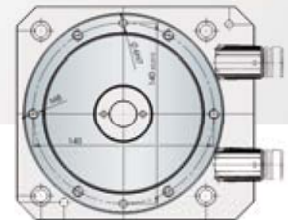


TO

FREELY PROGRAMMABLE ROTARY TABLES | TO TORQUE ROTARY TABLE



Precise and fast mechanical integration through pin holes, safe electrical commissioning through perfect hardware.



TO TORQUE ROTARY TABLE: DYNAMIC, FLEXIBLE, PRECISE

MATCHED BASE FRAMES AND PLATES

Simple integration into existing equipment. Highly dynamic, high-precision and ready-for-installation rotary table solution with unbeatable price-performance.

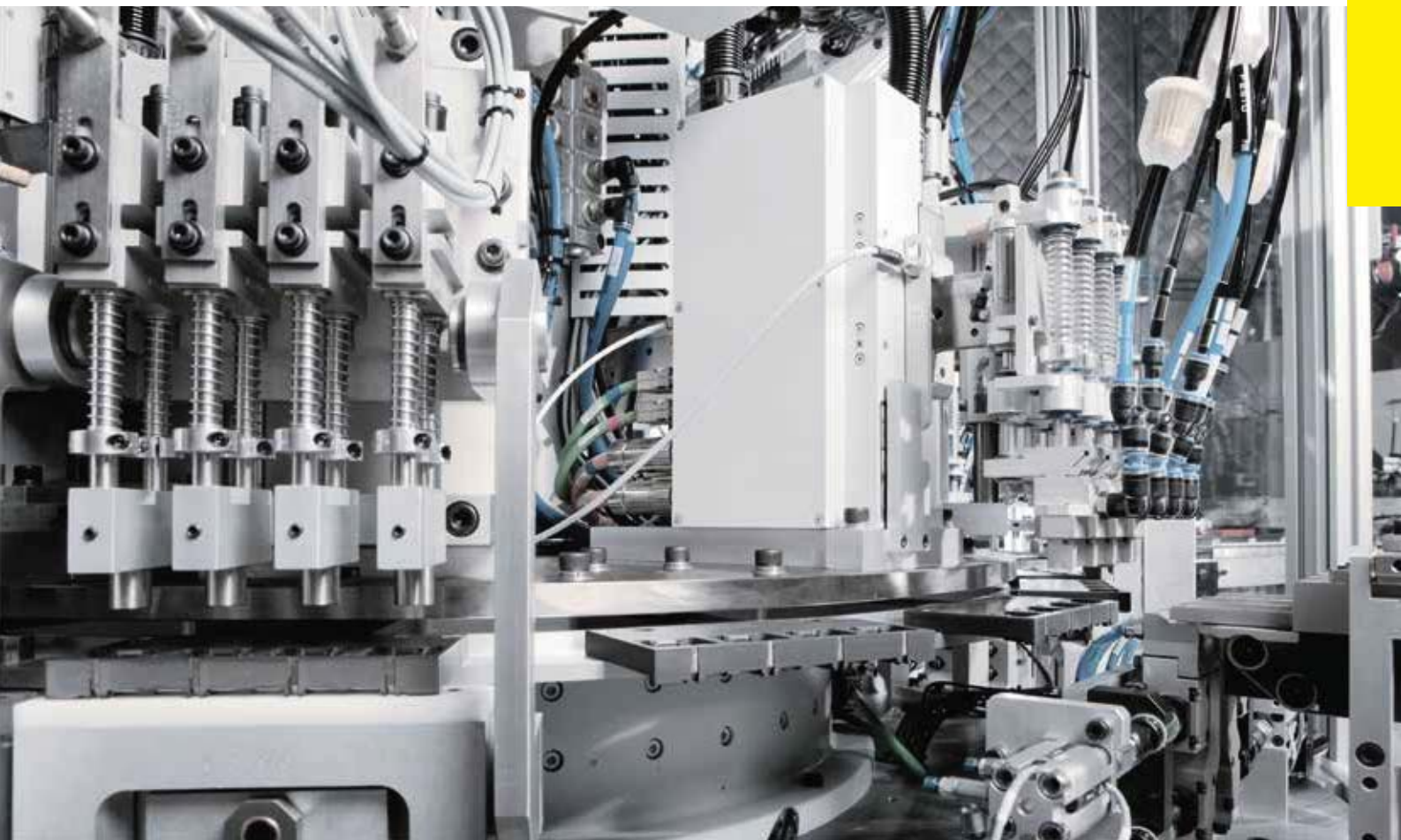


THE CLEANLINE. FOR CLEANROOM APPLICATIONS.

