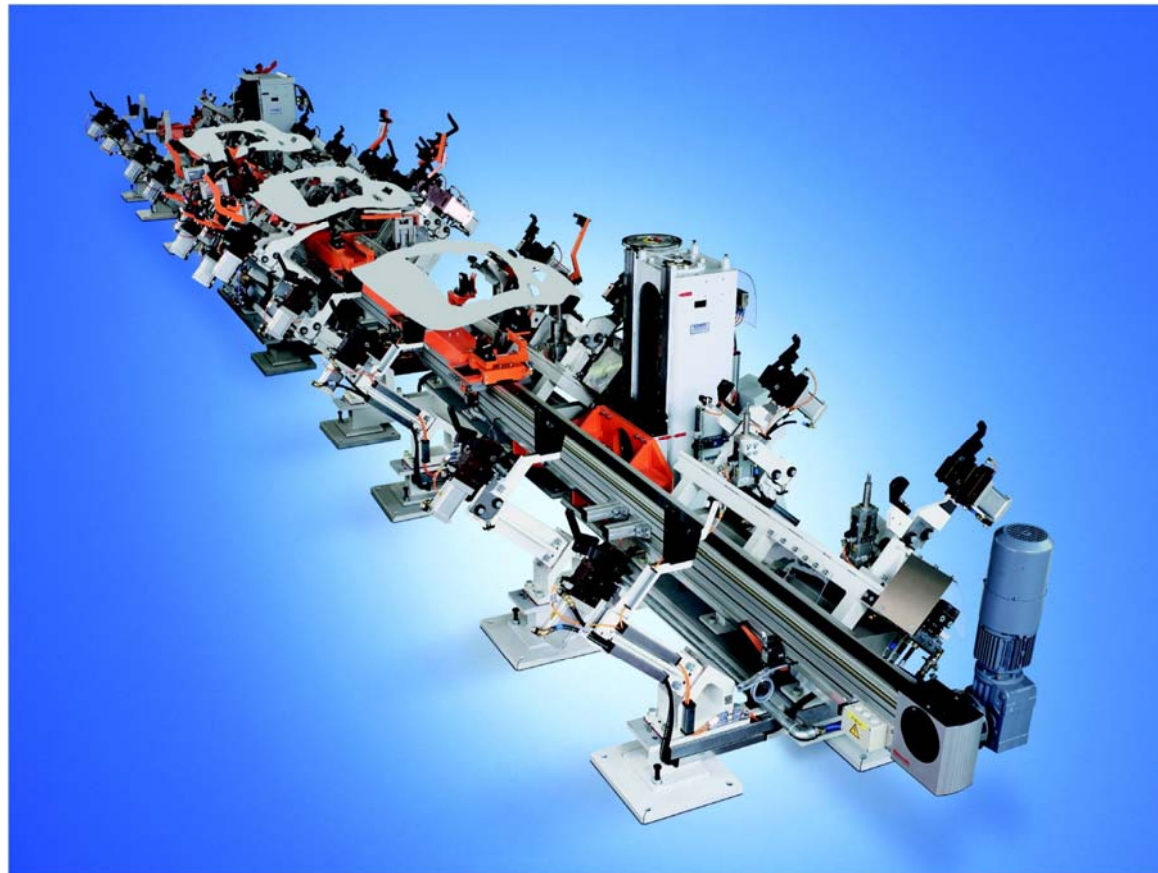
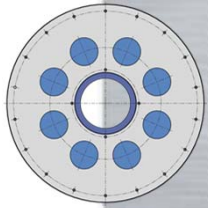


# EXPERT-TÜNKERS Monorail Shuttle Systems





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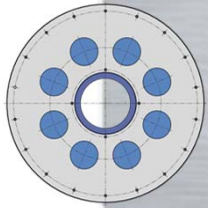


## 1. Basics

The new EXPERT-TÜNKERS Monorail Lift Shuttle Systems were developed after extensive studies of the market requirements.

