



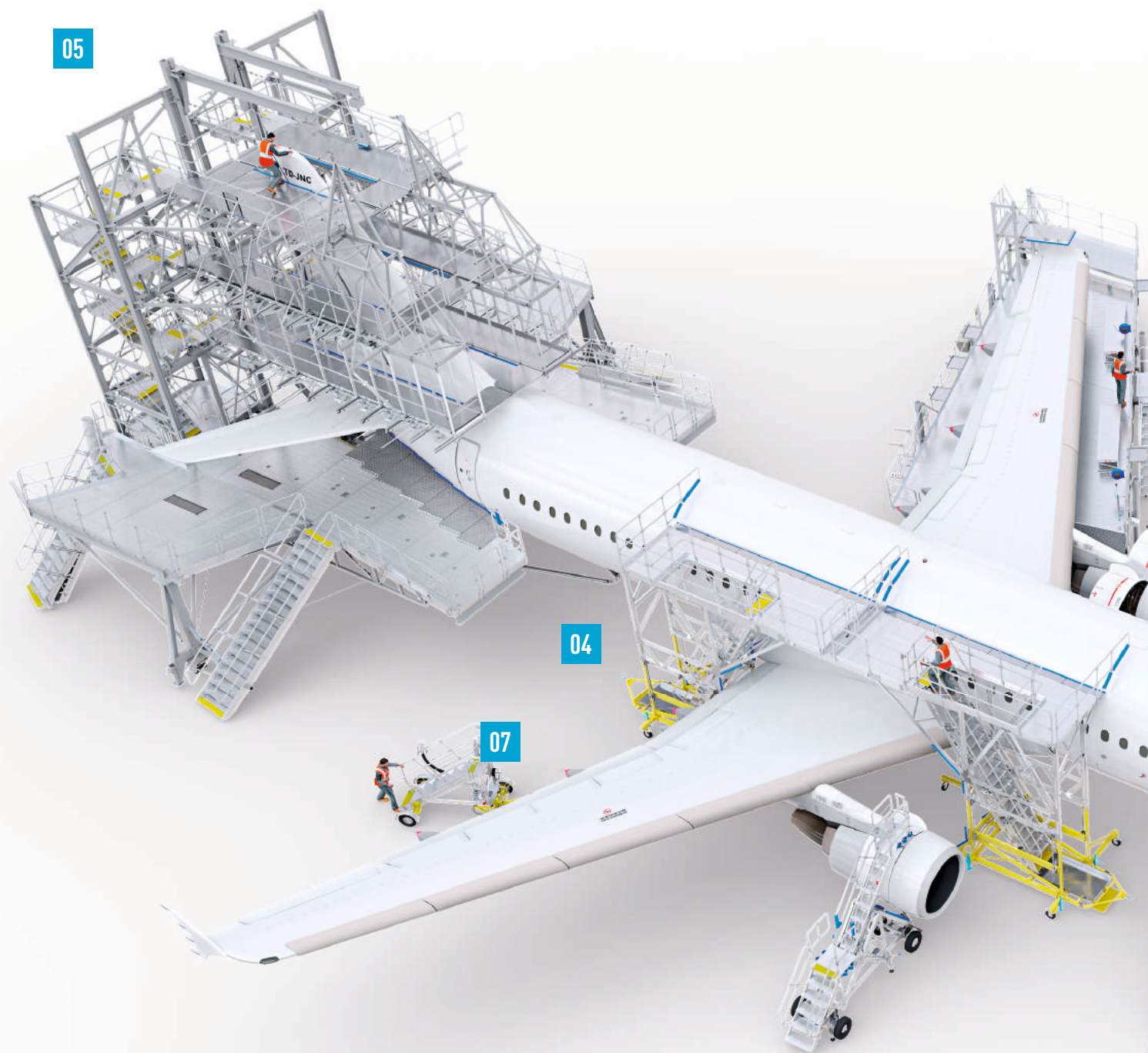
ZARGES



Special Solutions for Aviation



Our solutions at a glance





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We can find the right solution for you – challenge us



**IDEA &
OFFER**

- Standardised and individual solutions.
- Solutions devised with our specialist consultant.
- Competent and well-thought-out ideas.
- Customised to your specifications.



