

Technology that inspires



PRODUCT RANGE

Mechanics | Software | Electronics



Excerpt of the WEISS Product Range

CR/TH HEAVY DUTY RING



freely programmable

4

I would like to commission my installation quickly and efficiently



3

I require machine frames, mounting bases or custom equipment



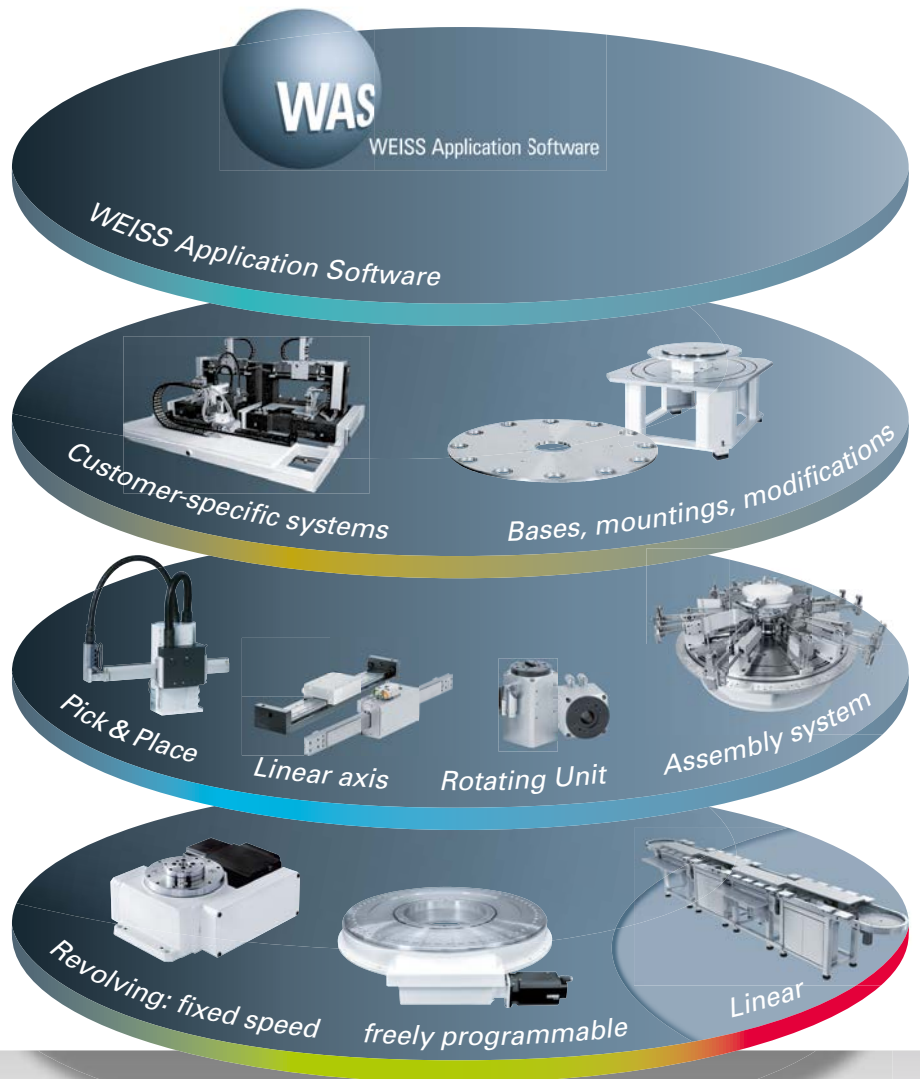
2

I require handling components



1

My transport is...



Four steps to perfect automation

Fixed position rotary indexing tables



TC rotary indexing table
TR rotary indexing ring

User-programmable rotary indexing tables



NC rotary indexing table NR rotary indexing ring
CR/TH heavy duty ring TO torque rotary indexing table
TW rotary indexing table

Linear assembly system

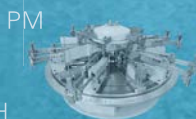


LS 280

Handling module



HG/HN



HP Pick&Place HL Linear axis
HG/HN Linear axes ST/SW rotary unit
SH Lifting-rotating unit PM Pick-o-Mat

