



## MAHA-In-Ground Lifts

Model: ZS SQUARE 3.5 / 5.0 • ZS MATOP • ZS 94 • ZS 5  
VS SQUARE • VS RUNWAY • ES 93 • ZS VARIO 3.5 / 5.0



Lifting Technology



One, two and four cylinder lifting devices with various vehicle handling equipment such as flat support arms, swivel arms and complete drive-on platforms according to their usage.



## Welcome to MAHA – the leading manufacturer of workshop equipment



MAHA Maschinenbau Haldenwang GmbH & Co. KG stands for high-tech in the fields of motor vehicle testing and workshop equipment. All over the world, motorcycles, passenger cars, commercial vehicles and special vehicles are measured and inspected on testing devices from MAHA.



The workshop equipment from MAHA covers the complete range of lifting devices from service units to exhaust gas measurement technology. The option to link individual testing devices to universal safety test lines makes MAHA the expert technology partner of vehicle manufacturers, testing organisations and workshops around the world.

Despite all the high-tech, MAHA has not forgotten that business is made locally. For this reason, branches and representatives in over 130 countries provide optimum customer care on-site.

Individual supervision and a high degree of flexibility are strengths of MAHA that has made the company a global player in the international test business for over 40 years. We are committed to continuing this to provide tailor-made solutions and investment security in the future.

## MAHA-In-Ground Lifts & Accessories

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## Two cylinder lifting device with flat supports

suitable for the MATOP, SQUARE or ZS 94 medium pressure series



- ▶ Flat support bridge with pull-outs and rubber pad
- ▶ Asymmetrical pull-outs with large lateral adjustment range and tall approach height
- ▶ Galvanised support

Load capacity	3500 kg
Approx. length of stroke	1900 mm
Approx. raising / lowering time (load-dependent)	35 s
Piston centres	1350 mm
Extension range in latching steps	1400 - 2200 mm
Support range (crosswise)	880 - 1820 mm
Rubber support plate size	355 x 400 mm
Installation height of support	60 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

- ① Pull-outs with rotary driving slopes
- ② Handles for easy adjustment of pull-outs
- ③ Modular system with modern steel sheet technology
- ④ Centre support with modern steel sheet technology

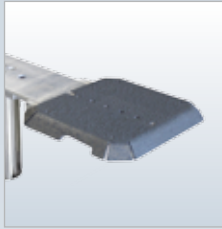


The pull-outs with special rubber pads are particularly suitable for quick and safe vehicle support.

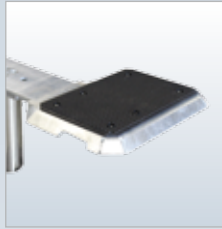
## Design versions of the pull-outs



Extended support in driving direction with rubber plate 1400 – 2200 mm.



Flat support with granulated coating for a low installation height.

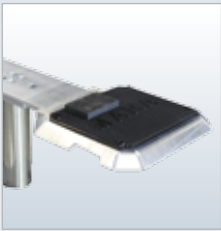


Large support plate for internal support points and tool tray.

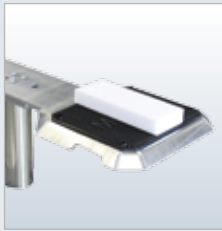


Shortened flat support, e.g. for Smart 1150 – 1750 mm.

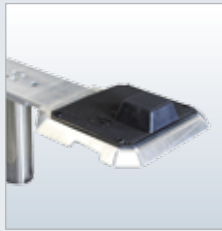
## Support block for individual vehicle support



Flat rubber support 20 mm high.



Ductile plastic block.



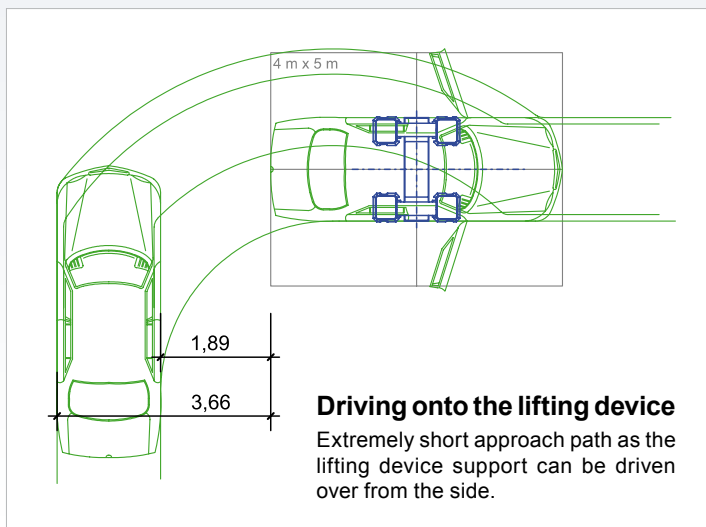
Pyramid block for precise support and greater freedom of movement under the vehicle.



Rubber plate and pyramid block matched to the nub profile.

## Working with the lifting device

Maximum utilisation of space and complete door clearance for effective work on the vehicle

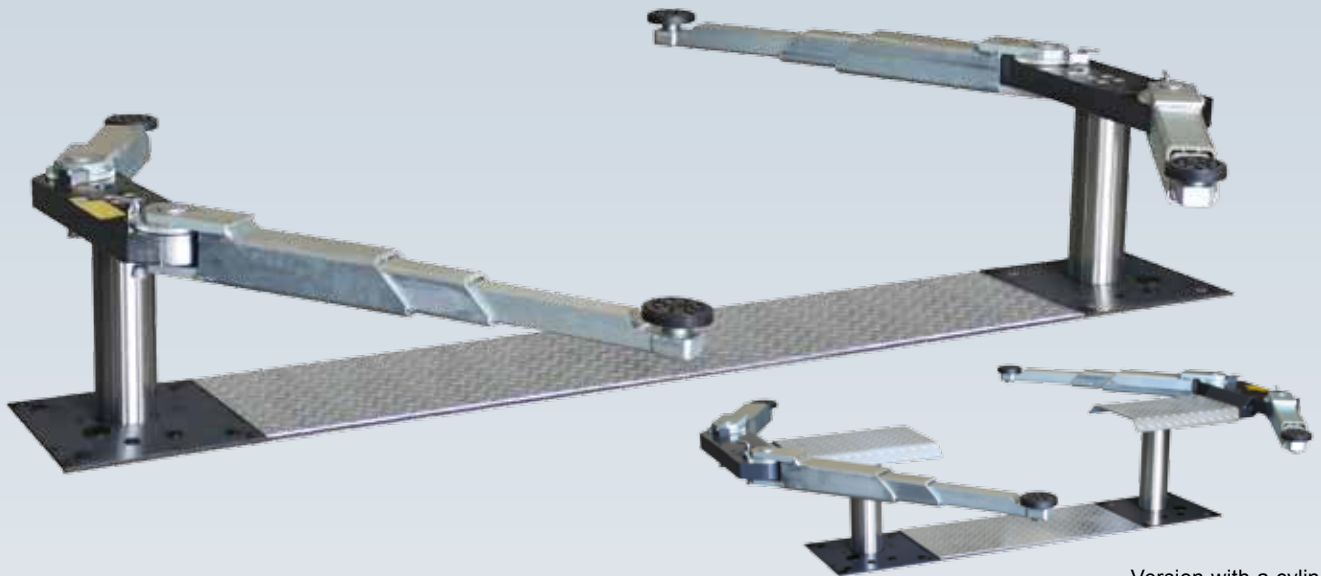


Flexible work under the vehicle.

