

THE FUTURE IS THIS EASY. WEISS ROTARY INDEXING TABLES. THE FIFTH GENERATION.

DISCOVER MORE GEN5.WEISS-WORLD.COM

01 INCREASE PRODUCTIVITY

The fifth generation shortens production time and enables higher numbers of pieces to be produced in the same amount of time. It increases productivity and output along with it.

- ⦿ Increased axial force by a factor of 2
- 🕒 Up to 38% faster with the same load

03 INCREASE FLEXIBILITY

Modular automation systems can be converted to meet changing requirements in an extremely short time. Each component contributes to the flexibility of the overall system.

- ⚙️ 5 configuration options for the motor and gear unit
- ⏸️ 8 speed levels with infinitely adjustable indexing time at each level

02 LEVERAGE EFFICIENCY

In modern production processes, productivity is not everything. The aim is to use existing resources strategically. At stake here is how to make best use of the work time, materials and financial resources.

- ⦿ Up to 27% better motor efficiency
- 🕒 Up to 25% shorter time indexing time
- ◻️ 23% smaller interference circle

04 ENABLE CONNECTIVITY

Feedback from individual machine components to the higher-level system establishes transparency, enabling access to even more optimization options.

- 🌐 Network production & automation processes
- ⏸️ Avoid downtime

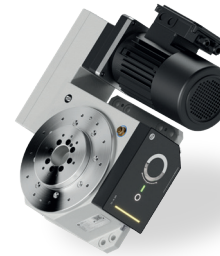
FOUNDATION OF THE FUTURE

A reliable mechatronic component is the basis of productivity, efficiency and digitalization. The fifth generation of WEISS rotary indexing tables is all this. Nothing more. Nothing less.

ENABLE THE DIGITALIZATION OF YOUR PRODUCTION PROCESSES

We have completely revised the technological basis. The new mechatronic platform combines a rotary indexing table, motor, control and future digital functions. It can be seamlessly integrated into an overall system.

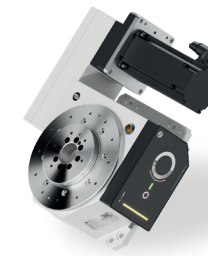
TECHNOLOGICAL BASIS IN THREE VARIANTS



TC-N FIXED-STATION ROTARY INDEXING TABLES OF THE FIFTH GENERATION

Benefits TC-N is up to 38% faster with the same load. The smart board enables easy status control and visual interaction.

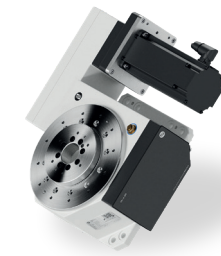
Features In the fifth generation of our fixed-station rotary indexing tables, the bearings and cam rollers are optimally aligned to accommodate higher loads of the same size. In the future, overall systems can be built to save more space.



TC-N WITH eCam FIXED-STATION ROTARY INDEXING TABLE WITH eCAM TECHNOLOGY

Benefits Total indexing time is up to 25% shorter for TC-N with eCam. Depending on the application, up to 80% higher loads are possible.

Features eCam technology combines the benefits of fixed-cycle cam profiles with those of servo motors. For time-critical applications, this is especially an advantage because the plate begins to rotate earlier.



CR-N FREELY PROGRAMMABLE ROTARY INDEXING TABLE OF THE FIFTH GENERATION

Benefits The permissible dynamic axial force is up to 20,000 newtons. CR-N is easy to control with W.A.S. 2 SCALABLE.

Features The freely programmable CR-N rotary indexing tables are especially attractive for large-scale production and flow manufacturing. W.A.S. 2 SCALABLE is the matching control package that can be used without in-depth know-how.



GENERATION 5 PRODUCT UPDATES IN DETAIL.

HIGHER LOADS ON A SMALL FOOTPRINT THANKS TO AN IMPROVED BEARING CONCEPT

Bearings with higher rigidity ensure that higher loads can be supported reliably and accurately. We have strengthened the bearing principle and put it in a geometrically optimized place in the overall system.

