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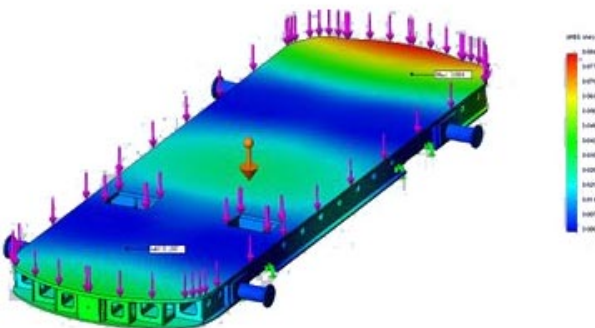
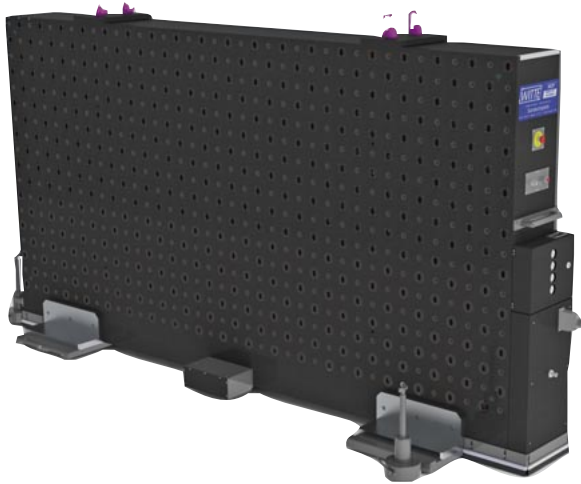
English



# Witte FixBase



Mobile precision in XXL format



All Alu Structure Plates are tested and optimized for capacity and rigidity according to FEM analysis

## Witte FixBase®

### Base plates and positioning systems

■ Accurate and very rigid Alu Structure Plates are used as bases for measuring or holding fixtures, as a cantilever for CMM measuring surfaces or as transport plates. They offer highest rigidity but are comparatively lightweight

■ Alu Structure Plates can be used vertically or horizontally.

■ According to customer request plates are available with natural or black anodized surface, hard coating is also possible.

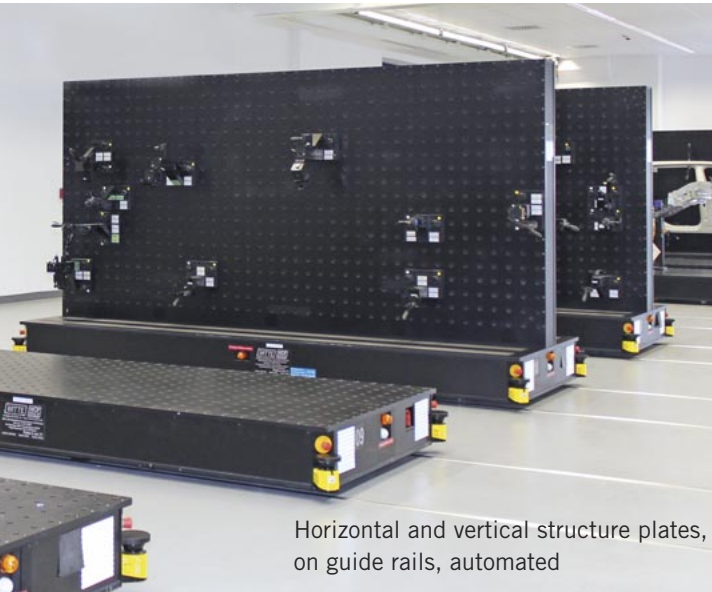
■ Whether extremely lightweight and economical or very accurate and demanding one of our options will suit your company's needs. Almost any type of grid can be integrated into the plate surface/s.

■ Important accessories to large plates are PWS (Precision Witte System) or PPS (Precision Positioning System) quick clamp systems. These are systems integrated into the plate to allow quick, accurate and repeatable positioning of sub-plates or adapter plates onto the Alu Structure Plate.

- Optional accessories i.e.
- Cable/radio remote control
  - Camera with monitor
  - Position sensors
  - Visual and acoustic warning signals
  - Laser-scanner to monitor area of movement

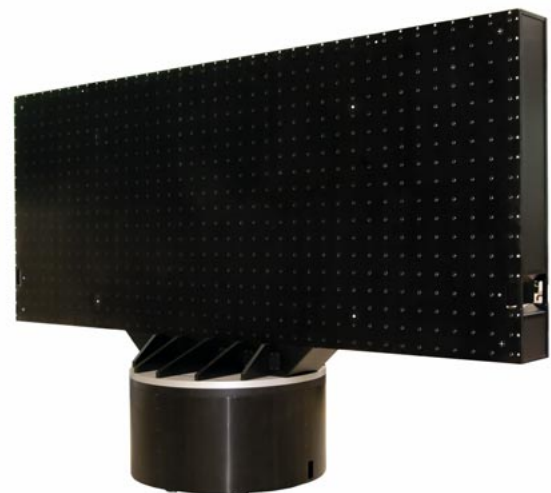
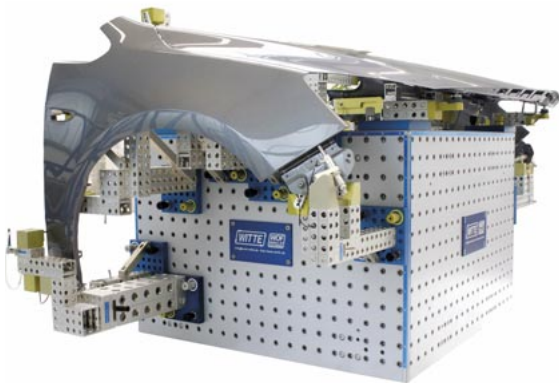
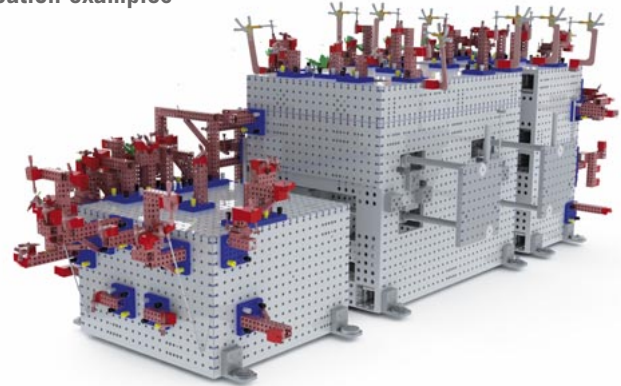
As well as special versions such as

- Motor driven, automated
- Contoured plates which fit to work piece, also three dimensional plates
- Contoured plates which fit to work piece, in segments or modular
- Mounted with moveable surface plates
- With integrated scissor trolleys are available on request

