# FREELY PROGRAMMABLE ROTARY INDEXING TABLE CR-N 700 **TECHNICAL DATA**

INSPIRING PEOPLE
**GREAT SOLUTIONS**

Rotary Indexing Table solutions from WEISS fit seamlessly into the overall system. With their modular design, the freely programmable Rotary Indexing Tables enable quick adaptation to different requirements, short delivery times, and fast service times. The exterior geometry is optimized to minimize interfering contours and has a compact size. WEISS prepares controls such that no in-depth programming knowledge is required for start-up. Wherever digital services can support the user, WEISS offers them. The focus is on easy operation and start-up. With its market maturity, the fifth generation of Rotary Indexing Tables even comes with a simulation model in the ISG TwinStore, which supports virtual start-up and saves time accordingly. CAD data are available for download in the Cadenas PARTcommunity. And with the corresponding control solution, WEISS Rotary Indexing Tables automatically optimize themselves during the process.

The freely programmable CR-N Rotary Indexing Tables are particularly attractive for large-scale series production and flow manufacturing. The height of the indexers is the same across several series, and therefore no compensating elements are required.

### For MORE Productivity

- 20 % more compact with the same level of performance
- 2 variants: “Precision” for maximum accuracy and “Dynamic” for the highest dynamics
- High-precision needle bearings to absorb maximum loads
- Lubricated for life to minimize maintenance costs

### Das MEHR an Flexibilität

- 4 configuration options for motor and gearbox positions
- Different gear stages enable rotation time optimization
- Large center opening for easier feed-through of power and sensor cables
- Easy attachment of conventional motors thanks to the flexible adaptation concept

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For more details on CR-N 700, please visit weiss-world.com

**Subject to technical modifications and other changes.**

**Downloads**
WEISS CAD Download Portal

# FREELY PROGRAMMABLE ROTARY INDEXING TABLE CR-N 700
# TECHNICAL SPECIFICATIONS

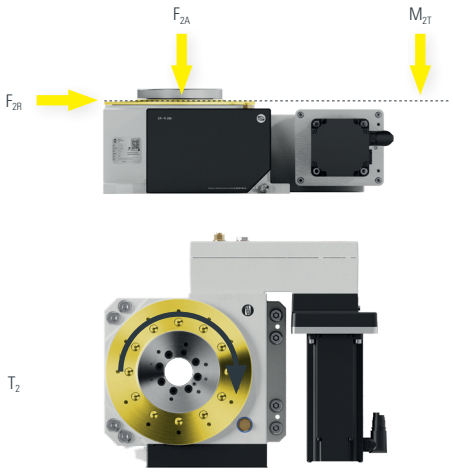
## SPECIFICATIONS

| | | CR-N 700K (Precision) | | CR-N 700S (Dynamic) | |
|---|---|---|---|---|---|
| | | 2-stage | 3-stage | 2-stage | 3-stage |
| **Indexing accuracy** [1] | arcsec | 30 (±15) | 40 (±20) | 60 (±30) | 80 (±40) |
| **Unidirectional repeat accuracy** | arcsec | 8 (±4) | 9 (±4,5) | 11 (±5.5) | 12 (±6) |
| **Output flange axial run-out at Ø 715 mm** | mm | 0.02 | | 0.02 | |
| **Output flange radial run-out at Ø 715 mm** | mm | 0.02 | | 0.02 | |
| **Recommended max. attachment diameter** [2] | mm | 4,250 | | 4,250 | |
| **Center opening Ø** | mm | 301 | | 301 | |
| **Approx. total weight without motor** | kg | 500 | | 500 | |

## OUTPUT FLANGE LOAD DATA

| | | | Dynamic | Static |
|---|---|---|---|---|
| **Max. axial force (standard / reinforced)** | $F_{2A}$ | N | 75,000 / 92,000 | 150,000 |
| **Max. radial force (standard / reinforced)** | $F_{2R}$ | N | 27,500 / 32,500 | 44,000 |
| **Max. tilting moment (standard / reinforced)** | $M_{2T}$ | Nm | 10,500 / 12,500 | 17,500 |
| **Max. acceleration torque (CR-N K / CR-N S)** | $T_2$ | Nm | 8,800 / 12,500 | 12,300 / 17,500 |

