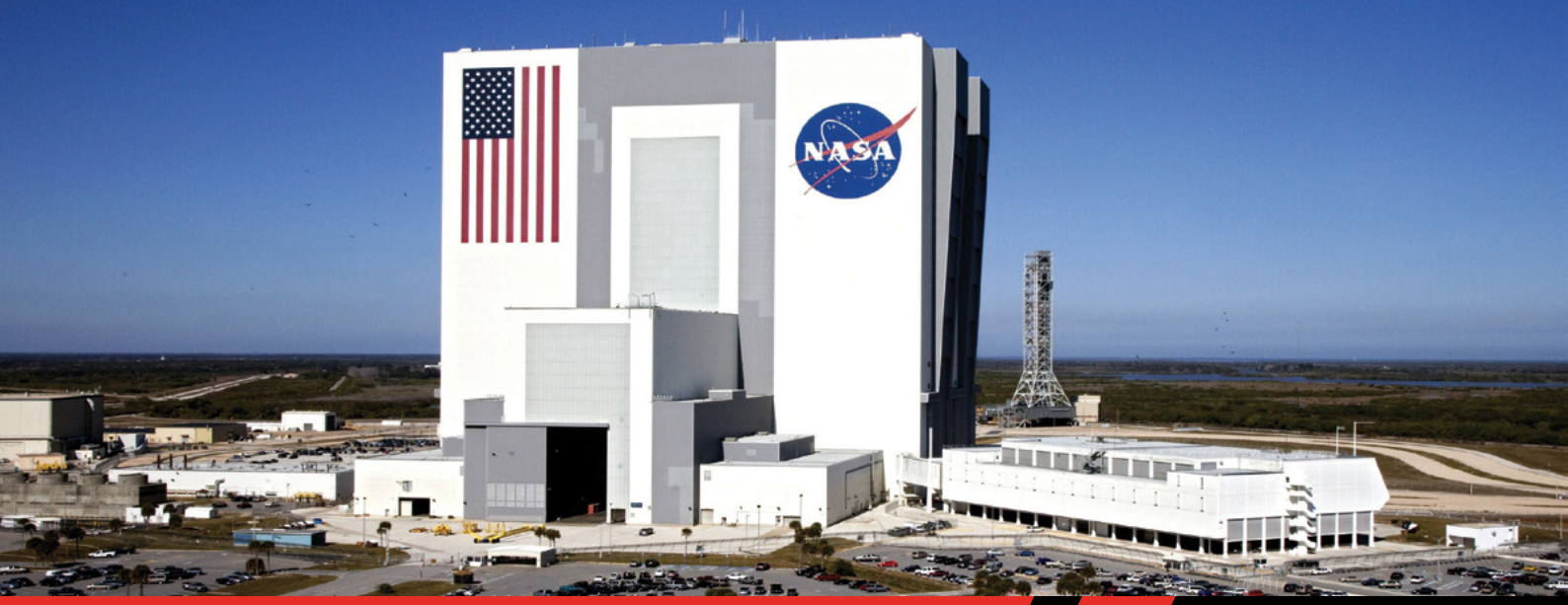
Reach Deck Platform

TRANSPORT MAINTENANCE ACCESS

FEATURES & BENEFITS

- Height adjustable platform
- Cantilever reach design allows platform to poke into tight areas
- Telescopic outriggers for ease of transport
- Adjustable jacks for stability
- Large 200mm easy run castors for manoeuvrability

Ensure safe, easy and hassle-free access for maintenance on any aircraft



CASE STUDY:

SPACE CRAFT

NASA MAINTENANCE SAFETY
HERE ON EARTH

AIRCRAFT
CLASSIFIED

CLIENT
NASA

LOCATION
UNDISCLOSED

THE CHALLENGE

The National Aeronautics and Space Administration needed safer access around and up to their classified craft during maintenance.

Of course, in addition to the requirements of an aviation customer, there were more specialized factors at play – the need to work on the craft in a confined space to reduce possibility of airborne contaminants, and the need for the access system to be able to be assembled by technicians themselves, and not have more people than necessary in the facility during installation.

Any system used needed to be lightweight, portable and feature no crimped ends for ease of cleaning.

THE DESIGNS

SafeSmart took dimensions of specified access points around the craft and designed a suite of platforms.