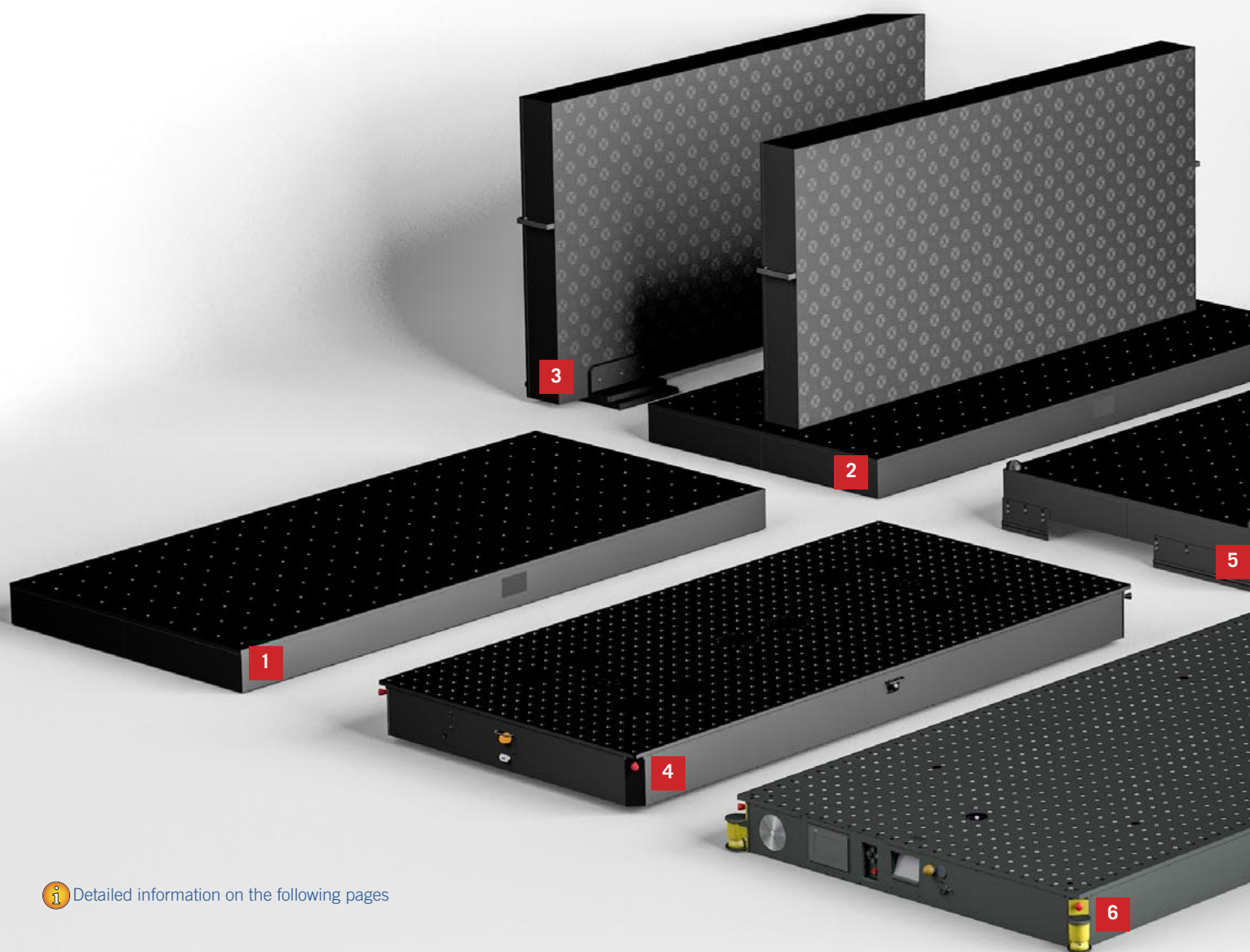
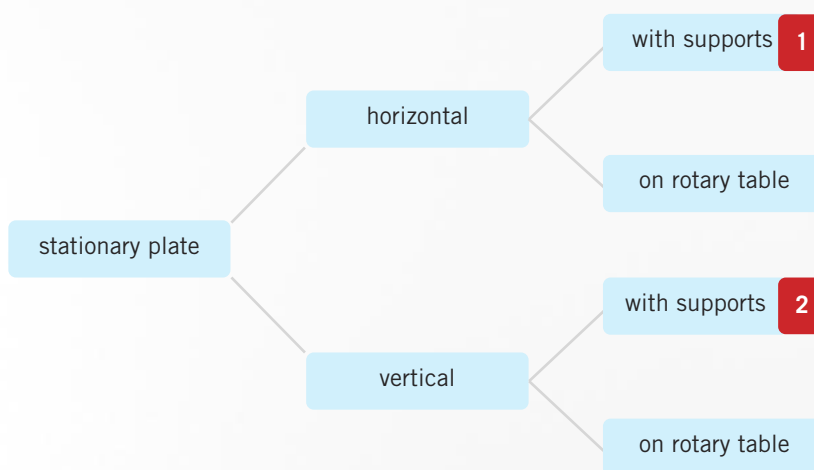


## Witte FixBase®

Application examples



# Witte FixBase®

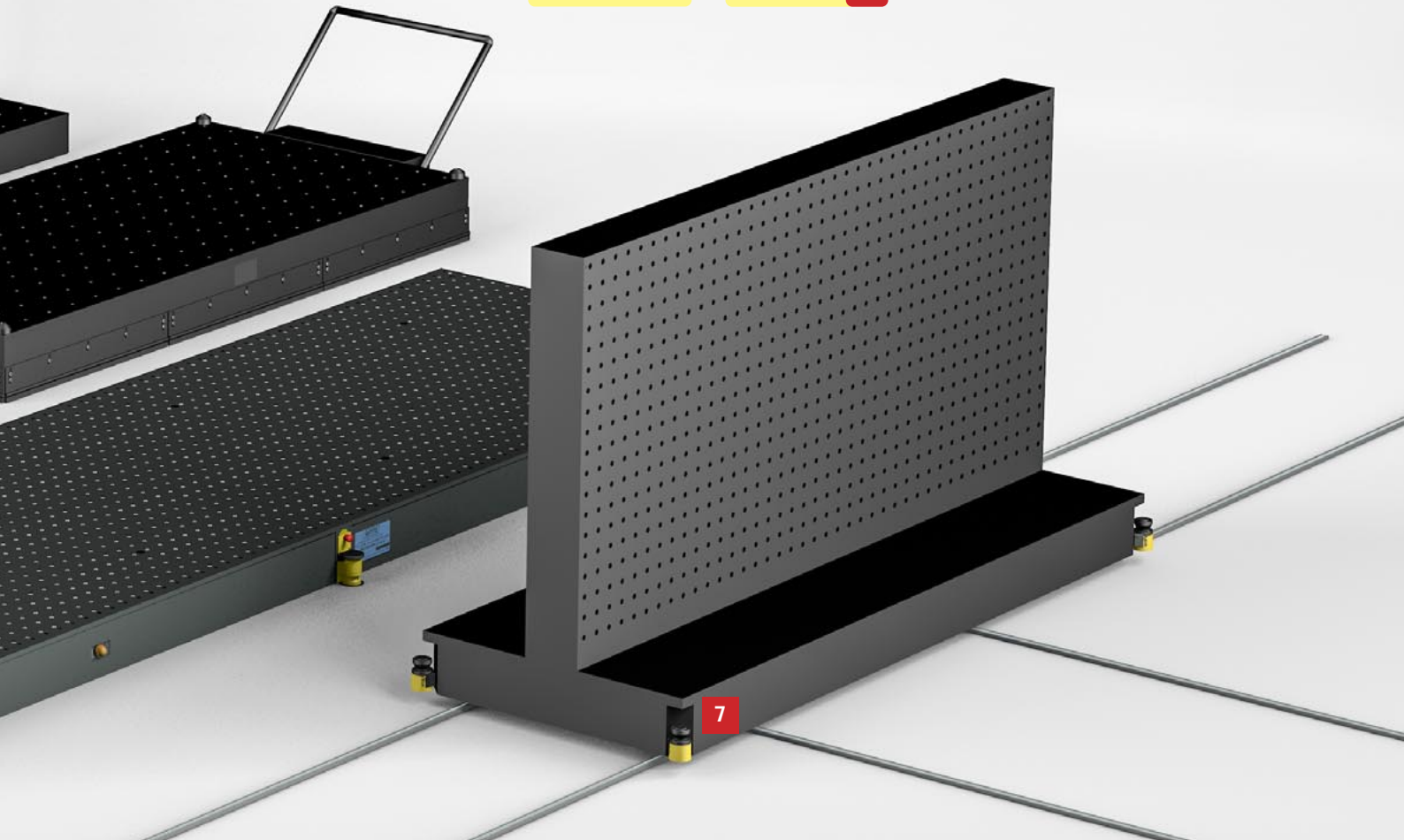


# te versions

```
graph LR; A[mobile Plate] --> B[horizontal]; A --> C[vertical]; B --> D[with drive]; B --> E[without drive]; D --> F[with hovercraft]; D --> G[with MDD]; D --> H[on wheels]; F --> I[radio-controlled]; F --> J[cable-controlled]; G --> K[radio-controlled]; G --> L[cable-controlled]; H --> M[automatic]; M --> N[without rails]; M --> O[on rails]; E --> P[with hovercraft]; E --> Q[on wheels]; P --> R[5]; Q --> S[6]; C --> T[with drive]; C --> U[without drive]; T --> V[with hovercraft]; T --> W[on wheels]; V --> X[radio-controlled]; V --> Y[cable-controlled]; W --> Z[automatic]; Z --> AA[without rails]; Z --> AB[on rails]; U --> AC[with hovercraft]; AC --> AD[3]; AB --> AE[7];
```

mobile Plate

- horizontal
  - with drive
    - with hovercraft
      - radio-controlled
      - cable-controlled
    - with MDD
      - radio-controlled 4
      - cable-controlled
    - on wheels
      - automatic
        - without rails 6
        - on rails
  - without drive
    - with hovercraft 5
    - on wheels
- vertical
  - with drive
    - with hovercraft
      - radio-controlled
      - cable-controlled
    - on wheels
      - automatic
        - without rails
        - on rails 7
  - without drive
    - with hovercraft 3