**IMPLEMENTATION &
REALISATION**

- Quick solutions through standardisation.
- Swift implementation and delivery.
- On-site assembly by our specialist personnel possible.
- High quality and safety.
- Compliance with all relevant standards.
- TÜV-tested constructions.



**SERVICE &
SUPPORT**

- Technical documentation.
- Reliable supply of spare parts.
- Seminars and training courses.
- Product testing.
- After-sales service.
- Prompt assistance in the event of problems.



Our constructions are compliant to following norms and standards:

DIN EN 1915

- Part 1 – Basic safety requirements.
- Part 2 – Stability and strength.

DIN EN 12312

- Aircraft ground support equipment.
- Part 5 – GSE equipment for aircraft refuelling.
- Part 8 – Maintenance stairs and platforms.

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ZARGES steps and platforms – the next generation of a proven system.

Whatever the application, ZARGES steps and platforms are made to your exact specifications.

The advantages for you:

- Easy to plan and configure
- Fast delivery and assembly
- Quick and easy to install due to a high level of pre-assembly



All of our solutions are TÜV tested and designed according to industry standards (e.g. DIN EN ISO 14122).



ZARGES – configure online now:
www.zargesconfigurator.com

02 Universal maintenance steps with fixed height

ZARGES universal maintenance steps with fixed heights can be used for a wide range of aircraft.



Benefits:

- Short set-up times
- Easy handling and manoeuvring
- Safe up to 8 Beaufort
- Weather resistant

Technical specifications

Platform

- Dimensions: 1,000 × 1,000 mm.
- ZARGES Sigma padding around and under the platform.

Step

- Width of 800 mm with 320 mm deep steps.

Flooring

- ZARGES aluminium profile with corrugated surface, anti-skid.

Handrails & guardrail

- Platform guardrail: double-sided; easily slidable with ergonomic operation at handrail level.
- Step handrail: double-sided; fixed.
- Higher accident prevention through gapless transition between handrails and platform guardrails.

Undercarriage

- Maximum clearance height of 150 mm.
- Light aluminium frame with steel front axle.
- Easy-to-use jack-up system for working and parking position.

Options



01

Wide platform

- Extended working area.
- Width 2,000 and 2,500 mm.
- Depth: 1,000 mm.



02

Retractable, swivelling guardrail

- Double-sided guardrail swivelling by 90° (only 1,000 mm platforms).
- Swivelling supported by gas spring.
- Optimum fitting to open PAX door, landing gear and engines.



03

Front gate

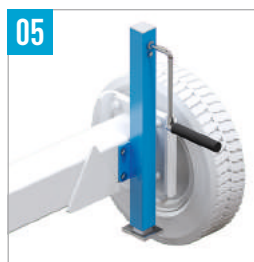
- Safety door with handrail, midrail and toeboard 100 mm.
- Easy spring-loaded operation towards the inside of the platform.



04

Guardrail padding

- Guardrail protection against damage.
- Material: PE foam with leather cover.
- Easy to place and remove by zip and push-button.



05

Spindles

- Set of 2 spindles at the front axle with folding crank.
- Higher stability and useful in case of floor unevenness.



06

Tow bar (6 km/h)

- 2-parts, turnable.
- Coupling via eye-hook or spherical head.
- Foot clearance protection.
- Parking position: click back system at the step.



07

Outdoor use

- Platform and steps with aluminium x-cut section, milled, anti-skid and permeable to water.
- Incl. CSE wheels Ø 400 mm and reflectors.



08

Further options

- Safety package.
- Colour package handrails.
- Foot protection.
- Speed package for 25 km/h.

Universal maintenance steps, height-adjustable 03

ZARGES maintenance steps with adjustable heights are suitable for a wide range of aircraft maintenance tasks. They are easily adjusted using hydraulic devices and simple to move.



Technical specifications

Platform

- Dimensions: 1,000 × 1,000 mm.
- ZARGES Sigma padding around and under the platform.

Step

- Width of 800 mm with 320 mm deep steps.

Height-adjustment

- Hydraulic system per hand pump or pipe burst valve.
- Telescopic support structure with safety ratchet.

Flooring

- ZARGES aluminium profile with corrugated surface.

Handrails & guardrail

- Platform guardrail: double-sided; easily sliding.
- Step handrail: double-sided; fixed.

Undercarriage

- Steel frame with front axle and easy-to-use jack-up system for working and parking position.
- Different types of undercarriage combinations.