For each platform, SafeSmart used their own Proscaf scaffolding as a core product for design, to accommodate easy assembly and storage of components when not being used. As a hybrid concept, SafeSmart integrated custom-made features such as self-closing gates on the top platforms, as well as scaffold-style stretcher stairs and padding to protect the craft from accidental contact from the scaffolding.

And open ends on scaffold tubing create easy access for cleaning.

THE RESULT

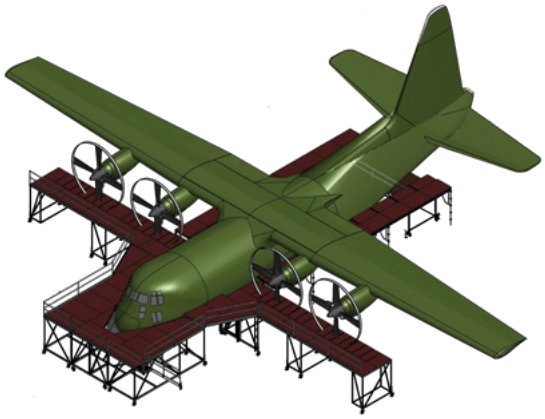
The maintenance program on the classified craft continues on at a faster pace, with added height safety for technicians. And technicians are able to deploy their platforms for safe access on short notice if need be, thanks to simple, SafeSmart-supplied instructions.

LARGER SCALE INSTALLATIONS | VARIOUS DOCKING CONCEPTS

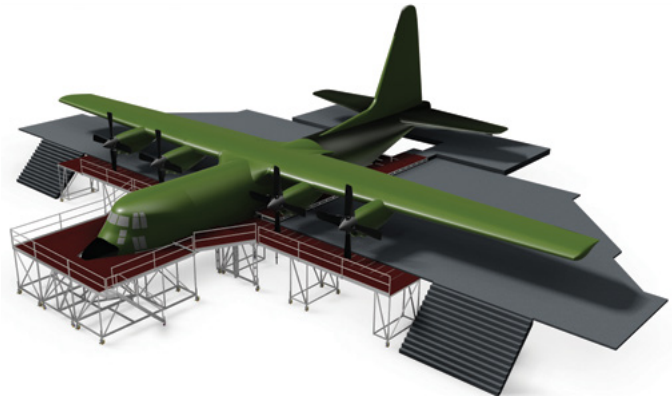
AIRCRAFT DOCKING SYSTEM HERCULES C130 (PICTURED)

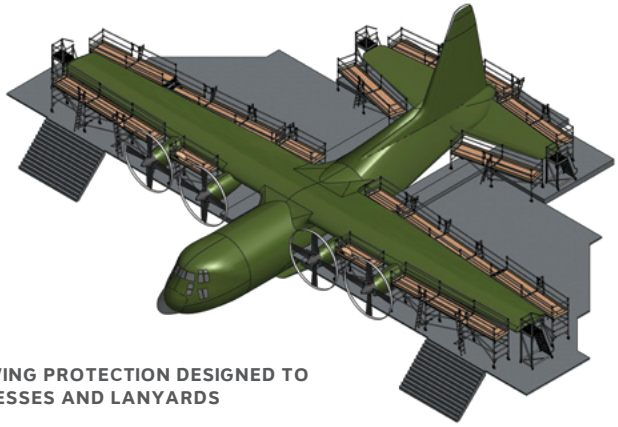
FEATURES & BENEFITS

- Job: hercules C130 heavy duty refurbishment for the RAAF Richmond, NSW, Australia
- The package includes heavy duty steel base docking platforms, structural aluminium custom mobile platforms and aluminium mobile scaffold to create a complete access solution
- Proscaf rosette system scaffold and clear span truss beams allow for tight space requirements and plenty of unobstructed access for operators underneath the platform
- Custom design aluminium platforms encapsulate the aircraft completely yet can be easily relocated if required
- Mobile scaffolding gives cost effective access to the wing surfaces
- SafeSmart Access provides the complete solution from system design to installation
- Complete system can be disassembled for redeployment
- **Unique, configurable design for different maintenance programs**
- **Removeable nose docks and sliders so aircraft can be quickly moved**



