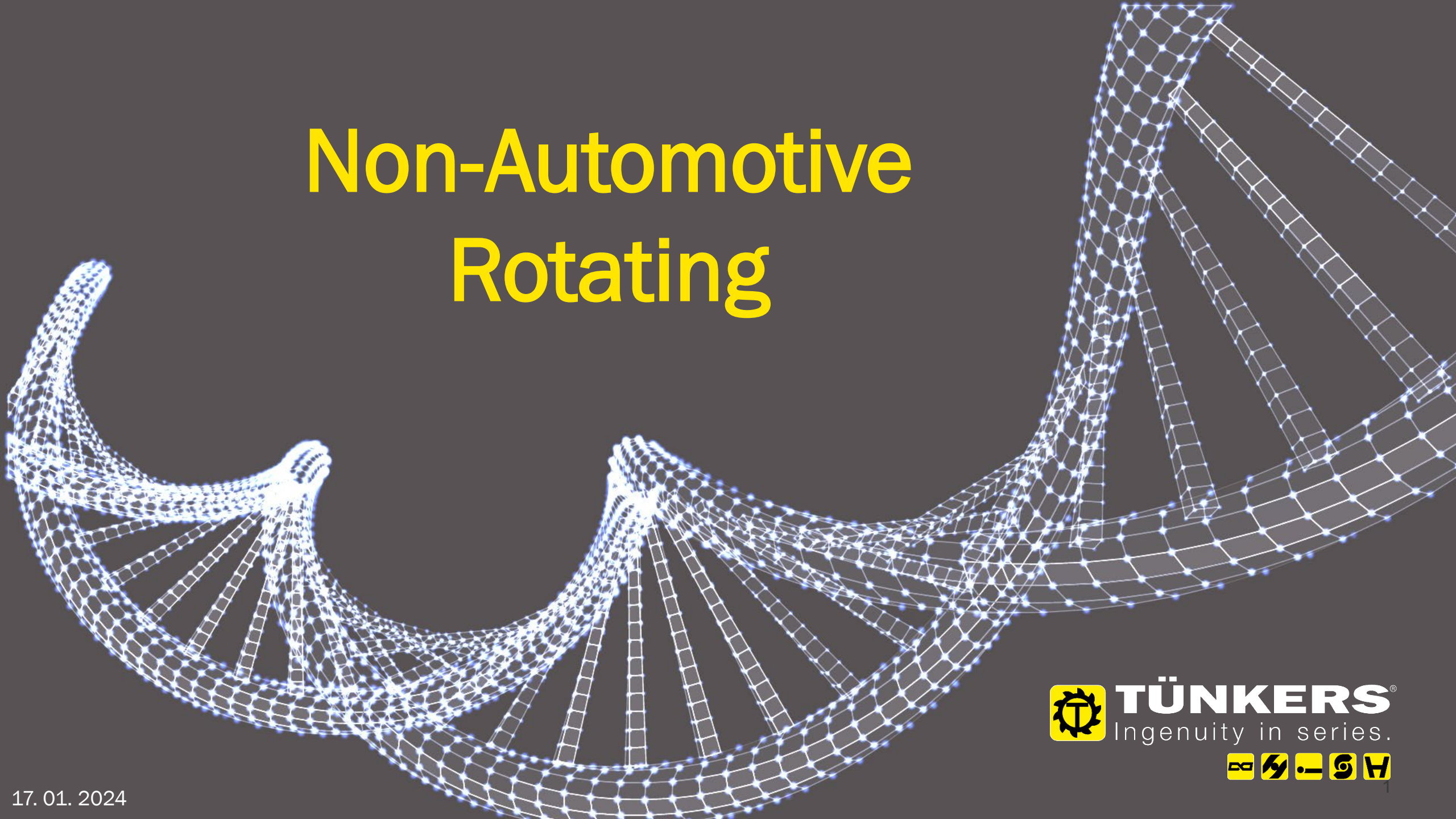


Non-Automotive Rotating



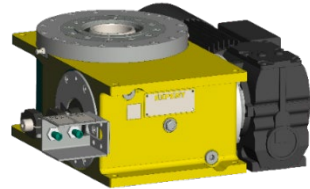
 **TÜNKERS**[®]
Ingenuity in series.



