

NC

FREELY PROGRAMMABLE ROTARY TABLES | NC ROTARY TABLE



NC ROTARY TABLE: USER-PROGRAMMABLE AND ROBUST

OPTIMISED BEARINGS

To achieve maximum quality and reliability, even when under load, all roller bearings run in an oil bath and the plate cam rollers are mounted on needle bearings.



FREELY AND INTUITIVELY PROGRAMMABLE

W.A.S. 2 – WEISS Application Software: secure and fast commissioning with free-of-charge user software.





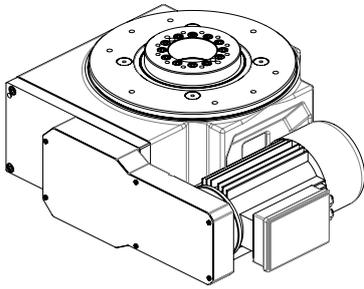
Custom machine for an automotive supplier. A user-programmable NC320 represents the heart of the system. It brings the seal and springs together and forwards the components to the other tables.

The NC combines robustness and durability with the advantages of a freely programmable rotary table offering a high level of torque. The NC differs from the TC range through its use of a brushless AC servo motor drive. In addition, the drive curve has a constant rise. The NC-T is capable of positioning large loads dynamically and precisely at freely selectable angles.

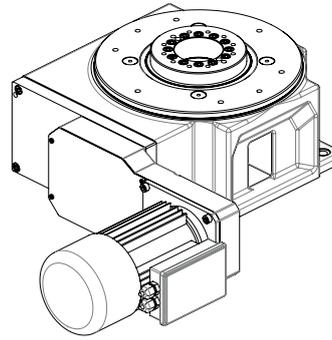
ADVANTAGES

- User-programmable
- High level of torque
- Absolute encoder (option)
- High-precision, rigid rotating plate bearing mounting
- Various sizes
- Large central bore and opening in the housing for media feed-through
- Mechanical interfaces for connecting customer-specific servo motors
- High degree of synchronism
- High degree of repeat accuracy