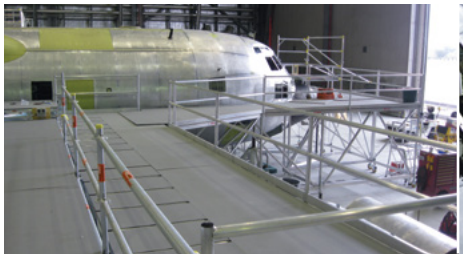
MOBILE ALUMINIUM DOCKING FOR NOSE AND PROPELLER ACCESS
UNIQUE SLIDING PLATFORM SYSTEM FOR CLOSE ACCESS TO FUSELAGE

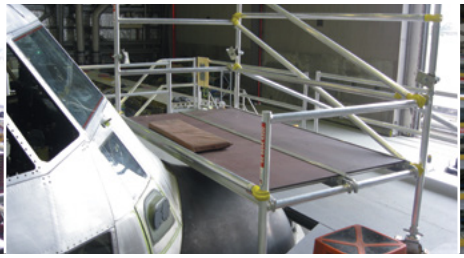




MOBILE SCAFFOLDING FOR WING PROTECTION DESIGNED TO AVOID USING HARNESSES AND LANYARDS

WORLD 1ST FLAT PACKED DOCKING





PROSCAF AVIATION PROJECTS

- Ideal for when you require a fast solution to complete your maintenance program
- The SafeSmart projects team can come in at very short notice, and complete any access dock or system you require in under a day
- Ideal for projects under time pressure, when waiting for customised fabricated stands isn't an option

TO FIND OUT MORE ABOUT PROSCAF, YOU CAN GO TO PROSCAF DIVISION AT WWW.PROSCAF.COM

A380 Engine Attrition Lining Repair Dock

A380 Wheel Well Access Scaffold

737 Mobile Cabin Access Dock

SAFESMART ONGOING RANGE FOR ALL SECTORS

ALWAYS AVAILABLE, FOR MRO SAFETY AND EFFICIENCY

GSE PLATFORMS

A-FRAME AVIATION PLATFORMS

CODE	DESCRIPTION
210283	3 Step-850mm(H)
210284	5 Step-1400mm(H)
210285	7 Step-2000mm(H)
210286	Heavy Duty Handrail set including toeboard

FEATURES & BENEFITS

- Ideal for working under the fuselage of an aircraft
- 450mmx450mm platform area
- Complete with wheels, handles and rubber buffers
- Handrail set for added peace of mind and compliance in use (when there are no overhead obstructions)
- Heavy duty welded frame for engineering use

FOLDED GUARDRAIL AND GATE SET

GUARDRAIL AND GATE SET

CHOCK TROLLEY

AVIATION CHOCK TROLLEY

FEATURES

- Fully welded box section aluminium frame - for the optimum strength-to-weight ratio
- Standard unit holds 8 x chocks and 8 x cones, can be customised to suit different quantities
- Foot operated floor locks to quickly secure and move trolley
- Ergonomic handles makes it easy for one person to move and use

BENEFITS

- Slashes time: one person can quickly and easily move around an aircraft and place or remove chocks and cones
- Slashes manpower: one person can complete the task in the same amount of time it would take 4 people previously
- Having a trolley to store the cones and chocks removes trip hazards from the tarmac
- Keeps the ramp neat and tidy with an efficient storage area for chocks and cones

Usual practice without trolley

MAINTENANCE PLATFORMS

SUPER MAINTENANCE

CODE	PLATFORM HEIGHT	PLATFORM SIZE	TYPE
210183	565mm	800 x 800mm	2 Step
210184	850mm	800 x 800mm	3 Step
210185	1130mm	800 x 800mm	4 Step
210186	1400mm	800 x 800mm	5 Step
210187	1700mm	800 x 800mm	6 Step
210188	1970mm	1000 x 1000mm	7 Step
210189	2250mm	1000 x 1000mm	8 Step
210190	2540mm	1000 x 1000mm	9 Step
210191	2828mm	1000 x 1000mm	10 Step
210192	3100mm	1000 x 1000mm	11 Step
210770	Batwing Gate		2-6 Step
210771	Batwing Gate		11 Step