Customer specific solutions



SK



SR/SK indexing machine bases
Additional indexing plate



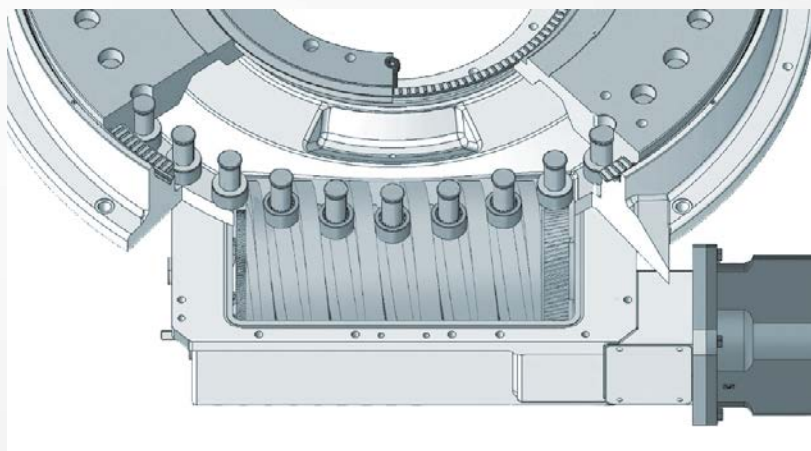
WAS-Software

WEISS Application Software (WAS)



CR/TH heavy duty ring: Makes light work of heavy loads

Flat heavy duty ring with large central opening. A real powerhouse. User-programmable. The flat design frees up space for ergonomically optimal workplaces. Using the WAS control system, the ring is completely user-programmable.



The cam drive, positioned far toward the outside, enables the highest precision and dynamic performance. Third-party motors can easily be connected.



User-programmable TH 400F rotary barrel drive for horizontal loads and high breakdown torque levels. With screw-on surface for Buhl pinning and optional rotary encoder.



WAS - WEISS Application Software: Secure and fast commissioning through free-of-charge user software.

The key advantages at a glance:

- *Extremely flat design*
- *Large central opening for optimum feedthrough of supply cables*
- *User-programmable*
- *Extremely smooth and quiet running (<70 dBA)*
- *Splashproof*
- *Covered gaskets for protection from beads of liquid*
- *Connection of third-party motors possible*
- *Zero backlash thanks to multiple cam rollers tensioned against one another*
- *Highest parts and repeat accuracy*
- *CR range with available manual hand crank*
- *Impressive price-performance*
- *Mounted on high-precision needle bearings to handle the heaviest loads in both the axial and radial direction*
- *Power transmission through multiple, meshed cam rollers*
- *Permanent status monitoring through WAS - WEISS Application Software*

TH 400F

Technical data

Direction of rotation:	freely programmable	
Mounting position:	rotation axis hor./vert. (preferred cam shaft down, horizontal)*	
Positioning accuracy:	± 15" (arcsec) standard with additional shaft encoder (± 50" without additional shaft encoder)	
Repeatability:	± 5" (arcsec) standard with additional shaft encoder (± 40" without additional shaft encoder)	
Max. axial run-out of output flange:	0.03 mm	
Max. circular run-out of output flange:	0.03 mm	
Weight:	approx. 430 kg. (without motor)	* Please consult WEISS for overhead mounting positions.

Load data (for the output flange)

F_A: permissible axial force dynamic: 20 kN static: 90 kN	M_k: permissible tilting moment dynamic: 27 kNm static: 62 kNm
F_R: permissible radial force dynamic: 127 kN static: 290 kN	T_A: permissible torque dynamic** 4.8 kNm static: 7 kNm