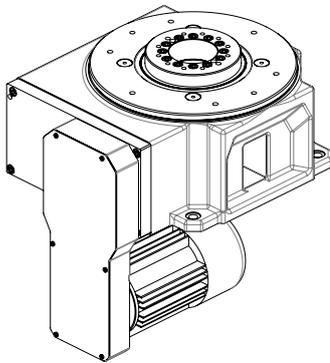
VERSIONS: DRIVE POSITION



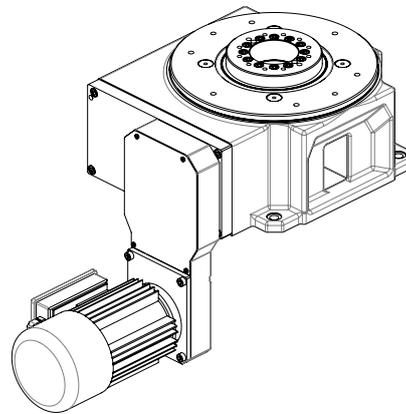
LATERAL INSIDE/DP 1



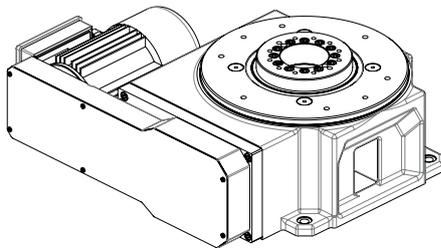
LATERAL OUTSIDE/DP 2



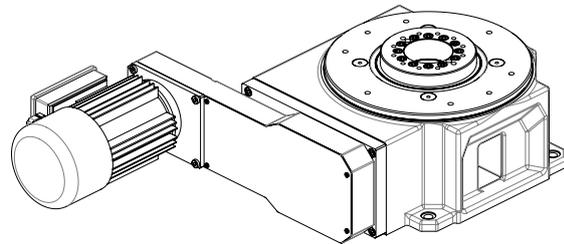
BELOW INSIDE/DP 3



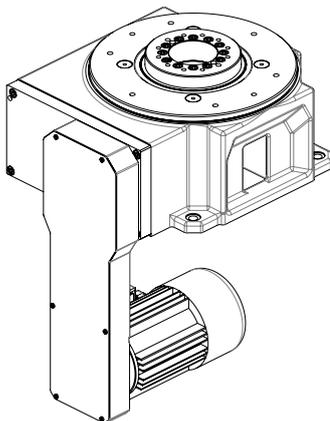
BELOW OUTSIDE/DP 4



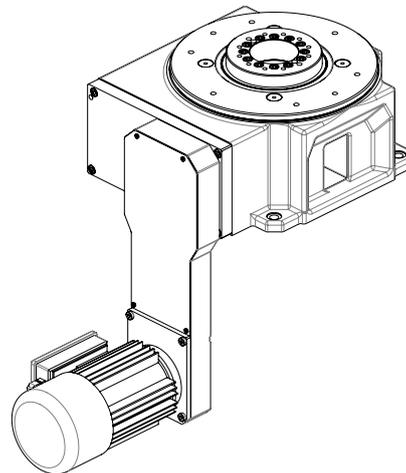
LATERAL INSIDE
MOTOR ON CAM SIDE/DP 5



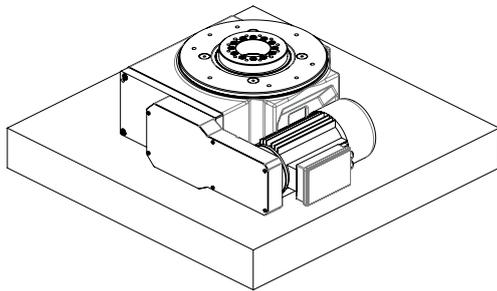
LATERAL OUTSIDE
LONG DRIVE HOUSING/DP 6



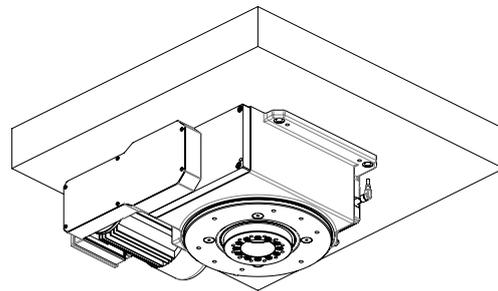
BELOW INSIDE
LONG DRIVE HOUSING/DP 7



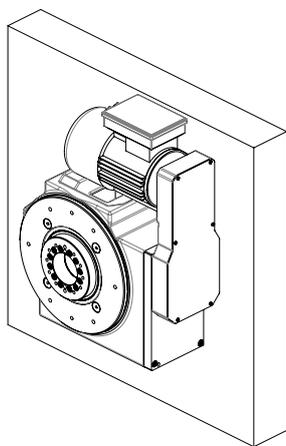
BELOW OUTSIDE
LONG DRIVE HOUSING/DP 8

VERSIONS: MOUNTING POSITION


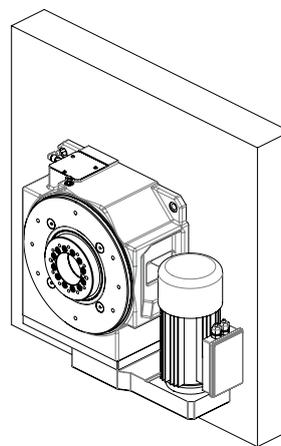
STANDARD / MP 1



OVERHEAD / MP 2



VERTICAL, DRIVE ON RIGHT / MP 3



VERTICAL, DRIVE AT BASE / MP 4

GENERAL INFORMATION ON THE MODEL RANGE

- NC rotary tables can be operated clockwise, anti-clockwise and also in reversing mode.
- The NC rotary tables are “lubricated for life”!
- The maximum stated radial force and torque of the stationary central section and the output flange refer only to the rotary table.
- When determining the maximum actual load of the overall system, the influence of the plate material and the plate attachment means must also be taken into account.
- We would be happy to advise and support you in dimensioning your overall system.