Product Overview

Selection of Rotary Tables

Rotary Tables / Trunnion Drives



EGD - SERIES
Globoidal-Rotary Table for high loads and precision at low cycle times in a compact design



EGV / EEW - SERIES
Optimized Trunnion for high radial forces. The mechanical lock ensures a high positioning

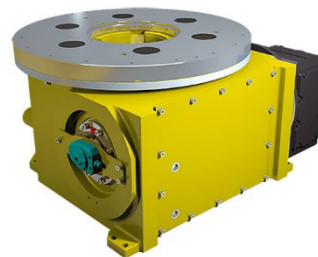


EDX 410-500 - SERIES
Rotary Table with fixed partion for clocked work sequences, as a mini-series with dust seal

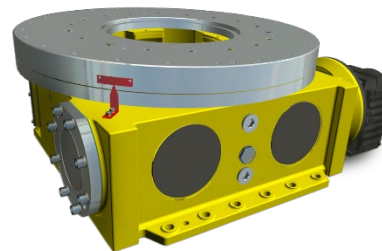


EP / PA - SERIES
Parallel Shift Index Drive for oscillating applications with high precision

Standard und Heavy-Duty Rotary Tables



EDX - SERIES
Rotary Table and Trunnion Drive with fixed partion cam drive



EDH+ - SERIES
Flexible Rotary Table for complex and dynamic applications up to 64t



EDC - SERIES
Flexible Double Cam Rotary Table for highly dynamic applications



EGC - SERIES
Ring Rotary Table - for flat and static internal applications

Rotary Table / Trunnion Drive

- EGD - Globoidal Rotary Table
- EGV - Trunnion Drive with mech. lock
- EEW - Trunnion Drive with staking out unit
- EDX - Mini Rotary Table with fixed partition
- EG - High precision Index Drive
- EP - Precision Parallel Shaft Index Drives



Application example

EGD - SERIES

Small Index Drive /
Rotary Table with
high precision

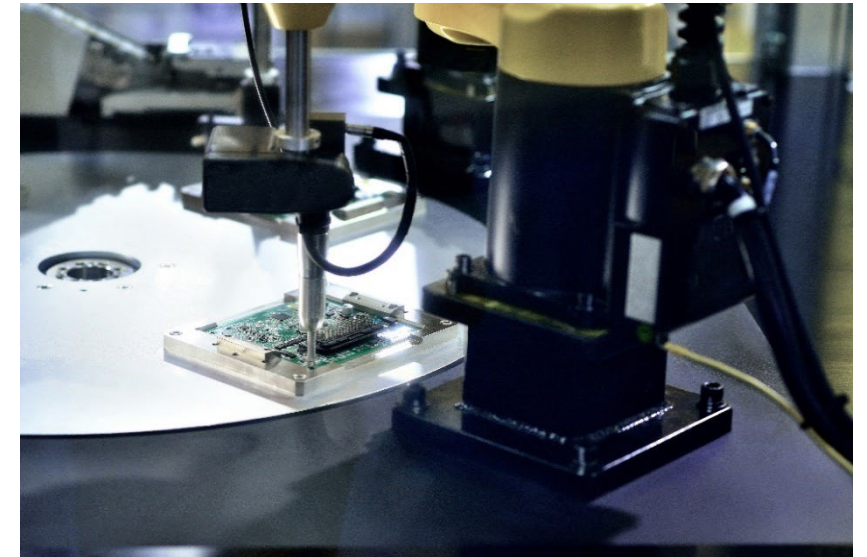
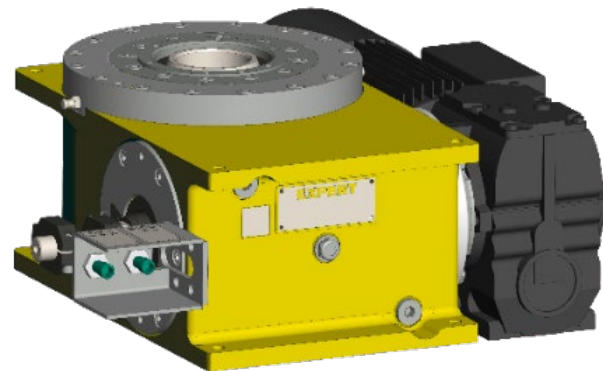
EGD | Globoidal Rotary Table