Cleanroom-certified version also available:
The TO220 CAB CL is certified to air purity class 1 as per US Federal Standard 209E.



The custom machine from INNOVATIVE Products & Equipment assembles and tests plastic parts for irrigation systems. The heart of the installation, a TO 750, beats at 75 cycles per minute. The four-track design allows production of 300 components per minute.



Direct drive rotary table with impressive dynamics and extremely high degree of repeat accuracy. User-programmable and also suitable for use in clean rooms. The direct drive rotary table allows the shortest indexing times at the highest precision. Its ability to cover a significantly more versatile range of tasks – including reuse – helps you tap new added value potential.

ADVANTAGES

- Extremely dynamic
- Extremely high repeat accuracy
- Absolute measuring system (TO 150C/TO 220C)
- High degree of reliability, long service life
- Zero backlash
- No wearing parts
- Direct, rigid connection of the load to the drive
- Overload protection
- Absolutely rust-proof design, all surfaces are treated
- No cooling devices necessary
- Compact design, small footprint, high level of torque

TO 150C

TECHNICAL DATA

Operating cycles:	Up to 600 cpm
Direction of rotation:	Freely programmable
Max. table speed:	A-Typ: 60 rpm B-Typ: 150 rpm
Weight:	16 kg
Mounting position:	Any*
Positioning precision (arcsec):	± 25" (on request 15" improved indexing precision)
Repeatability (arcsec):	± 8"
Max. axial run-out of dial plate:	0.01 mm (at Ø 155 mm)
Max. concentricity:	0.01 mm

SHAFT ENCODER DATA

Measurement system:	Heidenhain EnDat ECN 113 (absolute ± 25") or EnDat ECN 225 (absolute ± 15")
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MOTOR DATA

Nom:	15 Nm
Peak:	45 Nm

* Please consult WEISS for overhead mounting positions.



LOAD DATA (for the dial plate)



Perm. tilting moment acting on the locked dial plate

600 Nm



Perm. radial force acting on the locked dial plate

10000 N

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

6000 N



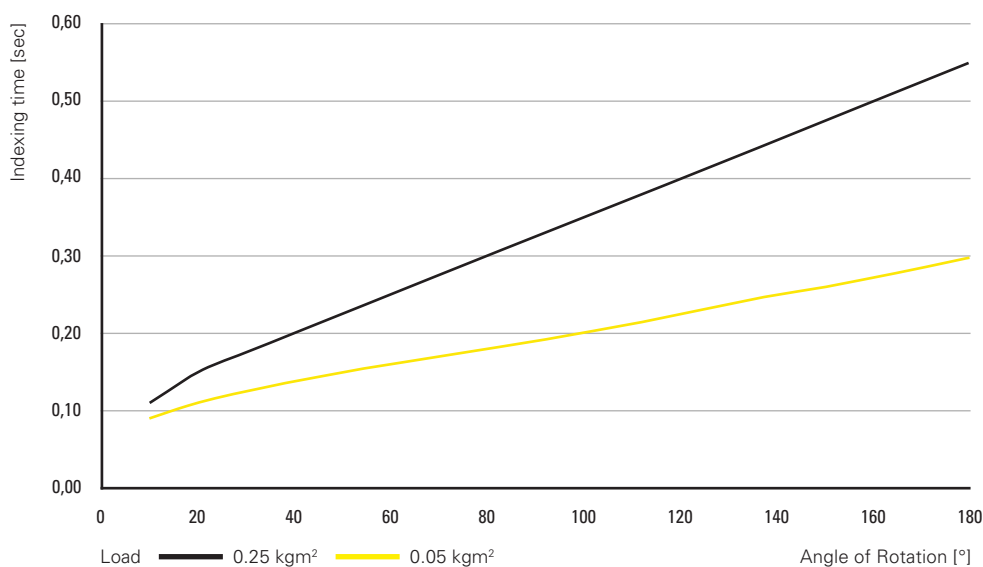
Perm. tangential moment acting on the locked dial plate

