FUELLING EQUIPMENT

→ Fuelling Stairs and Steps
→ Fuelling Devices
# Fuelling Equipment

## Products

<table>
<thead>
<tr>
<th>Working height</th>
<th>Fuelling Steps</th>
<th>Fixed-height Fuelling Stairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,50 m</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3,40 m</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3,30 m</td>
<td>X</td>
<td>X</td>
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<tr>
<td>3,20 m</td>
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<tr>
<td>3,05 m</td>
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<td>3,00 m</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2,90 m</td>
<td>X</td>
<td>X</td>
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<tr>
<td>2,70 m</td>
<td>X</td>
<td>X</td>
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<tr>
<td>2,50 m</td>
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<td>2,40 m</td>
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<td>2,20 m</td>
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<td>2,10 m</td>
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<td>2,00 m</td>
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<td>X</td>
</tr>
<tr>
<td>1,80 m</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>1,60 m</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### Single-sided access
- 3/4/5/6 steps

### Double-sided access
- 2/3/4/5 steps

### Uniaxial
- 3-550-150

### Double axial
- 3-550-160

### Ref No.
- 3-550-103/4/5/6
- 3-550-202/3/4/5
- 3-550-150
- 3-550-160
## Height-adjustable Fuelling Stairs

Universal fuelling stairs for all types of aircraft and fast, safe and convenient fuelling at wind speeds up to 8 Beaufort.

Fitted with fuelling hose/nozzle, earthing device and stainless steel container (optional).

<table>
<thead>
<tr>
<th>Platform height</th>
<th>Type of aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1,930 – 3,250 mm</strong></td>
<td>3-550-325, 3-550-302, PEA 06-39</td>
</tr>
</tbody>
</table>

Equipment compliant to:

- DIN EN 12312-5 (GSE equipment for aircraft refuelling)
- DIN EN 12312-8 (Maintenance Stairs and Platforms)
- DIN EN ISO 14122 (Permanent access to industrial machines)
- DIN EN 1915-1 (Basic Safety Requirements)
- DIN EN 1915-2 (Stability and strength requirements, calculations and test methods)
- DIN EN 280 (Mobile platforms for personnel lifts)
- ATEX (Equipment for explosive atmosphere)
Fuelling Steps, double- or single-sided access

Our range of products includes a large variety of aluminium fixed-height steps: single or double-sided. On the strength of their limited weight and robust folding mechanism, they are easy to carry on and store. Fitted with a stabilizer bar and foot caps, they are stable and safe.
BENEFITS
Easy to manoeuvre. Safe to use.
Tray for aircraft fuel cap.
Anti-skid surface.

Fuelling step, single-sided access

Type: folding / Material: aluminium
Safe work load: 150 kg

Characteristics
Large work platform for safe standing (400 × 400 mm)
made of checked aluminium plate
(optional, 500 × 400 mm / grating)

Knee-rail with folding tray attached 400 × 200 mm for safe working on platform and to store aircraft fuel cap during fuelling

Nozzle rest on side-piece
Single-sided handrail for safe ascent and descent
Tread 80 mm with polyurethane insert for anti-skid surface
Distance of steps: 232 mm

1 unit stabilizer bar
2 units rollers on stabilizer bar
4 units conducting foot caps

Fuelling step, double-sided access

Type: folding / Material: aluminium
Safe work load: 150 kg

Characteristics
Padded step edges to protect shin when ascending and standing on steps