The EXPERT-TÜNKERS globoidal rotary tables of the EGD-series are compact index drives, designed for loads up to 2,000 kg. The globoidal principle allows very short cycle times at precise and low backlash positioning. The EGD-series is commonly used for fast manufacturing applications, packing or textile and glass production.

Based on the EGD-series we developed our flexible underbody clamping EGV-series as an additional element for the flexible production at your Multi-Model-Plant.

Advantages of the EGD-Series

- Low backlash indexing drive with globoidal cam
- Hardened and ground precision components
- Quality bearings with high load capacities
- Short cycle times at high customer load and compact design



Application example

EGV - SERIES

Trunnion Drive with
locking device

EEW - SERIES

Trunnion Drive with
staking out unit



Application example: „Windmill“ - EGV-Trunnion as drive module for the flexible underbody clamping

Flexible Trunnion Drives / Small Index Drives for high radial loads

EGV-Series – Globoidal-Trunnion Drive

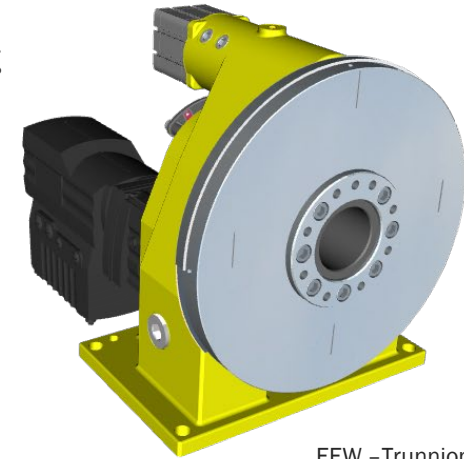
As a result of the redesign, the size of the EGV has been reduced to a minimum – this makes it the ideal choice as drive module for the flexible underbody clamping technology.



EGV – Globoidal Trunnion Drive

EEW-Series – Trunnion Drive with staking unit

Highly dynamic Trunnion Drive with reinforced radial bearings for increased customer loads of up to 7.5 t. The external safety locking unit ensures precise positioning and prevents unwanted twisting during the entire machining process.



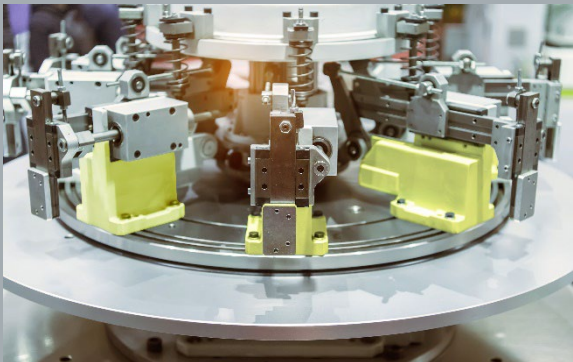
EEW – Trunnion Drive

Vorteile der EGV / EEW - Serie

- Compact design
- High precision
- High dynamics at short cycle times
- High static loads
- Integrated mechanical interlocking