225KG WEIGHT RATING

MADE IN NZ

FEATURES & BENEFITS

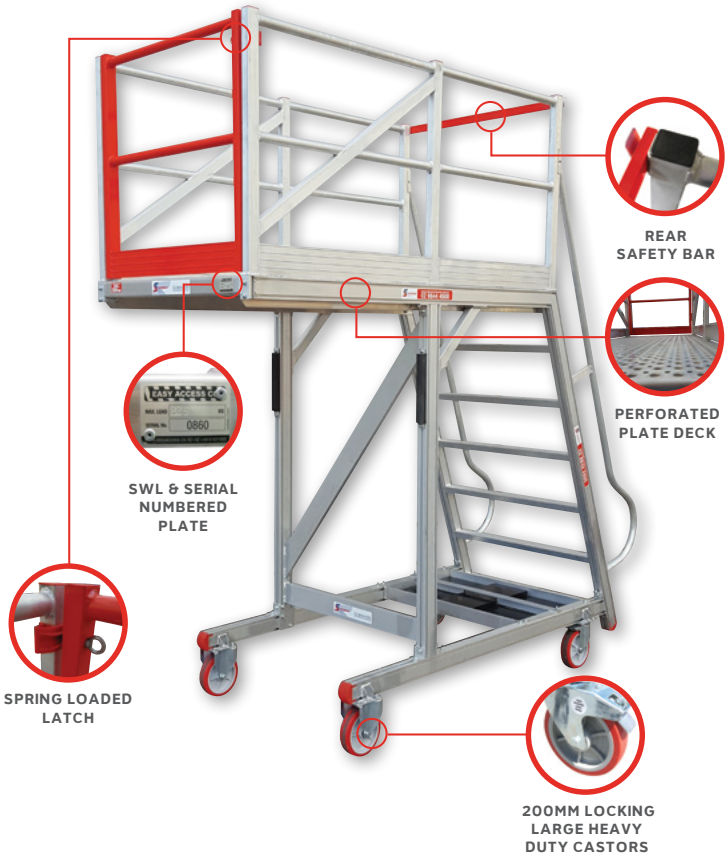
- Engineers approval, SWL rating & serial number
- Certification plate
- Built tough with 82 x 50mm marine grade
- Marine grade aluminium rhs - no C channel
- Perforated & swaged deck for superior traction in wet & greasy conditions

CANTILEVER

CODE	PLATFORM HEIGHT	PLATFORM SIZE	STEPS
210240	565mm	800 x 1800mm	2 Step
210241	850mm	800 x 1800mm	3 Step
210242	1130mm	800 x 1800mm	4 Step
210243	1400mm	800 x 1800mm	5 Step
210244	1700mm	800 x 1800mm	6 Step
210245	1970mm	1000 x 2000mm	7 Step
210246	2250mm	1000 x 2000mm	8 Step
210247	2540mm	1000 x 2000mm	9 Step
210248	2828mm	1000 x 2000mm	10 Step
210249	3100mm	1000 x 2000mm	11 Step
210238	200mm Swivel plate castor, fully locking (spare part)		

FEATURES & BENEFITS

- An essential tool for all machinery service workshops
- Allows you to get right into and up against your work area without reaching out from the platform
- Built tough, non-slip perforated
- Deck and aluminium frame



HEIGHT ADJUSTABLE PLATFORMS

EASYRAISE PLATFORM

CODE	PLATFORM HEIGHT	PLATFORM SIZE
210370	1.4 - 2.8M	1000 x 1000MM

Other sizes also available-please enquire

225KG
WEIGHT RATING

FEATURES & BENEFITS

- Height adjustable platform with manual winch
- Incrementally adjustable from 1400mm to 2800mm
- Compact and mobile for easy deployment
- Cantilever length increases as platform is raised

CUSTOM
SIZES
AVAILABLE

HEIGHT ADJUSTABLE PLATFORMS

BRIDGEDECK ACCESS PLATFORM

FEATURES & BENEFITS

- Adjustable height bridge is easily raised, for working on different aircraft
- Ideal for windshield changes
- Bridge can be lifted off base platforms, giving you two heavy duty maintenance platforms to be used independently

500KG
WEIGHT RATING

CUSTOM SIZES AVAILABLE

SUPER TRESTLE

TWO MAN WORK PLATFORM

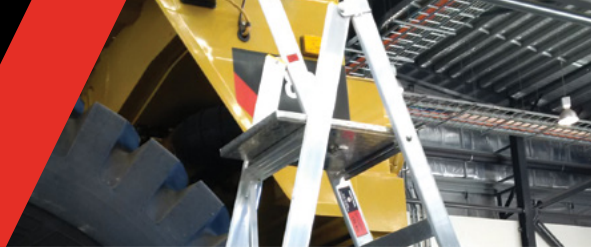
CODE	TYPE	DECK SIZE	DECK HEIGHT
210220	Wide platform max height 1000mm	450 x 1200mm	400 - 1000mm*
210221	Wide platform max height 1300mm	450 x 1600mm	600 - 1300mm*
210222	Wide platform max height 1700mm	450 x 1600mm	700 - 1700mm*
210223	Wide 450mm treadplank 2400mm long	450 x 2400mm	
210224	Full surround handrail for a single trestle		
210225	Plank handrail - one sided for a single plank		
210226	Spring loaded wheel		

