

Transporting

Transporting technology



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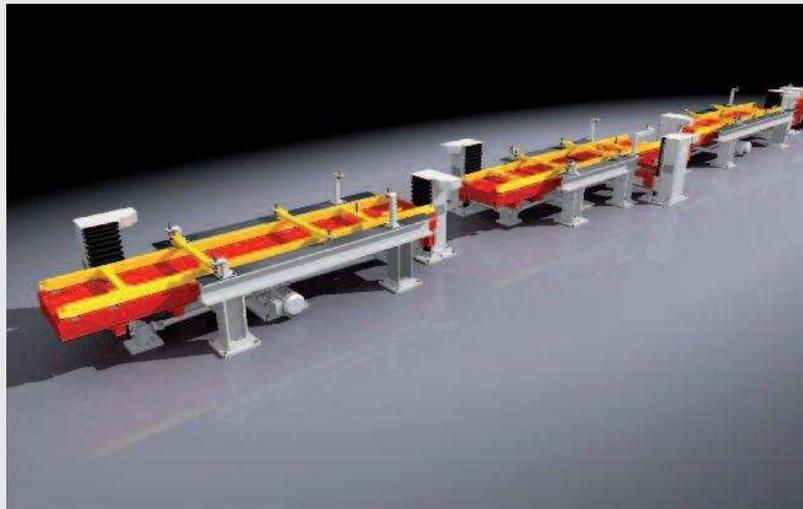
Transporting solutions, e. g. for the handling of automotive assembly groups such as baseframes or body, installed as a complete production line with up to 40 work stations.

Application examples

Lift and carry units

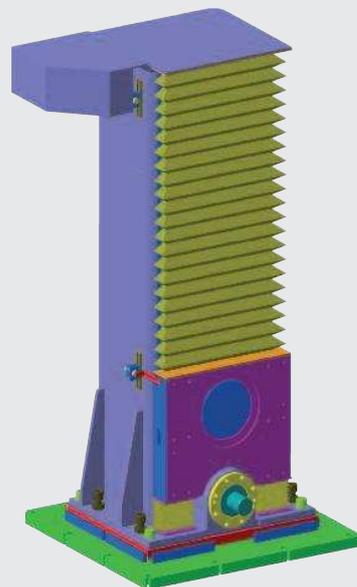
Conveying system for body-in-white manufacture, for safe and accurate positioning of skids transferring automotive bodies or automotive components in flexible station design in non-linked lines.

- short cycle times
- soft component transfer
- flexible determination of transfer positions
- compact design
- extremely low-maintenance
- long service life
- good operator protection
- no frequency converter required for lifting



Basic HSF element: Lift columns

Drive module for dynamic lifting, lowering and transporting of high loads with simultaneous high positioning accuracy.

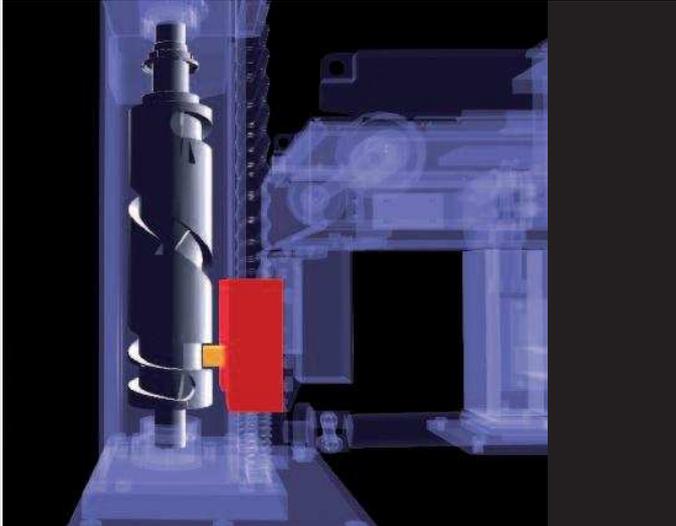


The movement profile is transferred via a curve-driven roller which realises dynamic and repeatable movements with a (defined) automatically locked end position.

Application areas include, among others, fixture changing systems, lift and carry systems, lift shuttle, line linkage, level lifters, material lifts and general transporting and guiding tasks.

Function

The curve-driven roller is activated by a geared motor. Acceleration and deceleration of the customer load is generated via a curved grooved cut into the drive cam. The high-performance cam follower transfers accelerating and deceleration form-closed to the linear units.

