

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. – WEISS Application Software: Secure and fast commissioning through 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 position encoder
- High-precision, rigid rotating plate bearing mounting
- Various sizes
- Mechanical interfaces for connecting customer-specific servo motors
- High degree of synchronism
- High degree of repeat accuracy

NC 150T

TECHNICAL DATA

Model:	NC 150T-A	NC 150T-B
Dial plate diameter:	150 mm	150 mm
Tool plate diameter:	800 mm	800 mm
Direction of rotation:	Freely programmable	Freely programmable
Max. table speed:	31 rpm	58 rpm
Transmission ratio:	$i_{Total} = 144.545$	$i_{Total} = 77.091$
Max. MTM:	15 kgm ²	10 kgm ²
Weight:	25 kg	25 kg
Mounting position:	Any*	Any*
Positioning precision:	± 45"	± 45" (arcsec)
Max. axial run-out of dial plate:	0.01 mm	0.01 mm (at Ø 150 mm)
Max. concentricity:	0.01 mm	0.01 mm
Max. parallelism of rotating plate surface to bottom housing surface:	0.03 mm	0.03 mm (at Ø 150 mm)

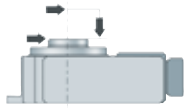
MOTOR DATA**

Nominal speed:	4000 rpm
Motor torque:	1.0 Nm (nom) 3.5 Nm (peak)
Brake torque:	3.5 Nm
Shaft encoder data:	Heidenhain EnDat RQ0425

* Please consult WEISS for overhead mounting positions.

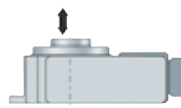
** It is possible to fit popular alternative motors from various manufacturers. We are happy to advise you if you require any further information.

LOAD DATA (for the stationary central part)



Perm. tilting moment acting on the centre section

200 Nm



Perm. radial force acting on the centre section

2500 N

Perm. axial force

3500 N



Perm. tangential moment acting on the centre section

150 Nm

LOAD DATA (for the turnplate)



Perm. tilting moment acting on the locked dial plate

500 Nm

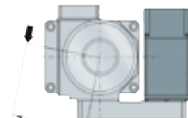


Perm. radial force acting on the locked dial plate

6000 N

Perm. operating force (acting vertically on the locked dial plate within the normal Ø)

5500 N



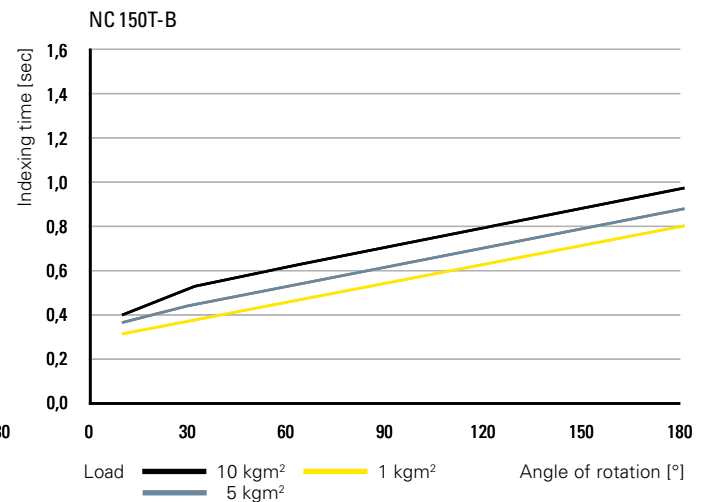
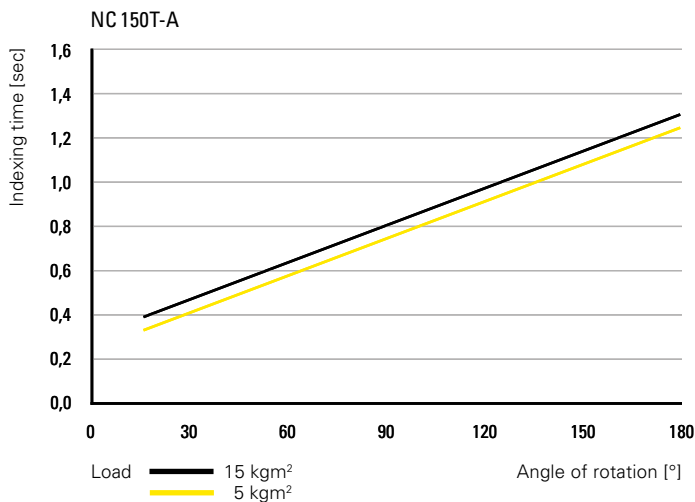
Perm. tangential moment acting on the locked dial plate