OPTIONEN

- If necessary, the stationary central section can be raised 5 mm or 10 mm.
- All sizes in the NC model range can optionally be equipped with an absolute encoder. (standard encoder: Heidenhain ROQ425)
- The rotary encoder provides improved single-side positioning accuracy and also improves controllability.
- A second measuring system input is required on the servo controller to evaluate this rotary encoder.
- The 8LSA model range from B+R or the MS2N model range from Bosch Rexroth are available as standard servo motors.
- It is possible to fit popular alternative motors from various manufacturers.
- For a surcharge, a positioning accuracy measurement report can also be drawn up and a compensation table incorporated for error compensation in a further step. However, this requires a mechanical zero point alignment.
- Standard colour: RAL7035 (other colours available on request)

NC 150T



GENERAL INFORMATION

- Maximum recommended equipment diameter D_{tp} : approximately 800 mm
- Custom option for NC0150T: screw-on mounting from above (please request drawing)

TECHNICAL DATA

$n_{1\text{Max}}$	Max. motor speed:	4500 1/min
$n_{2\text{Max}}$	Max. output speed:	58 1/min
i_{tot}	Overall gear ratio:	Level A: 144.545 Level B: 77.091
	Indexing precision without additional rotary encoder:	100 arcsec ($\pm 50''$)
	Indexing precision with additional rotary encoder:	80 arcsec ($\pm 40''$)
A_r	Axial run-out of the drive flange:	(at $\varnothing 150$ mm) 0.01 mm
C_r	Concentricity of the output flange:	0.01 mm
P	Parallelism between the output flange and screw-on surface of the housing:	0.03 mm
m	Total weight, including motor:	approximately 24 kg
D_i	Min. inside diameter of the rotary plate:	80 mm

LOAD DATA (for the stationary central part)

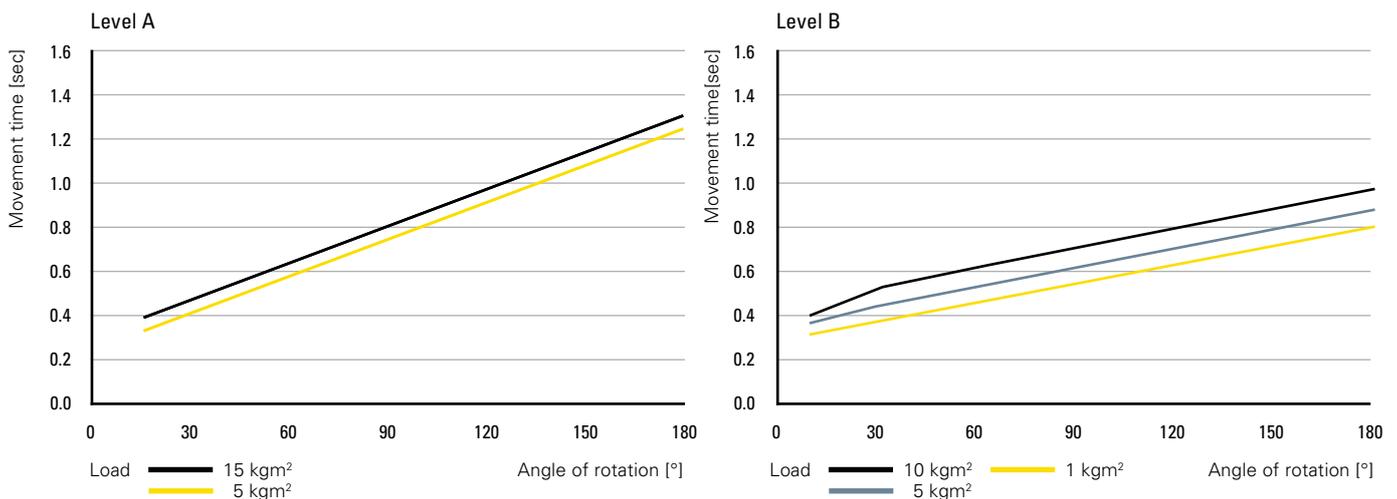
T_{SP}	Permitted torque:	140 Nm
$M_{T\text{SP}}$	Permitted tilting moment:	200 Nm
$F_{A\text{SP}}$	Permitted axial force:	3500 N
$F_{R\text{SP}}$	Permitted radial force:	2500 N

Combined loads and permitted process forces only after inspection by WEISS.