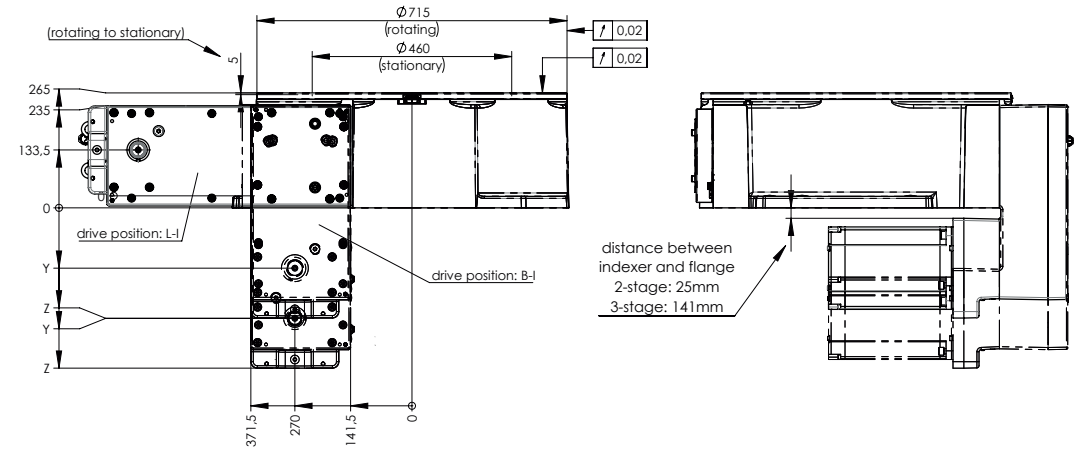
### Output Flange Load Data

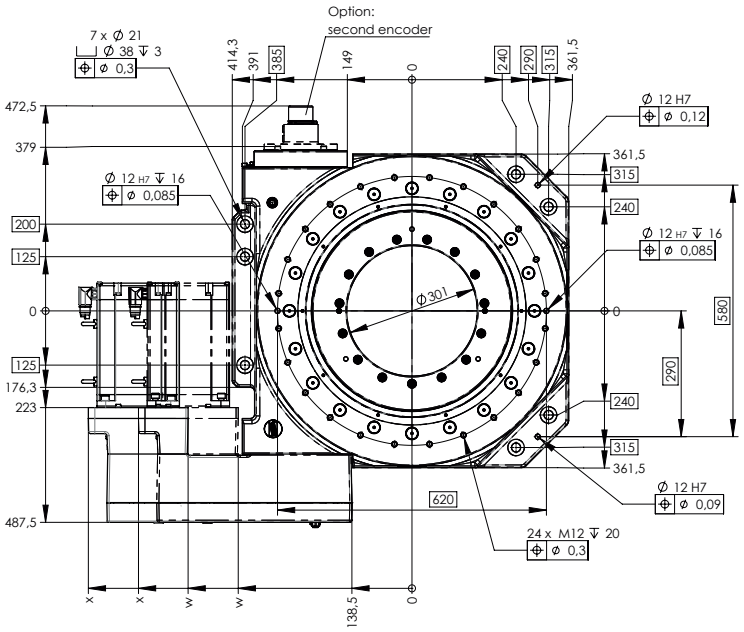



– The specifications are individual load specifications. Contact our Application Engineering department to check your application data for combined loads and process forces.
– Drive design optimization: Due to the different gear ratios, the drivetrain can be optimally designed for the application. For more information, see the type code.
– Recommended flatness of the connection design of 0,08 mm.

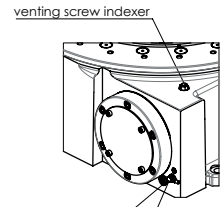
[1] It is optionally possible to improve the indexing precision by 30% with an additional encoder.
[2] Consult with WEISS if larger diameters are required.

