

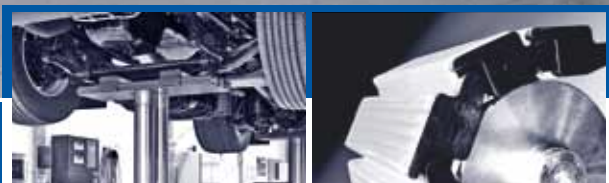


Multi-Post Trucklift Systems

Model: ES DUAL 14.0

available with 2, 3 or 4 post units.

Load capacity: from 28 t to 56 t. For vans, commercial vehicles and buses



Lifting Technology



- ▶ Commercial vehicle lifting system with safety control at every height
- ▶ Robust design with double cylinder system
- ▶ MAHA plug-on system or quick hinged slider system for flexible adaption

Premium Workshop
Equipment

Post lifts are becoming the lift of the future. Versatile usage, easy handling for buses and trucks, good lighting and optimum freedom of movement - all positive characteristics of multi-post lifting technology.



Large vehicles can be lifted quickly and safely with multi-post systems saving time by promoting and supporting efficient and labor-friendly work processes.

The new technology is especially attractive for big, public transportation operations. This brochure offers an overview of modern MAHA multi-post lifting systems. Discover a versatile workshop system to make your working life easier!

Through Innovation, Made by MAHA



Three Important Advantages of Multi-Post Lifting Systems



Working on One Level

Most of the work is carried out on the workshop floor. All necessary machinery and materials are on one level making for short distances and effective work processes.

The flush-floor design of the lift opens up the workshop for versatile use and makes cleaning easier.

Truck lift systems do not require expensive installations for pits such as air suction, oil systems, illumination, power supply or compressed air.

Lifting Height Changes for Flexible Working Environment

By changing the lifting height, the vehicle is adjusted for various kinds of work or technician positions. This adjustment provides free access to all components such as brakes and other systems to inspect, repair or replace them.

The seven most important working heights:

- Under the vehicle
- Component height
- Brake repair height
- Wheel change height
- For vans and buses
- For commercial vehicles
- For trailers



In-ground Lift Technology and Efficiency

In one stroke, vehicles or tractor/trailers are lifted wheel-free using truck lift systems.

The fully automatic cylinder positioning as standard feature lifts the vehicle even faster.

The double cylinder system secures the vehicle at any height. No additional placement devices need to be installed.

Individual Configurations for your Trucklift

Our lift systems use the classic modular design system. They consist of individual components which can be combined with one another depending on needs. Extensive planning from the start provides a large measure of flexibility later on. Whatever version you choose, MAHA is the right partner for you.

2-Post Lifting System

A 2-post lifting system is sufficient for most commercial vehicles. It is the ideal choice for semi-tractors, smaller trucks and buses. 3 or more post lifting units do, however, offer flexible working conditions when working on several vehicles at one time or with larger ones. Each lifting cylinder has its own hydraulic unit. The individual units can then be operated separately or synchronously.

3-Post Lifting System

Articulated buses and semi-trailers require 3 lifting units. Standard installation includes a fixed built-in middle unit and two movable units in front and in back of this. Design, mounting, technology and operational comfort correspond with the 2-post lifting system. Thanks to parallelly switched lifting units, a 2-post lifting system can be created out of the 3-post lifting system if needed.



4-Post Lifting System

The 4-post lifting system is ideal for large 2-axle vehicles, semi-trailers or articulated buses. The system is just as easy to operate as the 2-post system thanks to the electronic synchronization control. Complete tractor/trailer units can be lifted trouble-free. The installation of a second operational board means 2 vehicles can be separately lifted. The unit can then be used as two independent lifting systems.

Vehicle type lifted determines the number of cylinders needed



Further modular system possibilities:

- Flush-floor installation of traverse bars with wide rolling cover or pockets
- A variety of moving pieces for the traverse bars
- Electronic functions for working ease and speed



The Trucklift System

Synchronization using Ultrasonic Measurement System

Precise monitoring of the cylinder unit using the patented ultrasonic measurement system. It guarantees synchronous cylinder operation offering additional safety against load slippage due to tipping.