LOAD DATA (for the output flange)

$M_{2T\text{dyn}}$	Permitted dynamic tilting moment:	500 Nm
$F_{2A\text{dyn}}$	Permitted dynamic axial force:	5500 N
$F_{2R\text{dyn}}$	Permitted dynamic radial force:	6000 N

TIMING DIAGRAM



NC 220T



GENERAL INFORMATION

- Maximum recommended equipment diameter D_{tp} : approximately 1100 mm
- Custom option for NC0220T: screw-on mounting from above (please request drawing)

TECHNICAL DATA

$n_{1\text{Max}}$	Max. motor speed:	4000 1/min
$n_{2\text{Max}}$	Max. output speed:	56 1/min
i_{tot}	Overall gear ratio:	Level A: 171.145 Level B: 71.314
	Indexing precision without additional rotary encoder:	90 arcsec ($\pm 45''$)
	Indexing precision with additional rotary encoder:	70 arcsec ($\pm 35''$)
A_r	Axial run-out of the drive flange:	(at $\varnothing 220$ mm) 0.01 mm
C_r	Concentricity of the output flange:	0.01 mm
P	Parallelism between the output flange and screw-on surface of the housing:	0.03 mm
m	Total weight, including motor:	approximately 44 kg
D_i	Min. inside diameter of the rotary plate:	96 mm

LOAD DATA (for the stationary central part)

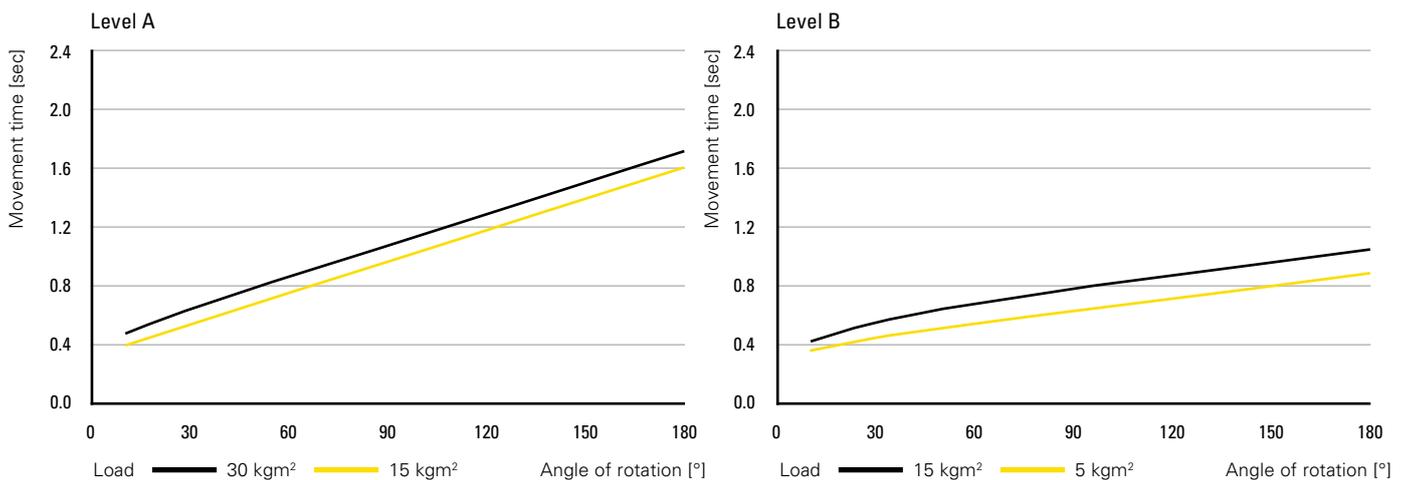
T_{SP}	Permitted torque:	145 Nm
$M_{T\text{SP}}$	Permitted tilting moment:	300 Nm
$F_{A\text{SP}}$	Permitted axial force:	5000 N
$F_{R\text{SP}}$	Permitted radial force:	4000 N

Combined loads and permitted process forces only after inspection by WEISS.