EDX 410-500 - SERIES

Small Index Drives
with mechanical
escapement



Application

EDX | 410-500 Rotary Table

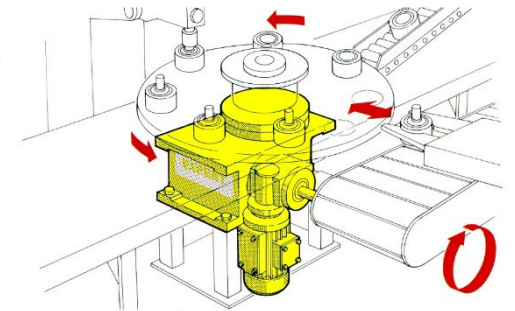
Small Index Drives – Rotary Table or can also be used as a Trunnion Drive with fixed pitch and maximum torque in an extremely compact design. Mechanical escapement due to adapted roller pitch. Suitable for holding radial forces without the use of additional locking devices or brakes.

Advantages of the EDX 410-500 - Series

- Low backlash, positive lock in operating position - no additional locking device require
- Higher output torque due to multiple cam follower principle
- Optimized power transmission to several cam followers at emergency stop
- Smooth and impact-free motion sequence due to specific law of motion
- Maintenance friendly - Cam follower exchange without tooling removal



Gearbox type: Cam drive

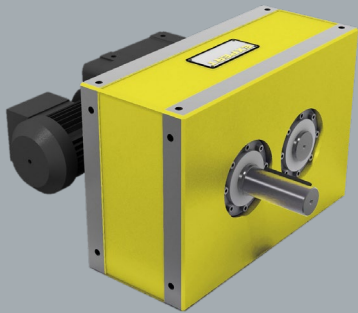


EP - SERIES

Parallel Shaft Index Drive

PA - SERIES

Parallel Shaft Index Drive with aluminum housing



EP - Parallel Shift Index Drive

Step gears for small applications

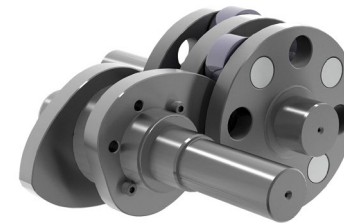
EP / PA – Parallel Shaft Index Drive

Parallel arrangement of input and output shafts. In the holding position a backlash-free and positive positioning of the output is achieved. The main application area of these drives are places where fast and vibration-free positioning is required. Typical applications are for fast and vibration-free positioning, e.g. packaging machines, conveyor systems or assembly machines.

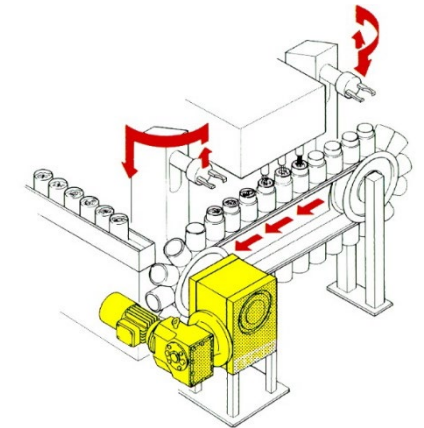
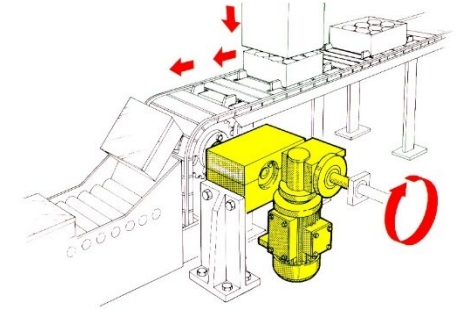
PA is also suitable for the food & beverage industry thanks to its lightweight aluminum housing.