Options



01

Sliding guardrail

- Double-sided slideable guardrail.
- Bumpers on sides touching the aircraft (optionally available).
- **Option:** swing-out safety gates.



02

Height-adjustment

- Hydraulic hand pump.
- Hydraulic with pipe burst valve.
- Telescopic support structure with safety ratchet.



03

Stabilisers

- 4 individual stabilising jacks.
- Spindle with foldaway hand crank.



04

Further options

- CSE wheels Ø 400 mm.
- Heavy load wheels.
- Guardrail padding.
- Speed package (max. 25 km/h).
- Foot protection.
- Wide platform.
- Outdoor use.
- Tow bar.
- Front gate.



Passenger door access for B737; height-adjustable



Fixed-height steps with retractable and swiveable guardrail to open the PAX door

04 Special maintenance steps and platforms

Infinite applications for ZARGES maintenance steps and platforms: Choose from standard UCAS and maintenance steps or ask our specialists for your individual solution.



UCAS (Under Cowling Access Step) for line maintenance. Narrow and brace-free design to reach for example engines 1-4 on widebody aircraft

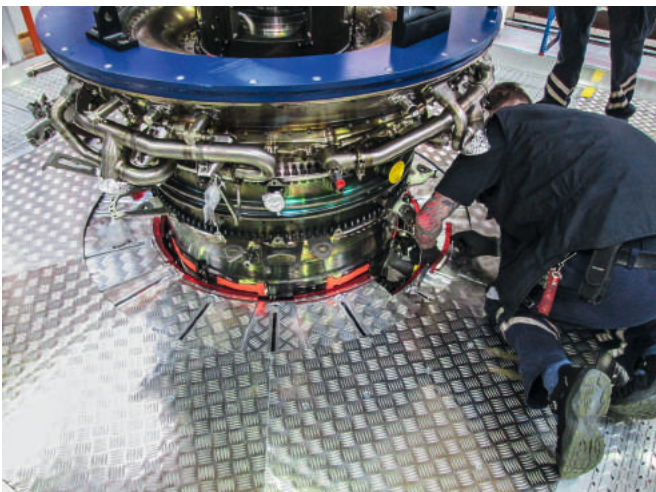
Item-No.	Version	Platform height mm	Working height mm	Platform mm	Step width mm	Weight kg
80991051	light	1.760	ca. 3760	740 × 1.000	600	491
80991052	standard	2.250-3.250	ca. 4.250-5.250	728 × 410	680	878
80991053	wide	2.250-3.250	ca. 4.250-5.250	844 × 725	690	752
80991054	XL	4.010	ca. 4.250-5.250	835 × 843	690	916



UCAS (Under Cowling Access Step)



Set of height-adjustable steps for pylon and precooler access on A340 and B747



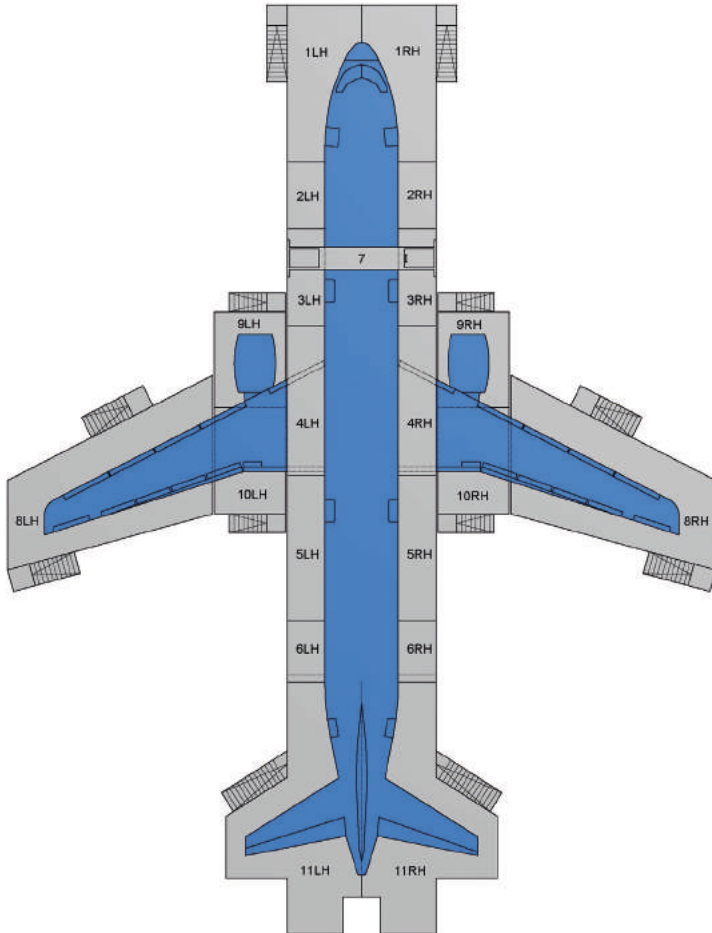
1 set of height-adjustable maintenance steps for quick turn at engine type GEEnX-2B