We provide:

- 3D CATIA V5 models for Simultaneous Engineering projects for early and efficient integration into the plant layout
- High operational availability through proven EXPERT-TÜNKERS technology
- Optimized transport times
- Nearly maintenance free/extremely long MTBF (mean time between failures)
- Standardized and optimized components
- Economically advantageous solutions



# EXPERT-TÜNKERS Monorail Shuttle Systems

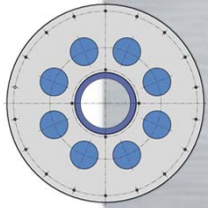


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## 2. Transport Principle

The EXPERT-TÜNKERS Monorail Lift Shuttle Systems transport several parts synchronously, in a harmonic motion shock-free from station to station. The parts are lifted synchronously and after the horizontal stroke deposited in the next station accurately.

The part pick up (soft touch) is with  $V = 0$  m/min.

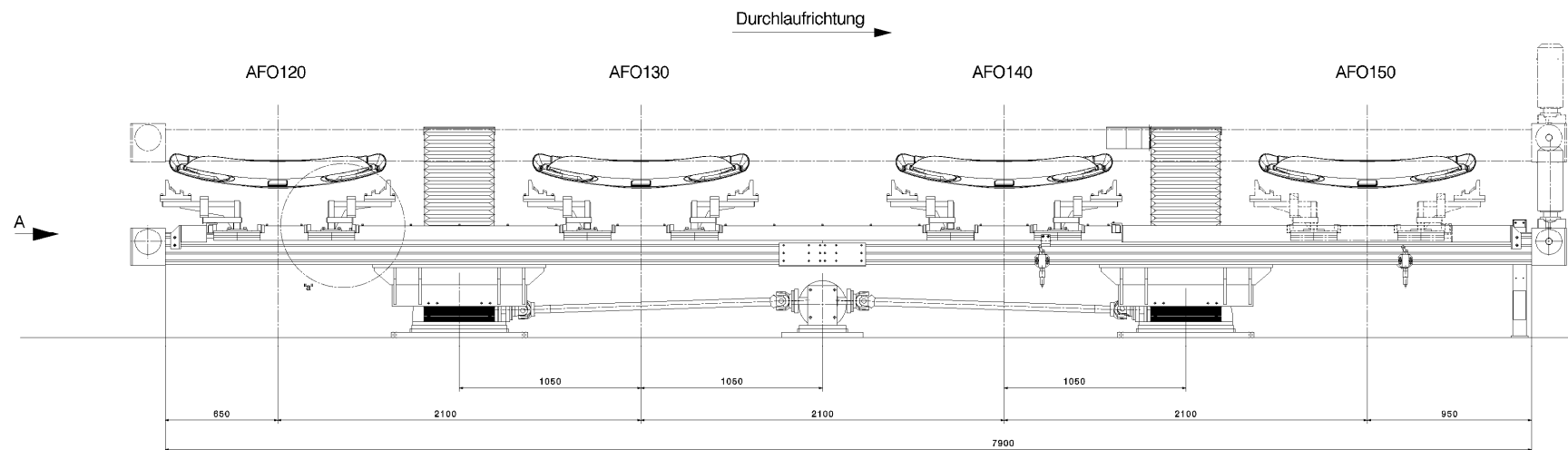


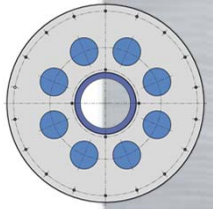
# EXPERT-TÜNKERS Monorail Shuttle Systems