Distance of steps: 232 mm
Tread 80 mm with anti-skid surface

1 unit stabilizer bar
4 units conducting foot caps

<table>
<thead>
<tr>
<th>No. of steps</th>
<th>Platform height</th>
<th>Weight</th>
<th>Ref No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (incl. platform)</td>
<td>0.78 m</td>
<td>9.5 kg</td>
<td>3-550-103</td>
</tr>
<tr>
<td>4 (incl. platform)</td>
<td>1.06 m</td>
<td>11.0 kg</td>
<td>3-550-104</td>
</tr>
<tr>
<td>5 (incl. platform)</td>
<td>1.32 m</td>
<td>12.5 kg</td>
<td>3-550-105</td>
</tr>
<tr>
<td>6 (incl. platform)</td>
<td>1.58 m</td>
<td>14.0 kg</td>
<td>3-550-106</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of steps</th>
<th>Platform height</th>
<th>Weight</th>
<th>Ref No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 × 2</td>
<td>0.50 m</td>
<td>4.0 kg</td>
<td>3-550-202</td>
</tr>
<tr>
<td>2 × 3</td>
<td>0.74 m</td>
<td>5.5 kg</td>
<td>3-550-203</td>
</tr>
<tr>
<td>2 × 4</td>
<td>0.98 m</td>
<td>7.0 kg</td>
<td>3-550-204</td>
</tr>
<tr>
<td>2 × 5</td>
<td>1.22 m</td>
<td>8.5 kg</td>
<td>3-550-205</td>
</tr>
</tbody>
</table>
Fixed-height fuelling stairs, uniaxial (3-550-150)

For use to work at heights ranging from 2,900 to 3,400 mm our uniaxial fuelling stairs will give you entire satisfaction for a safe and fast daily use. Towable on tarmac up to 25 km/hr, our stairs are easy to handle for towing and coupling thanks to a brilliant design based on a balanced center of gravity and foldable steps.
BENEFITS
Easy to manoeuvre.
Tow bar opposite side of stair access.
Clear ascent and descent to platform and work area.
Foot end of stair folds away for towing.
Reduced space requirements when manoeuvring.

**Characteristics**

**Material:** Aluminium, mill finish
**Footprint:** 3,200 × 1,745 mm
**Height over all:** 2,500 mm
**Travelling speed:** 25 km/hr
**Net weight:** 165 kg

**Platform**

**Height of platform:** 1,500 mm
**Depth of platform:** 500 mm
**Width of platform:** 800 mm
**Railings:** 1,000 mm

**Railings** (Ergonomically shaped)

**Height of Railing:** 1,000 mm
**Aluminium tube:** 40 × 3 mm
**Stair section:** with mid-rail
**Platform:** with mid-rail and kick-board

**Steps** (antiskid surface, ZACHER GSS grating)

**Depth of steps:** 240 mm
**Width of steps:** 800 mm
**Distance of steps:** 200 mm
**Inclination:** 45°

**Towing device**

**Towing connection:** by spherical head for spherical ball ø 50 mm or eye-hook coupling ø 40 mm
**Coupling height:** 500 – 800 mm

**Wheels**

Pneumatic tyres ø 400 mm

**Reflectors**

Yellow (side), double-sided safety reflectors
White (front) and red (rear) safety reflectors

**Load balancing**

Centre of mass above axle.
During towing and coupling static load is balanced to 0kg when operator holds tow bar in towing position.
Fixed-height fuelling stairs, double-axial (3-550-160)

Fitted or not with fuelling devices such as hoses or containers, these stairs allow you to work at heights ranging from 2,900 to 3,500 mm. These well-engineered and efficient products rest upon several thought-out features such as foldable tow bar in upper position, pivoting front axle, wheels with braking system, spring suspension and so on.
**BENEFITS**

Fuelling operation to be carry out from each step. Pressure relief and spring balance for light weight handling of the nozzle. Tray for aircraft fuel cap.

**Characteristics**

| Material: | Aluminium, mill finish |
| Length: | 4,200 mm (2,930 mm tow bar at 90°) |
| Width: | 1,600 mm |
| Height: | 2,600 mm |
| Net weight: | approx. 340 kg (excl. fuelling equipment) |
| Travelling speed: | max. 25 km/hr |
| Driving-in angle: | 40° |
| Rear axle: | Rigid axle, steel, galvanized, fixed |
| Front axle: | Rigid axle, steel, blast-galvanized, axle pivot steering |

**Platform** (antiskid surface, ZACHER XCut grating)

- Height of platform: 1,600 mm
- Depth of platform: 395 mm
- Width of platform: 600 mm

**Railings** (Ergonomically shaped)

- Height of Railing: 1,000 mm
- Aluminium tube: 40 x 3 mm
- Stair section: with mid-rail
- Platform: with mid-rail and kick-board

**Steps** (antiskid surface, ZACHER XCut grating)

- First and last step powder-coated, yellow
- Depth of steps: 320 mm
- Width of steps: 600 mm
- Distance of steps: 200 mm
- Inclination: 34°