# Witte FixBase® Equipment

According to design

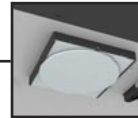
## Horizontal Structure Plate:



Steel supports



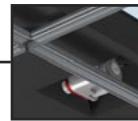
MDD (Multi directional drive)



Hovercraft plates



Pendle rollers



Rails with direct driven tilt/lift units

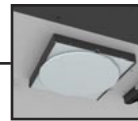


Direct drive

## Vertical Structure Plate: with horizontal substructure



Steel supports



Hovercraft plates



Pendle rollers

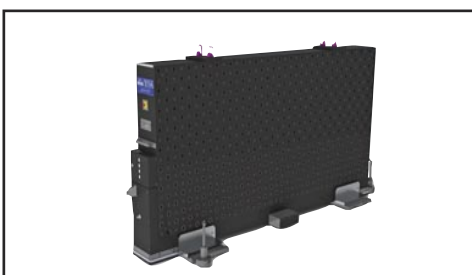


Rails with direct driven tilt/lift units

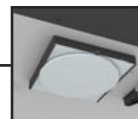


Direct drive

## Vertical Structure Plate:



Steel supports



Hovercraft plates



Pendle rollers



Direct drive

## Dimensions

Length x width, one-piece:

1,5 x 3m to 2,4 x 10m

Thickness:

150mm to 1000mm

**Larger plates (multi-part)  
on request.**

Flatness:

Acc. DIN 876 II Gen. 3 (up to 5m x 2m),

**higher precision on request**

Grid:

Grid tolerance JS7,

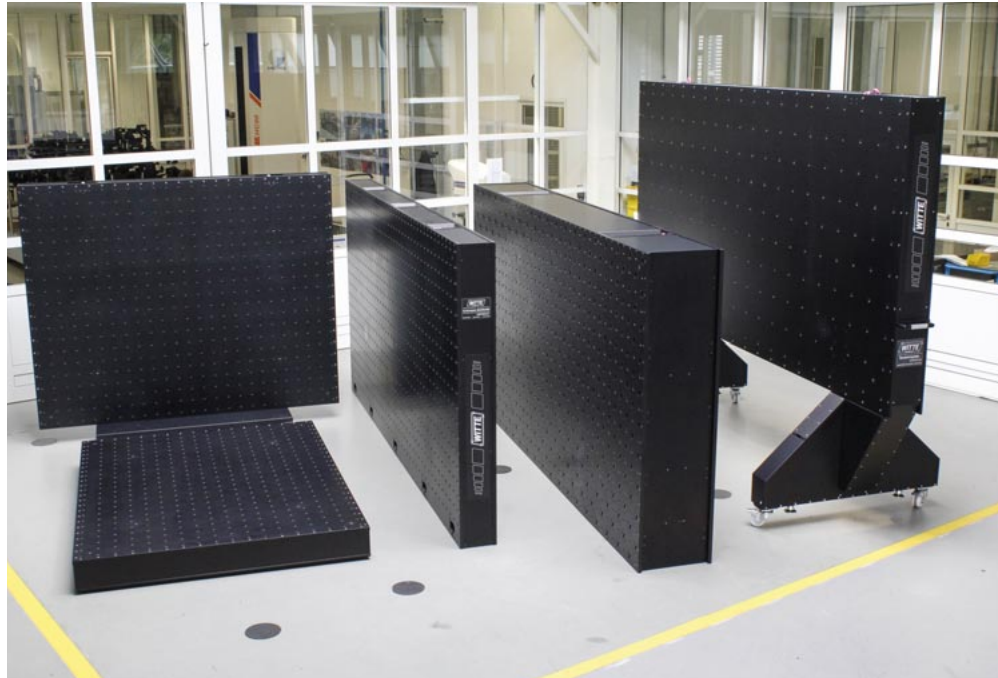
Over all toleranc JS8

**higher precision on request**

load rating:

500kg/m<sup>2</sup> up to 2000kg/m<sup>2</sup> standard,

**Higher ratings on request**



## Set up surface

### Column connection classic – with fitted screw



Simple and proven version.

Two types of locators are available:

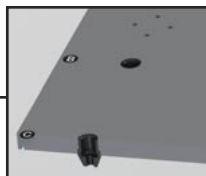
- Snug fit, floating (XY positioning)
- Without fit (only clamping)

### Column connection with Witte PPS-quick clamp system

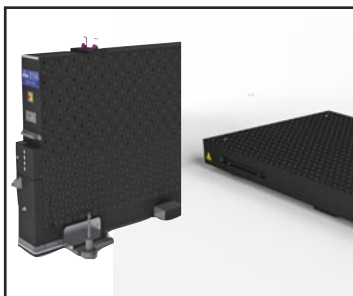


Separate positioning and fixation of footplates via centering pin and clamp units

### Column connection with Witte PWS-quick clamp system

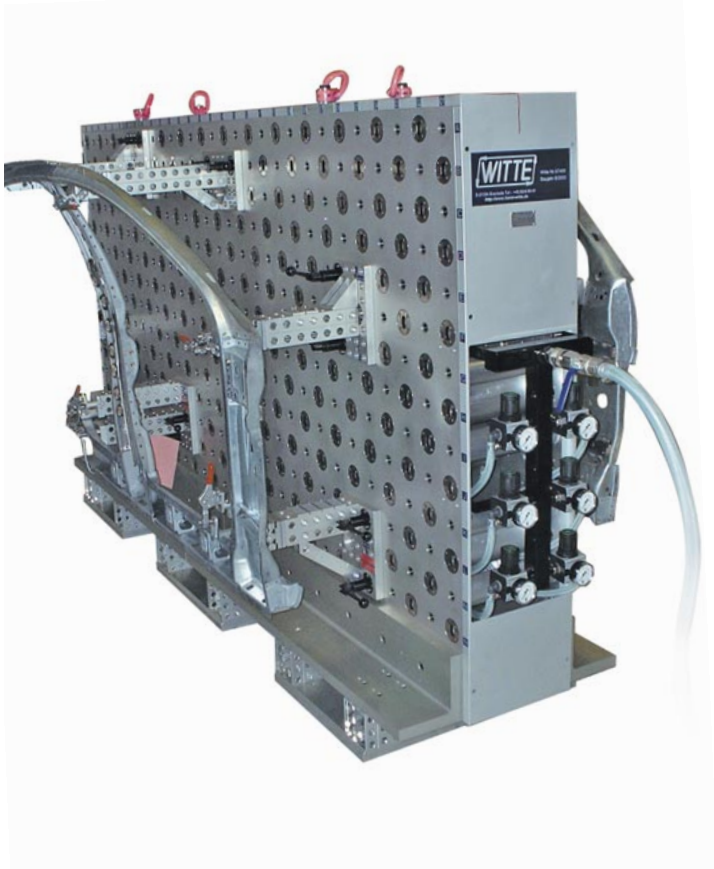


Expanding clutch bolt centers and clamps footplate on PWS grid or Alu Structure Plate