## Sample of use: Rear Hood

### Side View



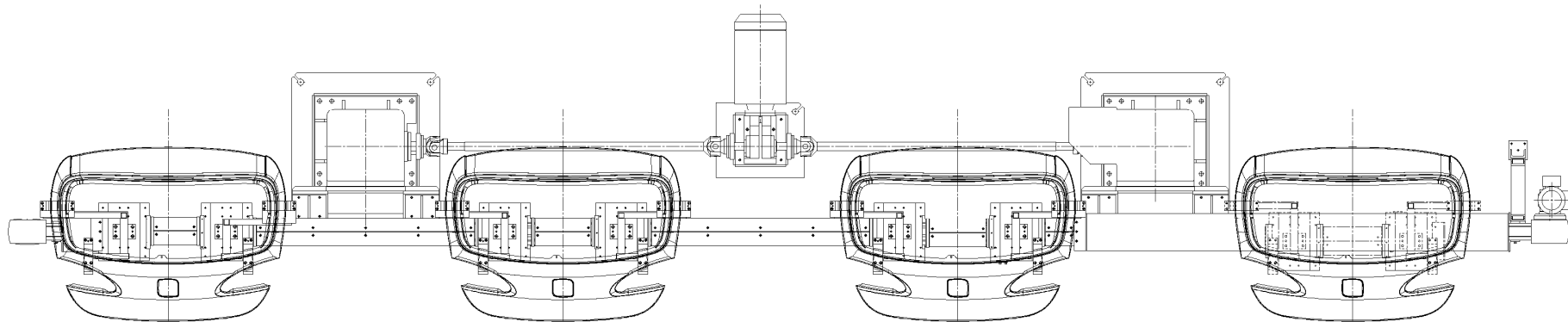


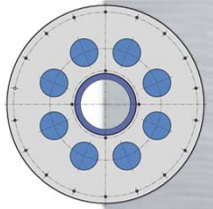
# EXPERT-TÜNKERS Monorail Shuttle Systems