Stumbling points and ground unevenness are omitted.

## Two cylinder lifting device with swivel arm supports

suitable for the MATOP, SQUARE or ZS 94 medium pressure series

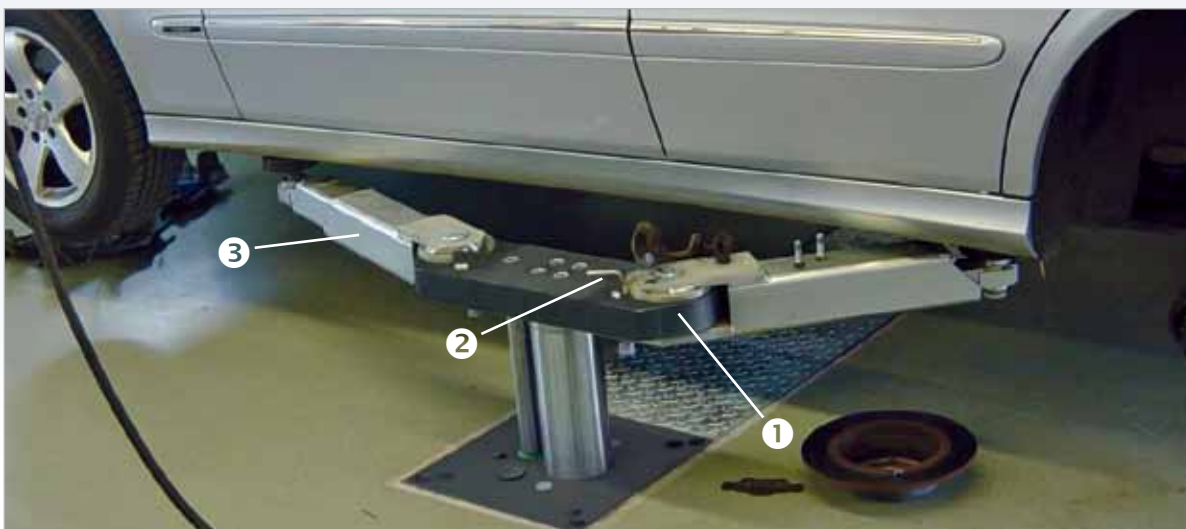


Version with a cylinder distance of 1350 mm.

- ▶ Swivel arm lifting device with continuously variable and extendible support arms
- ▶ Height of support plate can be adjusted by a thread and connector system
- ▶ Automatic support arm stop at ground level

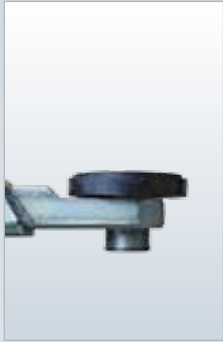
Load capacity	3500 kg
Approx. length of stroke	1900 mm
Approx. raising / lowering time (load-dependent)	35 s
Piston centres	2300 / 1350 mm
Swivel arm pull-out path	560 - 1140 mm
Pivot distance /crosswise/longitudinal	2300/480 mm
Adjustable support plate	75 - 106 +50 mm
Lower swivel height	77 / 89 / 101 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

- ① Easy drive on the lifting device using 270° swivel range of the support arms
- ② Support stop can be operated from above
- ③ Continuously variable triple telescopic support arms



The support plate of the swivel arm support can be positioned very exactly at the relevant support points under the vehicle.

## Flexible support plate systems



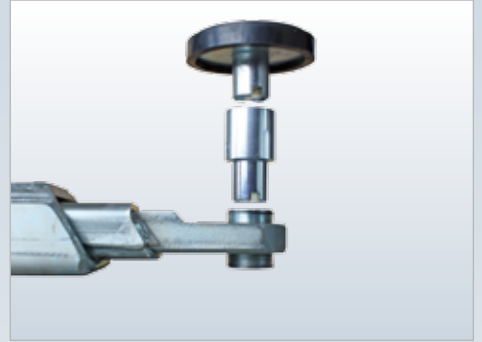
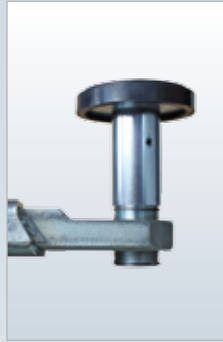
Fine adjustment of the support plate in the range of 25 mm using thread with a low pitch.



Support plate height at 50, 100 mm.



Support plate height at 150, 200 mm.



High degree of flexibility and safety using MAHA support plate connector system (as standard).

## Installation at floor level using frame system with cover plates



Fully covered swivel arm support. Can be driven over with a wheel load of 2 t



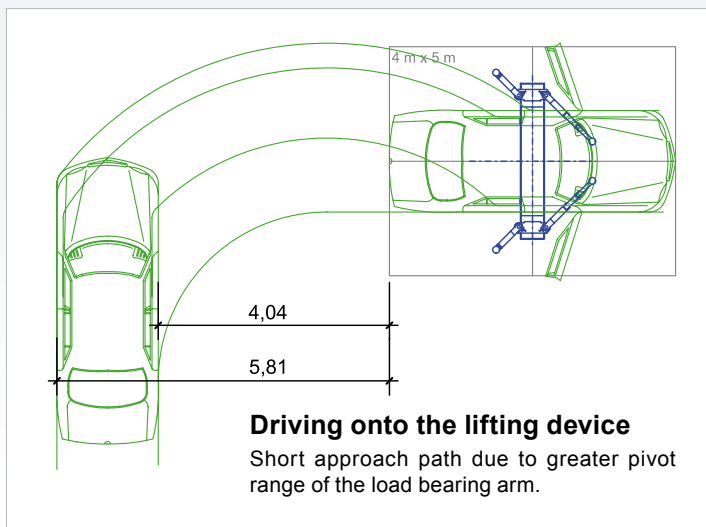
A pneumatic damper system assists the opening and closing of the cover



Frame system with cover plates, fully galvanized

## Working on the lifting device

Maximum utilisation of space and complete door clearance for effective work on the vehicle.