FEATURES & BENEFITS

- 450mm deck width
- Large work area
- Folds down flat for easy transport & storage
- Independent safety testing approved
- Adjusts in height in seconds
- Splayed feet work well to straddle helicopter skids for close maintenance access

MADE IN NZ

200KG WEIGHT RATING



CONVENIENCE AND SAFETY

Even the smallest jobs at the smallest heights in aviation maintenance need safe and efficient height access. SafeSmart's Warthog products and those made by Branach are relied upon around the world.

ALUMINIUM WARTHOG SERIES

CODE	TYPE	SIZE (DECK HEIGHT)
210093	2 Step	0.6m
210094	3 Step	0.9m
210095	4 Step	1.2m
210096	5 Step	1.5m
210097	6 Step	1.8m
210098	7 Step	2.1m
210099	8 Step	2.4m
210100	9 Step	2.7m
210101	10 Step	3.0m
210201	Spring Loaded Castor	
210128	Full Surround Safety Rail	

MADE IN NZ

180KG WEIGHT RATING

FEATURES & BENEFITS

- 10 Year manufacturers warranty
- Fully welded box section aluminium frame
- Won't twist like a standard platform ladder
- Platform kick board stops slips and spills

10 YEAR WEAR & TEAR GUARANTEE!

WARTHOG WELDED LADDER

FIBREGLASS FPL SERIES

FEATURES & BENEFITS

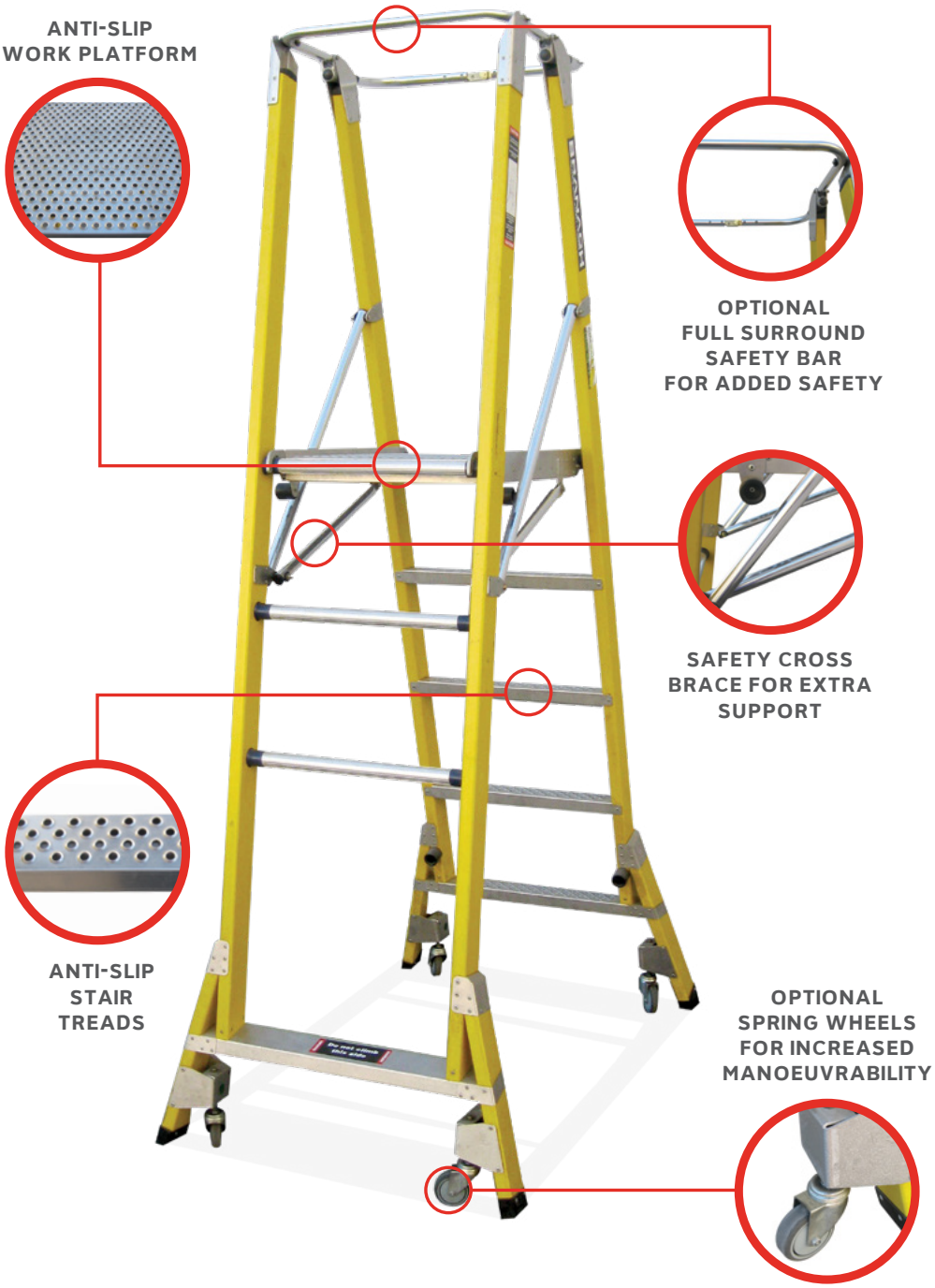
- Sturdy and durable
- Lightweight and easy to move
- Single action set-up
- Comfortable, non-restrictive 450mm-wide platform
- Non-slip hinged aluminium platform
- Rubber feet
- Backrail optional for all-round protection