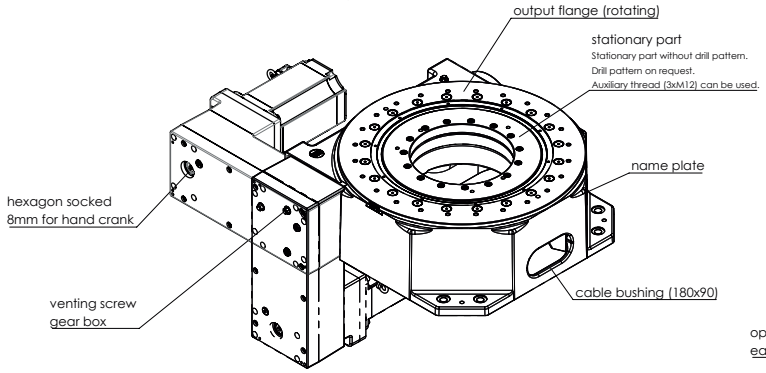
# FREELY PROGRAMMABLE ROTARY INDEXING TABLE CR-N 700
## PHYSICAL DATA

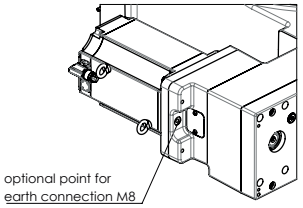



| *gear box* | drive position | W | X | Y | Z |
|---|---|---|---|---|---|
| 2-stage | L-I | 401 | 631 | - | - |
| | B-I | - | - | 139 | 255 |
| 3-stage | L-I | 516 | 747 | - | - |
| | B-I | - | - | 255 | 370 |



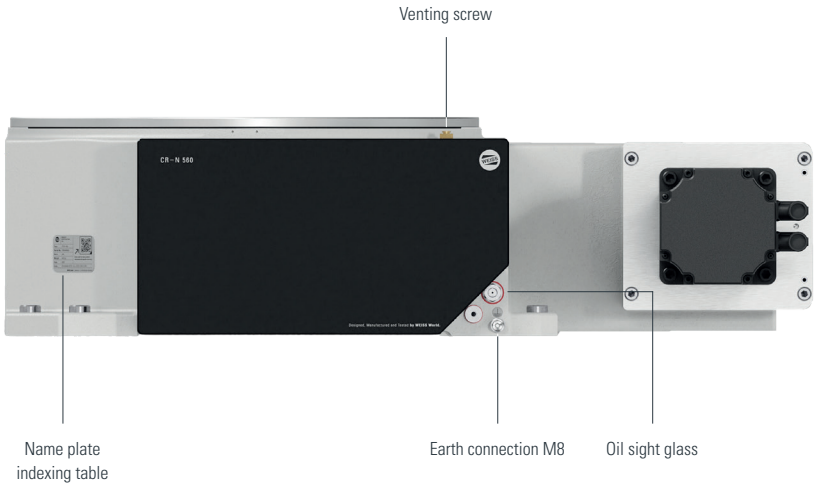




Please keep the motor and brake accessible for servicing. If the rotary table is recessed in the base plate, the pocket must be 15 mm larger on all sides than the outer contour of the table.

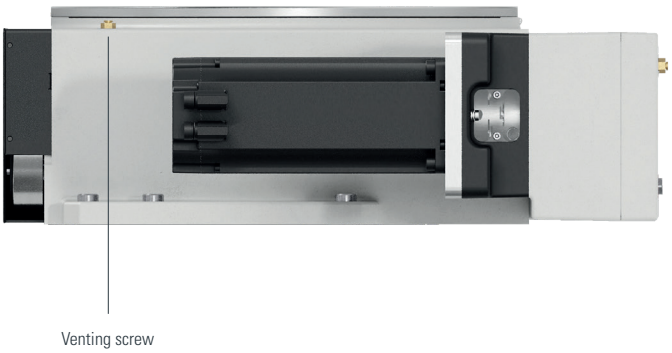
The installation of common alternative motors from various manufacturers is possible. The drive flange geometries depend on the motor.