## Sample of use: Rear Hood

Top View



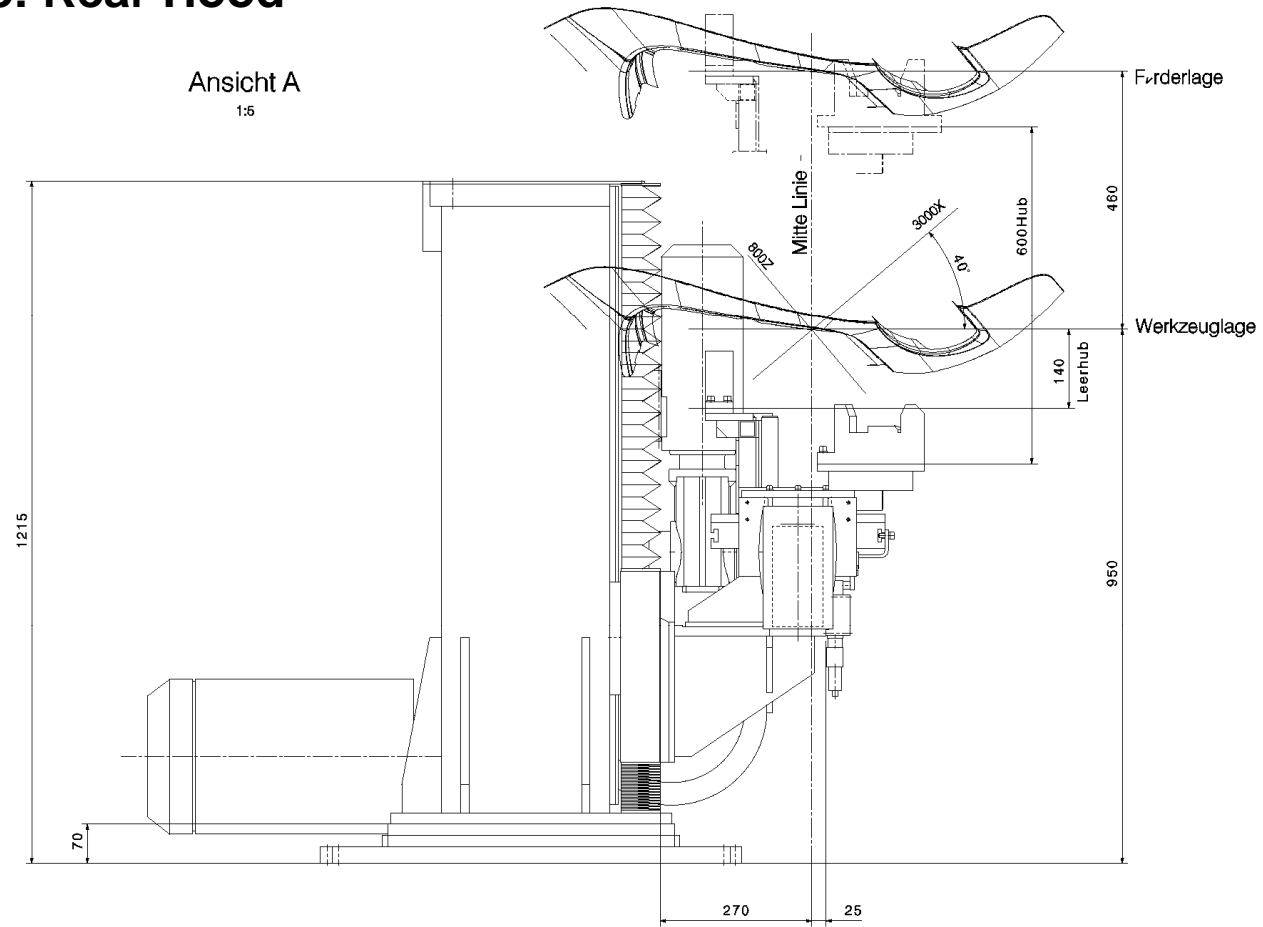


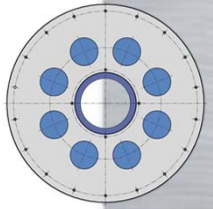
# EXPERT-TÜNKERS Monorail Shuttle Systems