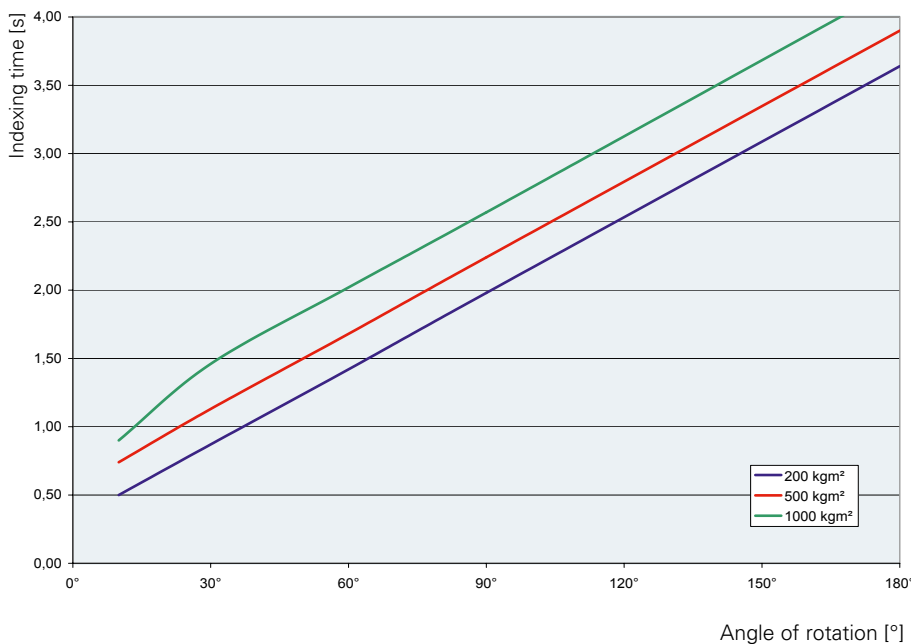
Combined loads only after inspection by WEISS.