Nominal
50 Nm

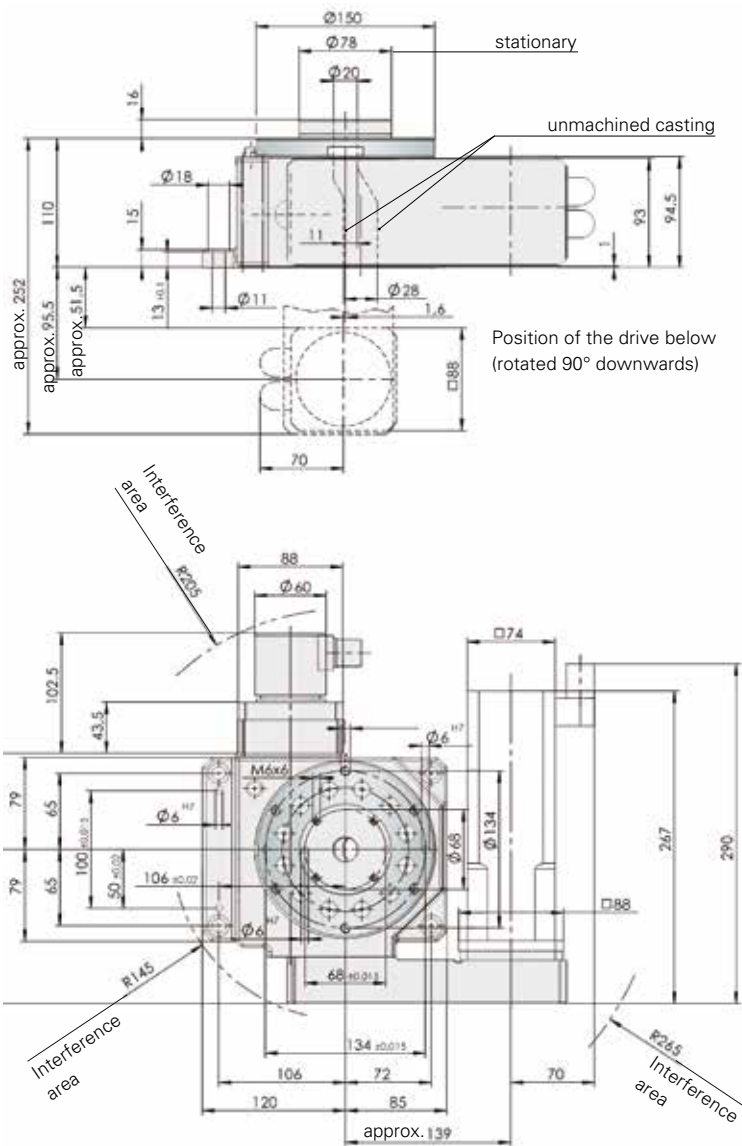
Peak
150 Nm

Combined loads only after inspection by WEISS.

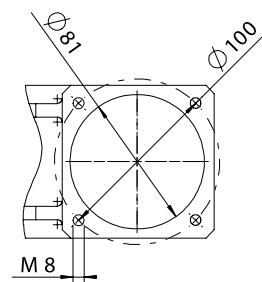
TIMING DIAGRAM



DIMENSIONS



Motor flange (view from the motor side)



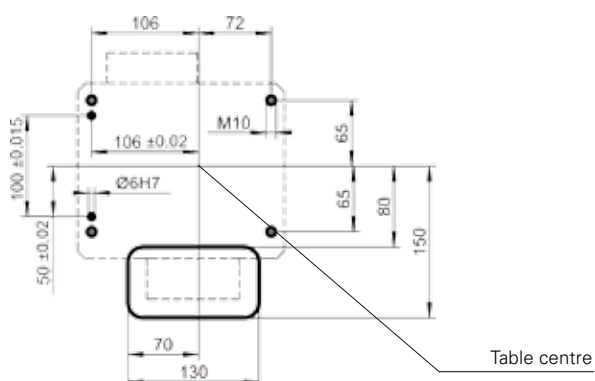
Note:

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.