## Sample of use: Rear Hood

### Section



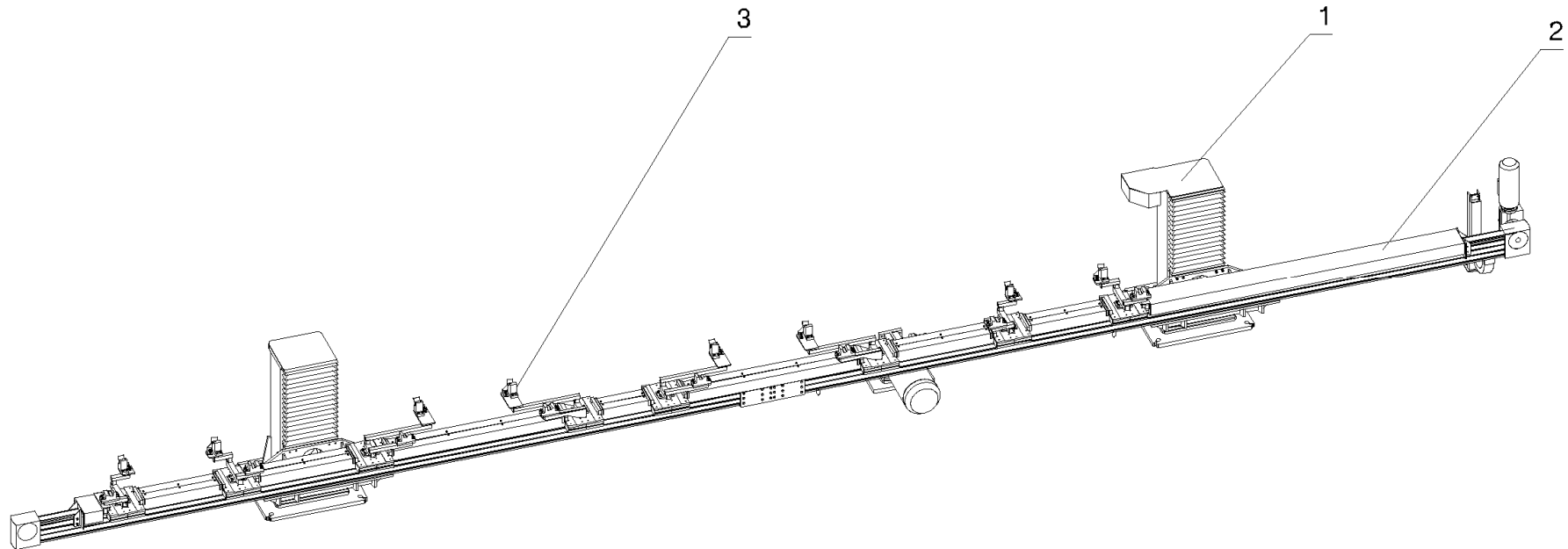


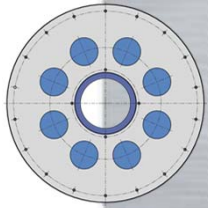
# EXPERT-TÜNKERS Monorail Shuttle Systems



**Sample of use: Rear Hood**

**GA Model**





# EXPERT-TÜNKERS Monorail Shuttle Systems



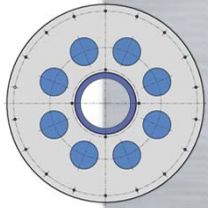
## 3. Vertical Drive

The vertical movement of the EXPERT-TÜNKERS Monorail Lift Shuttle Systems is generated by two EXPERT-TÜNKERS standard lifters.

Advantages of the EXPERT-TÜNKERS standard lifters:

- Proven cam / cam follower drive
- Harmonic, shock-free drive movement
- Part pick up (soft touch) at  $V = 0$  m/min.
- Acceleration/deceleration per optimized law of motions of the VDI (German Engineering Federation) Richtlinie 2143
- Low power requirements
- Exact, form locking, mechanically locked end positions





# EXPERT-TÜNKERS Monorail Shuttle Systems



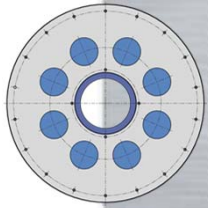
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## 4. Horizontal Drive

The horizontal movement is generated with an electromechanical standard linear axis.

Technical advantages of the linear axis:

- Free programmable stroke = flexibility
- Drive with a servo gear motor = flexible speed
- Large aluminum profile with high durability
- Solid roller clusters mounted on integrated and jerk free steel inserts
- Maintenance free with lifetime lubricated and sealed rollers
- Weld resistance cover in the tooth belt area



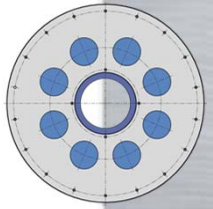
# EXPERT-TÜNKERS Monorail Shuttle Systems



## 5. Technical Data

Number of stations:	3 to 10 stations (Standard)
Total length:	max. 20,000 mm (Standard)
Horizontal stroke:	freely selectable
Horizontal stroke time:	example 2,500 mm in 2.0 seconds
Vertical stroke:	min. 250 mm, max. 1,300 mm
Vertical stroke time:	600 mm in 2.0 seconds
Height:	500 mm from upper edge of floor to upper edge of (part holder)

The speeds are accordingly to the stroke and lift in relation of the weight.