LOAD DATA (for the output flange)

$M_{2T\text{dyn}}$	Permitted dynamic tilting moment:	700 Nm
$F_{2A\text{dyn}}$	Permitted dynamic axial force:	7500 N
$F_{2R\text{dyn}}$	Permitted dynamic radial force:	8000 N

TIMING DIAGRAM



NC 320T



GENERAL INFORMATION

- Maximum recommended equipment diameter D_{tp} : approximately 1400 mm
- Custom option for NC0320T: screw-on mounting from above (please request drawing)

TECHNICAL DATA

$n_{1\text{Max}}$	Max. motor speed:	4000 1/min
$n_{2\text{Max}}$	Max. output speed:	35 1/min
i_{tot}	Overall gear ratio:	Level A: 166.25 Level B: 113.05
	Indexing precision without additional rotary encoder:	80 arcsec ($\pm 40''$)
	Indexing precision with additional rotary encoder:	60 arcsec ($\pm 30''$)
A_r	Axial run-out of the drive flange:	(at $\varnothing 320$ mm) 0.01 mm
C_r	Concentricity of the output flange:	0.01 mm
P	Parallelism between the output flange and screw-on surface of the housing:	0.03 mm
m	Total weight, including motor:	approximately 112 kg
D_i	Min. inside diameter of the rotary plate:	150 mm

LOAD DATA (for the stationary central part)

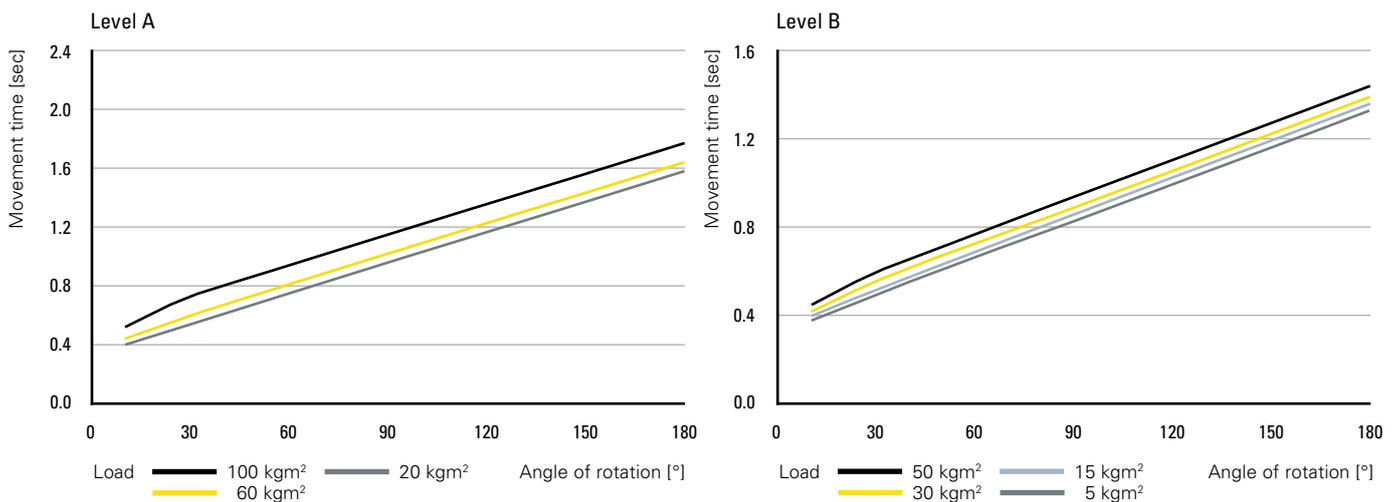
T_{SP}	Permitted torque:	800 Nm
M_{TSP}	Permitted tilting moment:	1800 Nm
F_{ASP}	Permitted axial force:	18000 N
F_{RSP}	Permitted radial force:	10000 N

Combined loads and permitted process forces only after inspection by WEISS.