Nominal
15 Nm

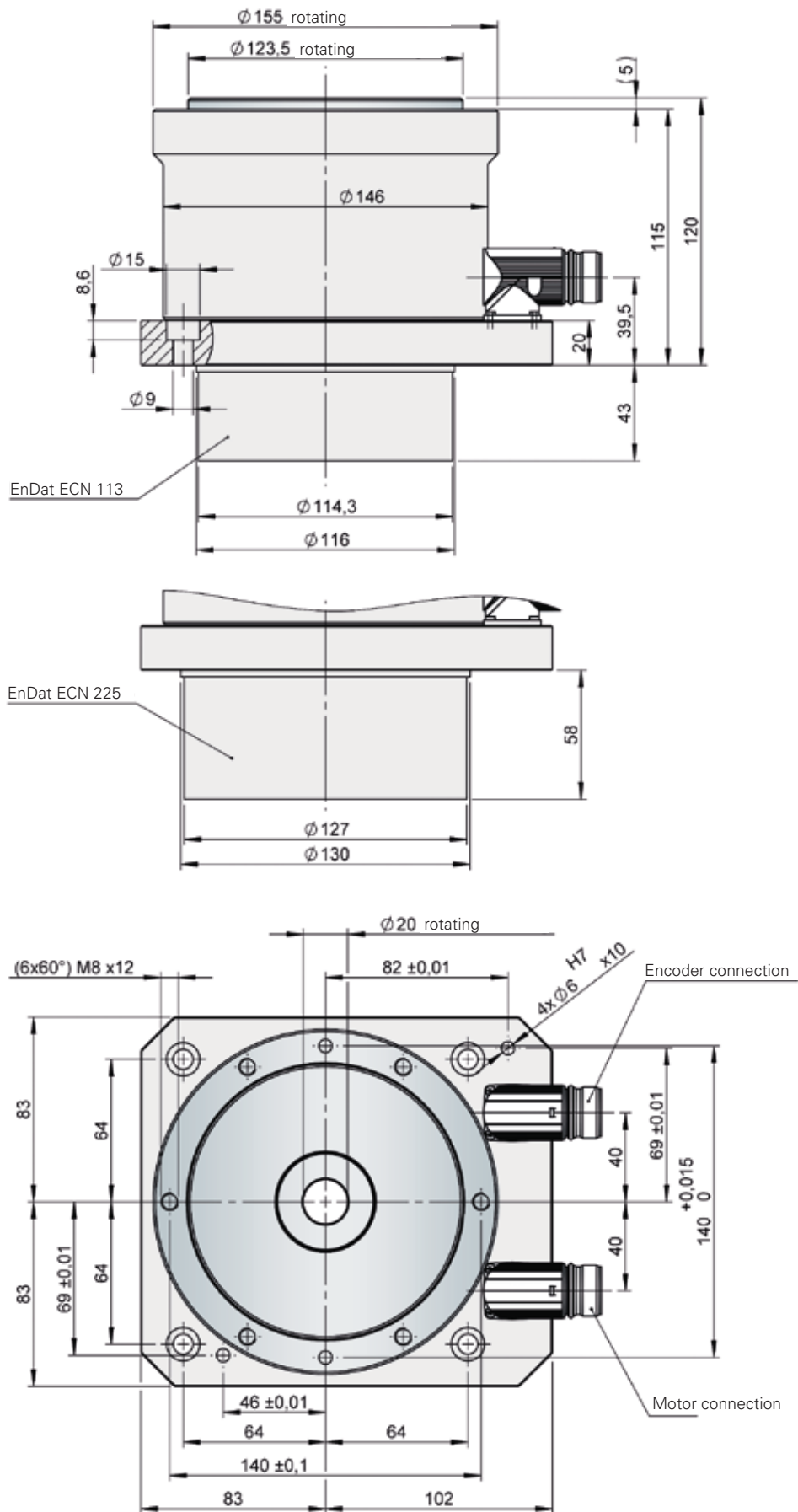
Peak
45 Nm

Combined loads only after inspection by WEISS.