** max. driving torque at drive flange (depends on drive)

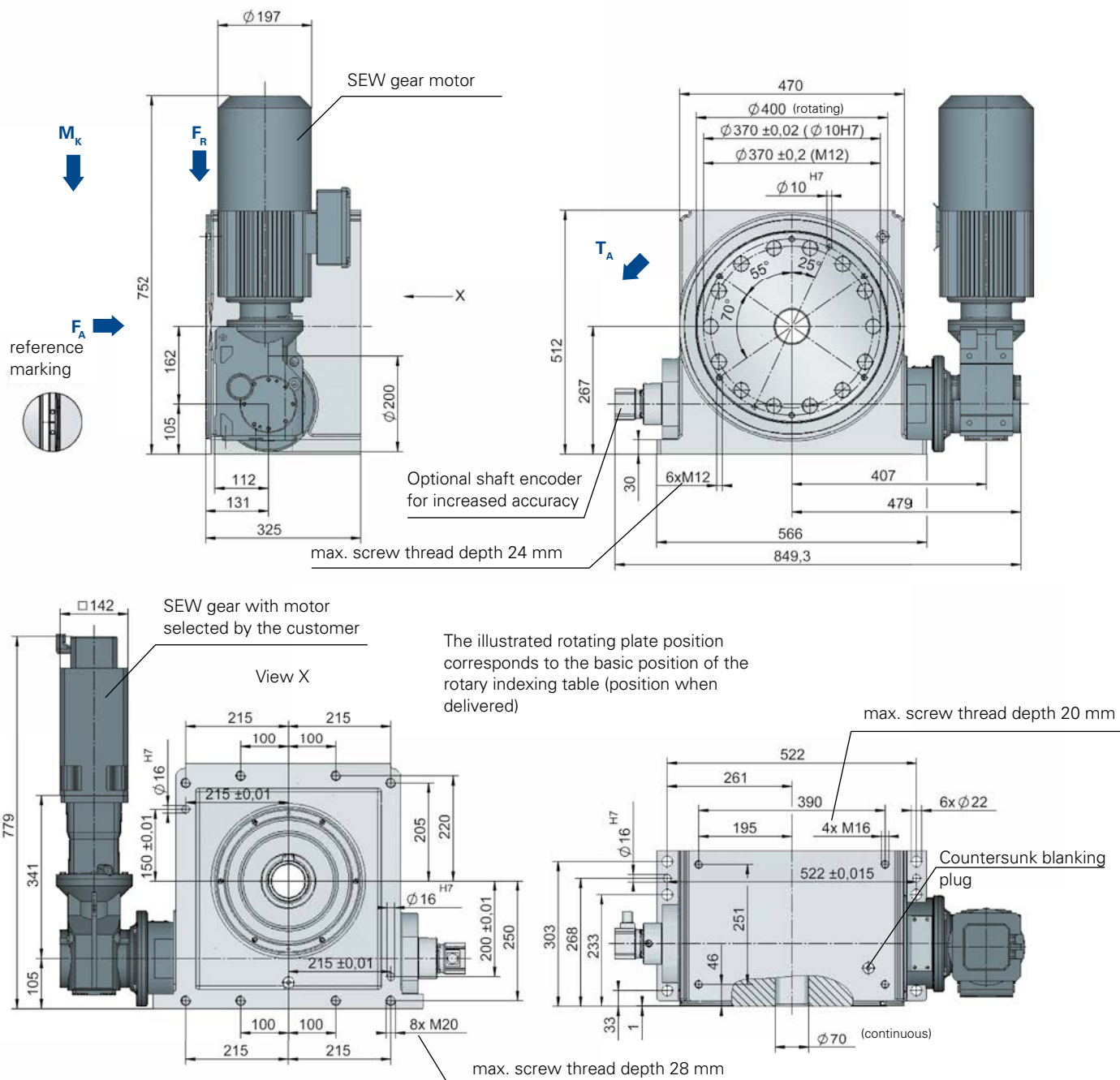
Driving data

i_R Rotary indexer	14
i_B Bevel gear	15.86 (standard, other transmissions possible)
i_T Total	222.04 (standard, other transmissions possible)
M_M Max. motor	22 Nm (for standard bevel gear transmission)
M_B Max. brake	10 Nm (for standard bevel gear transmission)

Drive time TH 400F for standard transmission (please contact us for other requests)



TH 400F Dimensions



producer	motor description
B&R (WEISS standard)	8LSA56.E1022D200-0
recommended third party motors	
SEW	KF47DRL100L4-2100
Siemens	1FK7083-5AF71
Rockwell	MPL-B4560F-MK24AA

producer	motor description
Mitsubishi	HF-SP 35 2B

TH 700F

Technical data

Direction of rotation:	freely programmable
Mounting position:	rotation axis horizontal (cam shaft down, horizontal)
Positioning accuracy:	± 15"
Repeatability:	± 10"
Max. axial run-out of output flange:	0.02 mm
Max. circular run-out of output flange:	0.02 mm
Weight:	approx. 630 kg. (without motor)

Driving data

i^{Total}	144
n^{Max. motor}	2000 rpm
M_{Max. motor}	80 Nm
M_{Max. brake}	50 Nm

Load data (for the stationary centre section)

M_K : perm. tilting moment	3500 Nm	F_A : perm. axial force	35000 N	T : perm. torque	1700 Nm
F_R : perm. radial force	19000 N				

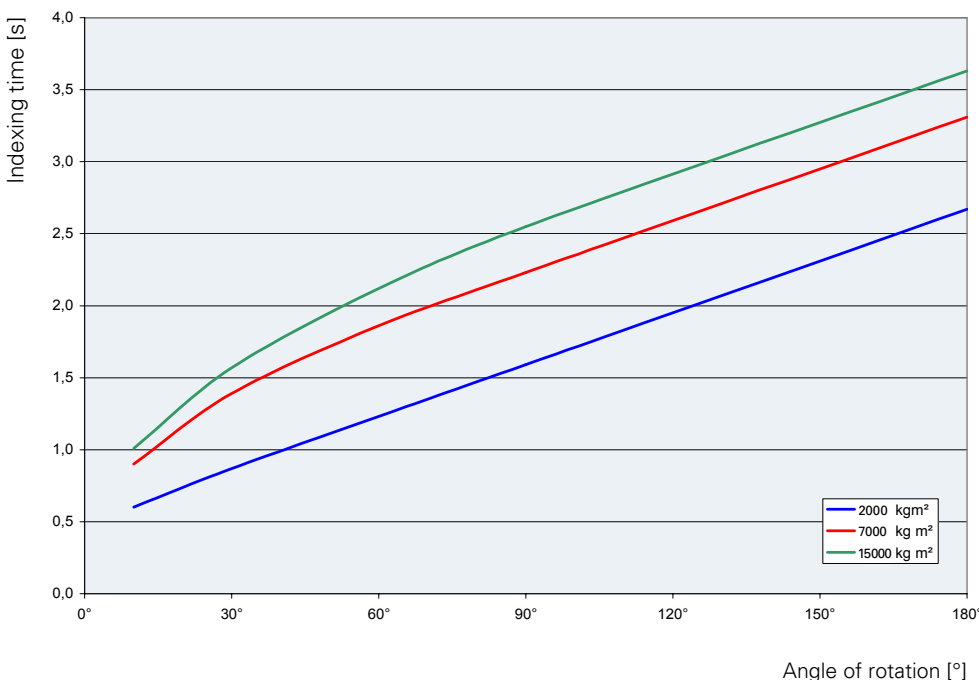
Load data (for the output flange)