Particularly suitable for all types of vehicle repairs.

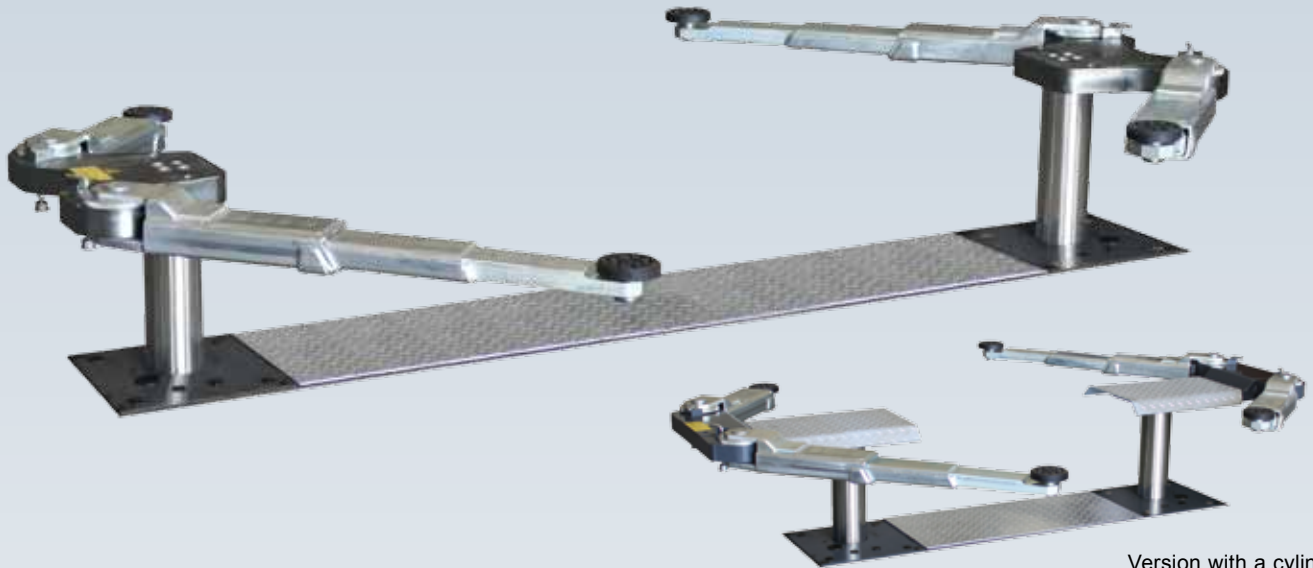


Flexible work under the vehicle.

Stumbling points and ground unevenness are omitted.

## Two cylinder lifting devices with flat swivel arm supports

suitable for MATOP, SQUARE or ZS 94 medium pressure series

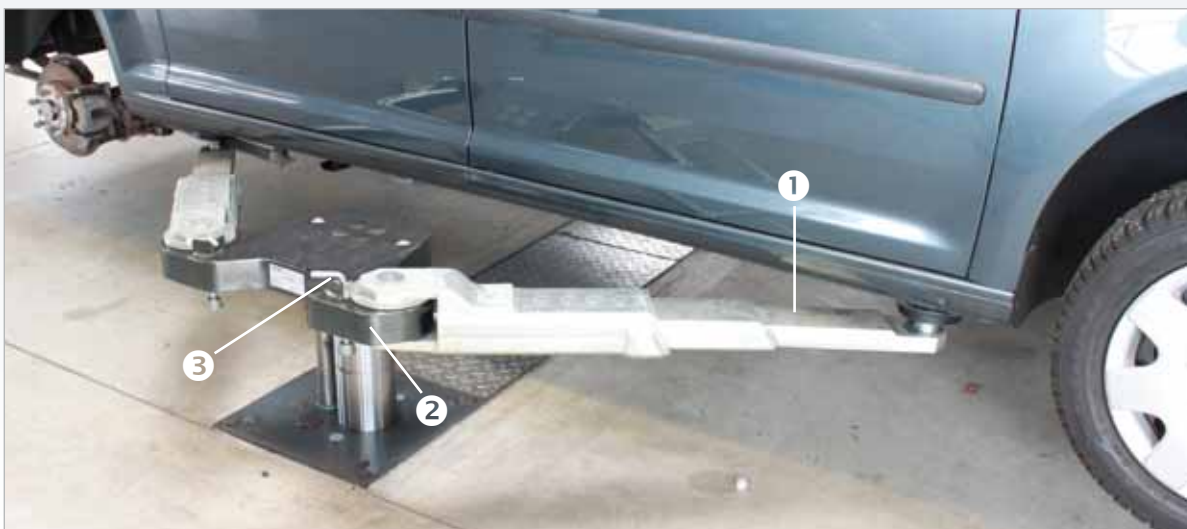


Version with a cylinder distance of 1350 mm.

- ▶ Flat swivel arm lifting device with rubber support plates
- ▶ Flat support arm pull-out for extensive vehicle support, especially suitable for sports cars

Load capacity	3500 kg
Approx. length of stroke	1900 mm
Approx. raising / lowering time (load-dependent)	35 s
Piston centres	2300 / 1350 mm
Swivel arm pull-out path	530 - 1020 mm
Pivot distance /crosswise/longitudinal	2700/480 / 2300/480 mm
Adjustable support plate	75 - 106 +50 mm
Lower swivel height	77 / 89 / 101 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

- ① Low installation height of the support arm pull-outs
- ② Large pivot distance, suitable for supporting vehicles with a low wheel base and small support are
- ③ Support arm stop can be operated from above

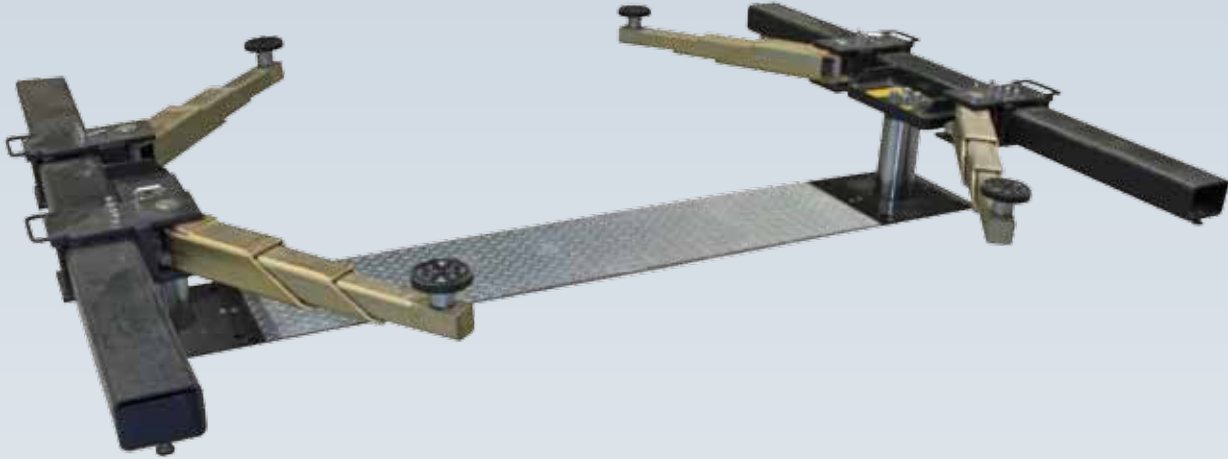


Easy positioning of the support plates due to low installation height of the swivel arms.