The rotary plate 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.

Installation hole pattern with cutout for drive when mounted below



NC 220T

TECHNICAL DATA

Model:	NC 220T-A	NC 220T-B
Dial plate diameter:	220 mm	220 mm
Tool plate diameter:	1100 mm	1100 mm
Direction of rotation:	Freely programmable	Freely programmable
Max. table speed:	23 rpm	56 rpm
Transmission ratio:	$i_{Total} = 171.154$	$i_{Total} = 71.314$
Max. MTM:	30 kgm ²	15 kgm ²
Weight:	40 kg	40 kg
Mounting position:	Any*	Any*
Positioning precision:	± 40"	± 40" (arcsec)
Max. axial run-out of dial plate:	0.01 mm	0.01 mm (at Ø 220 mm)
Max. concentricity:	0.01 mm	0.01 mm
Max. parallelism of rotating plate surface to bottom housing surface:	0.03 mm	0.03 mm (at Ø 220 mm)

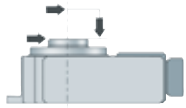
MOTOR DATA**

Nominal speed:	4000 rpm
Motor torque:	4.1 Nm (nom) 5.0 Nm (peak)
Brake torque:	5.0 Nm
Shaft encoder data:	Heidenhain EnDat RQ0425

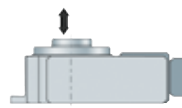
* Please consult WEISS for overhead mounting positions.

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LOAD DATA (for the stationary central part)



Perm. tilting moment
300 Nm



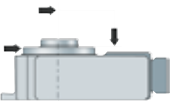
Perm. radial force acting on the centre section
4000 N

Perm. axial force
5000 N



Perm. tangential moment acting on the centre section
200 Nm

LOAD DATA (for the rotary plate)

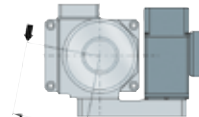


Perm. tilting moment acting on the locked dial plate
700 Nm



Perm. radial force acting on the locked dial plate
8000 N

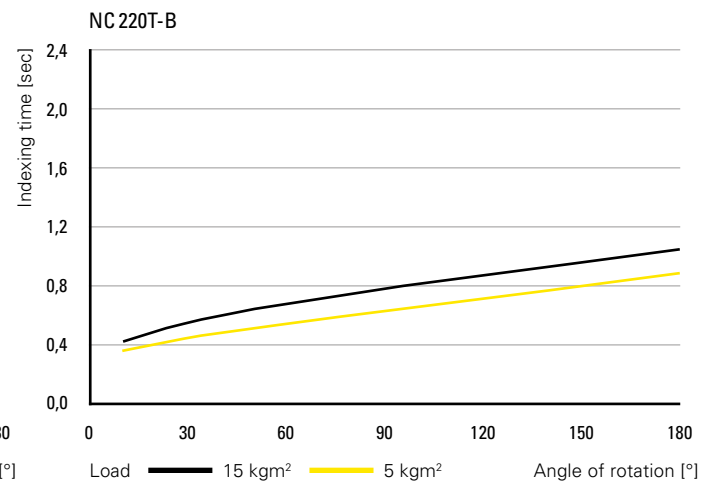
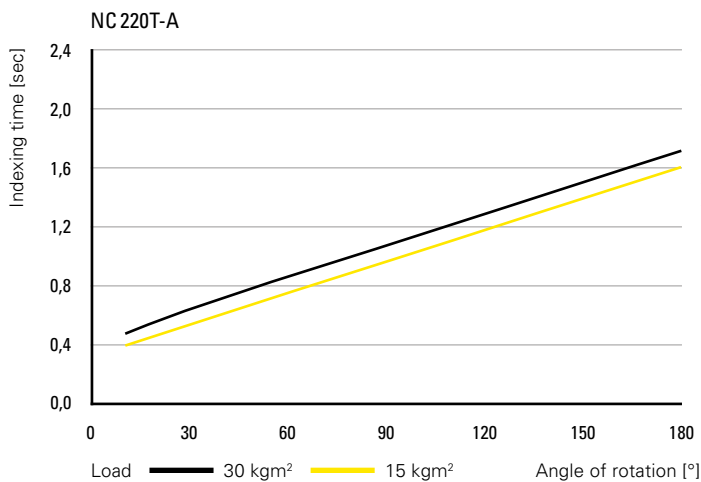
Perm. operating force (acting vertically on the locked dial plate within the normal Ø)
7500 N