The measurement system is maintenance-free and malfunction-resistant.



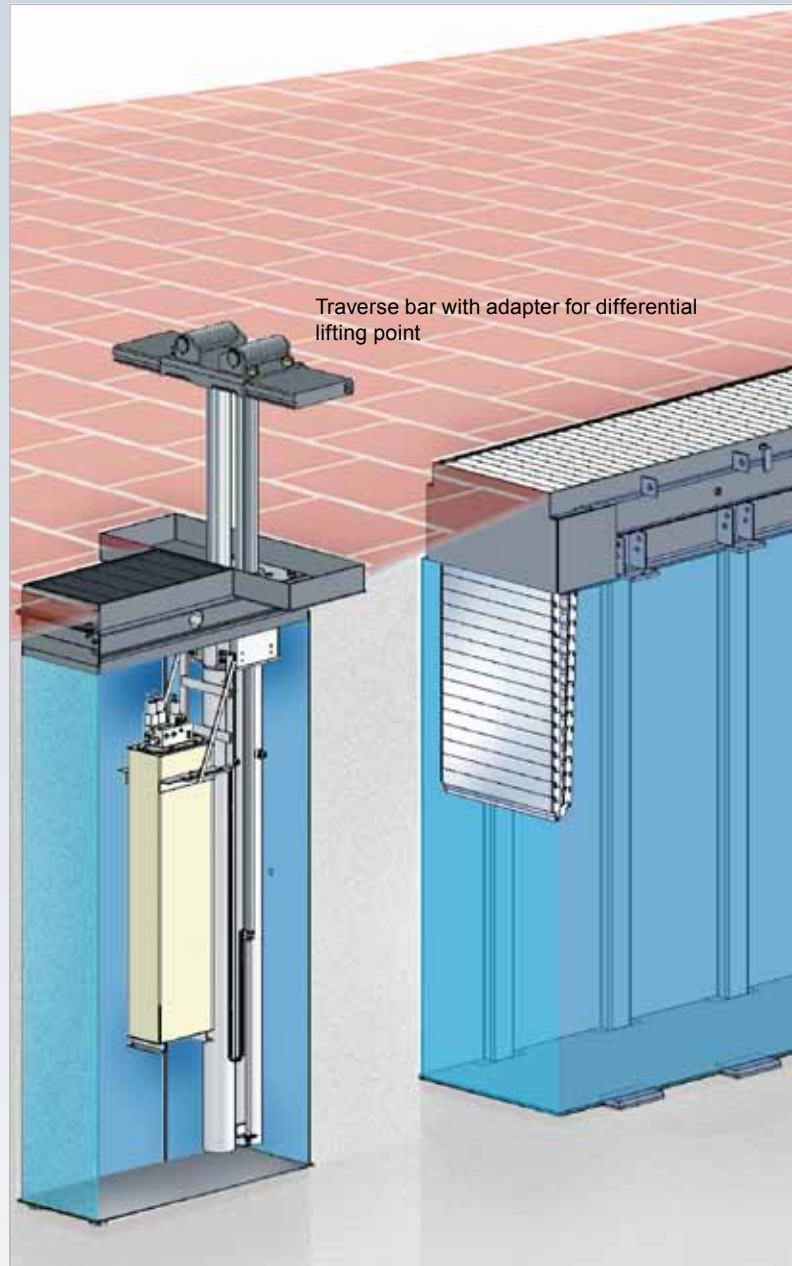
All MAHA Trucklift systems have synchronization control based on DIN EN 1493.



Double cylinder system as safety feature against system failure and for flexional strength of the lifting unit.



Wheel recesses serve as positioning assistance for vehicle lifting. They are either fixed or movable.