## Two cylinder lifting devices with body alignment supports

suitable for MATOP, SQUARE or ZS 94 medium pressure series



- ▶ Body alignment swivel arm lifting device with rubber support plates
- ▶ High degree of flexibility and safety using MAHA support plate connector system
- ▶ Automatic support arm stop at ground level

Load capacity	3200 kg
Approx. length of stroke	1900 mm
Approx. raising / lowering time (load-dependent)	35 s
Piston centres	2300 mm
Swivel arm pull-out path	395 - 765 mm
Pivot distance /crosswise/longitudinal	2300/1878-678 mm
Adjustable support plate	123-145 +50 mm
Lower swivel height	110 / 120 / 132 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

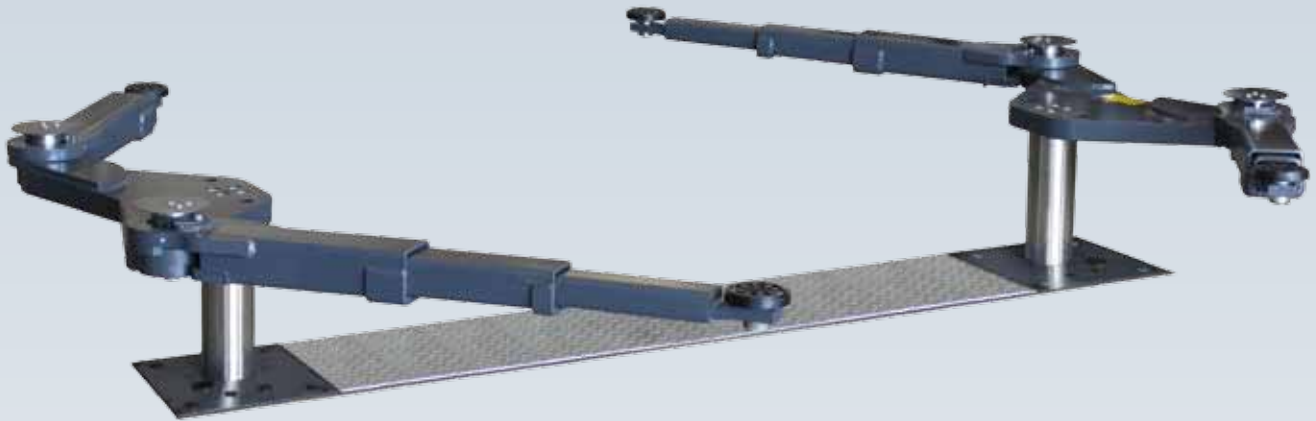
- ① The swivel arms can also be moved due to the large longitudinal support
- ② Support arm stop can easily be operated from above to lifting device the vehicle from the body alignment bench



Simply positioning of the body alignment bridge. The right-angled vehicle supports result in a high degree of freedom of movement under the vehicle and the body alignment supports.

## Two cylinder lifting devices with 4.0 t swivel arm supports

suitable for SQUARE 5.0 and ZS 5 medium pressure series



- ▶ Transporter and passenger car 4 t swivel arm lifting device with rubber support plates
- ▶ Smooth-running swivel arm pull-outs due to bending edge design
- ▶ Support plate height adjustment using thread and connector system

Load capacity	4000 kg
Approx. length of stroke	1900 mm
Approx. raising / lowering time (load-dependent)	35 s
Piston centres	2300 mm
Swivel arm pull-out path	672 - 1271 mm
Pivot distance /crosswise/longitudinal	2820/850 mm
Adjustable support plate	91-118 +50 mm
Lower swivel height	111 / 114 / 117 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	5,5 / 400 / 16

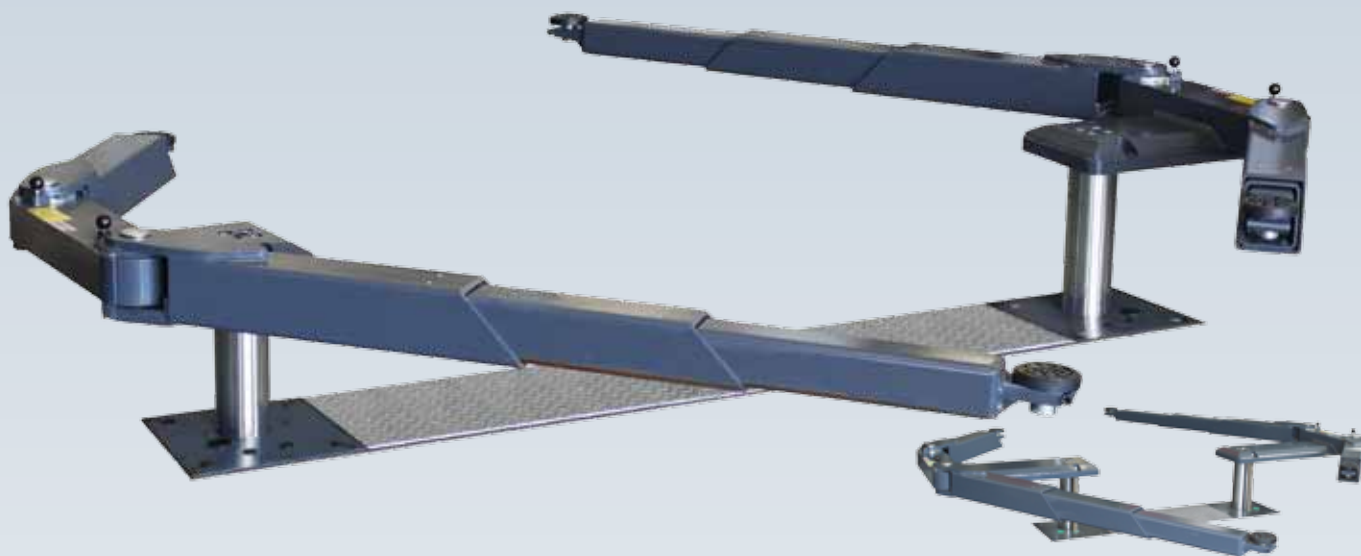
- ① With a very large support area to support transporters and passenger cars even with small support distances
- ② Support arm stops covered, automatic activation at ground level and can be operated from above for readjustment
- ③ Low installation height using optimally manufactured swivel arm supports



Swivel arm system with very large support area.

