All Alu Structure Plates are tested and optimized for capacity and rigidity according to FEM analysis.
Witte FixBase®

Application examples

Horizontal and vertical structure plates, on guide rails, automated

FixBase cube combination mounted with column type supports

Fixbase Cube for mounting single parts of vehicle front

Horizontal Structure Plate with integrated motor driven jack system

Perpendicular Structure Plate with motorized height adjustment

Witte FixBase® elements can be anodized in different colours. The colour natural is standard, black (-1) is available as an alternative. Other colours on request.
Witte FixBase®

- Horizontal with supports 1
- Vertical with supports 2
- Stationary plate on rotary table

Detailed information on the following pages
Plate versions

- mobile Plate
  - horizontal
    - with drive
      - on wheels
        - with hovercraft
          - radio-controlled
          - without rails
          - on rails
        - automatic
          - with hovercraft
            - cable-controlled
            - on rails
      - with hovercraft
    - without drive
      - on wheels
        - with hovercraft
        - radio-controlled
        - without rails
        - on rails
      - automatic
        - with drive
          - on wheels
            - with hovercraft
            - cable-controlled
            - on rails
          - automatic
            - without drive
              - with hovercraft
                - without rails
                - on rails

- vertical
  - with drive
    - on wheels
      - with hovercraft
        - radio-controlled
        - without rails
        - on rails
      - automatic
        - with hovercraft
          - cable-controlled
          - on rails
  - without drive
    - with hovercraft
      - without rails
      - on rails

Witte FixBase® Equipment

According to design

**Horizontal Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units

**Vertical Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units

According to design

**Vertical Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units

Witte FixBase® Equipment

According to design

**Horizontal Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units

**Vertical Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units

Witte FixBase® Equipment

According to design

**Horizontal Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units

**Vertical Structure Plate:**
- Steel supports
- Hovercraft plates
- Pendle rollers
- Rails with direct driven tilt/lift units
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 tolerance JS8
higher precision on request

load rating:
500kg/m² up to 2000kg/m² 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

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

View from underneath

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.

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Alu Structure Plates

rotating

Robot measuring cell for optical measuring
Configuration:
- 2 vertical Alu Structure Plates mounted on rotating hovercraft supports, rotatable by 180°
- 1 stationary, horizontal Alu Structure Plate with extended height
- On hovercraft, rotary and tact tables
- To reach both work pieces or do assembly from outside without interrupting measuring process
- Integrated safety monitoring, release switch

Vertical Alu Structure Plate on hovercraft rotary table

Horizontal Alu Structure Plate on motorized rotary table (shown without base unit). Force is directed to the rotary plate via inner plate structure
FixBase® Cubes

- Cubes mounted with grid plates:
- Grid with fitted bores
- Flat, full surface grid on 5 sides
- Cubes in different or same sizes can be joined together or used individually
- Maximum dimensions 3,000x1,500x2,000mm
- Further functions can be integrated into the cubes i.e. door supports which move outwards, hood or tailgate supports which upwards

Supports for single parts and assys of various versions and models i.e. two-seater, notchback, limousine, estate, van, SUV are possible using corresponding configurations

Application example for FixBase cubes
- Single cube for frontend (top)
- Combination of several cubes to mount all parts of a body-in-white
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
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