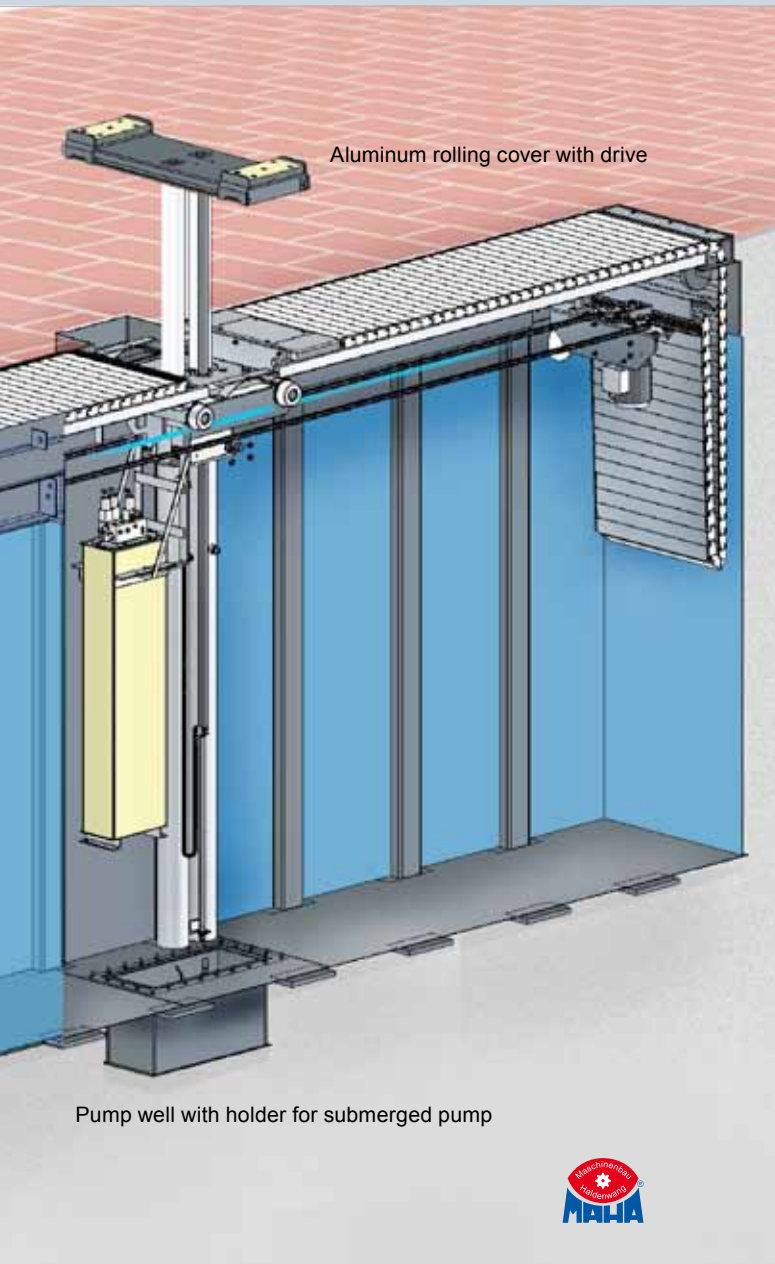


Travel Range of the Lifting Unit

The rolling cover design provides for a generous standard travel range of the lifting unit. Our lifting units run very close to the edge of the installation boxes, meaning fixed cylinders or other installation boxes can be placed very close together.

Equipment for Washing Bays

The aluminum rolling cover means that the trucklift is recommended for wash bays. The installation boxes are supplied with pump well and submerged pump. Special coating for the tank pipe and hydraulic oil tank are offered as additional corrosion protection.



Installation box / Installation frame

Installation is quick and low cost using MAHA installation boxes. Lining work is not needed and several boxes can be set quickly, one after the other.

Construction costs and material needs are reduced thanks to the divided design of the installation box requiring less excavation and cement.

Installation boxes are water-tight and self-supporting with all parts installed with millimeter accuracy.

Installation frames are used when extensive lining work is not needed and the cylinder force can be absorbed in the upper range of the foundation.