MEHR FLEXIBILITÄT BEI AUFBAUTEN DANK DER FREI ZUGÄNGLICHEN MITTENÖFFNUNG

An even larger free center opening at the center of the table with a free feedthrough to the housing side. It can be used to provide a large number of signals and media. The upright center part is the ideal basis for vertical attachments and rotary feedthroughs.

PRECISION-GROUND AND HARDENED CAM ROLLERS FOR EVEN HIGHER DYNAMICS

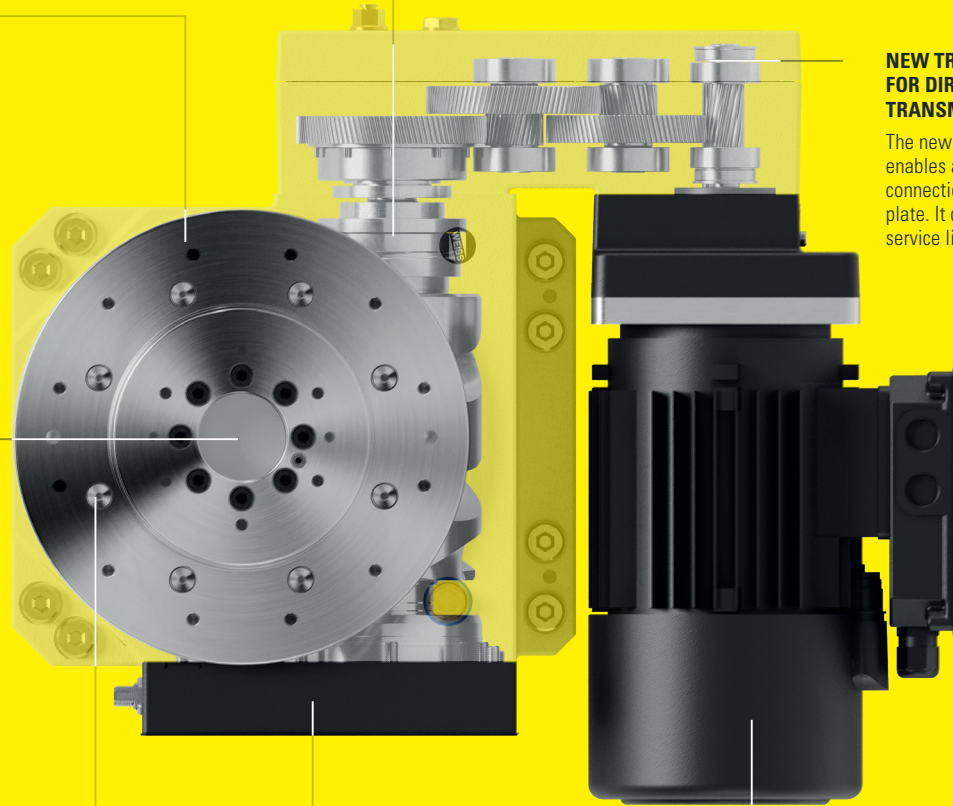
Optimization of the pins and bearings has yielded a reliable, high-precision and rigid system.

HIGHLY DURABLE & PRECISE CYLINDER CAM

The revision of all geometric components and new manufacturing processes have significantly increased the power density. Together with process optimization, paired components ensure a long service life, high rigidity and precision. The rotary indexing tables of the fifth generation let users select among 4 cam designs.

NEW TRANSMISSION CONCEPT – FOR DIRECT & LOSS-FREE POWER TRANSMISSION

The new toothed gear-based gear unit enables a much directer, more rigid connection from the motor to the rotary plate. It delivers accuracy, rigidity and service life.



THE OPERATING STATUS AT A GLANCE

An illuminated smart board sends light signals to provide information on the operating status of the fixed-station rotary indexing tables. The optional module provides space for information as part of production digitalization.

ENERGY-EFFICIENT & ADAPTABLE MOTORS

Energy efficiency boost thanks to a new, efficient generation of motors. The motors used to operate the fixed-station tables are infinitely adjustable to enable them to adjust to specific customer applications precisely.