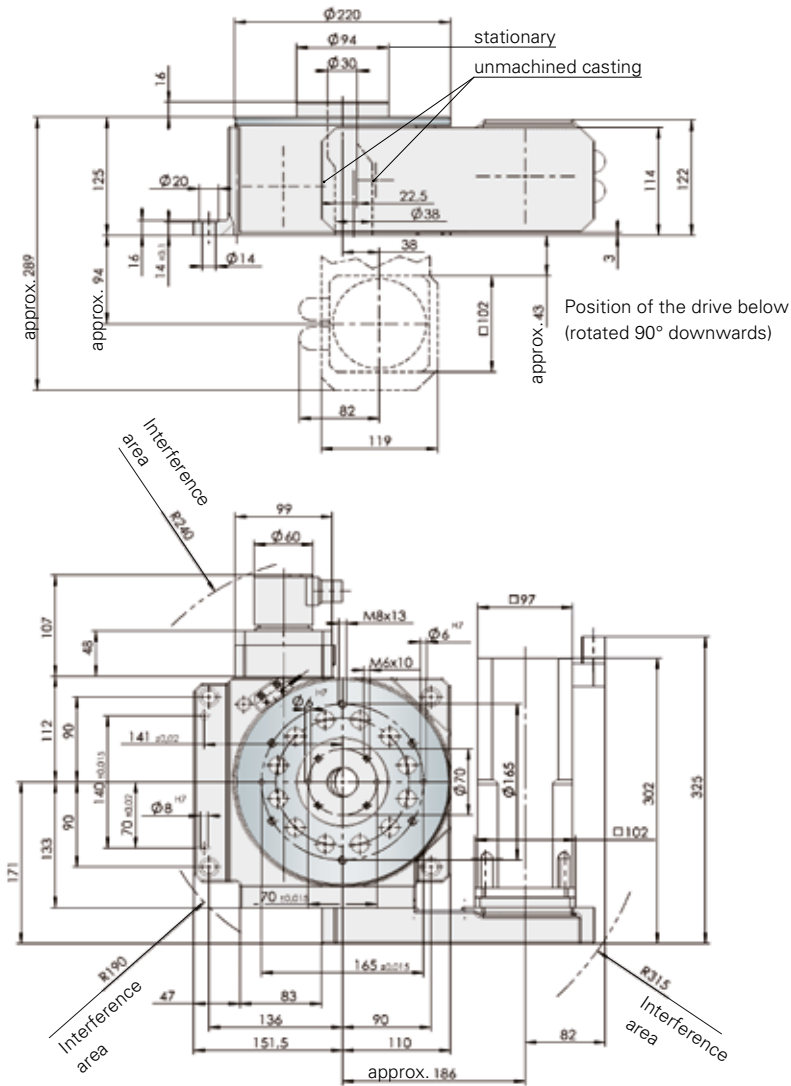
Perm. tangential moment acting on the locked dial plate
Nominal **70 Nm** Peak **200 Nm**

Combined loads only after inspection by WEISS.

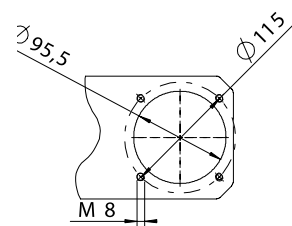
TIMING DIAGRAM



DIMENSIONS



Motor flange (view from the motor side)



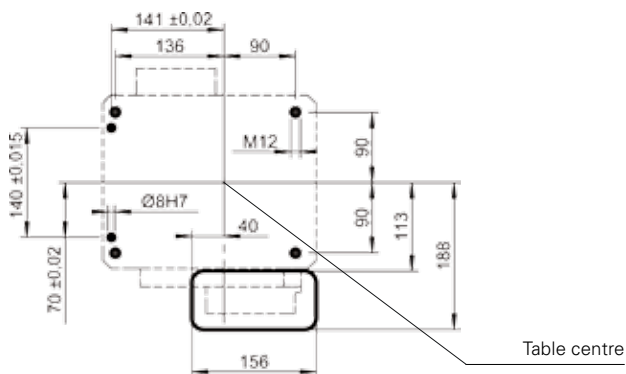
Note:

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.