F_A : permissible axial force dynamic: 70 kN static: 150 kN	M_K : permissible tilting moment dynamic: 10 kNm static: 20 kNm
F_R : permissible radial force dynamic: 30 kN static: 50 kN	T_A : permissible torque dynamic:* 11.5 kNm static: 17 kNm

Combined loads only after inspection by WEISS.

* max. driving torque at output flange (depends on drive)

Drive time TH 700F for standard transmission (please contact us for other requests)

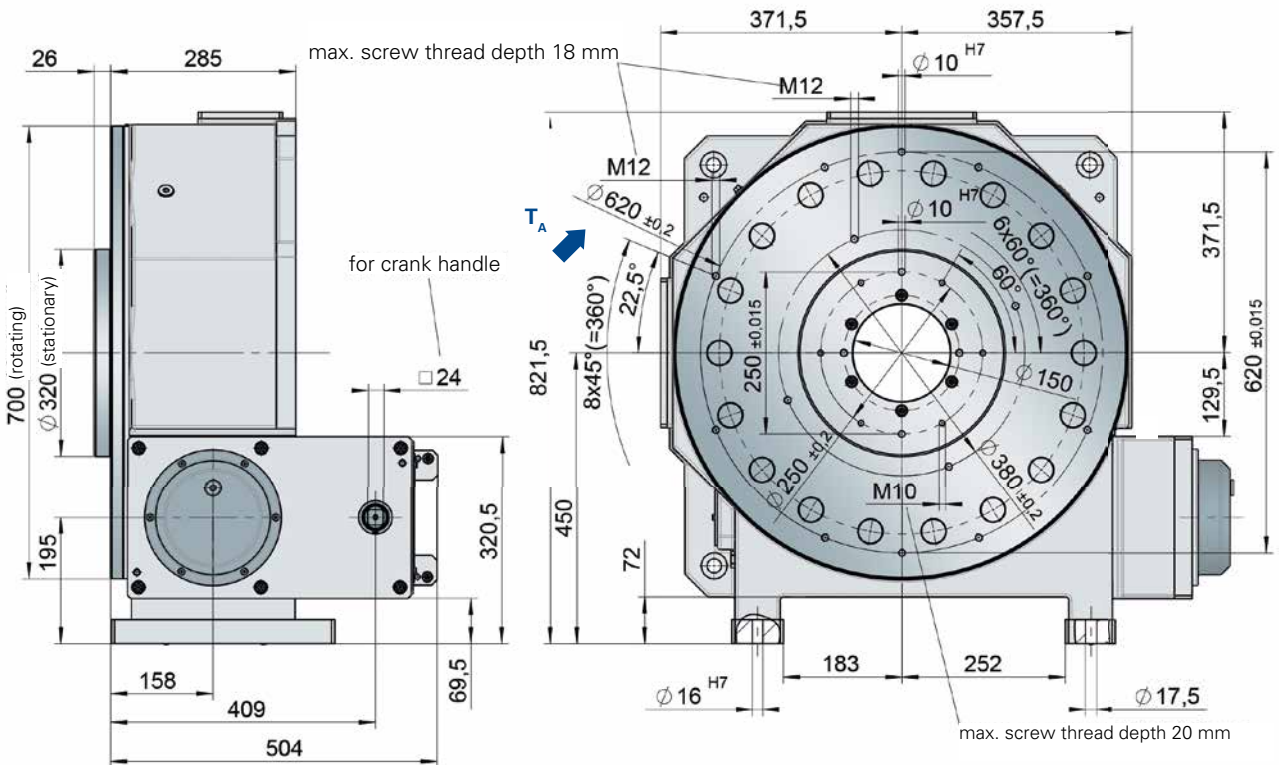
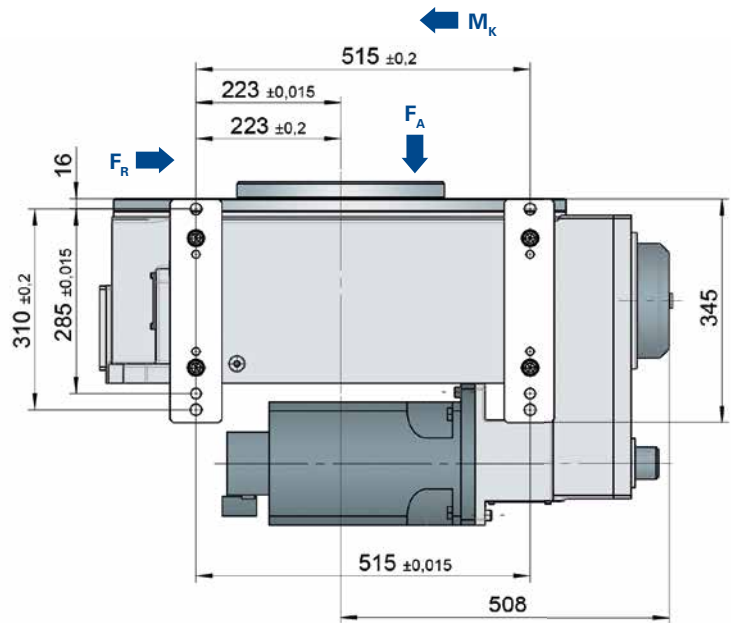