## Two cylinder lifting devices with 5.0 t swivel arm supports

suitable for SQUARE 5.0 and ZS 5 medium pressure series



Version with a cylinder distance of 1350 mm.

- ▶ 5 t transporter swivel arm lifting device with rubber support plates
- ▶ Height adjustment of support plate using connector system for fine adjustment with the thread adjustment
- ▶ Automatic support stop at ground level and can be operated from above for readjustment

Load capacity	5000 kg
Approx. length of stroke	1900 mm
Approx. raising / lowering time (load-dependent)	35 s
Piston centres	2300 / 1350 mm
Swivel arm pull-out path	850 - 1880 mm
Pivot distance /crosswise/longitudinal	3012/550 mm
Adjustable support plate	118-138 +50 mm
Lower swivel height	127 / 139 / 151 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	5,5 / 400 / 16

- ① Long swivel arm for supporting large and heavy transporters
- ② Swivel arm pivot on set on outside for vehicles with small support distances
- ③ Continuously variable extendible swivel arms



Position aid for swivel arms.

## Two cylinder lifting devices with drive-on platforms

suitable for ZS VARIO; ZS MATOP; ZS SQUARE and ZS 94 medium pressure VS RUNWAY, VS SQUARE series



### Drive-on platform lifting devices are the perfect solution:

- ▶ High degree of freedom of movement under the vehicle
- ▶ Space tools is provided
- ▶ Light under the vehicle and lifting device
- ▶ Transparent customer dialogue is possible in the vehicle support

### Optional equipment:

Drive-on platform coating	Powder coating, granulated coating or aluminium sheet
Drive-on platform modules	Wooden, grid or steel running surface possible
Drive-on platform assembly	Ground level, ground level with ground balance accessible, installation frame
Axle clearance tester	Standard or with removable prismatic jaws
Axle measurement equipment	Driving platform rests, slider plates
Compensating plate set	For various applications

- ① High level of freedom of movement using ground balance, especially in a dialogue with the customer
- ② All drive-on platforms are equipped with axle lifting device rails (except the design, modular area)
- ③ Lighting in the insides of the drive-on platforms (optional)



The floor balance enables a uniform workshop ground level

## The appropriate drive-on platform lifting devices for every requirement



Attractive design for the customer area.



Versatile use as a test lifting device platform.



High degree of accuracy as an axle measurement lifting device.



High space requirement under the vehicle.



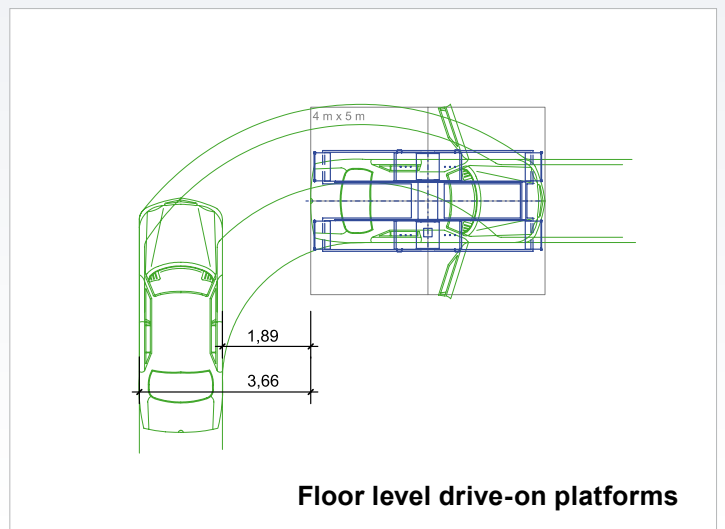
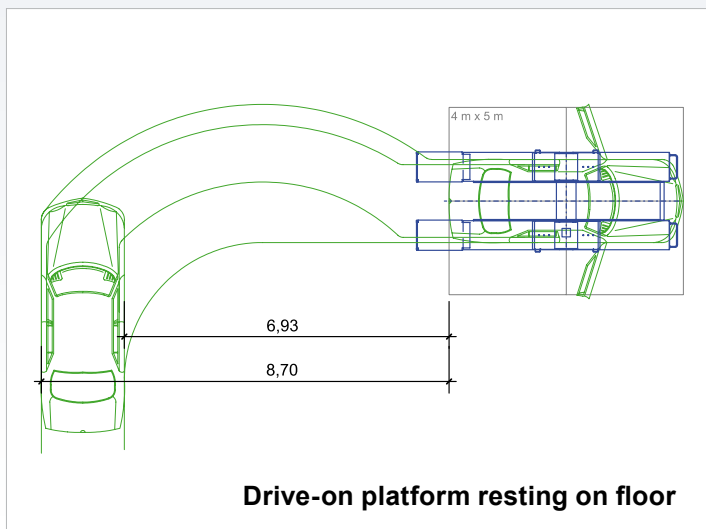
Even workshop floor.



High level of freedom of movement under the driving platform for high stability.

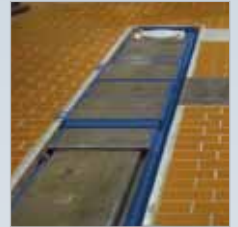
## Professional workshop planning for efficient work

For example, the drive up path is much smaller for the even floor design



## Versions of drive-on platform lifting devices

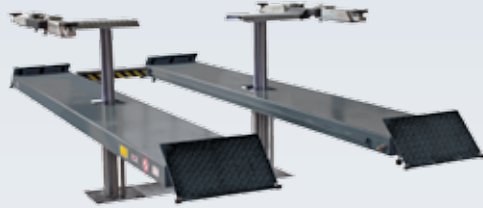
### ZS VARIO drive-on platform lifting devices with sill support



- ▶ Suitable for vehicle support, vehicle inspection, axle measurement and repairs
- ▶ Two lifting devices in one!  
Wheel-free jack with a stroke of 1860 mm (standard = 600 mm)  
Drive-on platform with a stroke of approx. 1900 mm
- ▶ Wheel-free jack 3.5t as a platform support over the entire width of the driving platform or with a flat support

Load capacity	3500 kg	5000 kg
Load capacity Wheel-free jack	3500 kg	3500 kg
Runway L x W	4400 x 617 mm	5000 x 600 mm