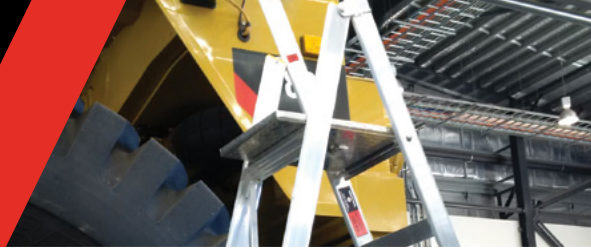
CODE	TYPE	DECK HEIGHT
210336	2 Step	0.6m
210356	3 Step	0.9m
210317	4 Step	1.2m
210318	5 Step	1.5m
210319	6 Step	1.8m
210320	8 Step	2.4m
210321	10 Step	3.0m
210322	12 Step	3.6m

MADE IN AUS

150KG WEIGHT RATING

ELECTRICALLY SAFE





ENGINEERING AND MAINTENANCE PERSONNEL

CABIN ACCESS STAIRS

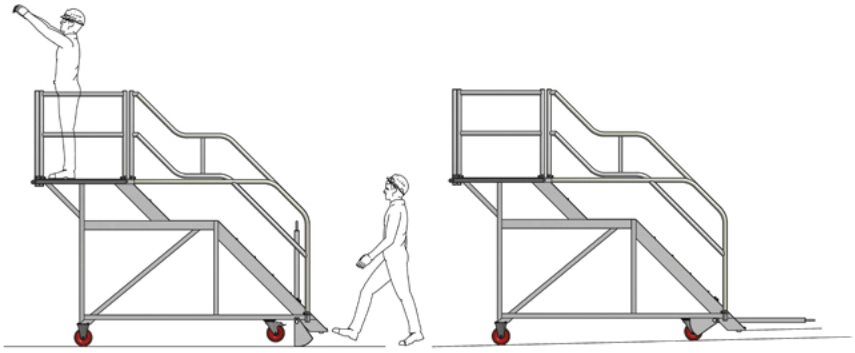
FEATURES & BENEFITS

- Cabin access stairs are crucial to allow safe and smooth passage for entry and exit of the aircraft
- These highly mobile stairs can easily be manoeuvred by one person
- These stairs allow maintenance personnel to traverse between aircraft cabins and the ground
- We offer a variety of height adjustable and fixed stairs for all makes and models of aircraft

CARGO ACCESS PLATFORM

FEATURES & BENEFITS

- Allows for safe & easy access to open cargo doors
- Towable lug system for transport
- Rubber buffer to exposed edges