# SERVICE POINTS

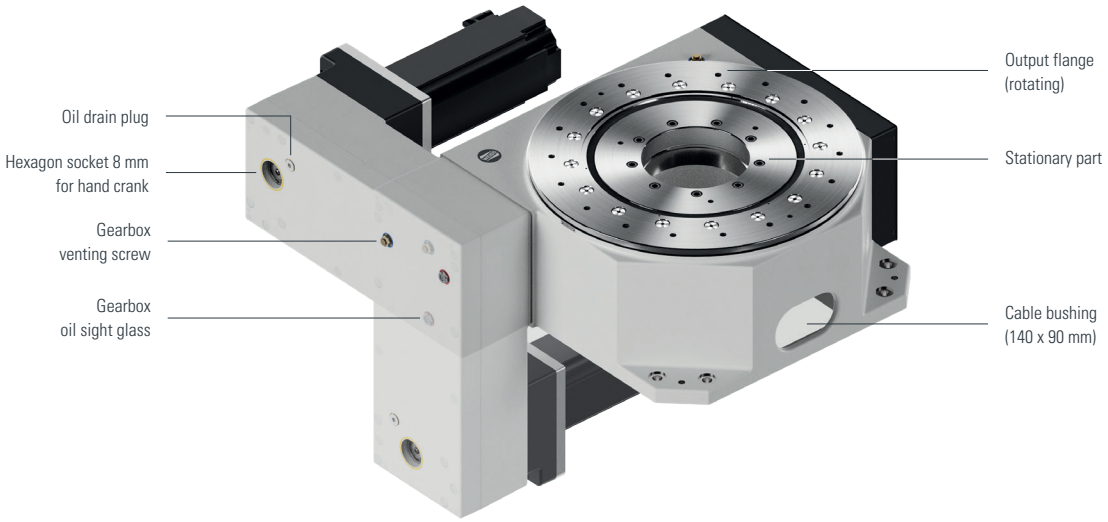
## Side View




## Side View




## Isometric View



# VARIANTS

## **2 Variants** – Different Applications

CR-N 700K Precision

CR-N 700S Dynamic

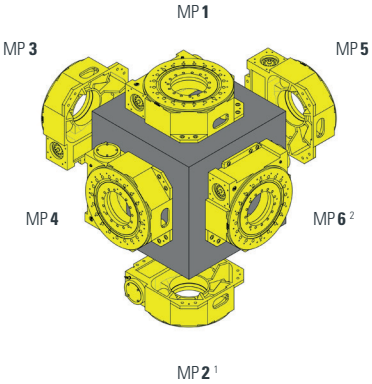
**CR-N 260K Precision**

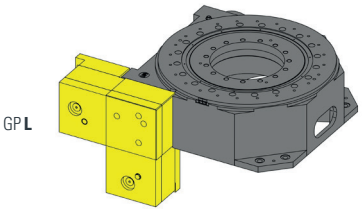
The variants for applications that require maximum precision. Thanks to the special cam characteristic, the cam followers are mutually tensioned. Rotary Indexing Tables with this variant have above-average accuracy in any stopping position.

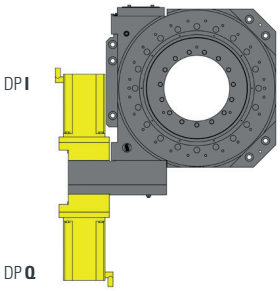
**CR-N 260S Dynamic**

Thanks to the higher torque, CR-N Rotary Indexing Tables in the Dynamic variant achieve significantly shorter rotation intervals without sacrificing any accuracy at all. The special arrangement of the cam followers in one direction ensures optimal power transmission.