TIMING DIAGRAM



DIMENSIONS



TO 220C

TECHNICAL DATA

Max operating cycles:	600 cpm
Direction of rotation:	Freely programmable
Max. table speed:	A-type: 60 rpm B-type: 150 rpm
Weight:	32 kg
Mounting position:	Any*
Positioning precision:	± 25" (± 15" optional)
Repeatability (arcsec):	± 7"
Max. axial run-out of dial plate:	0.01 mm (at Ø 245 mm)
Max. concentricity:	0.01 mm

MOTOR DATA

Nom:	52 Nm
Peak:	130 Nm

SHAFT ENCODER DATA

Measurement system:	Heidenhain EnDat ECN 113 (absolute ± 25") or EnDat ECN 225 (absolute ± 15")
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* Please consult WEISS for overhead mounting positions.

LOAD DATA (for the dial plate)



Perm. tilting moment acting on the locked dial plate

1000 Nm



Perm. radial force acting on the locked dial plate

15000 N

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

10000 N

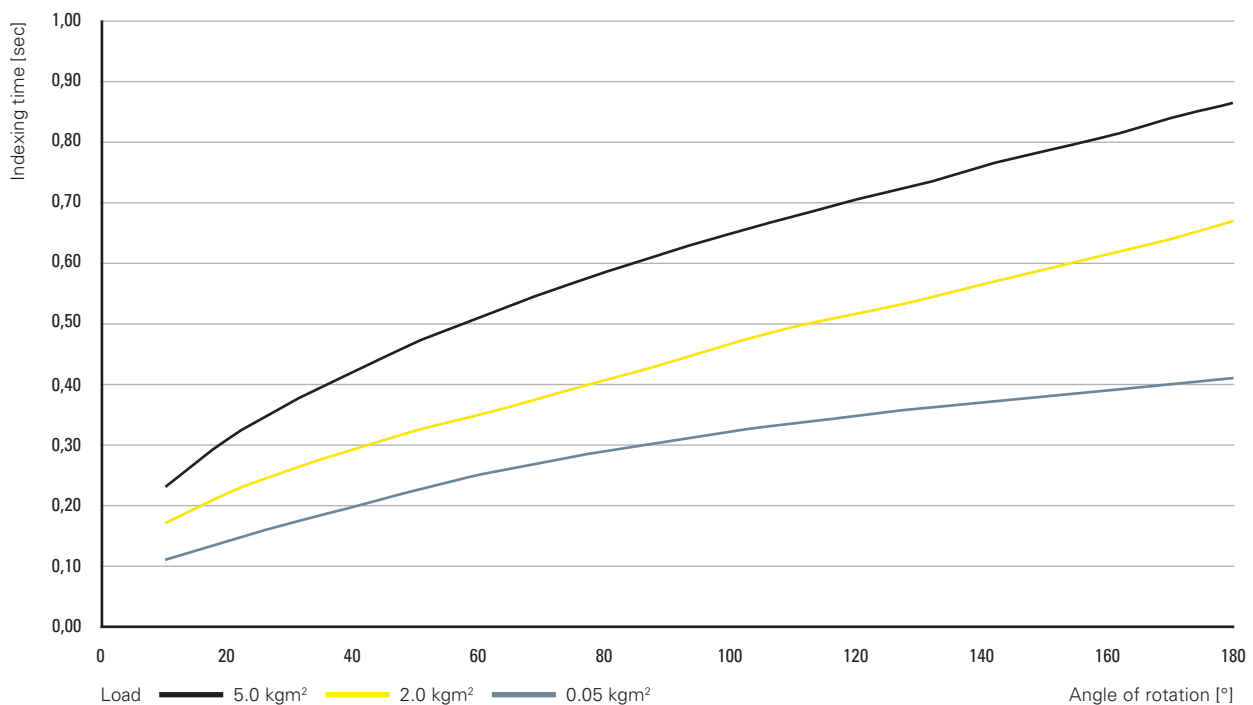


Perm. tangential moment acting on the locked dial plate:

Nominal	Peak
52 Nm	130 Nm

Combined loads only after inspection by WEISS.