THE STRENGTHS OF THE NEW GENERATION.

✓ HIGH CYCLE RATES

The bearing principle and drive train deliver higher dynamics. The flat, compact rotary indexing tables achieve high rigidity and robustness. Higher cycle rates are possible with a smaller size and the same load.

✓ HOHE BELADUNG

Thanks to the optimal alignment of the bearings and cam rollers, a smaller size and low cycle rates can support a higher load. At the same time, the bearings and cam rollers ensure precise axial and radial run-out, and high repetition and positioning accuracy.

✓ LIMITED INSTALLATION SPACE

The new design is compact, optimized to minimize interfering contours and can take on higher loads with a smaller size. This makes room for additional components or reduces the space required for the overall system.

✓ HARSH ENVIRONMENTS

Optimized geometry, lifetime oil filling and friction behavior all ensure that the gear units are low-wear, smooth-running, energy-efficient, robust and durable.

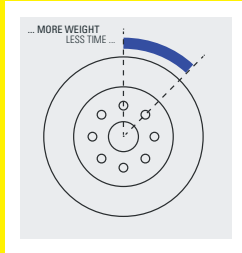
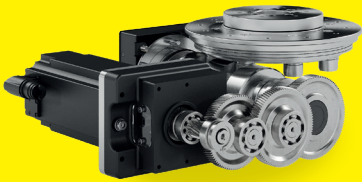
✓ PRECISION & DURABILITY

The cam is more powerful, dynamic and durable thanks to an optimized manufacturing process. For the gear unit, WEISS relies on toothed gear units for direct, precise and loss-free power transmission.



EVEN FASTER, THANKS TO eCAM

WEISS has successfully transferred the proprietary eCam technology in its linear transfer systems to the new generation of rotary indexing tables for the first time. As a result, WEISS has tapped further potential for using rotary indexing tables in large-scale production.

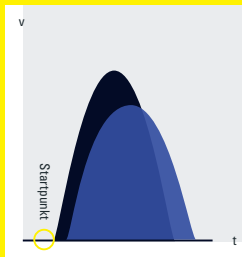
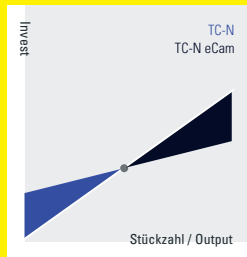


FUNCTIONAL PRINCIPLE OF eCAM TECHNOLOGY

eCam combines the benefits of servo motors with high-precision fixed-station cylinder cams. Overlapping the cam shortens the overall cycle times.

BENEFITS OF eCAM FOR ROTARY INDEXING TABLES

By using eCam technology, a rotary indexing table of the same size can move a specified load in less time.



eCAM APPLICATION AREAS

Rotary indexing tables with eCam technology are ideal for assembly and automation systems with high piece numbers and short cycle times.

ADVANTAGES & BENEFITS OF eCAM TECHNOLOGY

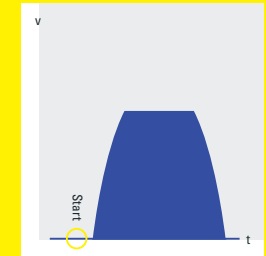
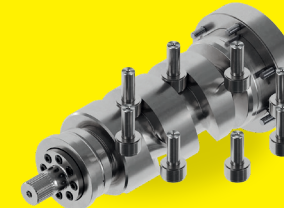
In multiple-shift operation and in large-scale production, eCam achieves a faster overall rotation time and, in turn, a higher output thanks to cam overlapping.

PROOF OF CONCEPT

In a reference application, unsorted workpieces were provided. A WEISS DR delta robot places them on a rotary indexing table for a test run. The application compares the performance of TC-N with fixed-station cam and TC-N with eCam technology.