## **Installation Positions** – Alignments



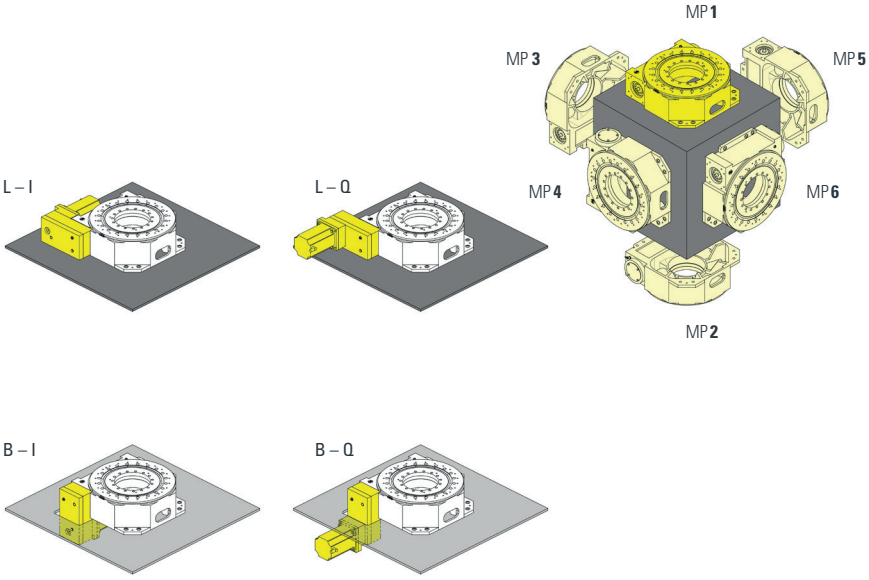




| **MOUNTING POSITION** – MP | | **GEARBOX POSITION** – GP | | **DRIVE POSITION** – DP | |
|---|---|---|---|---|---|
| MP **1** | horizontal | GP **L** | left | DP **I** | inside |
| MP **2** | overhead [1] | GP **B** | below | DP **Q** | outside |
| MP **3** | vertical, gearbox right | – | – | – | – |
| MP **4** | vertical, gearbox below | – | – | – | – |
| MP **5** | vertical, gearbox above | – | – | – | – |
| MP **6** | vertical, gearbox left [2] | – | – | – | – |

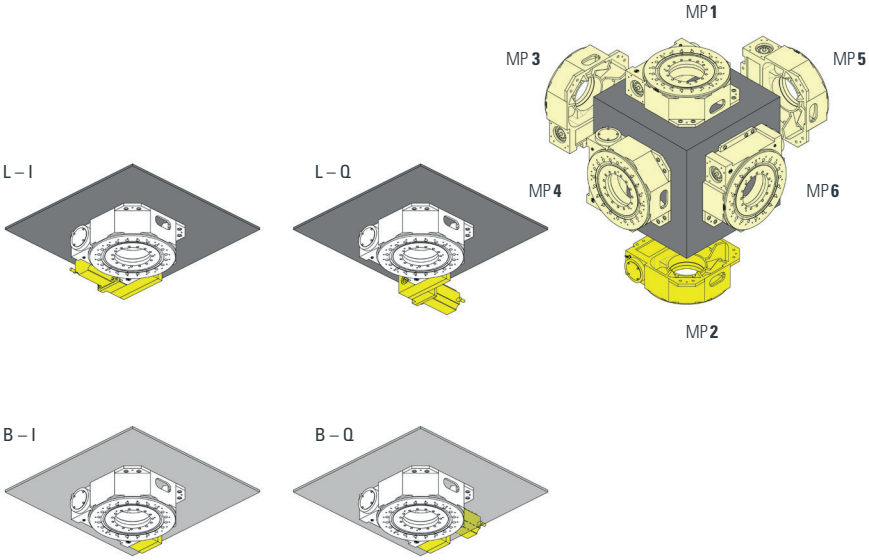
[1] Load data for overhead applications with guidance from WEISS.
[2] Only with guidance from WEISS.