TIMING DIAGRAM



TO 750C

TECHNICAL DATA

Max operating cycles:	400 cpm
Direction of rotation:	Freely programmable
Max. table speed:	50 rpm
Weight:	270 kg
Mounting position:	Any*
Indexing precision (arcsec):	± 7"
Repeatability (arcsec):	± 2"
Max. axial run-out of motor:	0.01 mm (at Ø 500 mm)
Max. concentricity:	0.01 mm (at Ø 500 mm)

The manufacturing tolerance of the dial plate has to be added.
See chapter customer-specific solutions.

MOTOR DATA

Nom:	700 Nm
Peak:	2100 Nm

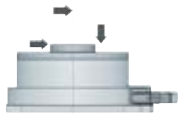
SHAFT ENCODER DATA

Measurement system:	Renishaw Signum with incremental (1 Vpp), BISS or DriveCLIQ-interface
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* Please consult WEISS for overhead mounting positions.

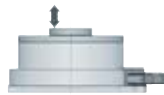


LOAD DATA (for the stationary centre part)



Perm. tilting moment acting on the centre section

2500 Nm



Perm. radial force acting on the centre section

20000 N

Perm. force acting vertically on the centre section

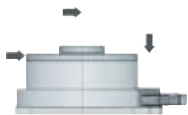
25000 N



Perm. tangential moment acting on the centre section

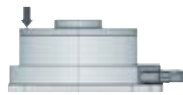
1100 Nm

LOAD DATA (for the dial plate)