**Spring suspension**

Rubber-cushioned (front) and Torsion-type suspension (rear)

Fender: Steel, galvanized, bolted

**Towing device**

Steel bar Ø 60 mm x 3 mm (profile thickness)

Vertically movable: -5° to +85°

Height of towing device: 500 – 800 mm

Attachment: coupling alternatively spherical head or eye hook

**Wheels**

4.00-10 6 PR pneumatic wheels Ø 450 mm or wheel rim 2.50-10

**Brakes**

Drum brakes attached to the front wheels or rear axle

Braking action: Spring-type cylinder, tow bar position = -5° or > +80°

**Reflectors**

Yellow (side), double-sided safety reflectors

White (front) and red (rear) safety reflectors

**Fuelling Equipment** (optional at extra cost)

Nozzle, earthing device, tank, hose, coupling (see last pages)
Height-adjustable fuelling stairs (3-550-325)

We can offer you fuelling stairs with height-adjustable working platforms based on hydraulic elevation system: either from 1,930 to 3,250 mm or from 2,490 to 4,250 mm. Mainly meant for use on wide bodied aircrafts, these products of steel design combine sturdiness and comfort with an access stairway that doesn’t exceed a 50° slope in the upper position.
BENEFITS
Pressure relief and spring balance for light weight handling of the nozzle. Tray for aircraft fuel cap.

Characteristics
Material: Aluminium, mill finish
Travelling speed: max. 25 km/hr
Driving-in angle: 40°
Rear axle: Rigid axle, steel, galvanized, fixed
Front axle: Rigid axle, steel, galvanized, turntable steering
Height-adjustment: Hydraulic handpump, 1 hydraulic cylinder

Height of Platform: 1,930 mm – 3,250 mm
Ref No.: 3-550-325
Size of platform: 935 mm x 830 mm
Length: 5,300 mm / 4,800 mm (tow bar in brake position)
Width: 2,120 mm
Net weight: approx. 740 kg (excl. fuelling equipment)

Height of Platform: 2,490 mm – 4,250 mm
Ref No.: 3-550-302
Size of platform: 935 mm x 830 mm
Length: 6,200 mm / 4,850 mm (tow bar in brake position)
Width: 2,120 mm
Net weight: approx. 840 kg (excl. fuelling equipment)

Steps [antiskid surface, ZACHER XCut grating]
First and last step powder-coated, yellow
Depth of steps: 320 mm
Width of steps: 600 mm
Distance of steps: 140 – 250 mm
Inclination: 25 – 50°

Spring suspension
Torsion-type suspension (rear)
Fender: Steel, galvanized, bolted

Towing device
Steel bar ø 60 mm x 3 mm [profile thickness]
Vertically movable: -5° to +85°
Attachment: coupling alternatively spherical head or eye hook

Wheels
Pneumatic wheels ø 540 mm “T115-70 R15 100-4”

Brakes
Drum brakes attached to the front wheels
Braking action: Spring-type cylinder, tow bar position = -5° or > +80°

Reflectors
Yellow [side], double-sided safety reflectors
White [front] and red [rear] safety reflectors

Fuelling Equipment [optional at extra cost]
Nozzle, earthing device, tank, hose, coupling [see last pages]
Height-adjustable fuelling platform (PEA 06-39)

As a result of a long-time relationship with oil companies, we have developed a universal platform to work at heights ranging from 2,400 to 5,900 mm, hence for use on a wide variety of aircrafts including the A380. The elevation system is made through hydraulic jacks served by compressed air powered system to comply with explosion proof standards.
**BENEFITS**

Refuelling of all existing aircrafts needing a refuelling stair, including the A380. Heights served from 2.4 to 5.9 m thanks to a 0.6 to 3.9 m variable height platform.

Towable up to 25 km/hr behind a tank truck: large diameter wheels and spring suspensions.

Easy to move manually to the final position by one single operator, due to its lightness.

Autonomous from towing truck lifting system for 3 up-and-down cycles, based on explosion proof pneumatic power, rechargeable by the towing truck in less than 4 minutes.