## Console types

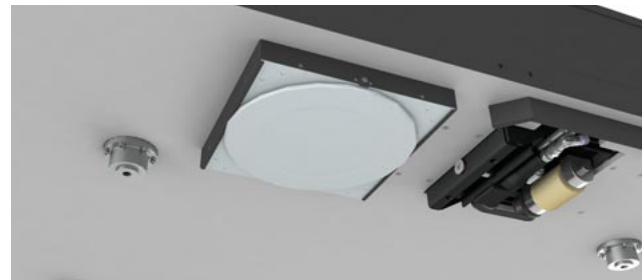




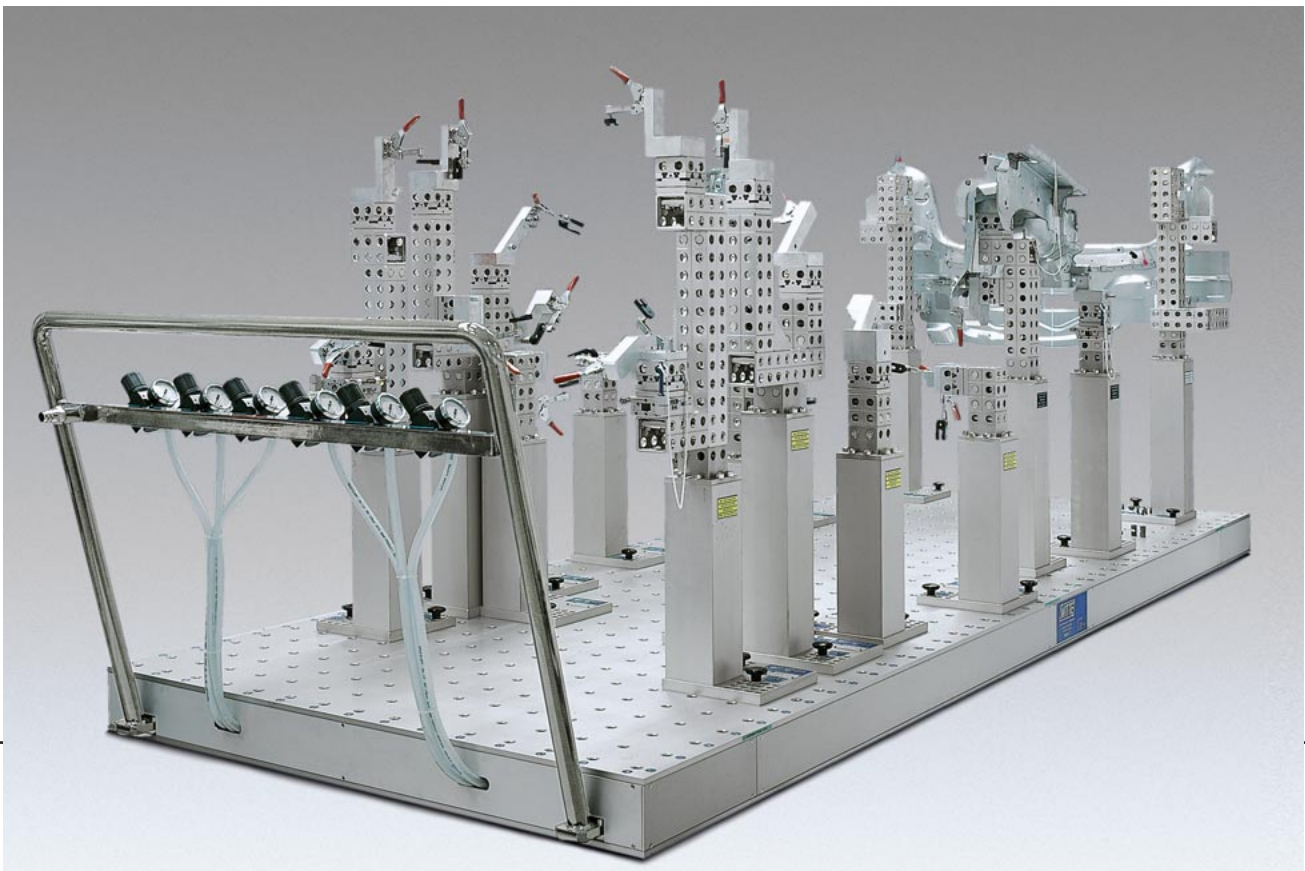
## Alu Structure Plate with hovercraft hose connected

Alu Structure Plates can be Witte-equipped with a hovercraft cushion system. This enables easy and quick transport of the plate from loading area to checking area (CMM surface area). Even plates with heavy loads can easily be moved over cracks, seams or ridges in the floor. Air pressure is individually regulated to adjust to irregular weight distribution guaranteeing a smooth and even ride.

For effective and problem free performance of hovercraft systems, a smooth non porous surface i.e. plastic coated, ground cement or vinyl flooring is ideal. Please contact us for specifications to ensure proper function in your facility.

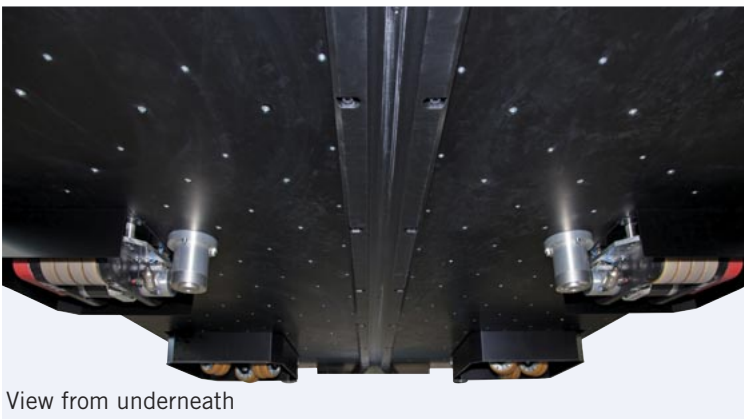


Hovercraft cushions mounted on underside of Structure Plate, optional direct drive and steel supports



## Alu Structure Roller Plate

with floating heavy duty guided rollers



View from underneath

### Applications:

- For uneven, porous or joined (tiled) floors
- If no air pressure is available or current operations will be adversely affected

### Characteristics:

- Automatic crawl speed when reaching final position

### Equipment options:

- Direct drive or E-Mover drive
- Camera with integrated screen



Control panel with camera monitor

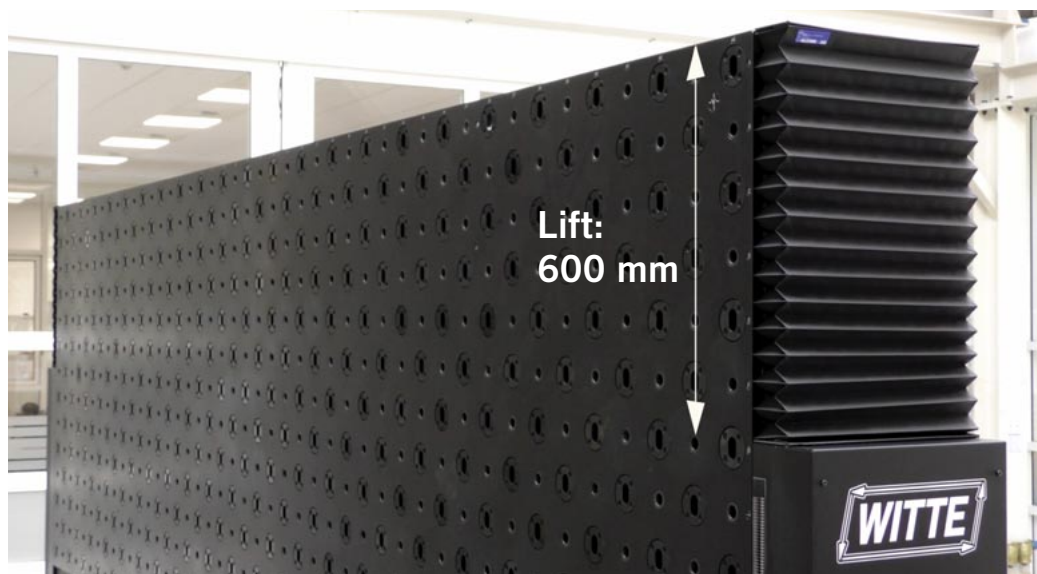
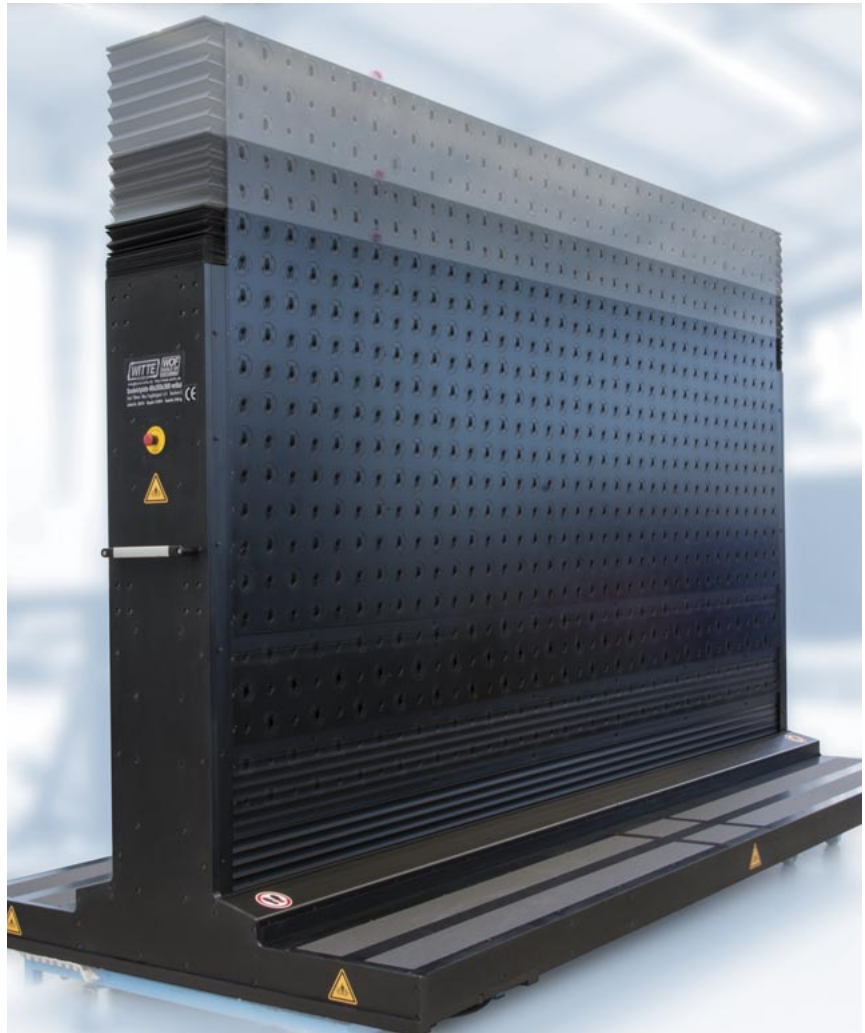
## Alu Structure Plates