Perm. tilting moment acting on the locked dial plate

6000 Nm

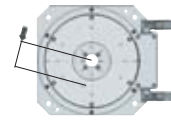


Perm. radial force acting on the locked dial plate

25000 N

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

25000 N

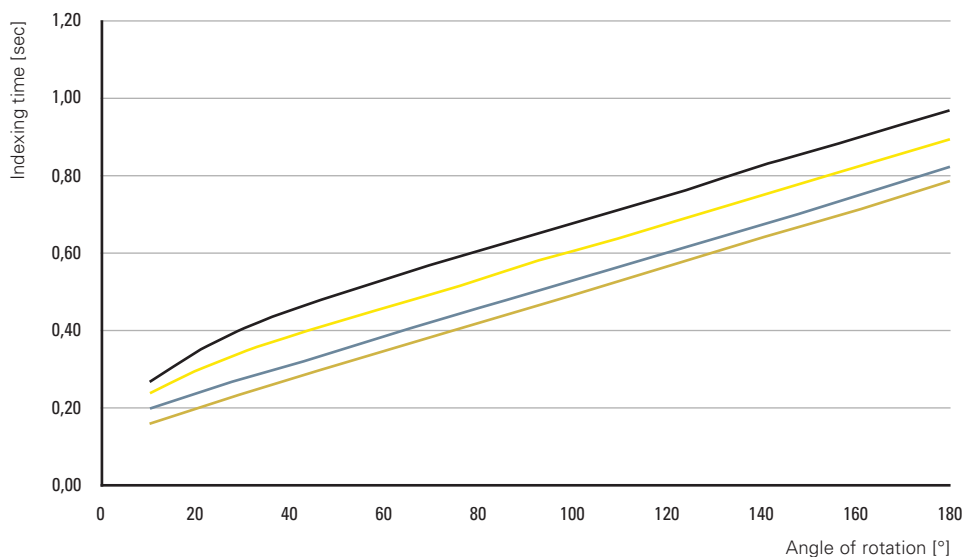


Perm. tangential moment acting on the locked dial plate

Nominal	Peak
700 Nm	2400 Nm

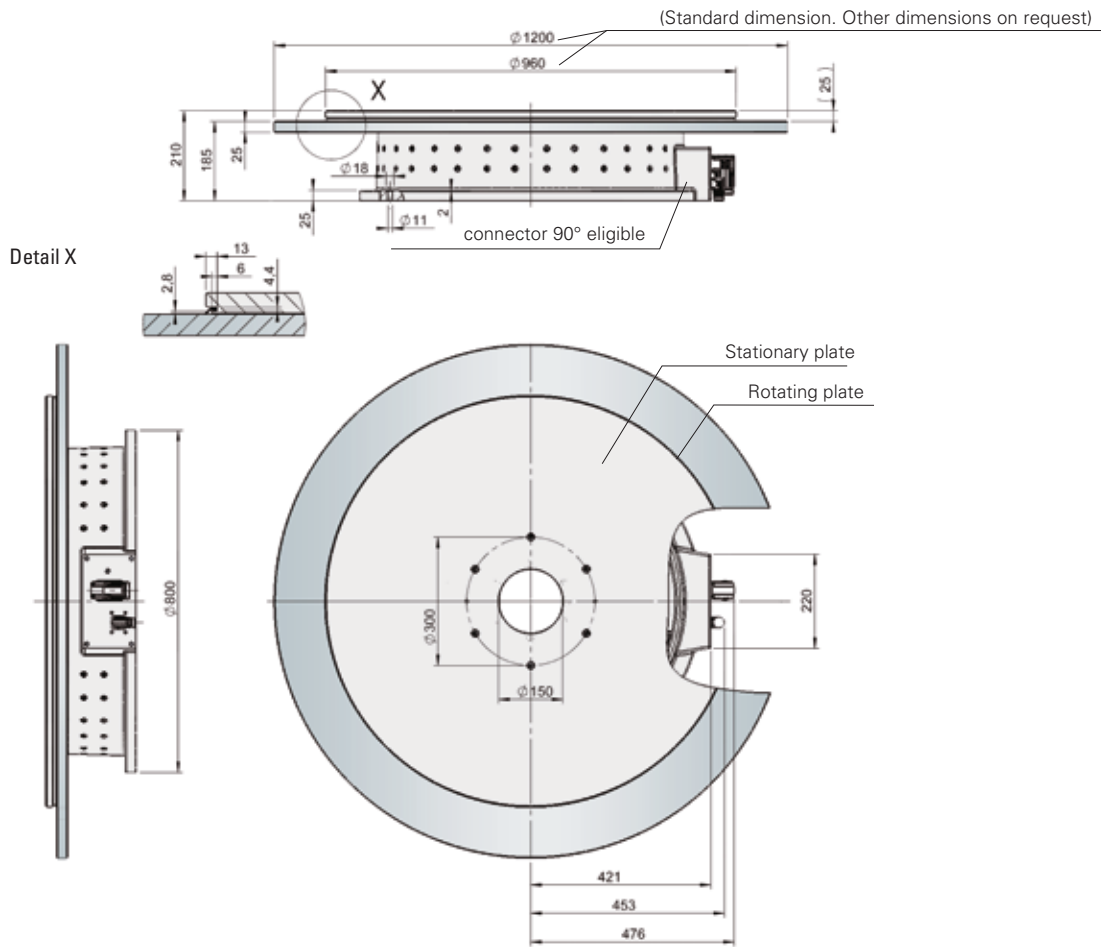
Combined loads only after inspection by WEISS.