Advantages of the EP / PA - Series

- Parallel shaft index drive
- Parallel arrangement of input and output shaft
- Polished cam discs and hardened support rollers
- Zero backlashes in the locking position
- Optional second output shaft
- Ideal for oscillating movements



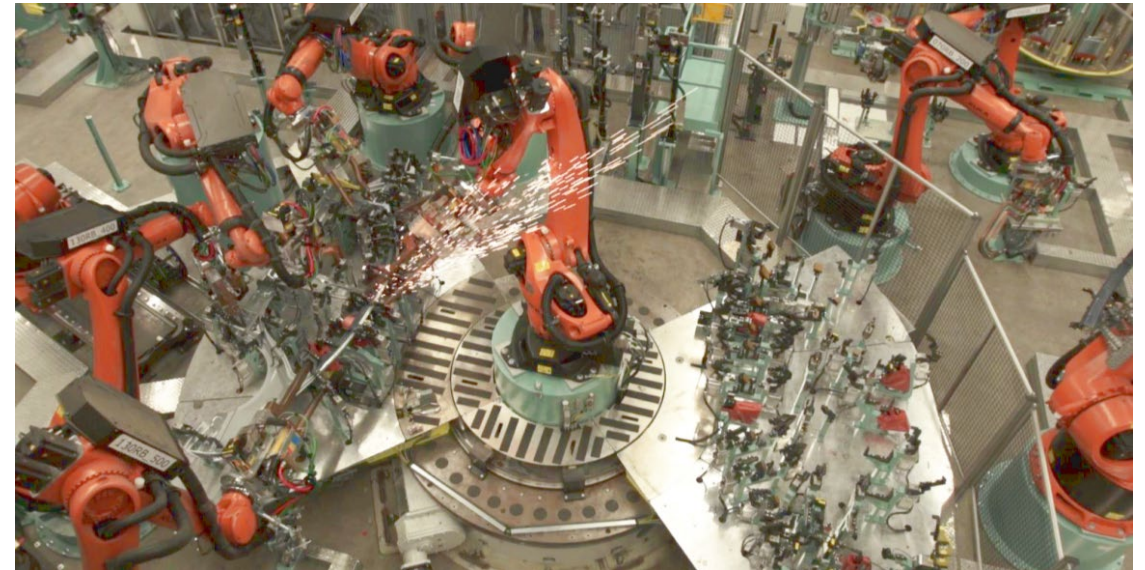
Gearbox type: Parallel shaft



Applications

Standard und Heavy-Duty Rotary Tables

- EDX - Fixed Rotary Table
- EDH⁺ - Flexible Rotary Table
- EDC - Double Cam Rotary Table
- EGC - Ring Rotary Table



Application example:

Large-sized Rotary Tables as a basis for flexible industrial facilities at Mercedes Benz in Bremen



Heavy-Duty Rotary Table EDH 3250

Flexible side panel production

Turntable outside diameter 3,000 mm with larger center opening

Central position of welding robot with optimized access to the fixtures

Customer load 10.000 kg

Index time 180° in 5,0 s

EDX - SERIES

Clocking with
mechanical locking

Size 410 - 1600

EDX | Fixed Rotary Table

Standard Rotary Tables and Trunnion Drives with fixed indexing positions and maximum torque in very compact design.

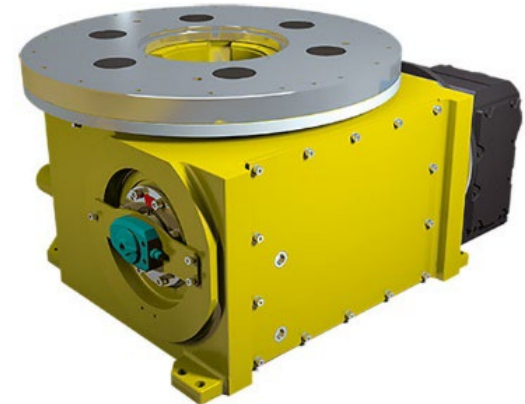
Multi-cam-follower design – Higher torque output.

With the EDX series there are always at least two cam followers engaged which provide for the force transmission from the cam to the rotary table within the range of acceleration and deceleration.

In case of an emergency stop all forces are allocated to several cam followers. Higher torques can be transmitted on the basis of the same design.