A320 ENGINEERING ACCESS STAIRS

FEATURES & BENEFITS

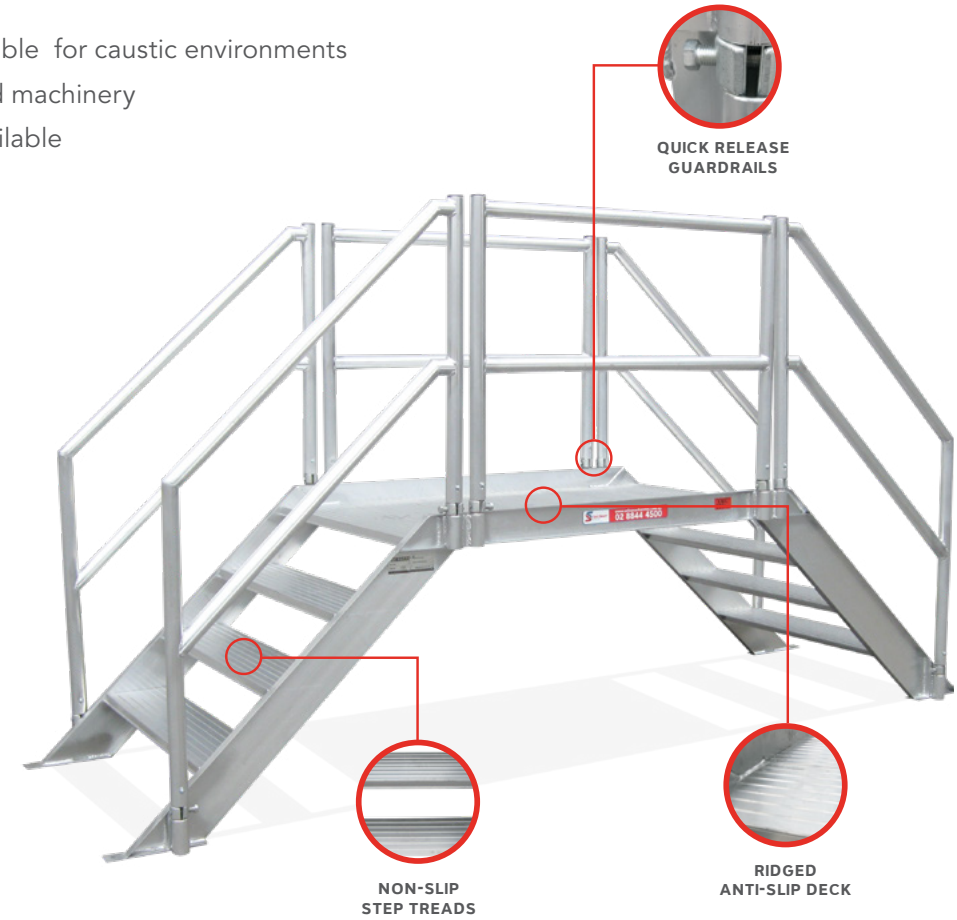
- More mobile to manoeuvre than passenger access stairs
- Sliding guardrails to allow the doors to open
- Large landing area for tools and equipment

Get Over and Around All Obstacles Safely

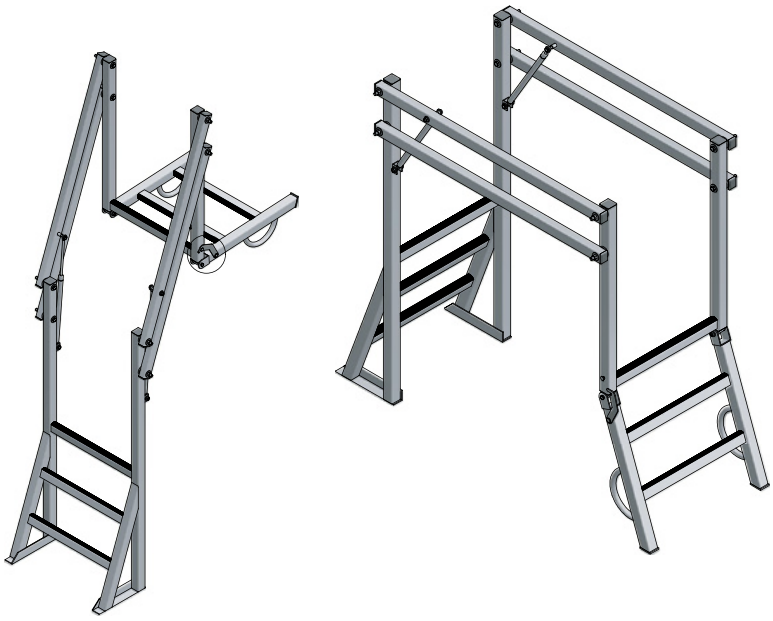
BAGGAGE HANDLING & FREIGHT CONVEYOR PLATFORMS

FEATURES & BENEFITS

- Non-corrosive aluminium - suitable for caustic environments
- Bridge safely over conveyor and machinery
- Any custom size and length available