It is possible to fit popular alternative motors from various manufacturers.

Installation hole pattern with cutout for drive when mounted below



NC 320T

TECHNICAL DATA

Model:	NC 320T-A	NC 320T-B
Dial plate diameter:	320 mm	320 mm
Tool plate diameter:	1400 mm	1400 mm
Direction of rotation:	Freely programmable	Freely programmable
Max. table speed:	24 rpm	35 rpm
Transmission ratio:	$i_{Total} = 166.25$	$i_{Total} = 113.05$
Max. MTM:	100 kgm ²	50 kgm ²
Weight:	120 kg	120 kg
Mounting position:	Any*	Any*
Positioning precision:	± 35"	± 35" (arcsec)
Max. axial run-out of dial plate:	0.01 mm	0.01 mm (at Ø 320 mm)
Max. concentricity:	0.01 mm	0.01 mm
Max. parallelism of rotating plate surface to bottom housing surface:	0.03 mm	0.03 mm (at Ø 320 mm)

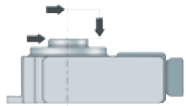
MOTOR DATA**

Nominal speed:	4000 rpm
Motor torque:	7.0 Nm (nom) 12 Nm (peak)
Brake torque:	8.0 Nm
Shaft encoder data:	Heidenhain EnDat RQ425

* Please consult WEISS for overhead mounting positions.

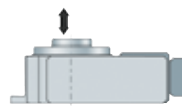
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LOAD DATA (for the standing centre part)



Perm. tilting moment
1800 Nm

Perm. radial force acting on the centre section
10000 N

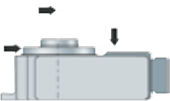


Perm. axial force
18000 N



Perm. tangential moment acting on the centre section
800 Nm

LOAD DATA (for the rotary plate)

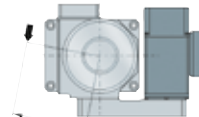


Perm. tilting moment acting on the locked dial plate
2250 Nm

Perm. radial force acting on the locked dial plate
15000 N



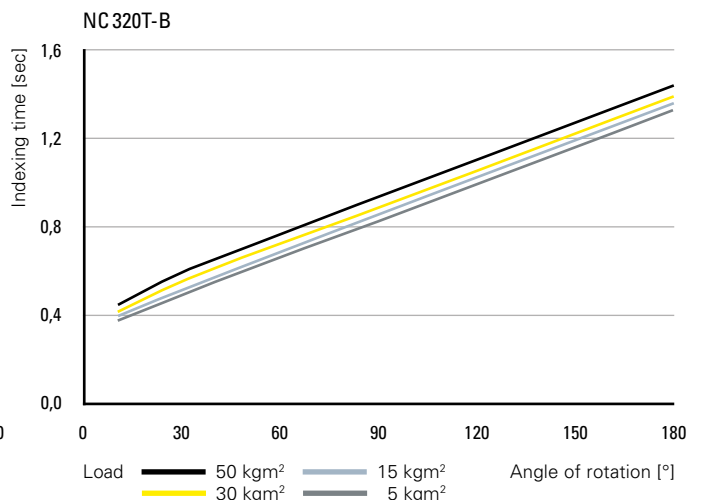
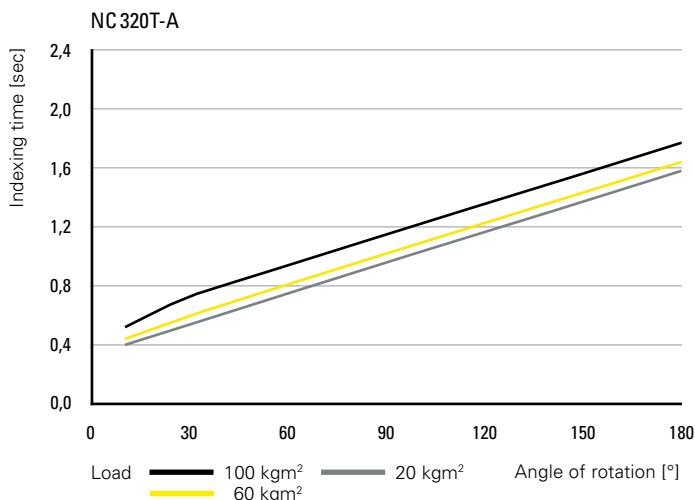
Perm. operating force (acting vertically on the locked dial plate within the normal Ø)
15000 N