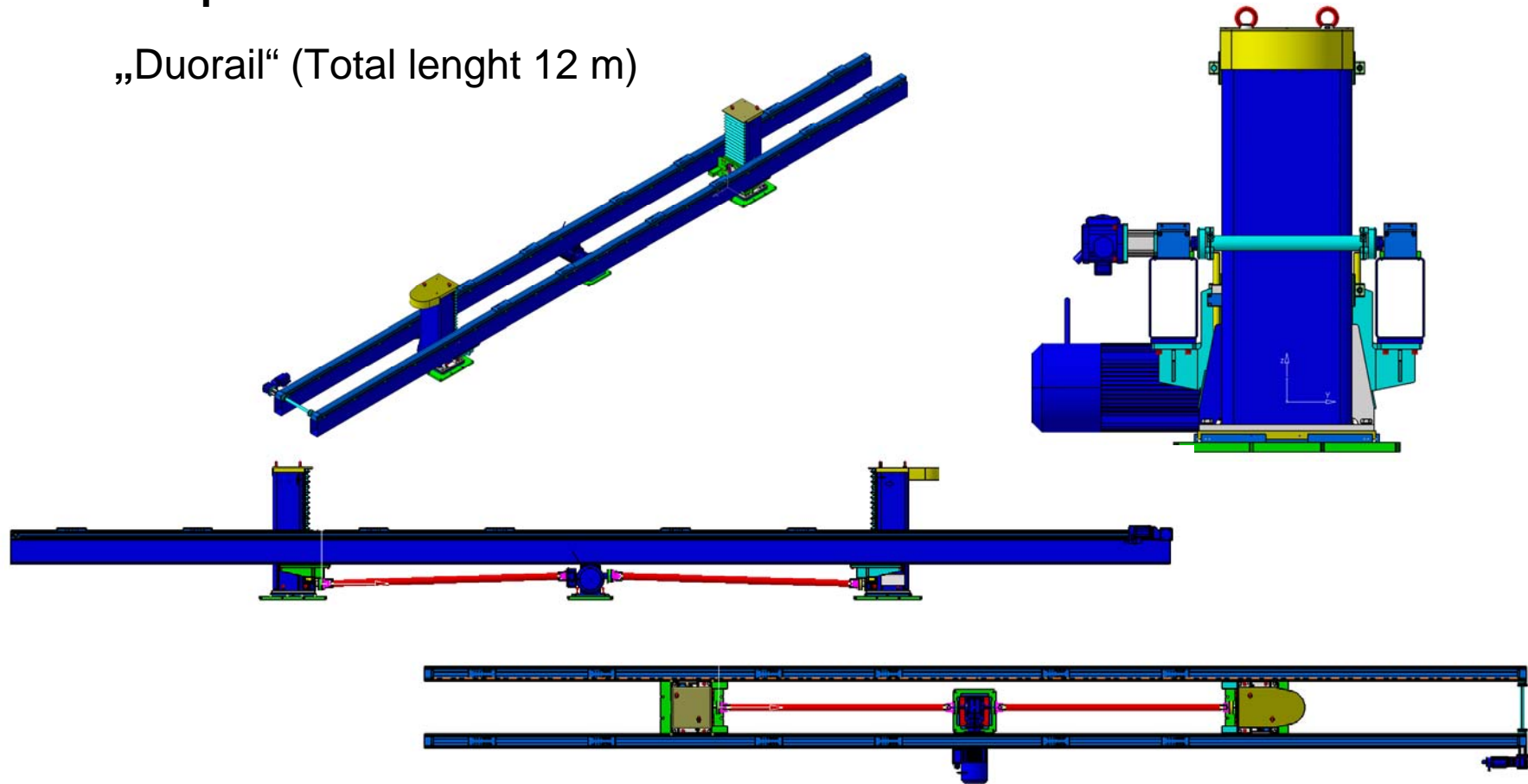


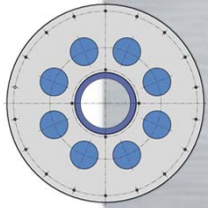
# EXPERT-TÜNKERS Monorail Shuttle Systems



## Sample Front Floor

„Duorail“ (Total length 12 m)