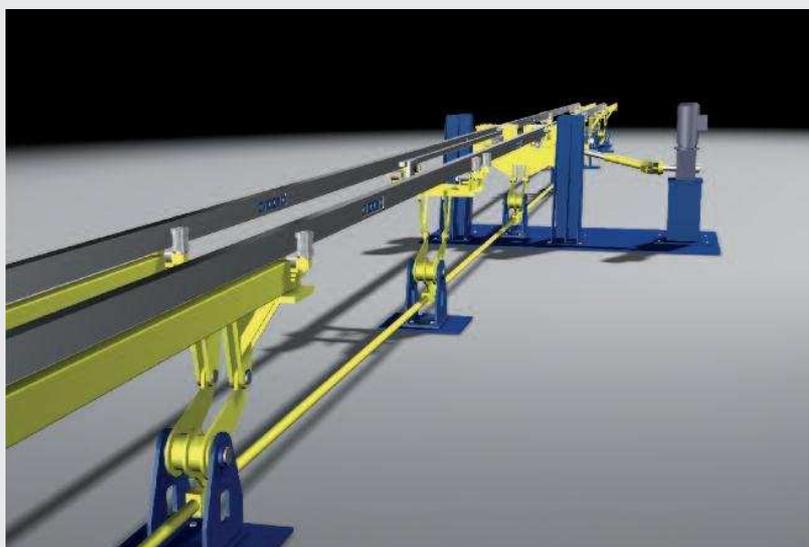


Advantages

- Approved drive principle via cylinder groove and follower
- Smooth and shock-free drive movements
- Freely selectable working positions
- Acceleration and deceleration in accordance with the optimised law of motion pursuant to the VDI guideline No. 2143.
- Highly precise, form-closed, mechanically locked end positions

Lift Shuttle

Conveying system for body-in-white manufacture, for safe and precise positioning of skidstransferring automotive bodies or automotive components in flexible station design in linked lines.



Monorail shuttle

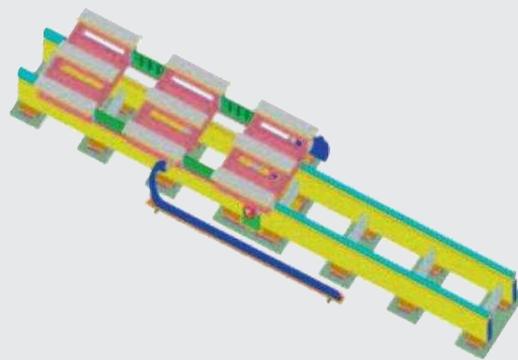
EXPERT-TÜNKERS monorail lift shuttle systems, transport several components synchronically, harmonically and shock-free from station to station. The components are synchronically lifted off, transferred horizontally and precisely positioned again at the next station. The gentle component transfer is carried out at $V = 0$ m/min.

The vertical drive of the monorail lift shuttle system is based on two EXPERT-TÜNKERS standard lifters.

- Approved drive concept via cylindrical cams and cam followers
- Harmonic and shock-free drive motion
- High-precision, form-closed, mechanically locked end positions



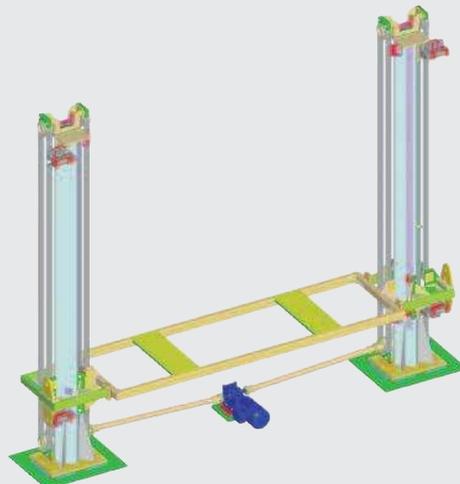
Tool transfer unit



Suited as tool transfer unit within flexible production lines.

Level lifter

Lifting fixture for transferring complete car bodies from welding lines to the next conveying process.