TH 700F Dimensions

reference marking



The illustrated rotating plate position corresponds to the basic position of the rotary indexing table (position when delivered)



producer	motor description
B&R (WEISS standard)	8LSA75.E1022D200-0
recommended third party motors	
SEW	DLR132S4-2100
Siemens	1FK7105-5AC71-1EH0
Rockwell	MPM-B2153E-MJ74AA

producer	motor description
Mitsubishi	HF-SP702B

TH 1000F

Technical data

Direction of rotation:	freely programmable
Mounting position:	rotation axis horizontal (cam shaft down, horizontal)
Positioning accuracy:	± 15"
Repeatability:	± 10"
Max. axial run-out of output flange:	0.02 mm
Max. circular run-out of output flange:	0.02 mm
Weight:	approx. 1500 kg. (without motor)

Driving data

i^{Total}	200
n^{Max. motor}	2000 rpm
M^{Max. motor}	120 Nm
M^{Max. brake}	100 Nm

Load data (for the stationary centre section)

M_K : perm. tilting moment	6000 Nm	F_A : perm. force acting vertically	45000 N	T : perm. torque	2000 Nm
F_R : perm. radial force	19000 N				

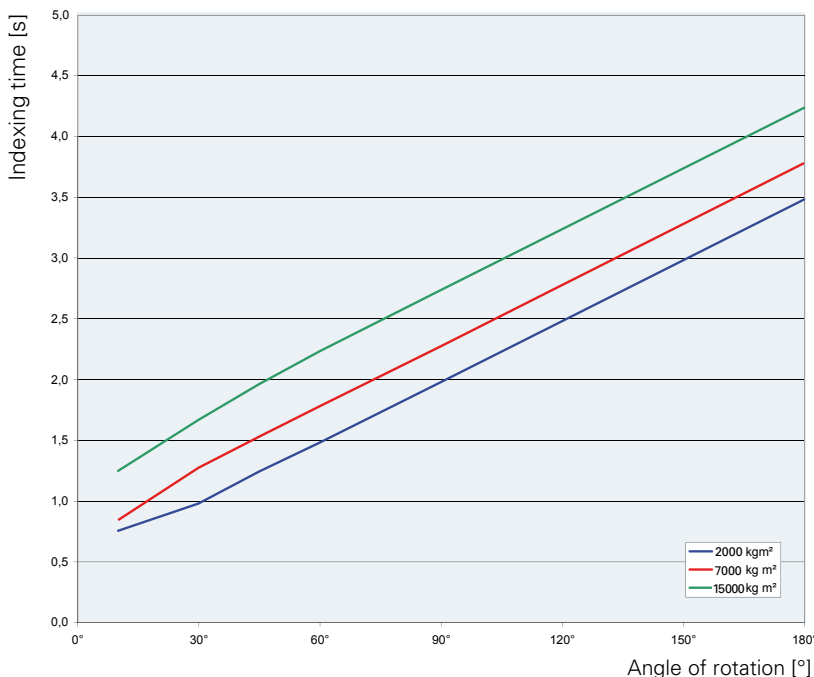
Load Data (for the output flange)