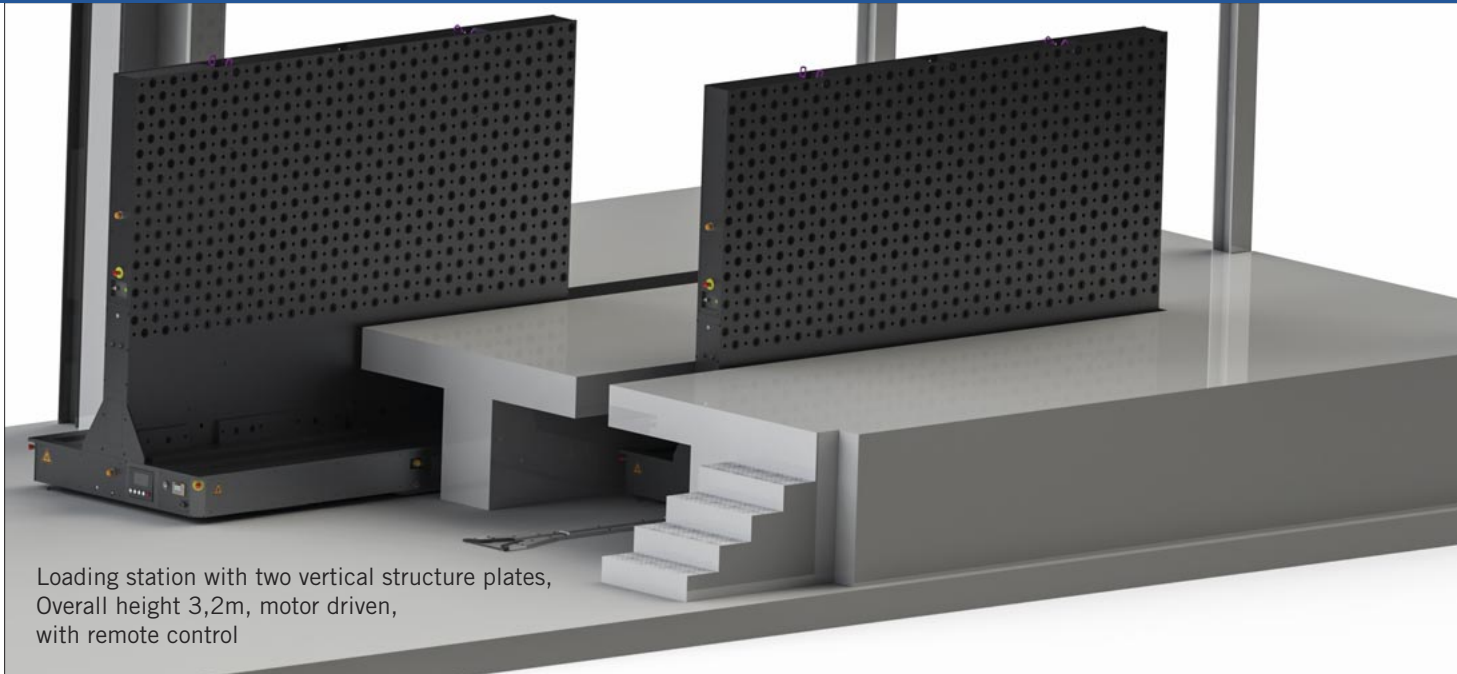
### height-adjustable

Motor driven height adjustable Alu Structure Plate for parallel use of tactile and photogrammetry measuring tasks.

Example configuration on the right:

- 750 mm lift from 2050 to 2800 mm.
- Clamping surface on both sides 3700 x 1700 mm
- Hovercraft with direct drive
- Double sided PPS grid
- Walk-on base for easy use of plate
- Grid surface anodized black
- Equipped with safety features, hook-eyes, emergency stop on both face ends and allround foot protection





Loading station with two vertical structure plates,  
Overall height 3,2m, motor driven,  
with remote control

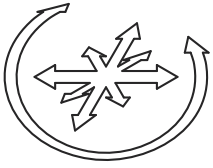


## Alu Structure Plates Special solutions

Complete vehicle unit for inspection and measuring of test cars or cars due for delivery. The vehicle is either driven or pulled onto the plate using a winch. After scissor trolleys raise the vehicle it is set down on RPS or car jack up points.

The Alu Structure Plate is equipped with hovercraft and as an option can be driven with friction wheels. Scissor trolleys and winch are power operated.



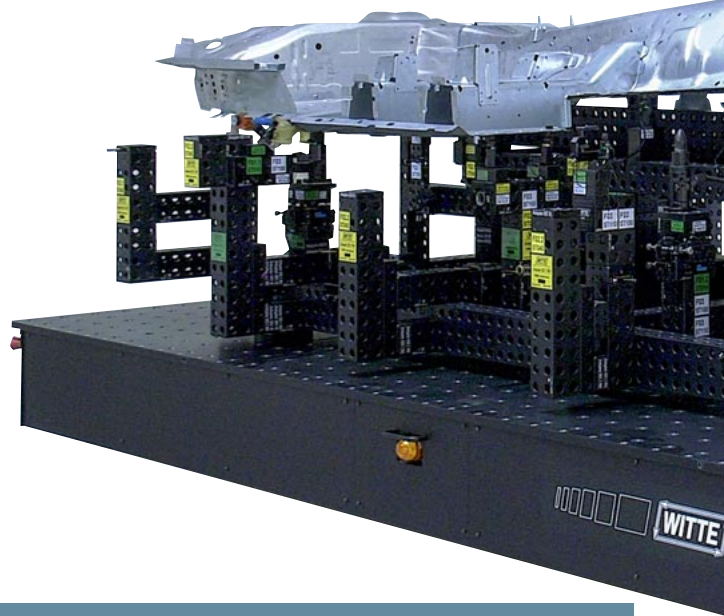


# Witte FixBase® MDD:

## Mobile structure plates with MultiDirectionalDrive

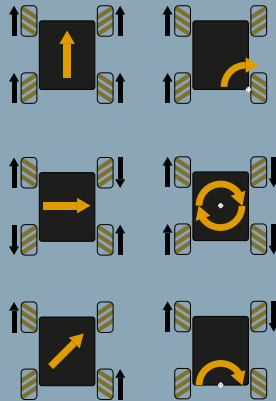
**Strong base for structures and fixtures. Precise measurement base. Smart transport plate. All of the above in perfect combination.**

- Witte FixBase MDD® are the mobile, self-propelled, multidirectional steering structure plates for dynamic efficient part logistics, loading process, and measuring room coordination.
- Extremely manoeuvrable, very robust, with highest accuracy, flatness and parallelism. Equipped with the latest controller technology and based on decades of Witte experience in the field of structure plates built in sandwich type design. A 100 percent Witte in-house development to highest quality and manufacturing standards.



### Multidirectional mobility

Unrestricted, precise mobility in all directions thanks to the unique Witte MultiDirectional-Drive technology. Intelligent modular linking of chassis and drive unit. Unlimited, variable combination of driving directions.