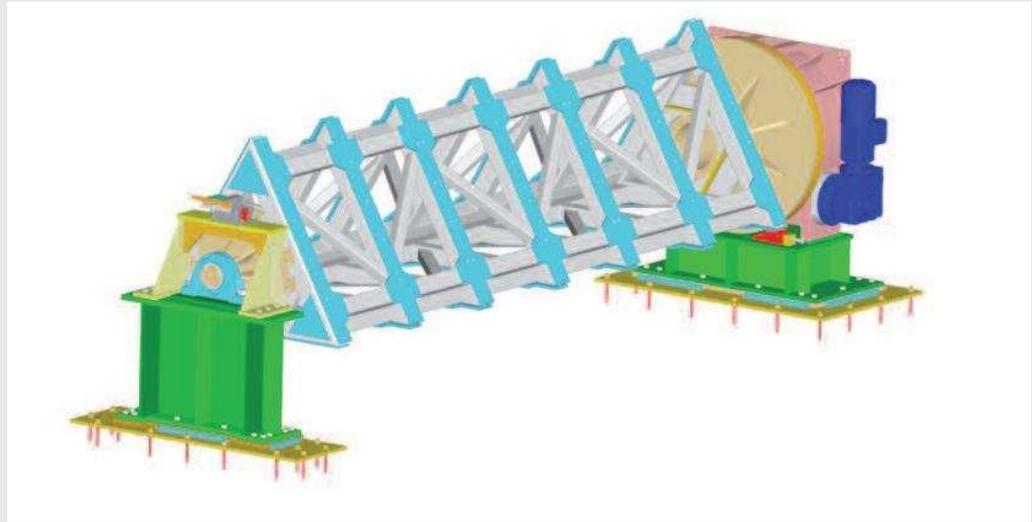
Additional modules



Additional modules

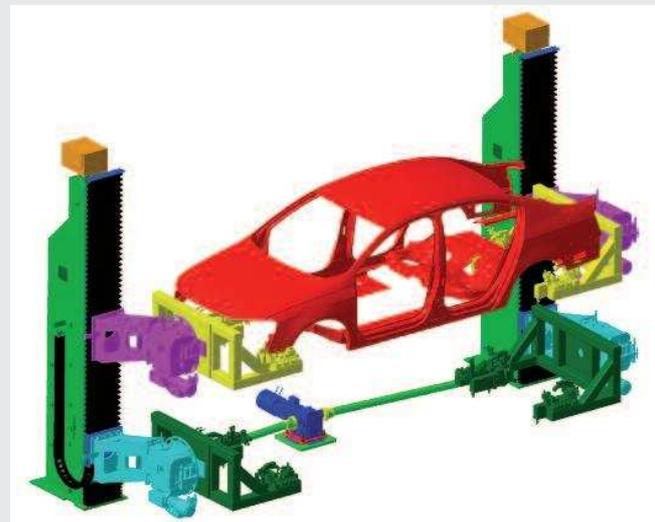
Special drives

EXPERT-TÜNKERS provides solutions for your component transporting systems. Our modular concept of drive units offers optimal, compact and economic solutions for reliable, constant handling operations. All drive axles required for the handling movements of high payloads are designed as separate modules with drive and control systems.



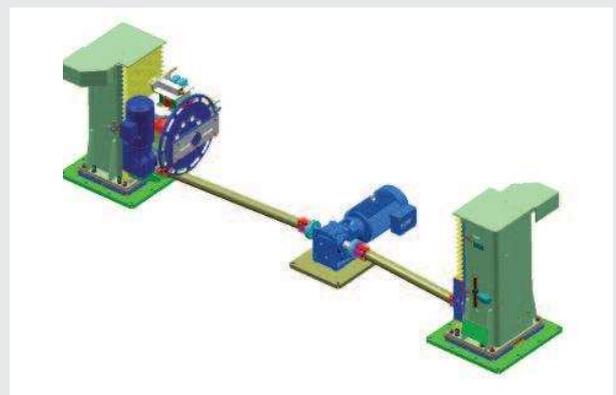
Trunnion drive

For side panel tool changer.



Lift and rotate unit

For flexible transporting of automotive bodies into optimal welding positions.



Rotary table index drive with integrated precision lock

EGV series

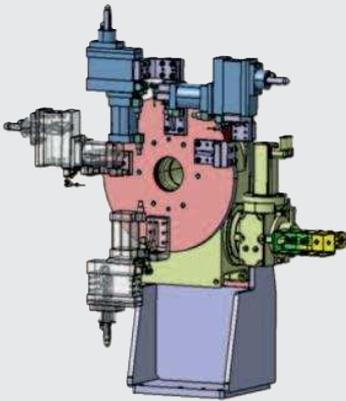
With a view to short cycle times, standard index drives are designed for the transfer of high dynamic moments for accelerating and decelerating payloads.

The force transmission via the pairing grooved roller / cam followers, limits the static moment that can be transmitted in the dwell period.

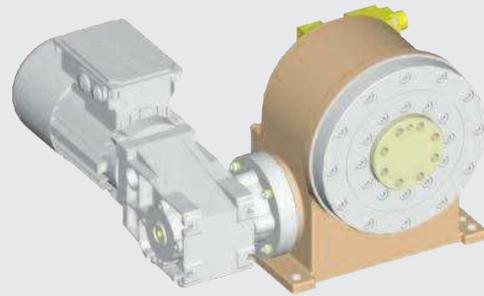
Applications in which the transmission of high standstill moments is required in working position (as to roll hemming or specific positioning operations) rely on correspondingly oversized drives or the use of additional locators.

Advantages:

- Extremely compact design – small space requirements
- Approved EXPERT-TÜNKERS curve-driven technology
- Easy dwell period positioning without complex servo technology
- Repeatable and high-precision positioning due to mechanically locked end position
- Application as horizontal and vertical axis



EGV trunnion drive (windmill) as a drive module for flexible underbody clamping technology



Extremely compact index drive. The output flange is mechanically locked in the dwell period via a supporting element on the drive cam.