Advantages of the EDX - Series

- Low backlash, positive lock in operating position - no additional locking device required
- Higher output torque due to multiple cam follower principle
- Optimised power transmission to several cam followers at emergency stop
- Smooth and impact-free motion sequence due to specific law of motion
- Maintenance friendly - Cam follower exchange without tooling removal



EDH⁺ - SERIES

Standard, flexible
positioning and
powerful

Size 610 - 3250



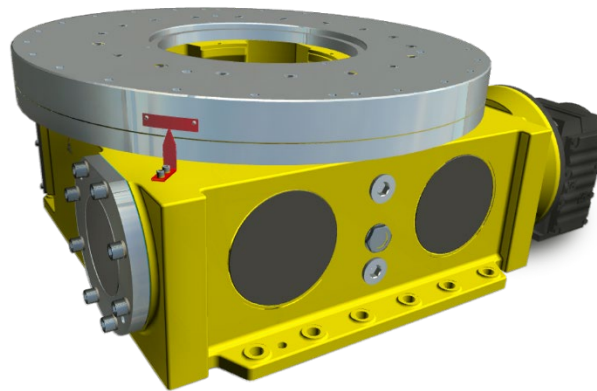
Catalogue

EDH⁺ | Flexible Rotary Table

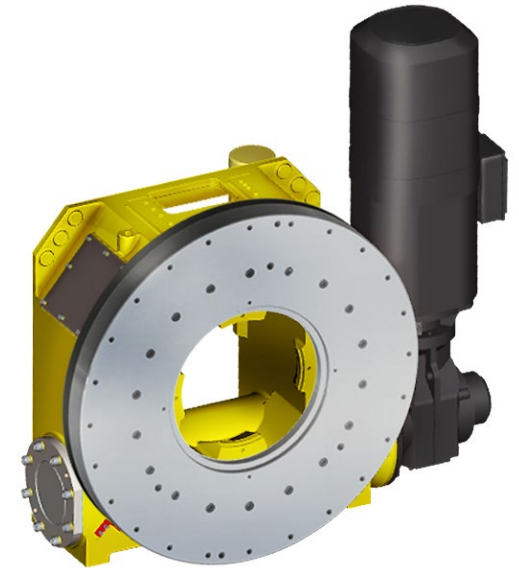
Flexible Rotary Tables and Trunnion Drives with maximum torque in an extremely compact design have been around for more than 10 years. Tried and tested in the automotive industry.

Advantages of the EDH⁺ - Series

- Individual positioning by servo-technology
- Higher torque due to multi-cam-follower principle
- More powerful with comparable installation space size
- Optimal distribution of braking forces in case of emergency stop
- Optimized design leading to higher torques at identical dimensions
- Maintenance friendly - Cam follower exchange without tooling removal



Rotary Table



Trunnion Drive

EDC - SERIES

Highly dynamic in
a compact design

Size 810 - 1170

EDC | Double Cam Rotary Table

Flexible Double Cam Index Drive with maximized output torque at compact design for highly dynamic applications.

Advantages of the EDC - Series

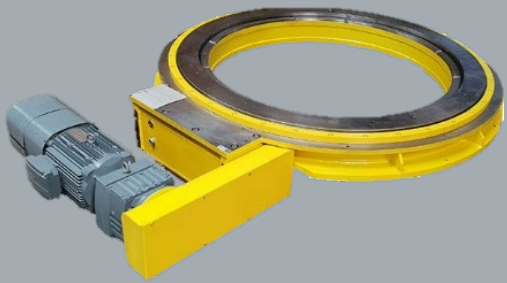
- Doubled torque at identical dimensions
- Highly dynamic for short cycle times
- Integrated gearbox - maintenance friendly and highly flexible
- Based on the reliable and precise EXPERT-TÜNKERS cam follower concept
- Variable drive positioning - from compact to decentralized

Type	Torque	Idle-cycle-time t for 180°
EDC 810	8.000 Nm	1,8 s
EDC 960	16.000 Nm	1,9 s
EDC 1170	30.000 Nm	2,1 s



EGC - SERIES

Space-saving Ring Rotary Table



EGC | Ring Rotary Table

Our rotary tables of the EGC series are an indexing module for the realization of flexible movement tasks through the usage of freely programmable servo motors.