System Control

The lifting and lowering movements and the travel drive of the units can be precisely regulated using either the portable control board or a cableway (optional) with control board. The lifting units can be selected either individually or in unison via the central unit or control board.



Safety Emergency Lowering

The emergency lowering is done at the control console outside of the danger area using a pneumatic control function.

Technical Data:

Load capacity per lifting unit	14 t
Number of lifting units	4 and more
Synchronization system	patented travel measurement technology
Lifting distance	1900 mm
Piston diameter	2 x 125 mm
Lifting time to max. height	60 seconds
Operational pressure max.	70 bar

MAHA Double Cylinder - Lifting Unit

Stability

The stability of our system is always at the forefront of development. A high moment of resistance against bending is achieved with the use of two lifting cylinders per cylinder unit. The double arrangement within a cylinder unit means that the lifting system is almost torsion-free.

Lifting Unit Safety System

The stability and special safety system define this double cylinder unit. The two separate working lifting cylinders are served by two separated hydraulic systems via a common hydraulic unit. Each of the lifting cylinders can, by itself, bear the maximum permitted load. Should one of the two lifting cylinders fail, the intact lifting cylinder is designed to carry the entire load, if need be.

The safety system functions at every lifting height.

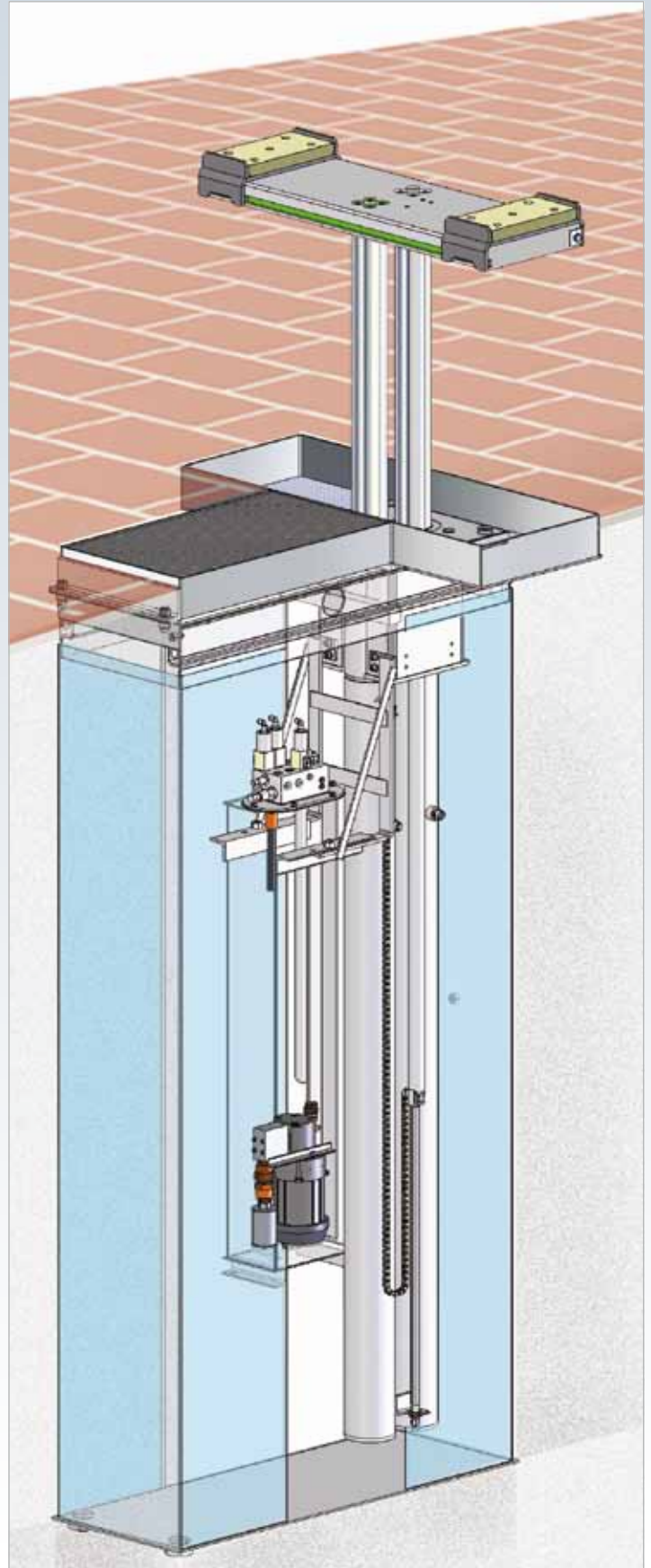
Torsion Protection of the Lifting Unit

The double arrangement of the lifting cylinder secures torsion protection of the lifting unit. This simple design assures that no additional components must be installed in the lifting cylinder.