F_A : permissible axial force dynamic: 120 kN static: 250 kN	M_K : permissible tilting moment dynamic: 25 kNm static: 50 kNm
F_R : permissible radial force dynamic: 100 kN static: 220 kN	T_A : permissible torque dynamic:* 24 kNm static: 32 kNm

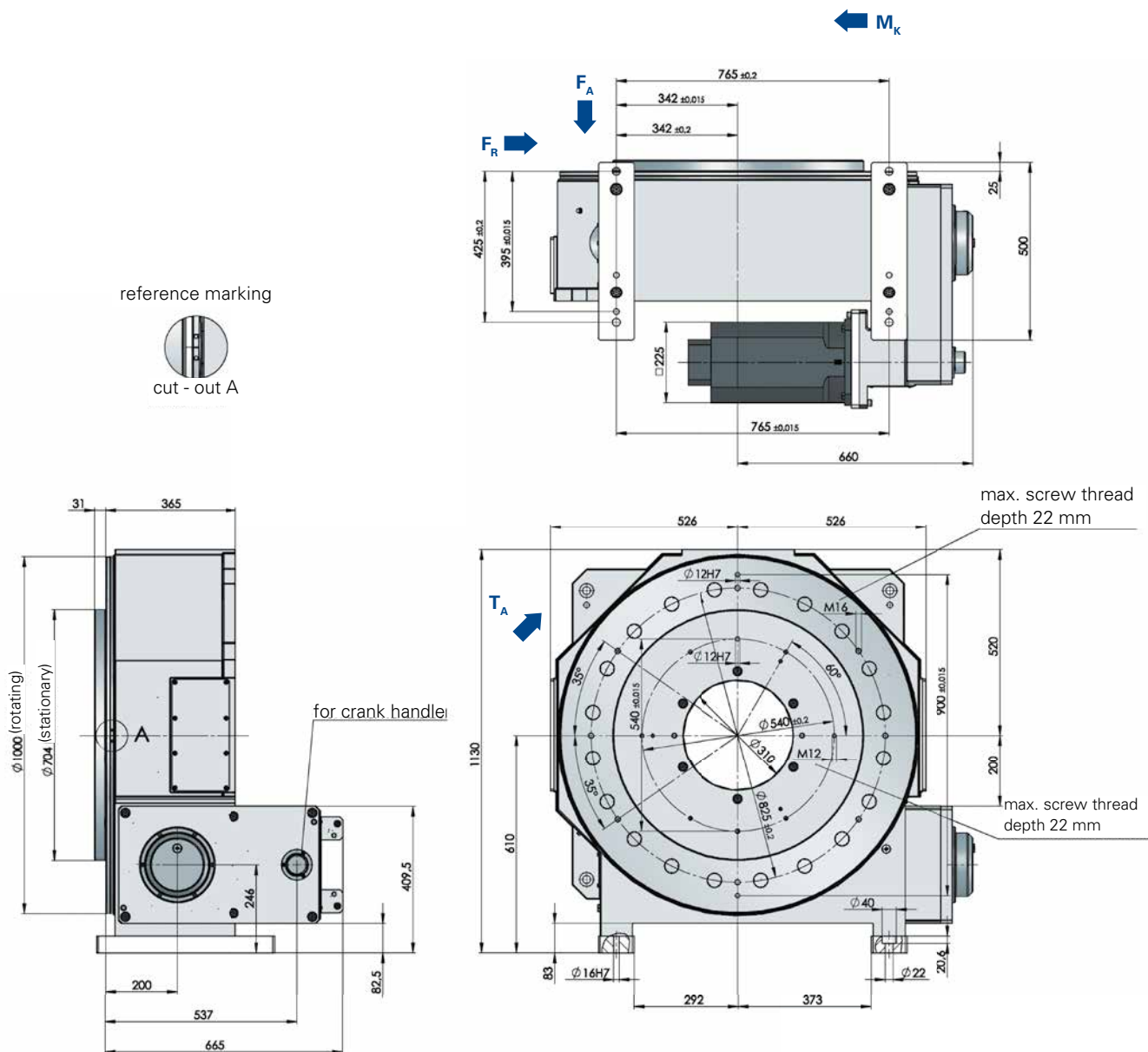
Combined loads only after inspection by WEISS.