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**Characteristics**

Material: 90% aluminium
Length: 3,900 mm (at low position)
Width: 2,300 mm (at low position)
Height: 2,400 mm (at low position)
Chassis: ground clearance 250 mm
Power supply: connection to the 8 bar truck compressed air supply by quick lock connector and 20 m long reel cable
Travelling speed: max. 25 km/hr
Driving-in angle: 90°
Net weight: approx. 660 kg

**Platform**

Backup operator exit by variable slope stairs
Able to carry 2 persons and the hose (total 265 daN)
Fitted with hose receptacles
Depth of platform: 1,000 mm
Width of platform: 1,500 mm

**Railings**

Height of Railings: 1,100 mm
Aluminium tube: 50 × 30 mm (platform)
ø 30 mm, thickness 2 mm (stair section)
Stair section: with mid-rail
Platform: with mid-rail and kick-board

**Steps**

Depth of steps: 210 mm
Width of steps: 700 mm
Distance of steps: -190 mm to +230 mm
Inclination: 70° (fixed stairway)
-43° to +53° (variable stairway)

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**Spring suspension**

Rear and front axle: torsion-type suspension

**Towing device**

Steel bar: 120 × 70 mm, vertically movable -15° to + 90°
Attachment: coupling with spherical head
Swivelling front axle

**Wheels and stabilisers**

Pneumatic wheels ø 500 mm
Hydraulic stabilisation powered by compressed air motor
Automatic destabilisation as soon as the towbar is horizontal
Wheels braked as soon as the towbar is vertical

**Height-adjustment**

Pneumatic powered system serving hydraulic jacks
Command box on the platform
Safety stop sensor to prevent aircraft damage
Safety stop to prevent lift if the wheels are not stabilised or the platform gate is open
Backup platform descent ordered from the ground

**Operating sequence**

When the truck arrives near the aircraft, the driver disconnects the platform from the truck and brings it manually to the refuelling point under the aircraft wing. Then he fetches the flexible hose from the truck and lays it on a receptacle on the platform. Finally he climbs on the platform at low position, orders the platform stabilisation and its lift to the right height, in order to connect the hose to the aircraft.

**Fuelling Equipment** (optional at extra cost)
### Fixed-height Fuelling Stair

<table>
<thead>
<tr>
<th>Part</th>
<th>Ref No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuelling nozzle</td>
<td>8-935-005</td>
</tr>
<tr>
<td>Fuelling hose</td>
<td>8-935-032</td>
</tr>
<tr>
<td>Coupling</td>
<td>8-935-014</td>
</tr>
<tr>
<td>Earthing device</td>
<td>8-935-008/012</td>
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<tr>
<td>Tank</td>
<td>8-935-003</td>
</tr>
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### Height-adjustable Fuelling Stair

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<td>Fuelling hose</td>
<td>8-935-035/037</td>
</tr>
<tr>
<td>Coupling</td>
<td>8-935-004</td>
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<tr>
<td>Earthing device</td>
<td>8-935-008/012</td>
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<tr>
<td>Tank</td>
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### Height-adjustable Fuelling Stair

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</tr>
<tr>
<td>Tank</td>
<td>8-935-003</td>
</tr>
</tbody>
</table>
OPTIONS
Fuelling equipment (optional at extra cost)

**FEUILLING NOZZLE**
Ref No. 8-935-005
Charter 60427 C6K
2,5"

**WELDING FLANGE**
Ref No. 8-933-068
Fuelling vehicle-welding flange
TFA 65 Al TW

**HOSE COUPLER**
Ref No. 8-935-004
2,5”, hose with threaded coupling
Ref No. 8-935-014
2,5”, hose with flange coupling

**FEUILLING HOSE**
Length: 2.9 m
Ref No. 8-935-032
Length: 3.2 m
Ref No. 8-935-037
Length: 3.4 m
Ref No. 8-935-035
2” (optional: 2,5”)

**FEUILLING PIPE**
Ref No. 7-410-020
2,5” aluminium
70 × 3mm

**EARTHING CABLE**
Ref No. 8-937-033
50 cm / 6 mm²

**EARTHING DEVICE**
spring supported
(ET 5B 15,0 m H07V 6)
Ref No. 8-935-008
manually [see illustration]
Ref No. 8-935-012

**CONTAINER**
Ref No. 8-935-003
10 l, stainless steel

**SPRING BALANCE**
Ref No. 8-935-020

Fuelling pipe clamp: mounting, insulated (equipotential bonding)
DETAILS
Spares and wearing parts list