Proven Technology

The trucklift unit was designed for use in commercial vehicle workshops. The cylinders are hard chromium-plated to meet the needs of everyday practice.

The hydraulic units are equipped with submerged oil motors.

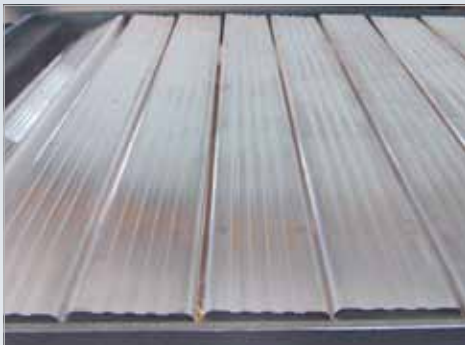


MAHA Roller Covering

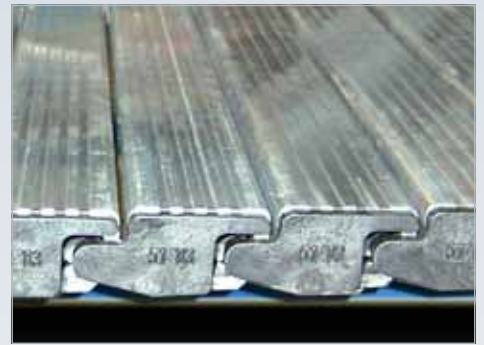
Aluminum Roller Covering

By using the roller covering, the working surface is flat and allows a very generous travel distance of the lifting units. The use of special sectional tube guarantees high stability with a wheel load up to 4 t.

As the truck lift has been designed for usage in wash bays, the roller covering is made of compatible materials such as aluminum for lift covering, synthetic materials for screwless joints and synthetic tracks as support surface.



Anti-slip aluminum tread



Screwless easy-run joints



Secure chain guidance for exact positioning of the lifting unit

Traverse on the Ground

If only vehicles with generous floor clearance are lifted, the lifting traverse can be placed on the floor. Without accessories the height is only 60 mm; 105 mm with the MAHA sliding piece. The narrow roller covering has wheel load capacity of 4 t.

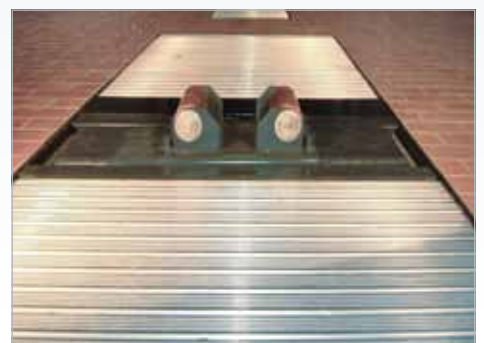
Traverse sunk in to floor level

If a flat workshop floor is needed or vehicles with limited floor clearance are to be lifted or driven through the work area, pockets for the traverses are installed. Fully automatic traverse movement out of the pocket to the lifting point.

Traverse drive over sunk-in

The wide roller covering is ideal for vehicles with extremely low floor clearance and with bus workplaces. The traverse can be driven over in a sunk-in position. The wheel load capacity of the aluminum covering is 1.4 t in spite of the generous width.