### ZS VARIO – Drive-on platform lifting device with swivel arm support



- ▶ Especially suitable for transporters and SUVs, for repairs, reception, vehicle inspection and axle measurement
- ▶ Two lifting devices in one!  
Wheel-free jack with a stroke of 1860 mm (standard = 600 mm)  
Drive-on platform with a stroke of approx. 1900 mm
- ▶ Wheel-free jack 3.5t or 5.0t as swivel arm platform

Load capacity	3500 kg	5000 kg
Load capacity Wheel-free jack	3500 kg	5000 kg
Runway L x W	4400 x 617 mm	5000 x 600 mm

### Runway lifting device with scissors Wheel-free jack



- ▶ Particularly suitable for vehicle inspection with the axle clearance tester, vehicle acceptance, axle measurement and repairs
- ▶ Very stable drive-on platform, can be fitted with axle clearance tester
- ▶ Wheel-free jack 450 mm stroke with platform support
- ▶ Transporters can also be lifting device when using an axle lifting device

Load capacity	3500 kg	5000 kg
Load capacity Wheel-free jack	3500 kg	3500 kg
Runway L x W	4400 x 617 mm	4800 x 617 mm

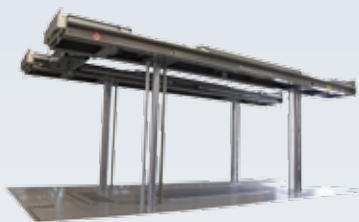
### VS RUNWAY - Four cylinder drive-on platform with sill support



- ▶ Particularly suitable for axle measurement, vehicle inspection with axle clearance tester, acceptance and repair
- ▶ Exact axle measurement lifting device with bolt offset system. The lifting device cylinders are almost below the vehicle wheels
- ▶ Very stable drive-on platforms with axle clearance tester
- ▶ Wheel-free jack 450 mm stroke with flat support

Load capacity	5000 kg
Load capacity Wheel-free jack	3500 kg
Runway L x W	5000 x 600 mm

### VS RUNWAY - Four cylinder drive-on platform without wheel-free jack



- ▶ Particularly suitable for axle measurement or transporter repairs, vehicle inspection with axle clearance tester and acceptance
- ▶ Exact axle measurement lifting device with bolt offset system. The lifting device cylinders are almost below the vehicle wheels
- ▶ Very stable drive-on platforms, can be equipped with axle clearance tester
- ▶ Robust system for repairs on transporters
- ▶ Axle lifting device for wheel-free lifting device

Load capacity	5000 kg
Load capacity Wheel-free jack	Achslift
Runway L x W	5000 x 600 mm

### Two cylinder drive-on platform lifting devices



- ▶ Suitable for axle measurement, repairs, vehicle inspection and vehicle acceptance
- ▶ Drive-on platform lifting device can be equipped with axle clearance tester for use with ZS SQUARE
- ▶ Axle measurement bolts must be used for axle measurement
- ▶ Axle lifting device for wheel-free lifting device

Load capacity	3500 kg	5000 kg
Load capacity Wheel-free jack	Achslift	Achslift
Runway L x W	4400 x 617 mm	5000 x 617 mm

# Driving platform lifting devices for axle measurement

## Drive-on platform support



Height levelling for 1200 mm using axle measurement supports. Telescopic axle measurement supports up to 1700 mm (optional).



Safe and simple storing of the vehicle platform supports in the vehicle platform.



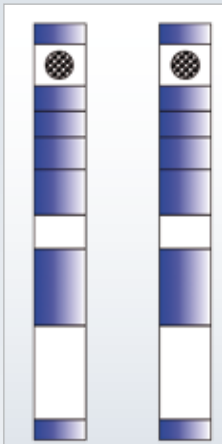
Attachment system and stop for the vehicle platform support.



## Compensation plate sets according to modular principle for drive-on platforms



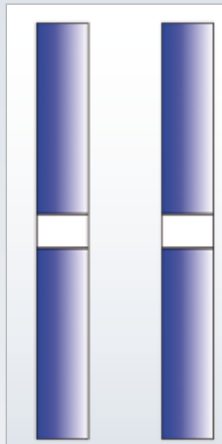
A-SET  
Rotary plate, slider plates, wheel-free jack



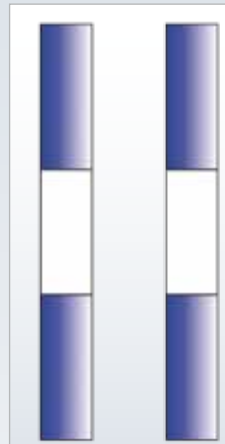
A-SET  
Rotary plate, slider plates, swivel arm



A-SET  
Rotary plate, slider plates without wheel-free jack



A-SET  
Swivel arm



A-SET  
Wheel-free jack

Compensation plate sets enable a uniform drive over level for your drive-on platform and these have an anti-slip coating.

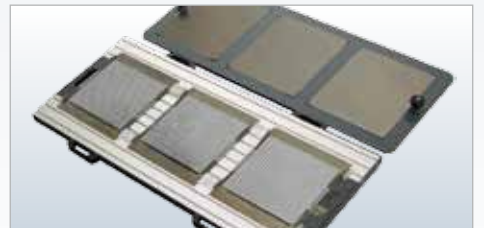
## Sliding plates for axle measurement



Sliding plate with lateral movement of 60 mm and rotary movement of 5°. Design length: 1060 or 1465 mm.



Precision sliding plate  
Minimum breakaway torque 5 Nm an minimum displacement force 15 N for 500 kg wheel load, large amount of steel balls, hardened running surface, collection grooves for dirty water.





## One cylinder lifting device with swivel arm supports



- ▶ One cylinder swivel arm lifting device with rubber support plate
- ▶ Fully accessible in the sill and motor region
- ▶ Height adjustment of support plate using thread and connector system
- ▶ Automatic support arm stop at ground level

Load capacity	3000 kg
Approx. length of stroke	1870 mm
Approx. raising / lowering time (load-dependent)	35 s
Swivel arm pull-out path	624 - 1010 mm
Pivot distance /crosswise/longitudinal	280/280 mm
Adjustable support plate	83 - 105 +50 mm
Lower swivel height	77 / 89 / 101 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

- ① Easy positioning of the swivel arms
- ② Easy drive up using narrow supports (380 mm)
- ③ High degree of flexibility and safety using MAHA support plate connector system



Safe and sensitive stopping of the support arms using locking system.