Special maintenance steps with intermediate platform for passenger access

Aircraft docking systems for maintenance, repair and overhaul (MRO) 05

Docking systems by ZARGES – nose to tail for civil and military aircraft!



The system includes several small modules suitable for multi- or single aircraft types, narrow- or widebody aircraft. Design and configuration depending on the customer requirements and with optimum fit to the specific contours such as engines and tail shape.

Dock	No.	A319	A320	A321	B737-900
Nose dock	1LH/RH	X	X	X	X
Fuselage module	2LH/RH	X		X	X
Fuselage module	3LH/RH	X	X	X	X
Fuselage module	4LH/RH	X	X	X	X
Fuselage module	5LH/RH		X	X	X
Fuselage module	6LH/RH			X	
Fuselage bridge	7	X	X	X	X
Wing dock-outboard	8LH/RH	X	X	X	X
Wing dock-inboard	9LH/RH	X	X	X	X
Wing dock-inboard	10LH/RH	X	X	X	X
Tail dock	11LH/RH	X	X	X	X

Nose docks

Single- or double-section solutions for access to the windshield, radome, PAX doors, nose wheel well and electronic bays.



Fixed-height dock with 2 levels for A320 family



Fixed-height dock for A330/A340 with foldable passenger access platform

Fuselage docks

One-level or two-level solutions for access to windows, emergency exits and cargo bays.
Sliding panels for ideal contour adaption to the aircraft.



Fuselage dock including bridge; fixed height with 2 levels for A320 Family



Docking system A320

Wing docks

Outboard docks for access to the leading and trailing edge, engine, overwing, underwing and wing tips.
Inboard docks for access to wheel well, engine, flaps and leading edge.



Two-piece wing dock for A300 with fixed height and media technology



Wing dock for C130 Hercules with fixed height

Engine docks

One-level or two-level solutions.
Sliding panels by hand crank or manual operation for ideal contour adaption to the aircraft.



Engine/propeller dock for C130 Hercules



Height-adjustable engine dock for CL300,605, Global Express

APU docks

Brace-free design with sliding panels to open or close the platform.
Gap in the middle allows lowering of parts/APU and direct loading by fork lift from the floor.



APU dock for A300



APU level of tail dock for B737

Horizontal stabiliser docks

Brace-free design with access to vertical stabilisers and ergonomic inclination of the working area.
For tail-in configuration, docking and undocking without moving the dock.



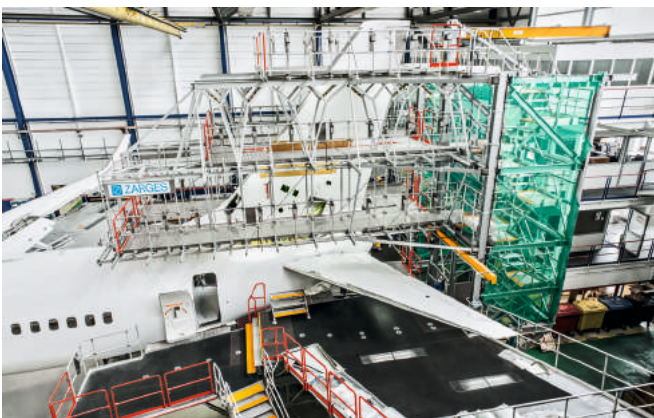
Fixed height dock for A300



Modular system on B737

Tail docks

Cantilever design with access to horizontal and vertical stabilisers, rudder, APU and rear passenger doors.
For tail-in configuration, docking and undocking without moving the dock.