· Recommendation



MAHA Trucklift Electronic Control



Central control and programming unit with two displays.



Standard delivery with electronic synchronization control of the complete lifting system with approval based on DIN EN 1493.



Integrated PC interface for error reading, also possible via long-distance diagnosis.

Cylinder Positioning to Vehicle Pick-up Points

Quick lifting of vehicles using the standard delivery program for re-setting of stored pick-up positions. Simply enter the vehicle type and move the cylinder to the programmed position.

Moving Sunk-in Traverse in and out of Pockets

An automatic program moves the traverses in and out of the pockets.

Safety Switching of the Lifting Unit's Synchronization Operation

At placement of the pick-ups at the vehicle pick-up point, pressure switches transmit a signal to the control unit with a counter load of approx. 800 kg and the lifting process is stopped. If all cylinder units are placed (under load), the synchronization operation can be activated. The vehicle can now be lifted or lowered synchronously using the synchronous control.

Mounting Work with Trucklift

To mount or remove vehicle components on a raised vehicle, individual cylinder units can be taken out of the synchronization operation and moved. To re-integrate a cylinder unit in the synchronization operation, place the pickup again. (pressure switch active) Vehicles must be appropriately secured using stands.

Sliding Pieces for Traverses



Sliding pieces for Forged Axle

Overall height of sliding piece 155 mm
Traverse total height 215 mm

Sliding piece for Forged Axle Actros

Overall height of sliding piece 90 mm
Traverse total height 150 mm



Traverse with Hinged Sliders

with external flip-up rod
Traverse base height 60 mm
Total height in resting position 170 mm

Hinged slider **small** version
Overall height above traverse 155 mm

Hinged slider **middle** version
Overall height above traverse 220 mm

Hinged slider **large** version
Overall height above traverse 280 mm



Sliding piece for MAHA Plug-in System

Suitable for the MAHA Plug-in System
Hole diameter 45 mm
Overall height of sliding piece 45 mm
Traverse total height 105 mm



Differential Traverse

Supported by 4 bearings with springs
Overall height above traverse 115mm
Traverse total height 175 mm

Sliding piece **small** version
Synthetic roller separation 250mm

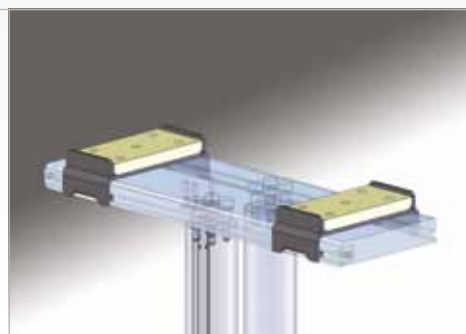
Sliding piece **middle** version
Synthetic roller separation 280mm

Sliding piece **large** version
Synthetic roller separation 400mm



Sliding piece for forged axle with synthetic support

Overall height of the sliding piece 50 mm
Traverse total height 110 mm





Innovations, Made by MAHA

Production Program:

Testing Technology for Cars, Trucks, Motorcycles, Tractors, Forklifts, Aircraft · Roller Brake Testers · Platform Brake Testers · Shock Absorber and Suspension Testers · Side-Slip Testers · Play Detectors · Roller Dynamometers for Performance and Function Testing · Speedometer Testers · Tachograph and Taximeter Testers · Axle and Wheel Load Scales · Scissors Lifts · Two- and Four-Post Lifts · In-Ground Lifts · Pit Jacks · Axle and Transmission Jacks · Mobile Column Lifts · Headlight Testers · Diesel Smoke Meters · Emission Testers for Petrol and Gas Engines · Sound Level Meters · Air Conditioning Service Equipment · Decelerometers · Closing Force Meters · Brake Fluid Testers · Complete Test Lanes for Cars and Trucks · Mobile Test Containers · Wheel Alignment Analysers · Wheel Balancers · Tire Changers.

Additional Services: Workshop Design and Planning · Training Seminars for Users and Service Technicians



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