The EGC combines two technologies: The EDH with a index cam and the EGD, with a globoidal index cam principle.

This enables extremely short cycle times with maximum precision and backlash-free positioning in the working position.

To the large ring diameter, applications can be positioned statically in the center so that installation space can be saved in the system.

Advantages of the EGC - Series

- Individual positioning through servo technology
- Extremely flat (145 mm)
- Large center through hole
- High load capacity
- High torques due to multiple cam follower in the engagement
- Optimised distribution of forces on several roller pins in case of emergency stop
- High torques with a compact design
- Easy to maintain - roller pins can be replaced without dismantling tools



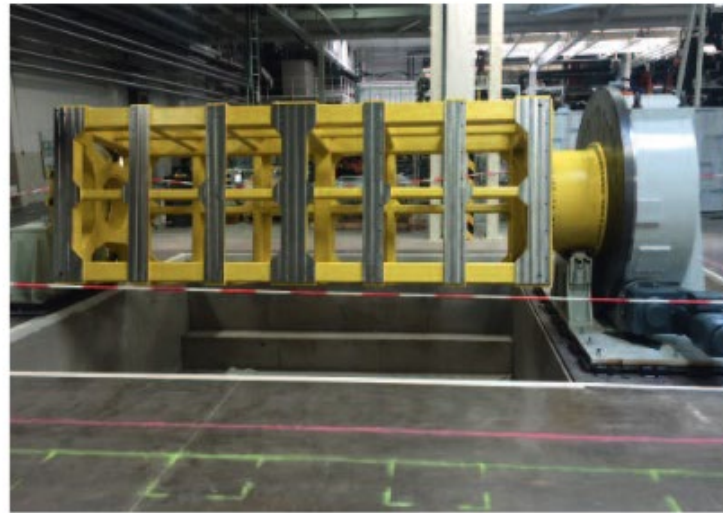
Applications



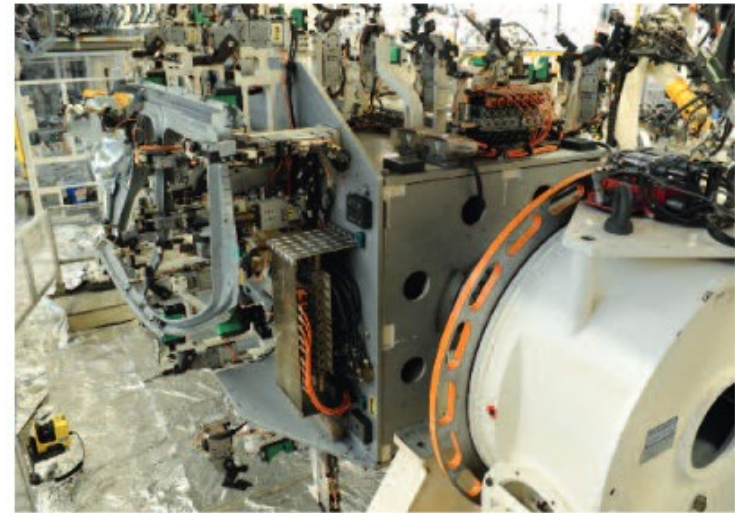
*EXPERT Heavy-duty Rotary Lifting Unit,
4-stop positioning*



EXPERT Rotary Table, 2-stop positioning



*EXPERT Heavy-duty Trunnion, during installation
(for 4 tools)*



EXPERT Trunnion Drive Unit, 4-stop positioning

Applications



EXPERT Trunnion Drive Unit with maintenance looking device



EXPERT Giant Trunnion with EDH 2550, 6-stop positioning



Some References

Automobil Manufacturers



Line Builders



Other Branches





Thank you for your
attention.

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THANK
YOU



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