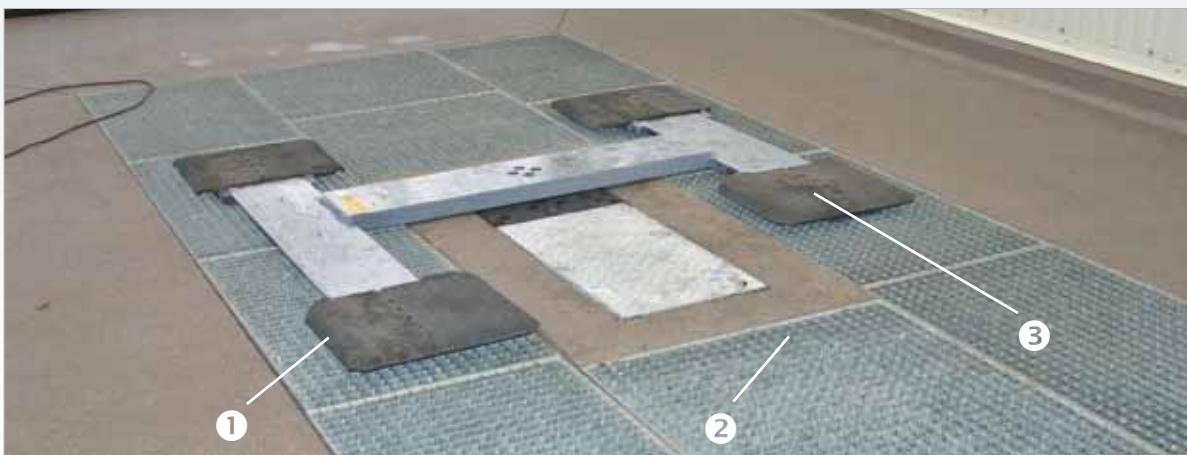
## One cylinder lifting devices with flat supports



- ▶ One cylinder flat support bridge with rubber support
- ▶ Robust lifting device with rigid components
- ▶ Asymmetrical pull-outs with large lateral adjustability and low crossing height
- ▶ Galvanised support

Load capacity	3000 kg
Approx. length of stroke	1870 mm
Approx. raising / lowering time (load-dependent)	35 s
Pull-out range in latching steps	1400 - 2000 mm
Support range (crosswise)	880 - 1820 mm
Rubber support plate size	355 x 400 mm
Installation height of support	60 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

- ① Pull-outs with rotary driving slopes
- ② Grids to transport water and dirt away
- ③ Modular system with various pull-out versions



Please observe the recommended maintenance intervals when using in maintenance halls.

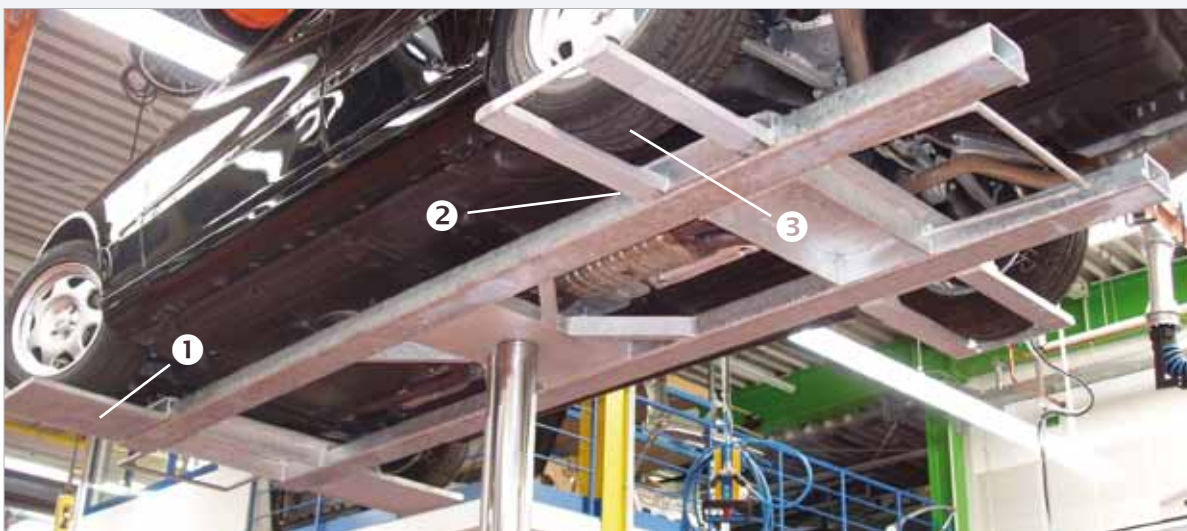
## One cylinder lifting devices with wheel/sill supports



- ▶ One cylinder lifting device with wheel/sill support
- ▶ Particularly suitable for body work
- ▶ Completely accessible sill area
- ▶ Galvanised support

Load capacity	3000 kg
Approx. length of stroke	1870 mm
Approx. raising / lowering time (load-dependent)	35 s
Pull-out range in latching steps	1400 - 3400 mm
Installation height of support	95 mm
Drive up height of wheel forks	40 mm
Drive up height of plate support	25 mm
Scissor protection system on the ground	CE-Stop
Power unit kW/V/A	3 / 400 / 16

- ① Easy drive-up due to low drive-up height
- ② Mounted on roller bearings, easily adjustable pull-outs
- ③ Lockable wheel fork when the sill support is used



The vehicles can be lifting device at the sills by pushing together the supports.