CROSSOVER PLATFORM



FOLDING STEP-THROUGH DESIGN

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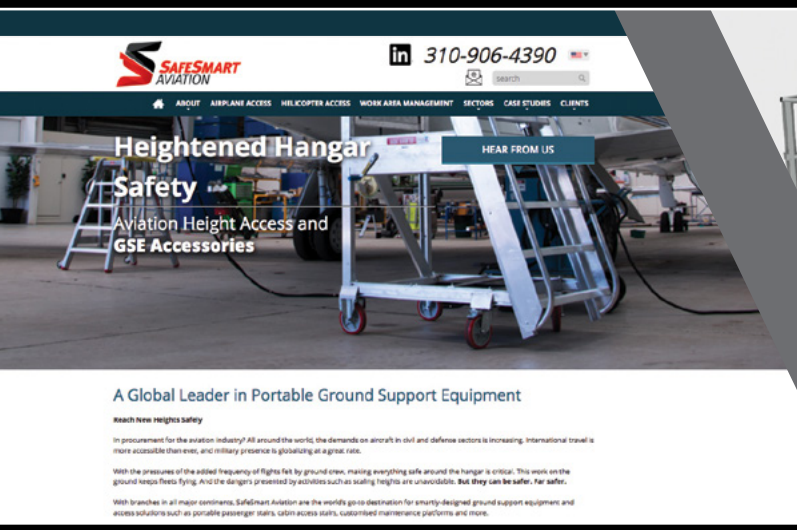

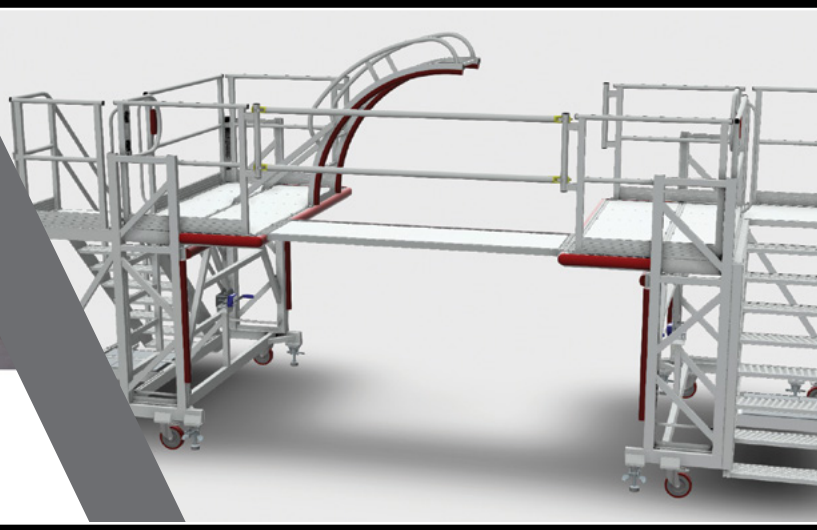

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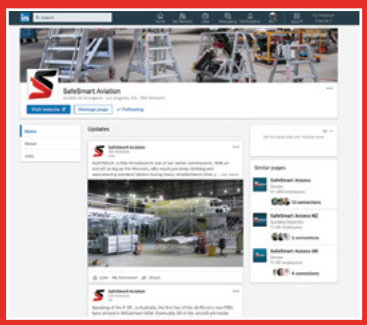
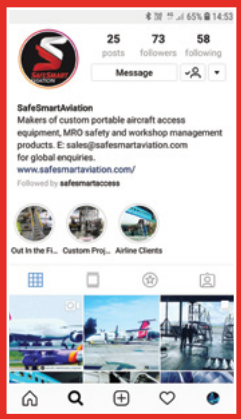
Join the conversation or see our projects as they happen.





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HEIGHTENED HANGAR SAFETY

SafeSmart Aviation

WORLDWIDE

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