### Load-bearing, light and highly precise plate structure

FixBase MDD® benefits from Witte's profound experience in the development and build of structure / sandwich plates. The tried and tested frame design

- is known for high rigidity and therefore the best long-term accuracy,
- can be adapted to different loads and dimensions,
- allows great flexibility of integration / fixation of built-in components,
- offers good accessibility for maintenance and service,
- guarantees highest overall accuracy, flatness and parallelism of structure.

### Mecanum wheels

Eight Mecanum wheels per chassis - four of which are powered - each on two air-lift bag chassis swing arms. For absolute controlled, smooth and balanced acceleration, moving and decelerating in every direction.



### Chassis with air-lift bags and Z-positioning

Complete relief of the wheels and exact lowering of the plate to the Z rest position / placement phases.

For

- high repeat accuracy due to physical, form fit type, locators
- exact leveled positioning also on uneven ground - indispensable especially for tactile measuring,
- creating a safe distance between the floor and the lowered plate.





#### Individual formats, grid and bushing sizes/types

FixBase MDD® offers the complete flexibility of the Witte structure plate concept with individually selectable plate size, grid distances and bushing geometries, even interchangeable bushings and threads.

Precisely adaptable to the respective application conditions and user requirements.



#### Performance- and safety-oriented lead-gel batteries

Equipped with cost effective, performance- and safety-oriented lead-gel batteries:

- technically reliable
- readily available
- short charging cycle times
- well protected against deep discharge and overcharging
- uncomplicated logistics (transport is not classified as a hazardous shipment, such as with Li- batteries)

#### Intuitive handling via radio remote control and / or control panel

Effortless, precise steering and positioning via radio remote control as well as controller activation by touch recognition. Large-format status monitor, multilingual user interface, extensively customizable and editable. Blocking against unauthorized access as well as complete activity log via status memory.



#### Safe positioning via physical guide rails and visual laser spots

Significantly higher mechanically guided accuracy and reliability compared to only electronic guidance. Recognized to be the best solution even in confined spaces and for optimal use of the measuring volume. Ideally acting in combination with laser spots for positioning and driving information.



#### Integrated floor charging contacts for refreshing of the battery charge status

Charging contacts in the plate and floor at the resting positions ensure that the on-board batteries are constantly refreshed during the positioning / parking phases. For permanent availability without loss of performance and additional protection against deep discharge of the batteries.



## Fully automated solutions

# DTS - Driverless Transport Systems

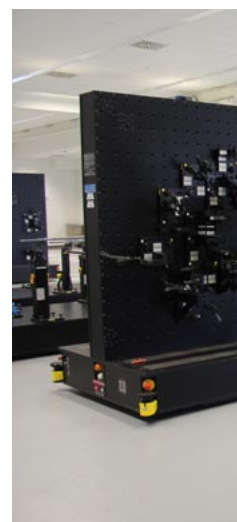
## With Alu Structure Plates Rail-guided

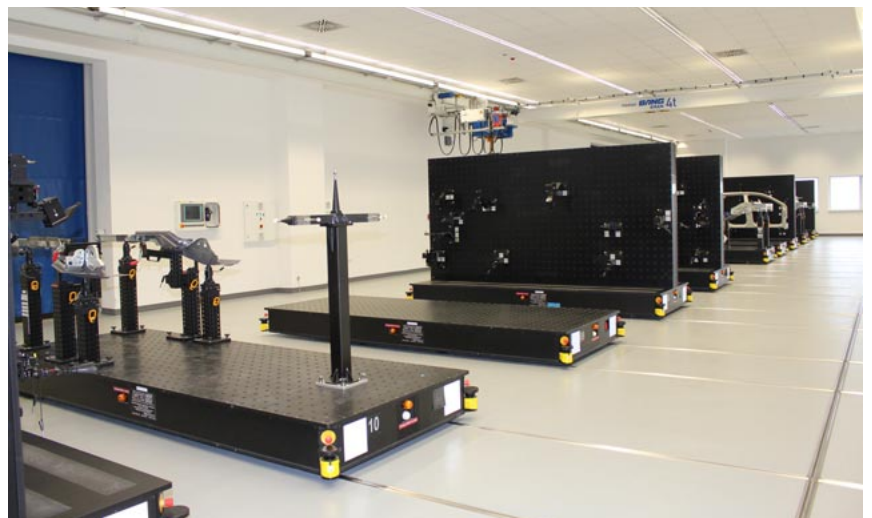
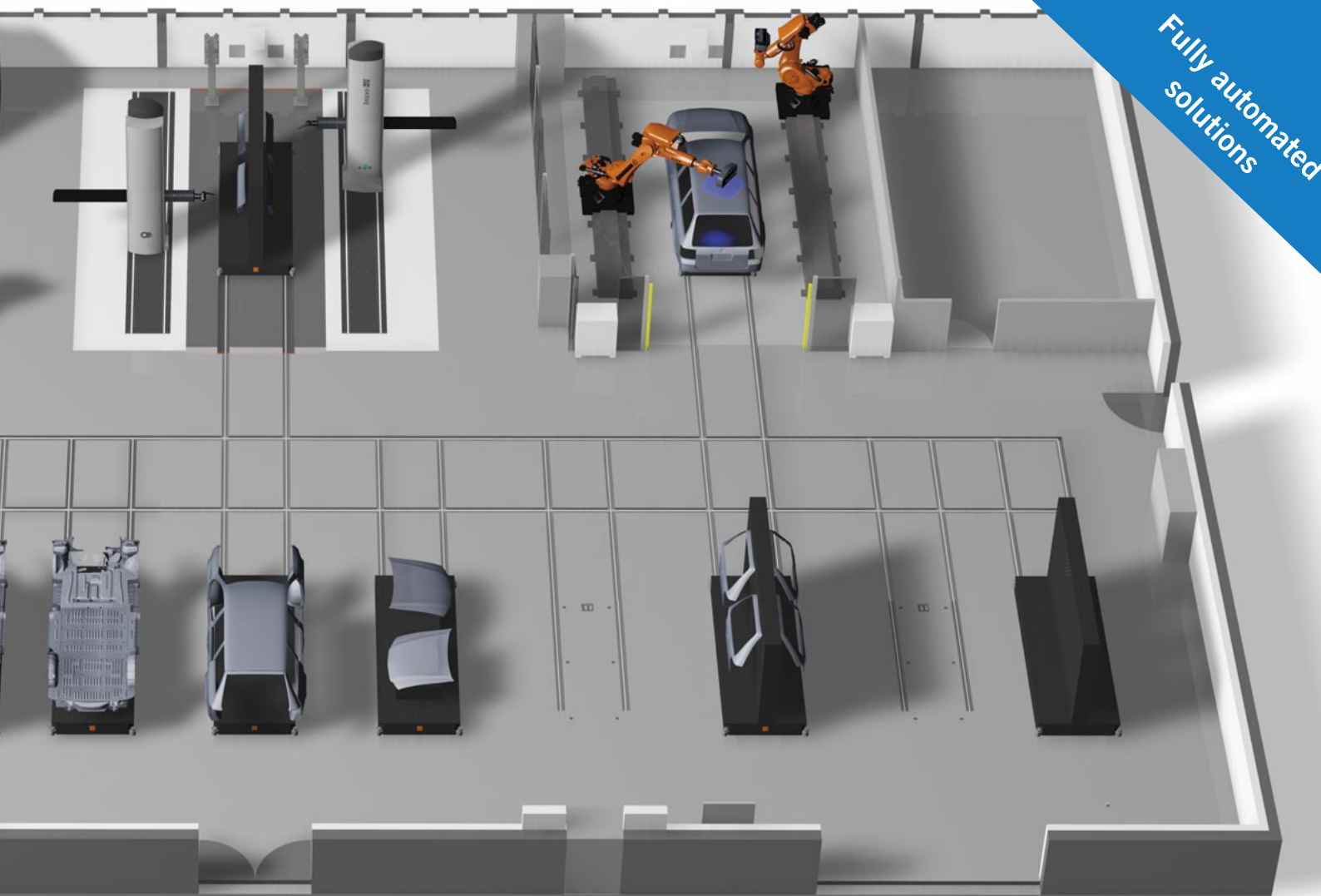
- For fully automatic controlled loading stations
- Quiet forcibly guided run rails embedded in the floor
- No edges or grooves to stumble over
- 90° cross operation due to correspondingly arranged pivoting wheels
- Electro drive with battery operation
- Position monitoring/controlling with RFID transponders and IW-LAN radio network
- Positioning in CMM by lowering on to centering rings