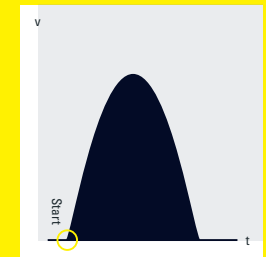
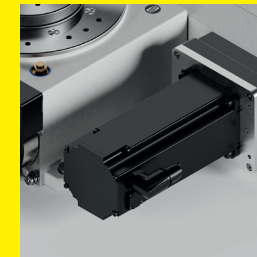
COMPONENT 1 – TC-N

The movement profile is milled into the fixed-station cylinder cam. The movement of the motor is transferred to the cam and the plate via the cam rollers.



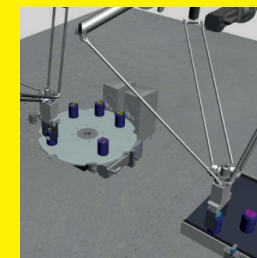
COMPONENT 2 – TC-N WITH eCAM

eCam technology enables the plate to start up more quickly, since eCam combines the benefits of servo motors with those of fixed-cycle cams. As a result, the rotary movement of the table starts earlier.



PERFORMANCE-SIMULATION

In the simulation, the behavior of the two rotary indexing tables is visible. eCam technology enables the rotary movement of the rotary indexing table to start without delay. A productivity increase of 5% with eCam technology could be documented.



Find out more

See for the benefits yourself now with a virtual simulation.

YouTube _ youtu.be/hjNALb1G6RE



A COMBINATION THAT MAKES SENSE

In eCam technology, the control system and its programming play a key role. This is why WEISS provides the TC-N eCam rotary indexing table together with the matching control package.



CONTROL PACKAGE

The W.A.S. 2 SCALABLE control package can be conveniently operated from a PC or laptop, thanks to its Windows-based GUI.



W.A.S. 2 SCALABLE contains custom-fit motor and encoder cables as well as harmonized drive controllers. The WEISS application software (W.A.S.) is the integral component.

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TC-N ROTARY INDEXING TABLE WITH eCAM

The TC-N rotary indexing table with eCam unites all the benefits of the fifth generation. It especially shows its strengths in large-scale production.

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UP TO

25%

SHORTER TOTAL INDEXING TIME

In combination, the control package and the rotary indexing table are the mechatronic overall concept that enables increased productivity.

GENERATION 5 & NETWORKED PRODUCTION

Production digitalization requires components that enable digital services and interfaces. WEISS has integrated this connectivity into its fifth generation.



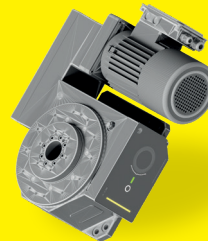
SMART BOARD

The fifth generation of TC-N fixed-cycle rotary indexing tables features visual interaction and provides information on the operating status, for example, via a Smart Board acting as a user interface. A light signal indicates that measures are necessary to sustain the performance. The functions of the Smart Board will expand hand in hand with the increasing digitalization of the rotary indexing tables and provide exactly the information operators will need in the future.



TYPE PLATE

A QR code on the type plate of the fifth generation directs users to the WEISS website and online product support. It corresponds to DIN SPEC 91406 for the automatic identification of physical objects in IT and IoT systems.



DESIGN DATA AND VIRTUAL COMMISSIONING

WEISS makes the CAD data for the rotary indexing tables available on its own website and, in the future, in the Cadenas PARTcommunity as well. At the start of sales, simulation models for the new rotary indexing tables will already be available. System integrators, system designers and design engineers can download them from TwinStore, the platform for simulation models.

Find out more
Use our services for design now.

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CHANGE IS NOT THE QUESTION.
IT IS THE ANSWER.
THE FUTURE IS THIS EASY.

We support you personally or digitally with comprehensive services in order to accelerate your progress. Tools such as design software, configurators and ordering wizards simplify your processes regardless of whatever phase you are in – be it product design, procurement or operation.

- ✓ CONSULTING
- ✓ PROCUREMENT
- ✓ DESIGN
- ✓ SIMULATION

Contact us if you want to learn more about the fifth generation of WEISS rotary indexing tables.



MAKE AN APPOINTMENT NOW!