Height-adjustable tail dock for B737 and A320 family with crane and media supply

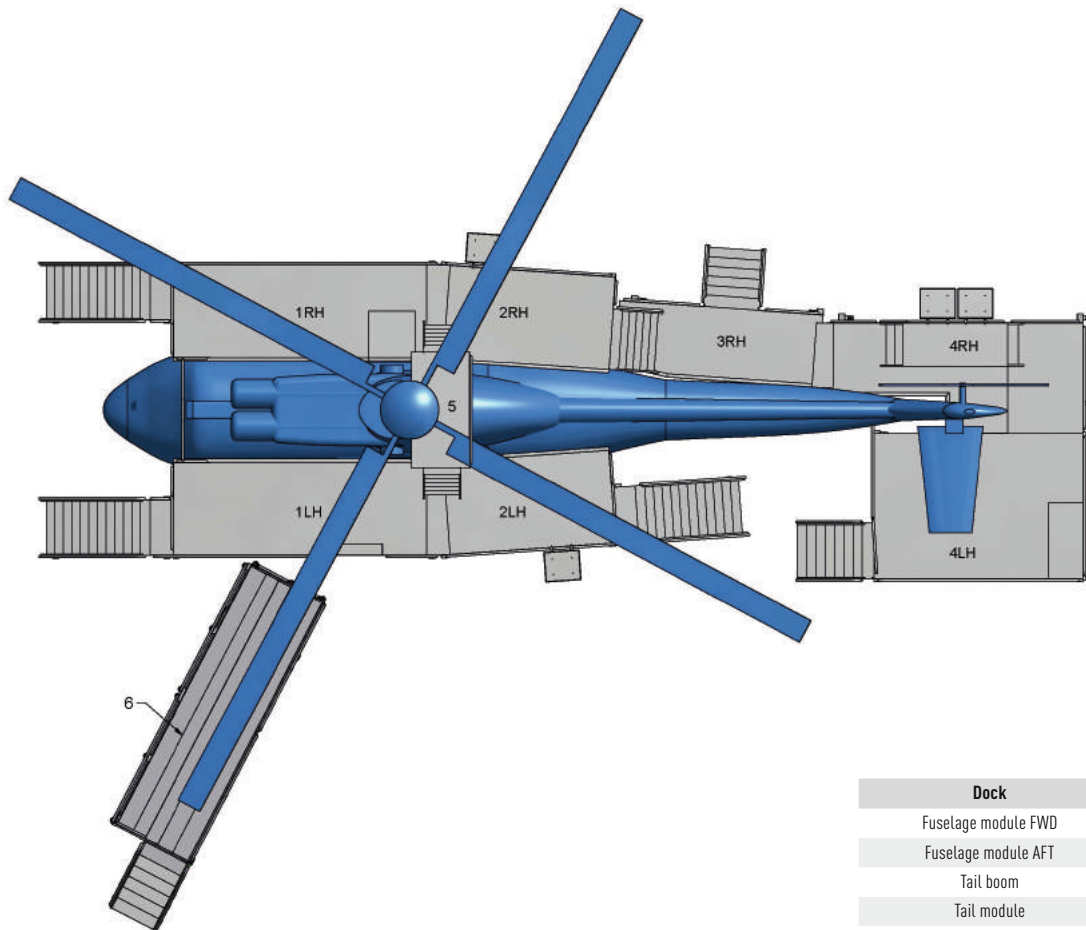


Height-adjustable tail and engine dock for Bombardier CRJ900

06 Helicopter docking systems

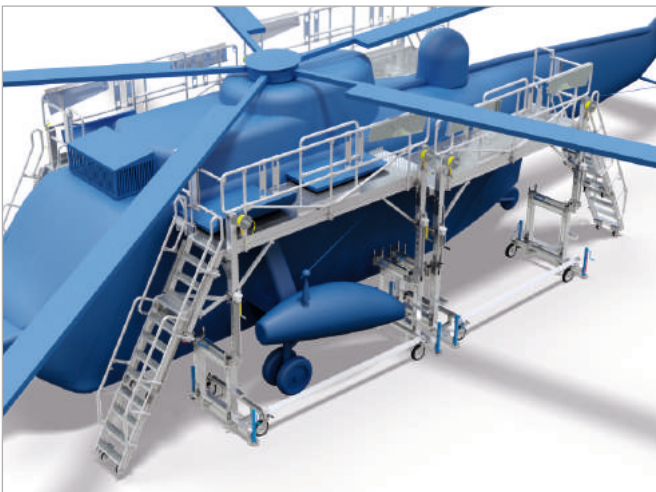
Modular docking systems by ZARGES – nose to tail for civil and military helicopters!