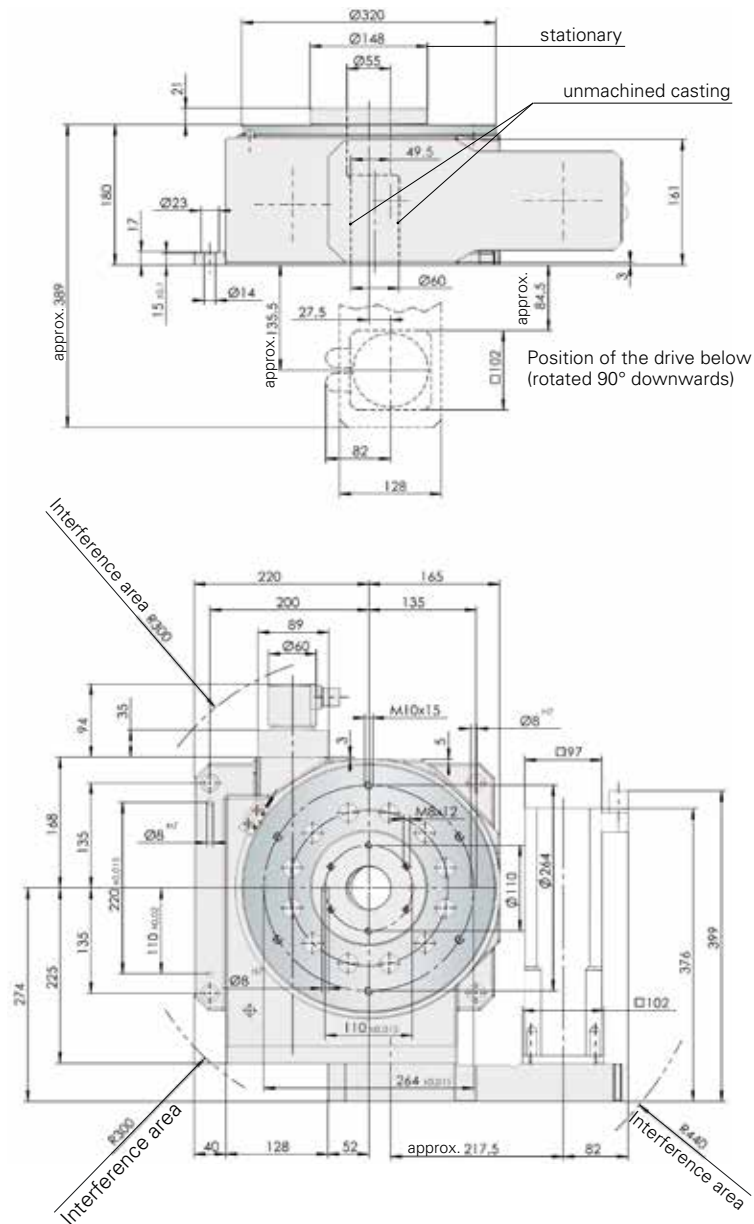
Perm. tangential moment acting on the locked dial plate
Nominal **400 Nm** Peak **800 Nm**

Combined loads only after inspection by WEISS.

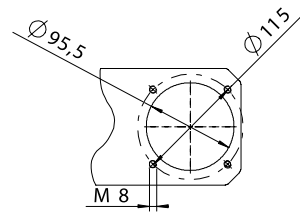
TIMING DIAGRAM



DIMENSIONS



Motor flange (view from the motor side)



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.

It is possible to fit popular alternative motors from various manufacturers.

Installation hole pattern with cutout for drive when mounted below