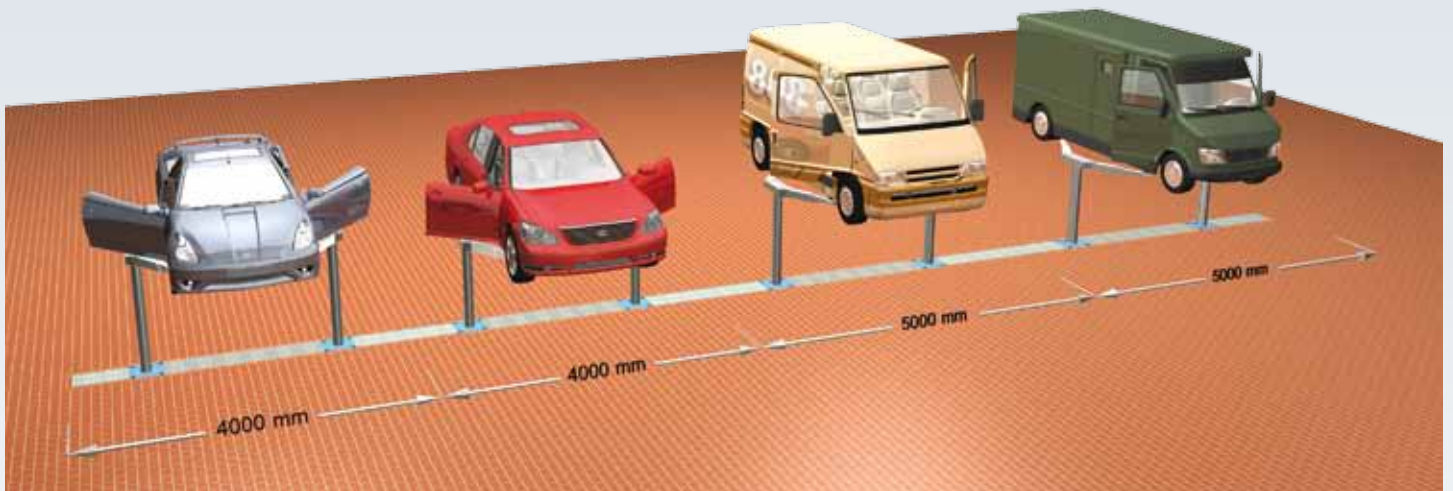
## Megaflex installation system

### Variable In-Ground Lift Positioning, Model: Megaflex System

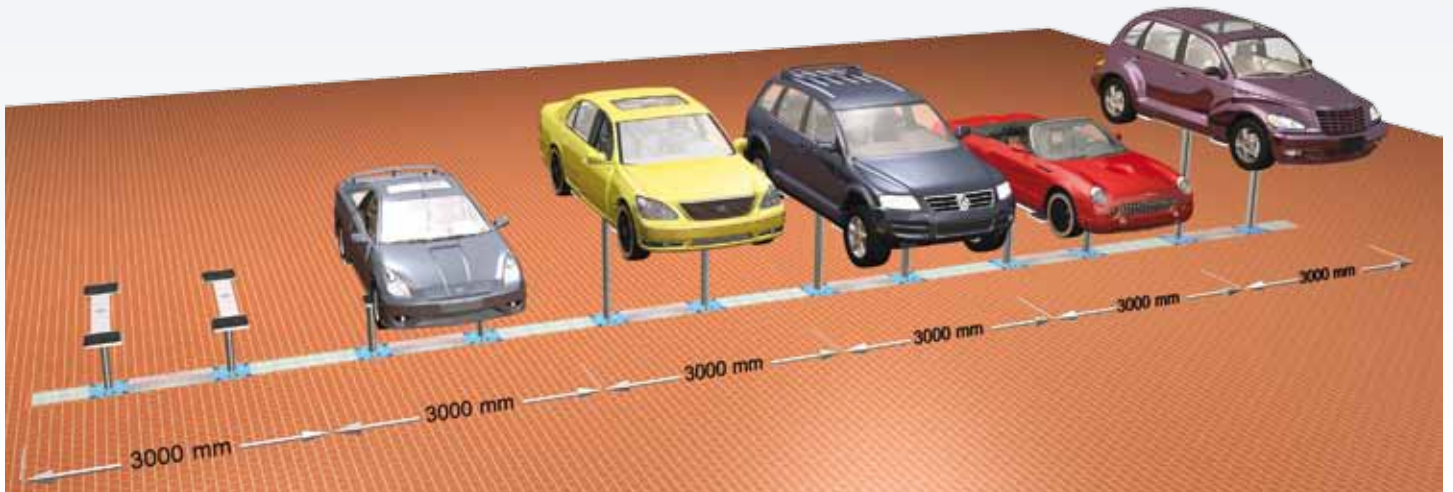
The new Megaflex system from MAHA offers workplace adaption to the demands of workshop utilization, working situation, the specific job, the financial situation of the workshop as well as the development of vehicle designs.

- ▶ One-time concrete work with large channel installation box
- ▶ Lifting units can be variably fixed based on requirements
- ▶ Effortless, quick upgrading or adaption of workplace width
- ▶ Easy upgrading of additional workplaces

#### Situation today ▼



#### Situation tomorrow ▼

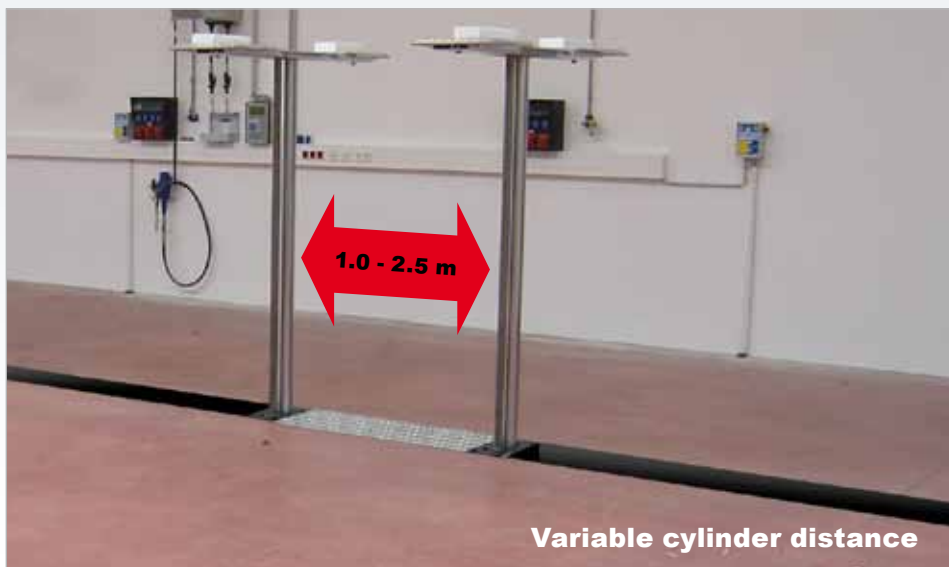


## In Ground lifting device Installation

Select from all our accommodating options the one you need. Through our modular system you may at any time adapt the supports to changed situations/range of vehicles.

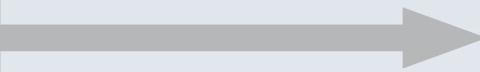
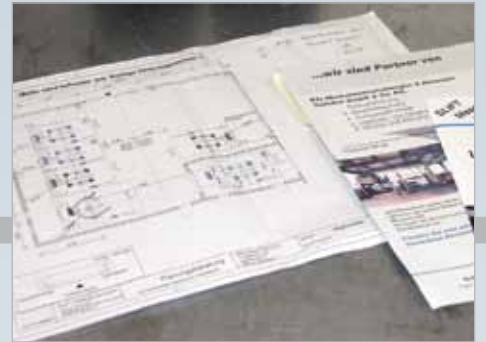


The lifting units may be placed at any desired position within a „channel“. Thus the platform distance is variable between 1.3 m and 3 m.



For the rack lifting devices, the cylinder distance is adjustable from 1 m to 2.5 metres. Owing to the variable width adjustment, different supports from our modular system may be substituted/utilised.

# Upgrading





MAHA subsidiaries in more than 130 countries worldwide!



**Production Program:**

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