Example of a recent project:

- 6 horizontal, 5 vertical Alu Structure Plates
- Loading of 2 tactile double arm CMM and a duplex robot cell for blue-light photogrammetry
- Plate system and measuring equipment are remote-controlled by a master control station





## Fully automated solutions

# DTS - Driverless Transport Systems

## With Alu Structure Plates, transponder-guided

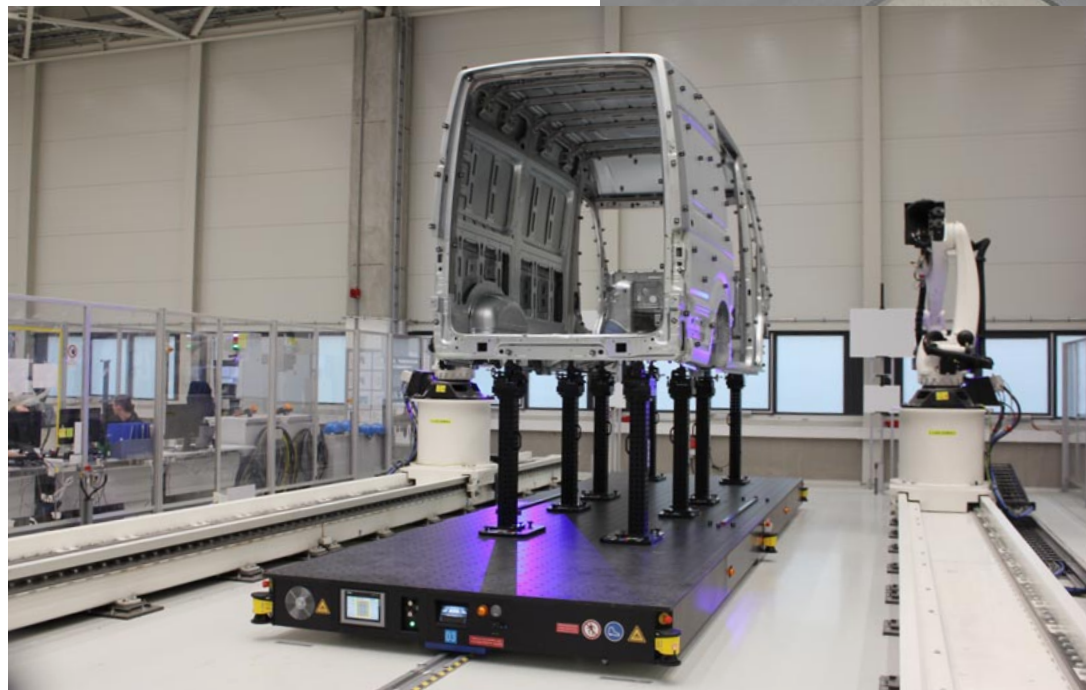
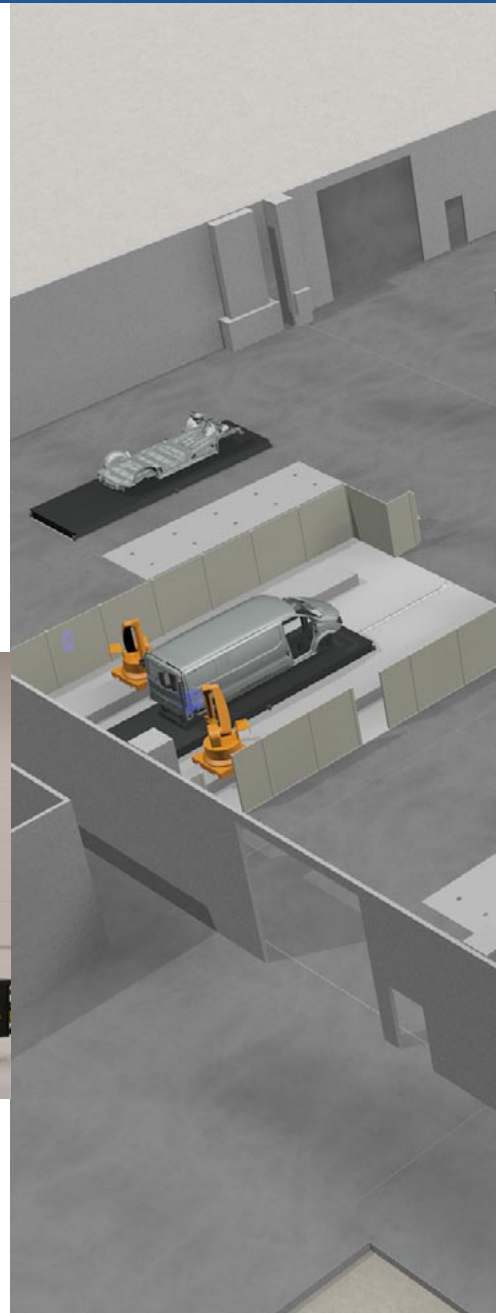
For fully automatic loading systems

- Quiet, accurate precise running via RFID chips embedded in the ground
- No mechanical travel or guiding elements required
- Straight forward / backward movement and turn on the spot
- Electric motor drive with battery supply
- Position monitoring / control with transponders and IW-LAN wireless network
- Repeatable positioning in the CMM by lowering on centering rings



Example of an implemented system:

- 9 horizontal structure plates 8x2,4m
- loading of 2 tactile double-column CMMs and 4 duplex robotic cells  
For photogrammetry measurement
- independent start / target movement with loading / collision monitoring