# VARIANTS

## Gear Unit and Motor Position – MP 1

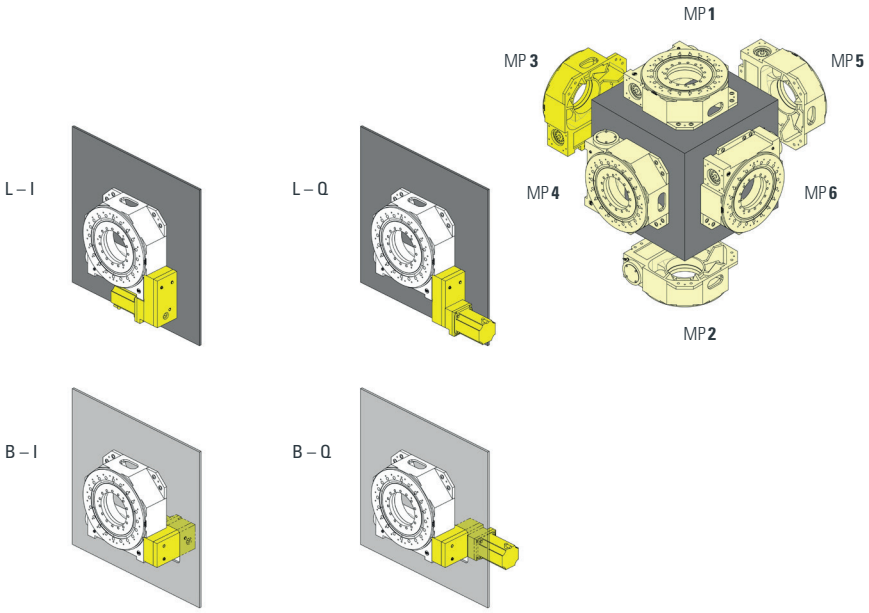



## Gear Unit and Motor Position – MP 2

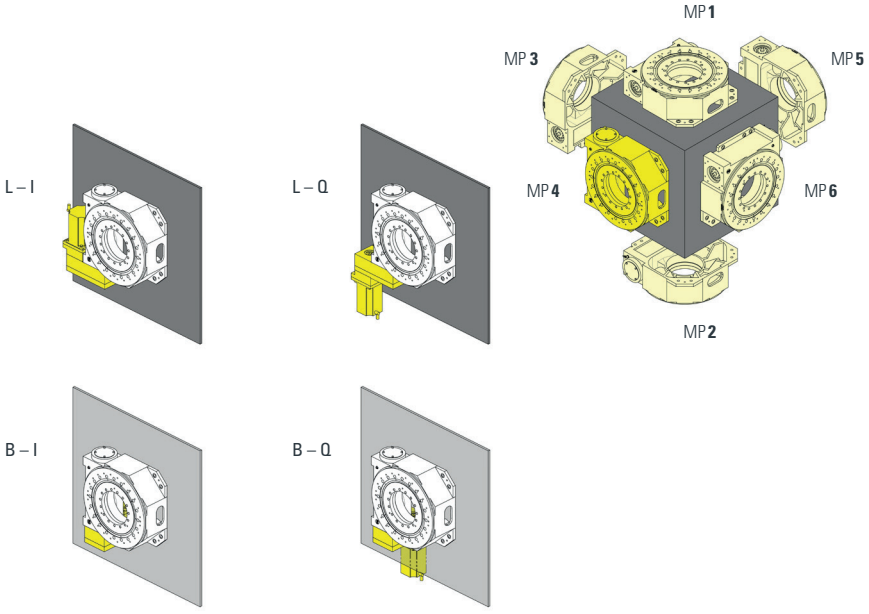


# VARIANTS

## Gear Unit and Motor Position – MP 3

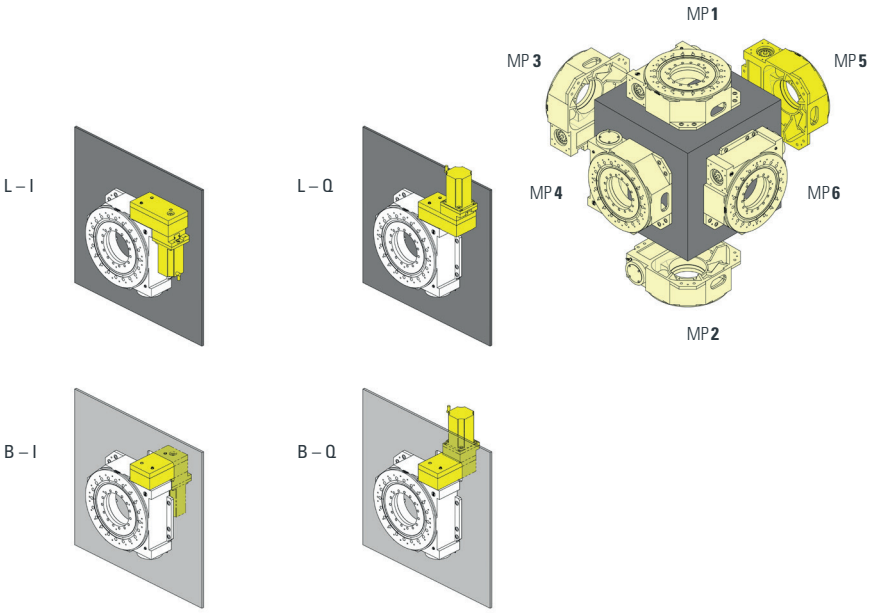



## Gear Unit and Motor Position – MP 4

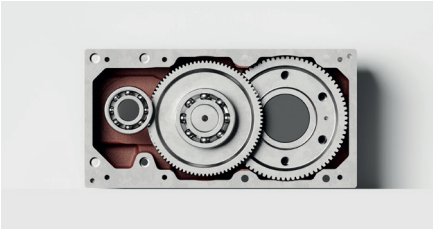


# VARIANTS

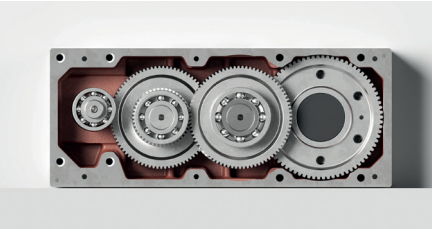
## **Gear Unit and Motor Position** – MP **5**




## **Gear Stages** – Optimal Design

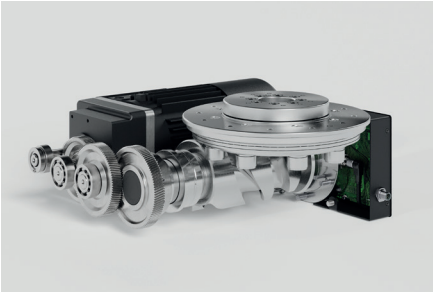


2-stage



3-stage

**Application-Specific Design**
The various gear ratios enable efficient, optimal design of the complete drivetrain for the respective application. The combination of motor, controller, and gear unit is available in 10 stages.



**Direct and Loss-Free Power Transmission**
The toothed-gear-based gear unit enables a much more direct and more rigid connection from the motor to the rotary plate. It pays off when it comes to accuracy, rigidity, and service life as well as the transmission of higher torques.

# TYPE CODE

| CHARACTERISTIC | VALUE | DESCRIPTION | |
|---|---|---|---|
| **Model** | CR | Freely programmable Rotary Indexing Table | |
| **Type** | N | | |
| **Size** | 700 | | |
| **Cam characteristic** | K | Precision | |
| | S | Dynamic | |
| **Gear (total ratio)** | C | 156 | 2-stage |
| | D | 195 | 2-stage |
| | E | 260 | 2-stage |