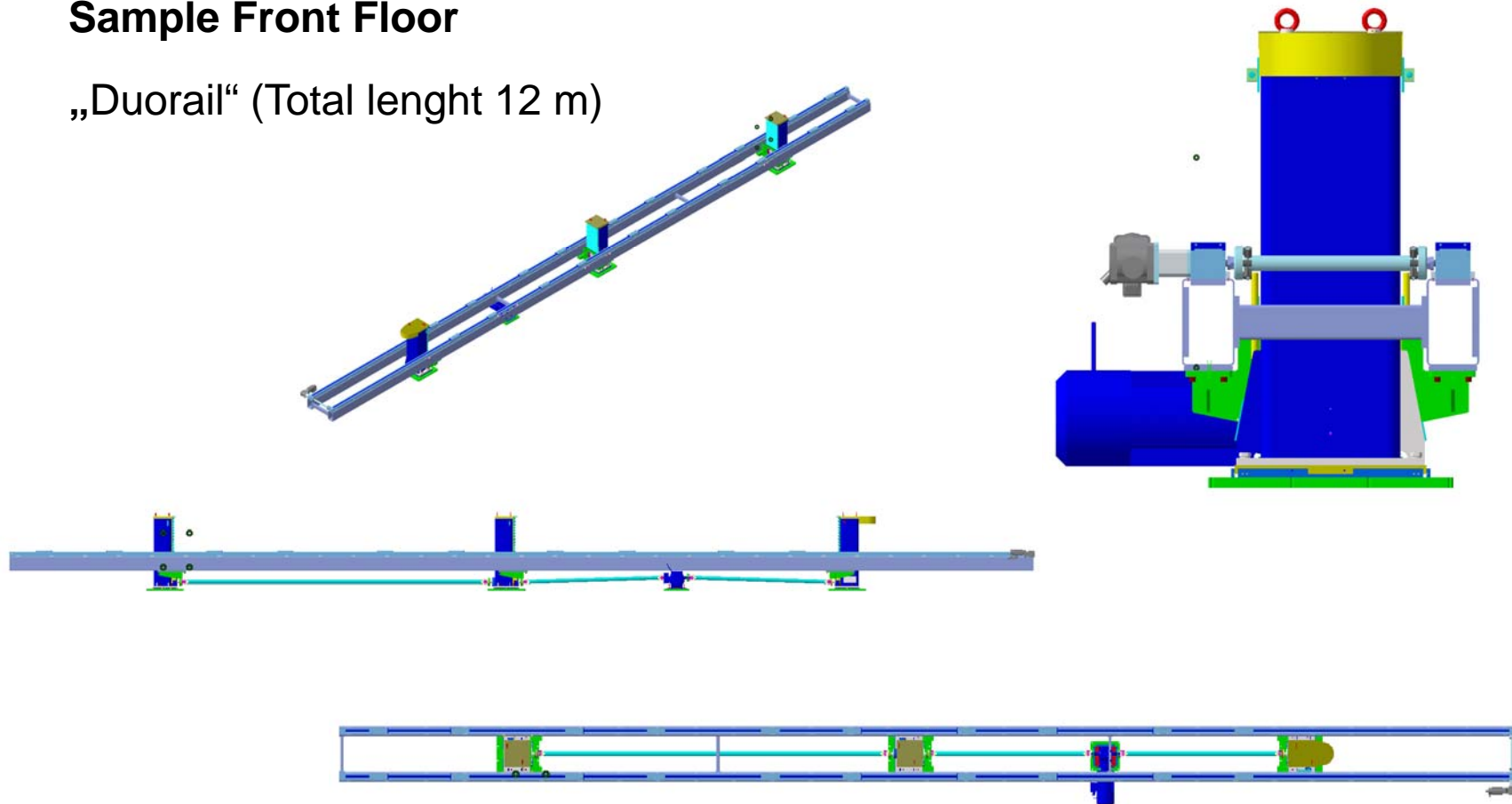


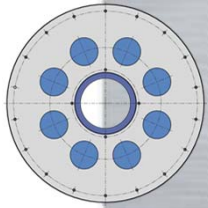
# EXPERT-TÜNKERS Monorail Shuttle Systems



## Sample Front Floor

„Duorail“ (Total length 12 m)



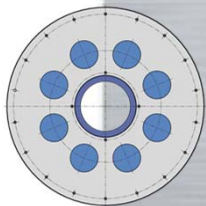


# EXPERT-TÜNKERS Monorail Shuttle Systems



## 6. References

- Seat Martorell (Spain)
- Volkswagen Taubaté (Brasil)
- Volkswagen Anchieta (Brasil).



**We are looking forward to receiving  
your enquiry addressed to:**

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