Tailored helicopter docking modules for precisely fitting on helicopter models and scope of maintenance, repair and overhaul. Individual solutions facilitating assembly, refurbishing and cleaning.



Dock	No.
Fuselage module FWD	1LH/RH
Fuselage module AFT	2LH/RH
Tail boom	3RH
Tail module	4LH/RH
Fuselage bridge/main rotor access	5
Blade washer stand	6

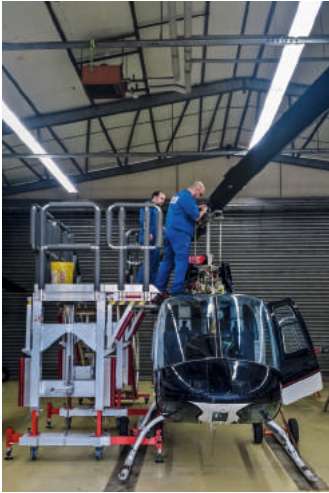
Examples



Height-adjustable maintenance platform for SeaKing Mk41



Demountable platform for transport in special container



Maintenance platform for Bell 206, Augusta 109, SA365, R44



Maintenance platform for EC 145; height-adjustable



Dock system for Black Hawk; height-adjustable



Maintenance platform for Alouette



Maintenance platform for Bell 206, Augusta 109, SA365, R44



Maintenance platforms for Black Hawk

07 Refuelling equipment

Universal refuelling steps for all aircraft types and fast, safe and convenient refuelling at wind speeds up to 8 Beaufort. Refuelling equipment with nozzles/couplings, hoses, earthing device and connectors available as optional equipment.

Refuelling steps



Aluminum fixed-height steps – mobile, stable and safe in use. Single or double-sided.

- Platform height: 0,77 to 1,30 m.
- Working height: 2,00 to 3,60 m.
- Main application: regional jets.
- Double step.
- Big working platform for safe standing.
- Tray for aircraft fuel cap.
- Nozzle rest on both sides.
- Single-sided access.
- 3/4/5 steps.

Item-No.	Ladder length mm	Platform height mm	Working height mm	Steps	Weight kg
40097	1.727	773	ca. 2.773	3	16,5
40098	2.006	1.039	ca. 3.039	4	18,0
40099	2.285	1.304	ca. 3.304	5	20,0

Single axle fixed-height refuelling steps



Foot end of steps folds away for towing for reduced space requirements when manoeuvring.

- Easy to handle.
- Minimum space requirement.
- Platform height: 1,50 m.
- Working height: 2,90 m to 3,40 m.
- Main aircraft type: regional jets, narrowbodies.
- Platform dimensions: 500 x 800 mm.
- Overall dimensions: 3,700 x 1,700 x 2,500 mm.
- Flooring: metal profile gratings, antiskid and pervious to water.
- Pneumatic tyres with Ø 400 mm and tow bar for max 30 km/h.

Item-No.	Towing eye	Ball coupling	Refuelling equipment		
			none	prepared	included
80991001	x		x		
80991002		x	x		
80991003	x			x	
80991004		x		x	
80991005	x				x
80991006		x			x

Two axle fixed-height refuelling steps



Refuelling operation can be carried out from each step.

- Platform height: 1,60 m.
- Working height: 2,80 to 3,30 m.
- Main application: Narrowbody aircrafts.
- Platform dimensions: 600 × 400 mm.
- Overall dimensions: 2,930 × 1,610 × 2,600 mm.
- Flooring: Metal profile gratings, antiskid and pervious to water.
- Pneumatic tyres with Ø 450 mm and tow bar for max 30 km/h.

Item-No.	Towing eye	Ball coupling	Refuelling equipment	
			none	included
80991007	x		x	
80991008		x	x	
80991009	x			x
80991010		x		x

Two axle height adjustable refuelling steps – small and large



Hydraulic elevation system. Optional single double-sided refuelling equipment available.