| | F | 243.75 (975 : 4) | 3-stage |
| | G | 351 | 3-stage |
| | H | 487.5 (975 : 2) | 3-stage |
| | I | 568.75 (2,275 : 4) | 3-stage |
| | J | 796.25 (3,185 : 4) | 3-stage |
| | K | 1,001 | 3-stage |
| | L | 1,137.5 (2,275 : 2) | 3-stage |
| | X | special | |
| | Z | without | |
| **Mounting position** | 1 | horizontal | |
| | 2 | overhead (after consultation) | |
| | 3 | vertical, gearbox right | |
| | 4 | vertical, gearbox below | |
| | 5 | vertical, gearbox above | |
| | 6 | vertical, gearbox left (after consultation) | |
| **Gearbox position** | L | left | |
| | B | below | |
| | Z | without | |
| **Drive position** | I | inside | |
| | Q | outside | |
| | Z | without | |
| **Stationary section** | B | below | |
| | X | special | |
| **Bearing option** | A | reinforced | |
| | Z | standard | |
| **Housing option** | Z | without | |
| | X | special | |
| **Paint** | S | 7035 | |
| | 1 | 7016 | |
| | 2 | 1013 | |
| | 3 | 9001 | |
| | 4 | 9006 | |
| | Z | without | |
| | X | special | |
| **Accessory 1** | Z | without | |
| **Motor** | B2 | B&R EnDat 2.2 – single-cable solution | |
| | R1 | Rexroth – single-cable solution | |
| | XX | special | |
| | ZZ | without | |
| **Cam encoder** | ZZ | without | |
| | A2 | EnDat 2.1 (ROQ425) | |
| | B2 | EnDat 2.2 (ROQ437) | |
| | XX | special | |
| **Accessory 2** | Z | without | |
| **Special** | X | special | |
| | Z | without | |
| **Version** | 00 | V0 | |