LOAD DATA (for the output flange)

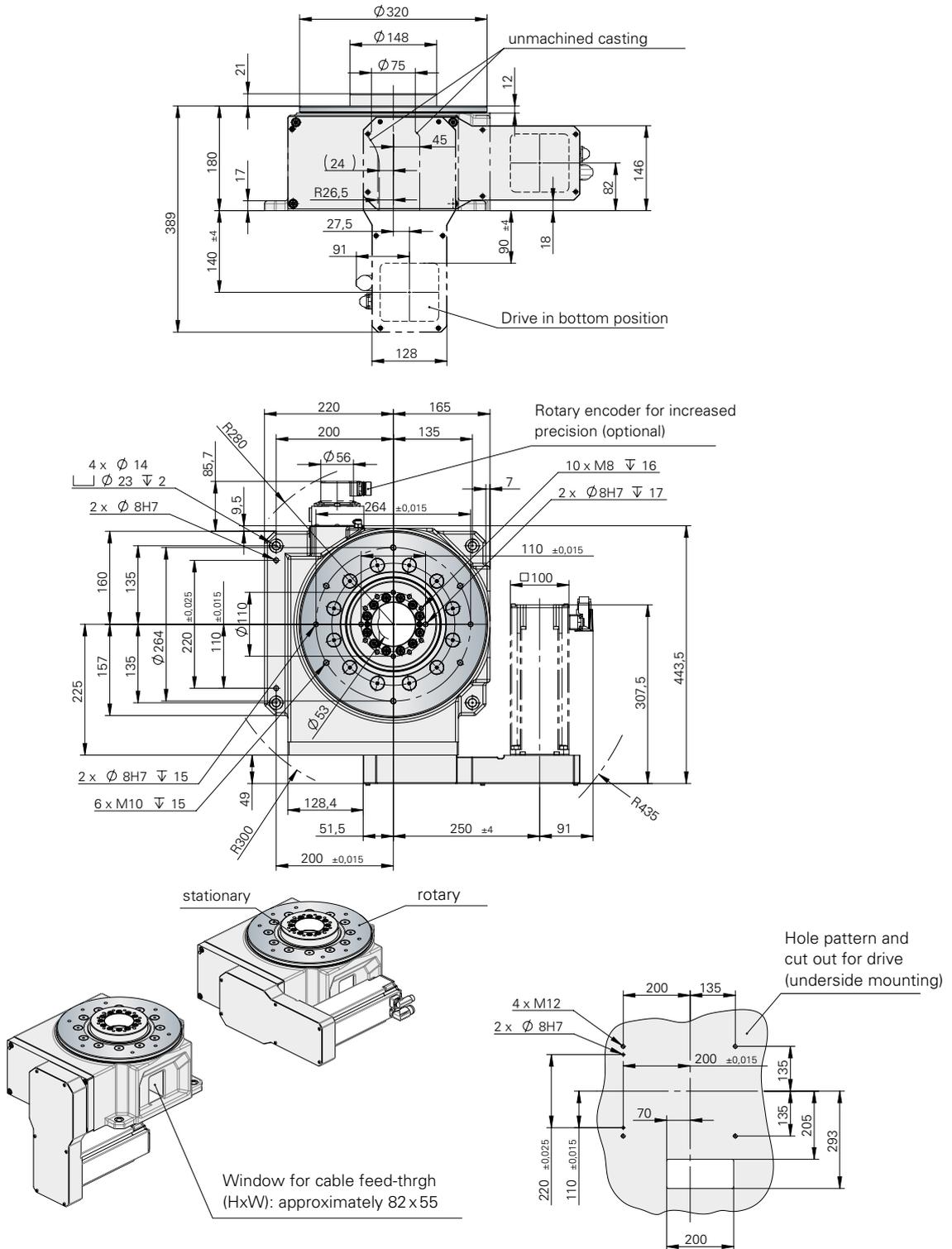
$M_{2T\text{dyn}}$	Permitted dynamic tilting moment:	2250 Nm
$F_{2A\text{dyn}}$	Permitted dynamic axial force:	15000 N
$F_{2R\text{dyn}}$	Permitted dynamic radial force:	13000 N

TIMING DIAGRAM



DIMENSIONS

The output flange position shown corresponds to the home position of the rotary table (delivery state).
It is possible to fit popular alternative motors from various manufacturers. The drive flange geometries are motor-dependent.



Note:

The motor must be accessible for servicing! Please leave the necessary space for motor plug and cable outlet.
If you require subsequent drilling work on the rotary table, please request information on permissible drilling depths.