- Platform height: 1,93–3,25 m/2,49–4,25 m.
- Working height: 3,50 to 5,20 m/4,00 to 6,20 m.
- Main application: Widebody aircrafts.
- Platform dimensions: 940 × 830 mm.
- Overall dimensions: 5,700 × 2,200 × 3,300 mm.
- Flooring: metal profile gratings, antiskid and pervious to water.
- Pneumatic tyres with Ø 530 mm and tow bar for max 30 km/h.

Item-No.	Towing eye	Ball coupling	Refuelling equipment	
			none	included
80991011	x		x	
80991012		x	x	
80991013	x			x
80991014		x		x
80991015	x			
80991016		x	x	
80991017	x			x
80991018		x		x

08 Other maintenance equipment and accessories



Towable service-steps for quick and flexible access.



Easy-fold maintenance steps with for minimum storage space



Maintenance platform with detachable cover



Maintenance platform for flap rigging of A320



De-icing check vehicles



Modular platform system

Accessories



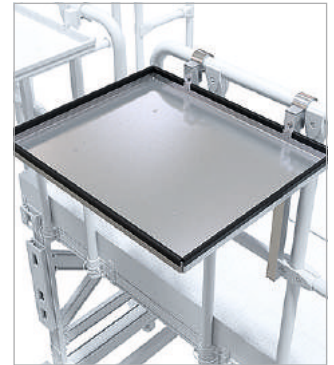
Alternative towing coupling available towing eye



Alternative towing coupling available ball coupling



Alternative towing coupling available NATO hook



Tool tray



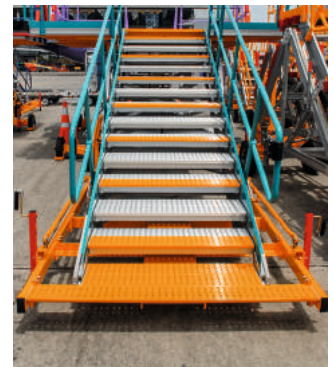
Flip up - integrated fold-out steps to increase the working height



Hydraulic jack-up system



Material lock

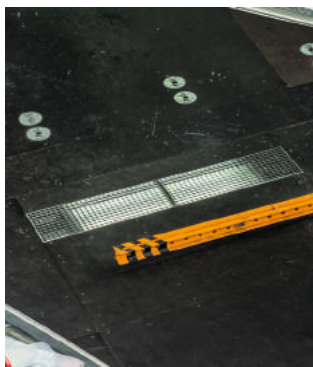


Colouring of guardrails/handrails or complete steps - Skydrol resistant surfaces on request

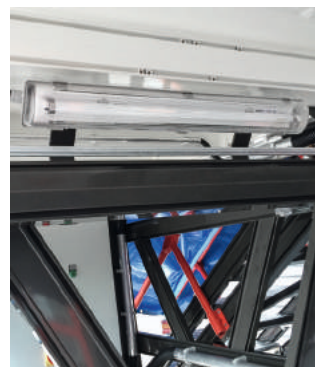
Media supply



Compressed air



Floor mounted lightning for optimum vision (explosion-proof or LED on request)



Overhead mounted lightning for optimum vision (explosion-proof or LED on request).



Electric power supply (230V, 380V or customer specified)



Signal and indicator lights



Cranes and lighting solutions

09 Special containers for transport and storage



Examples of our service and quality:

- Pressure-sealed construction.
- Waterproof design.
- Cargo protected against shocks and vibrations.
- Stackable containers.
- Recesses for fork lifts, lifting lugs.
- Paint and labelling to customer specifications.
- Unlimited potential for built-in items, from single items to bulk material.

Special containers made from aluminium are individual, customer-specific solutions, designed to your specifications and manufactured using state-of-the-art technology. The areas of application include the storage and transport of large equipment, components, missiles and other components for air and space travel and industrial applications on land, by sea and air.



Generously sized containers for large equipment



Stackable containers



Special container for aircraft components



Special container with paint finish

ZARGES also has the perfect solution for rail vehicles and industry.

Special solutions for rail vehicles and buses



Special solutions for industry and plant engineering



CONTACT

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For further information and advice, contact your local **ZARGES distributor** or visit www.zarges.com



ZARGES –
Steigen.
Verpacken,
Transportieren.
Speziallösungen.

At ZARGES, our focus is on the customer. Innovative standard products, special solutions or comprehensive service – every day, our customers can rely on the safety and high quality of our range.

Further information is available on the Internet or from your ZARGES distributor.

www.zarges.com/aviation