TIMING DIAGRAM

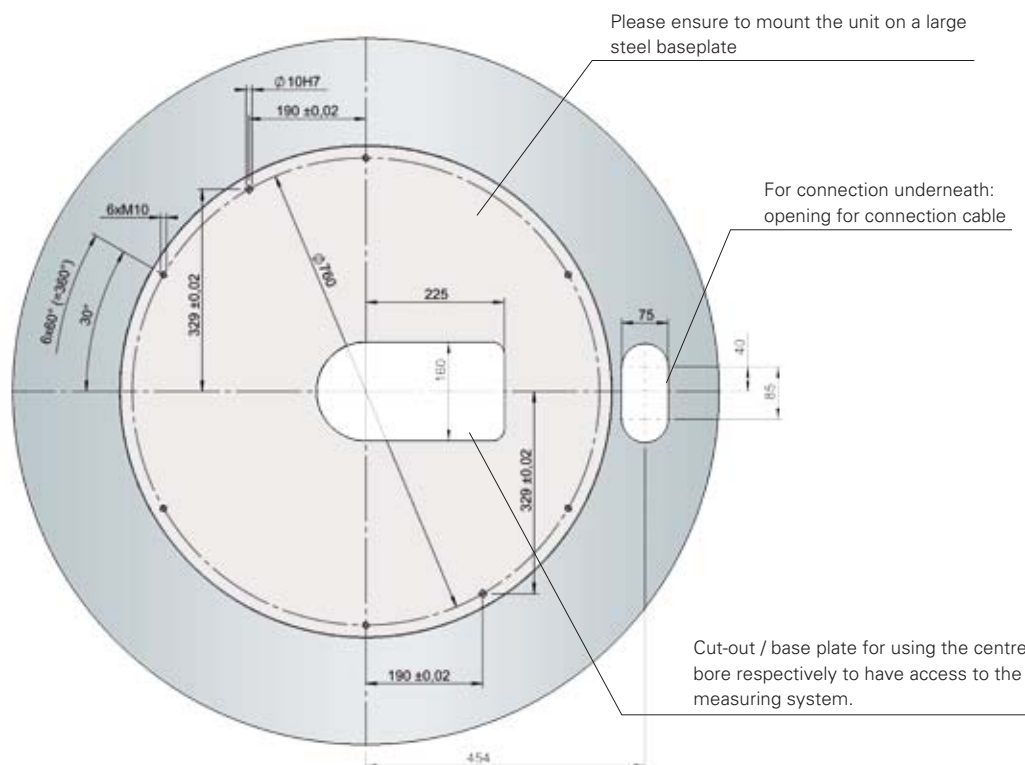


DIMENSIONS

Standing and rotating plate according to customer drawing are included in delivery and will be offered separately.



SCREW HOLE PATTERN



W.A.S./W.A.S. 2

WEISS APPLICATION SOFTWARE

The W.A.S. (WEISS Application Software) offers you easy access to the table drive options. The W.A.S. 2 software also offers quick and easy commissioning of entire multi-axis systems.

- Free language selection
- Easy access to axis parameters
- Diagnostic options, remote maintenance
- Inputs and outputs can be forced (e.g. for start-up)
- Software cams can be specified
- Error history



DESIGN AND CONNECTION

- Plug & play
- Pre-parameterised control package
- Perfectly matched components
- Outstanding flexibility with regard to cable length and interfaces

COMMUNICATION

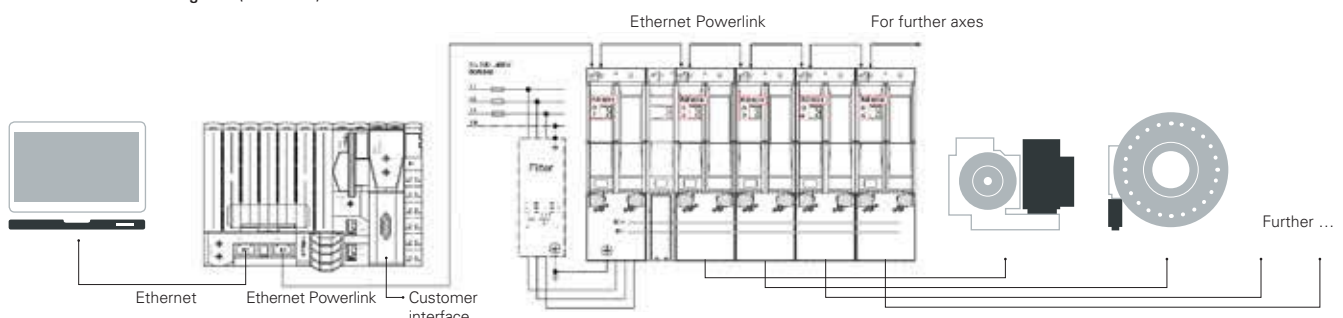
- Digital I/O (24-V inputs and outputs)
- Profibus DP
- EtherNet/IP (Rockwell)
- PROFINET (W.A.S. 2 only)
- EtherCAT (W.A.S. 2 only)
- More available on request