HANDPUMP WITH LEVER
Ref No. 8-932-123
Hydraulic

GAS SPRING
Ref No. 8-933-143
150 N

EYE HOOK
Ref No. 8-930-005
ALKO

EYE HOOK, NATO STANDARD
Ref No. 6-190-031
Steel

SPHERICAL HEAD
Ref No. 8-930-001

FENDER
HK1810
Ref No. 8-930-004
HK1509
Ref No. 8-930-013

WHEEL Ø 540 MM
Ref No. 8-818-042
T115-70 R15 100-4

WHEEL Ø 400 MM
Ref No. 8-818-059
Ball bearing
Pneumatic wheel

SOLID RUBBER TYRE Ø100 MM
Ref No. 8-818-060

REFLECTORS
Ref No. 8-930-002
red, triangular, 157 x 138 mm
Ref No. 8-930-017
yellow, 90 x 40 mm
Ref No. 8-930-034
white, 90 x 40 mm
TANKER LADDER

For maintenance, repairs, re-fuelling or cleaning tankers and tank wagons. Tanker ladders are used for tanker lorries in the food industry, in the chemical and petrochemical industries as well as on rail-mounted vehicles.

The tanker ladder consists of a 2-section push-up ladder (max. load 150 kg) which is readily height-adjustable by means of a rope winch mounted on the side, the side support section and a double-sided handrail.

Complementing this are railings, platform and chassis to your specific requirements. Should the existing modular system not fulfil your requirements, we can also design and manufacture special solutions on request.

**Design options as illustrated at the right:**

- **Basic module ladder** (Order No. 591000) (height-adjustable: 2,770 – 4,100 mm)
- **Railing**, ø 1,500 mm (Order No. 591004)
- **Platform**, 300 mm (Order No. 591020)
- **Chassis** (Order No. 591010)

<table>
<thead>
<tr>
<th>Base module – ladder</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-part ladder with height adjustment by means of rope winch, with support section and double-sided handrail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mandatory module – railing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two variations available:</td>
</tr>
<tr>
<td>Railing, round, 1,500 mm dia.</td>
</tr>
<tr>
<td>Railing, rectangular 1,500 × 2,050 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mandatory module – chassis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two variations available with push-pull handles:</td>
</tr>
<tr>
<td>Standard chassis with rigid stabiliser. Mobile on 2 swivel and 2 braked fixed castors</td>
</tr>
<tr>
<td>Chassis with extendable stabiliser suitable for fitting spindles (range of adjustment 200 mm) for optimum stability and compensation for ground unevenness. Mobile on 2 swivel and 2 braked fixed castors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional modules:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 different platforms are available in 300, 600 mm and 800 mm lengths</td>
</tr>
<tr>
<td>A platform railing with double lifting barrier may be used on platforms more than 600 mm in length</td>
</tr>
<tr>
<td>Optional antistatic version</td>
</tr>
</tbody>
</table>

### Optional module: aluminium platform, serrated

<table>
<thead>
<tr>
<th>for platform length in mm</th>
<th>300</th>
<th>600</th>
<th>800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order No.</td>
<td>591020</td>
<td>591021</td>
<td>591022</td>
</tr>
</tbody>
</table>

### Additional equipment:

<table>
<thead>
<tr>
<th>Platform railing with double lifting barrier, platform length = 600 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order No.</td>
</tr>
</tbody>
</table>

### Optional antistatic module

<table>
<thead>
<tr>
<th>Order No.</th>
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</thead>
<tbody>
<tr>
<td>591030</td>
</tr>
</tbody>
</table>
Zarges Tubesca Division AIR

The DIVISION AIR of the Zarges Tubesca group is based on the international cooperation between the german company ZACHER GmbH and the french company ALBRET POURTEAU, two world-class market leaders in the field of aircraft maintenance docking and mobile access industry for more than 30 years.

By providing custom-built or standardized solutions, both companies combine their experience to recommend result-oriented products, answering any technical requirement and facing any economical constraint. Through their project management policy and high-skilled professional team, ZACHER and ALBRET POURTEAU are major players.

If you don’t know us – you might know our customers:

[Images of logos]

Contact details

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