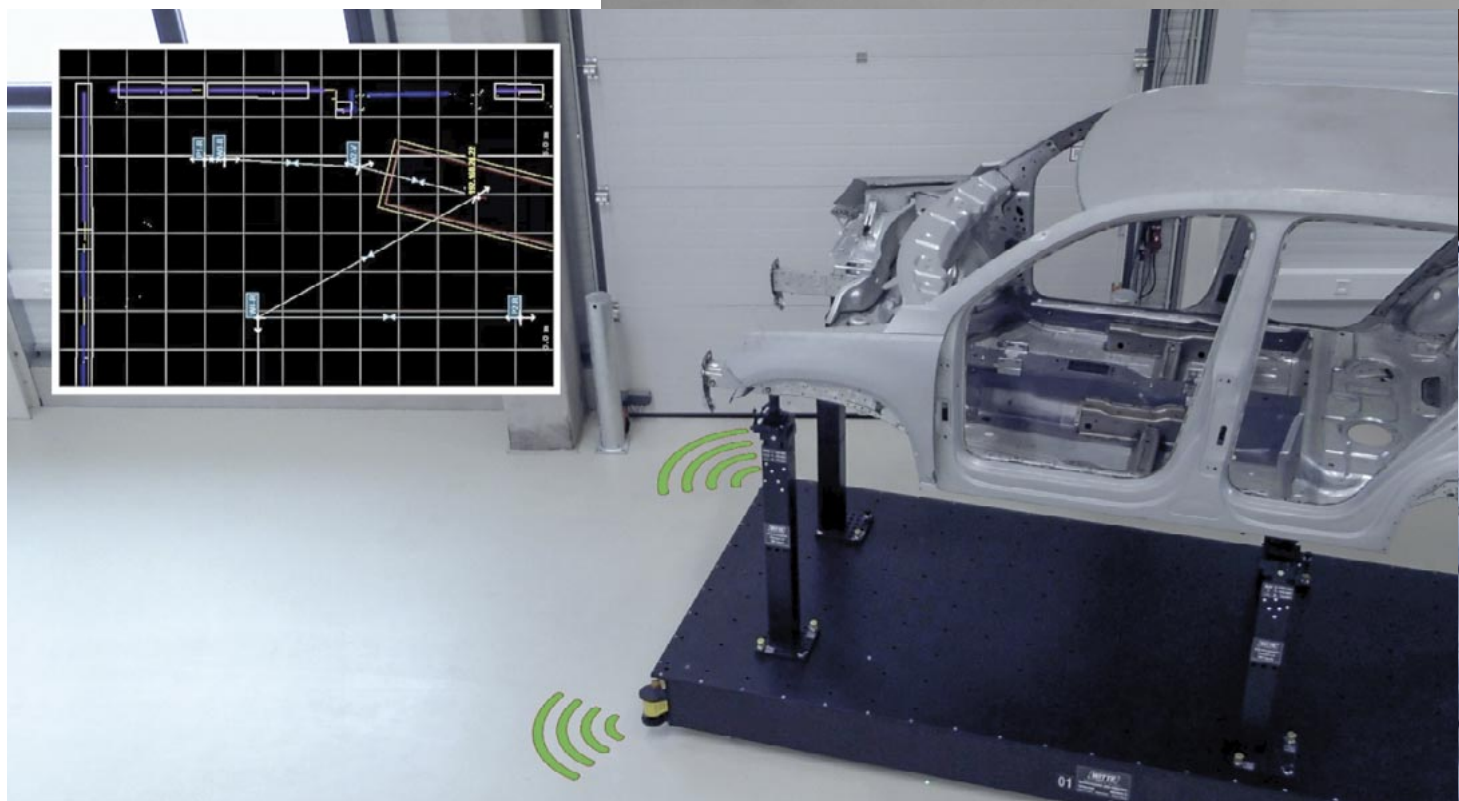
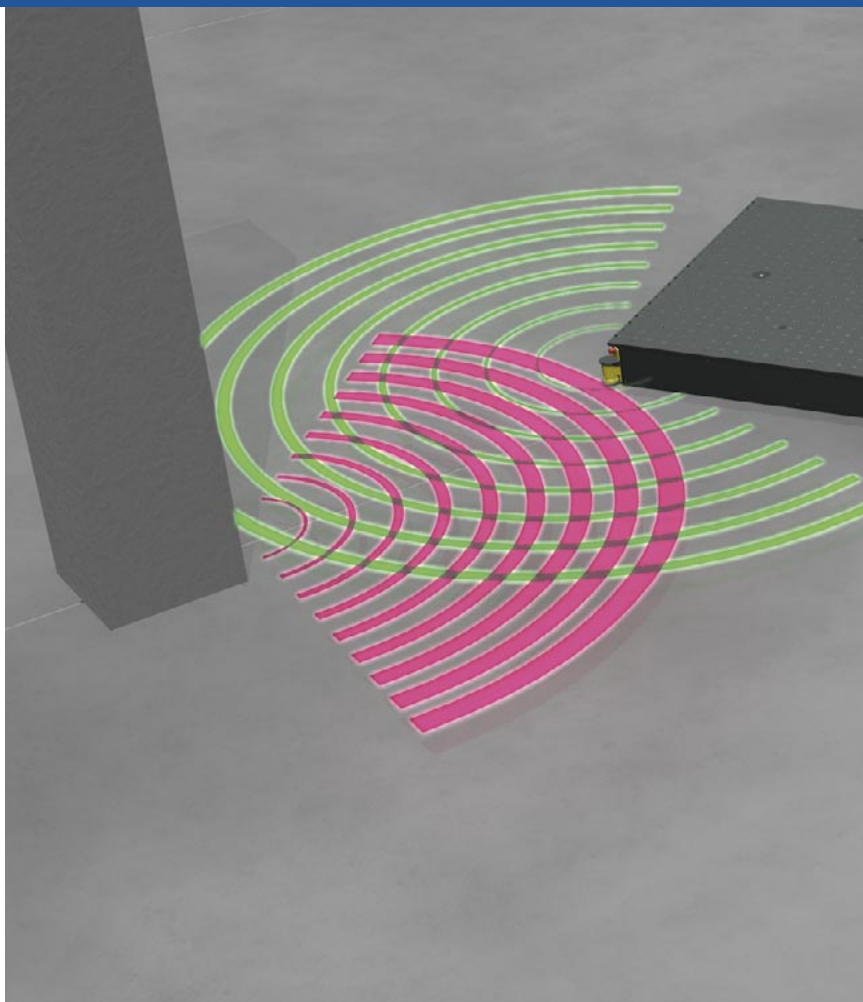


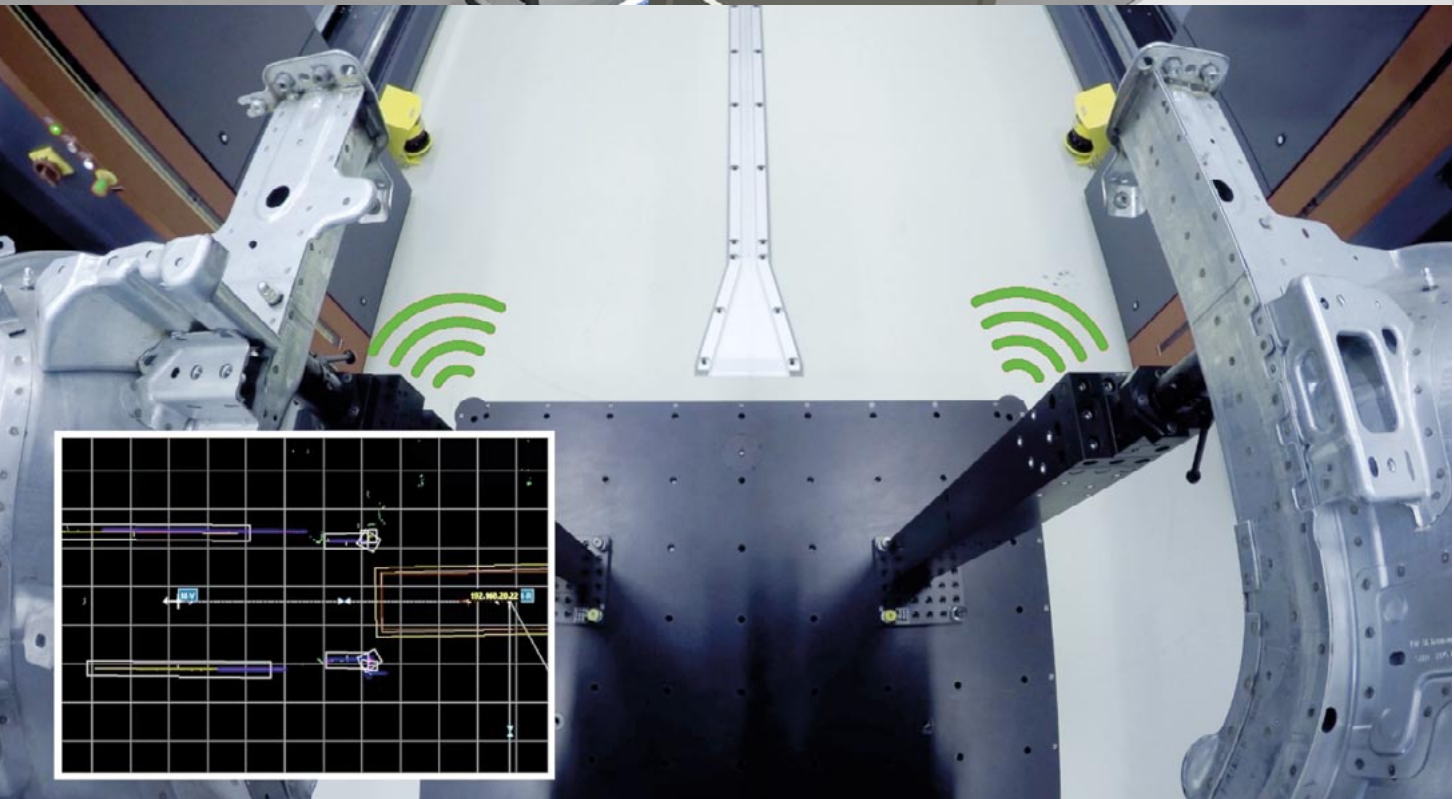


# DTS - Driverless Transport Systems

## Autonomous driven

- For fully automatic controlled loading equipment
- Quiet, accurate running due to permanent, independent orientation and navigation according to hall layout
- No drive or guide elements
- Straight forward / backward movement and turn on the spot, cornering (in preparation)
- Electric motor drive with battery supply
- Repeatable positioning in CMM by lowering on centering rings
- Fast changeover to new halls.  
Layouts customizable, through easy reprogramming of the path tracks
- Independent alternative route calculation possible







## Modular Fixturing Systems



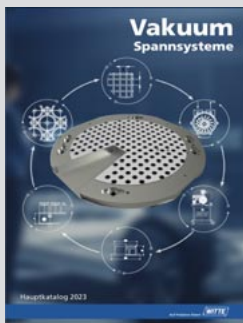
## PROject Project implementation made to order



## FixBase® Loading systems Structure plates Automation



## FIXINSPECT® Measuring accessories Optical / tactile systems



## Vacuum Clamping Systems

Witte: Fixed on precision  
whatever the means

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