SAFETY AND SERVICE

- Absolute measuring system
- Safe torque off function integrated
- Safe Motion on request
- Worldwide service
- Comprehensive safety and monitoring function

Electrical data	TO 150C / TO 220C	TO 150C / TO 220C	TO 750C
Main power voltage	230 V	400 V	400 V
Power voltage 24V	1.5 A	2.5 A	2.5 A
Connection power max	2.1 kVA	5 kVA	30 kVA
Installation dimensions W x H x D	60 x 300 x 295 mm	70 x 450 x 310 mm	200 x 450 x 310 mm

ACP Multi circuit diagram (W.A.S. 2)



MACHINE DESIGN TO

Fax to: +49 (0) 6281 5208-99 or just fill in the form online: www.weiss-international.com

Enquiry Attachment to order

Dear customer,

Thank you for your interest in our torque rotary indexing tables. To ensure we supply the correct unit to suit your application, we kindly ask you to answer the following questions:

Modell

TO 150C (A/B) TO 220C (A/B) TO 750C

The configuration (A/B) is selected by us on the basis of your indexing time specifications.

Indexing time

Based on the calculated mass moment of inertia, do you require:

- The shortest indexing time
- A longer indexing time of approx. _____ sec
- Angle of rotation _____ °
- Standing time _____ sec

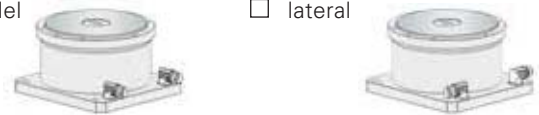
Mass moment of inertia: _____ kgm²
(additional indexing plate and add-ons)

Colour of the indexing table (TO 750C only)

- RAL 7035 (light grey)
- Special colour RAL _____ (extra charge)

Connection plug arrangement (TO 150C / TO 220C)

- parallel lateral

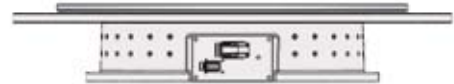


Direction of connection (TO 750C)

- below



- left



- right



Indexing ring

Diameter: _____ I/D mm
 Thickness: _____ mm
 Material: Al St other

Fixtures and parts

Number: _____
 Weight per station: _____ kg
 Diameter of the center of gravity: _____ mm

Dial plate

Included in the scope of offer and delivery Processing according to drawing No. _____

Electrical data

- WEISS control package
 - Servo motor, amplifier, W.A.S. Software
 - Cables length: 5m 10m 15m 20m 25m
 - Hand-held terminal (optional)
 - Interface to the customer PLC
 - Digital I/O PROFINET (W.A.S. 2 only)
 - Profibus-DP EtherCAT (W.A.S. 2 only)
 - EtherNet/IP (Rockwell)
 - Interface to W.A.S. – WEISS Application Software
 - RS232 and Ethernet are included in the scope of delivery
 - Converter USB to RS232

Electrical source

- TO 150C
- 1 oder 3 x 208 ... 230 V ~ 50/60 Hz
 - 3x400 ... 480 V ~ 50/60 Hz
- TO 220C
- 1 oder 3 x 208 ... 230 V ~ 50/60 Hz
 - 3x400 ... 480 V ~ 50/60 Hz
- TO 750C
- 3x400 ... 480 V ~ 50/60 Hz

Encoder

- | | |
|--|---|
| TO 150C / TO 220C | TO 750C |
| <input type="checkbox"/> ECN 113 ± 25" | <input type="checkbox"/> Incremental |
| <input type="checkbox"/> ECN 225 ± 15" | <input type="checkbox"/> Absolute BISS |
| | <input type="checkbox"/> Absolute DriveCliq |

For technical enquiries

Company: _____
 Name: _____
 Country: _____

Desired delivery date: _____
 Phone: _____ Fax: _____
 E-Mail: _____