* max. driving torque at output flange (depends on drive)

Drive time TH 1000F for standard transmission (please contact us for other requests)



TH 1000F Dimensions



producer	motor description
B&R (WEISS standard)	8LSA84.E1022D200-0
recommended third party motors	
SEW	DLR 13254-2100
Siemens	1FT6108-8ACFX
Rockwell	MPM-B2154E-M974AA

producer	motor description
Mitsubishi	LP15K2

CR 700C

Technical data

Direction of rotation:	freely programmable
Mounting position:	rotation axis vertical*/horizontal (cam shaft down, horizontal)
Positioning accuracy:	± 15"
Repeatability:	± 10"
Max. axial run-out of output flange:	0.02 mm
Max. circular run-out of output flange:	0.02 mm
Weight:	approx. 630 kg (without motor)
Handwheel:	freely accessible square shaft

Driving data

i_{Total}	144
n_{Max. motor}	2000 rpm
M_{Max. motor}	80 Nm
M_{Max. brake}	50 Nm

* Please consult WEISS for overhead mounting positions.

Load data (for the stationary centre section)

M_k : perm. tilting moment	3500 Nm	F_A : perm. axial force	35000 N	T : perm. torque	1700 Nm
F_R : perm. radial force	19000 N				

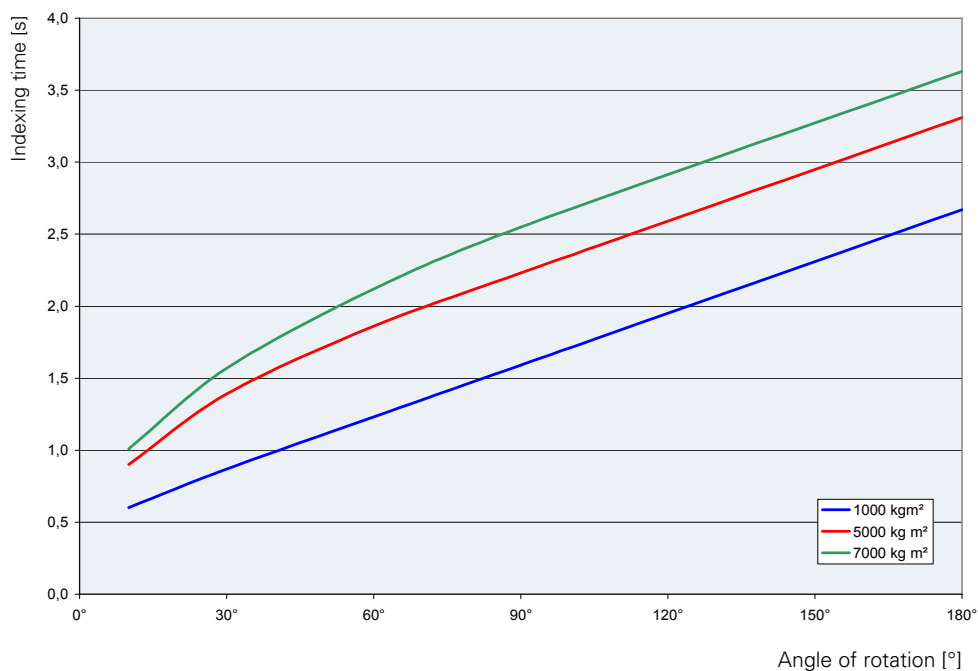
Load data (for the output flange)

F_A : permissible axial force dynamic: 70 kN static: 150 kN	M_k : permissible tilting moment dynamic: 10 kNm static: 20 kNm
F_R : permissible radial force dynamic: 30 kN static: 50 kN	T_A : permissible torque dynamic:* 11.5 kNm static: 17 kNm

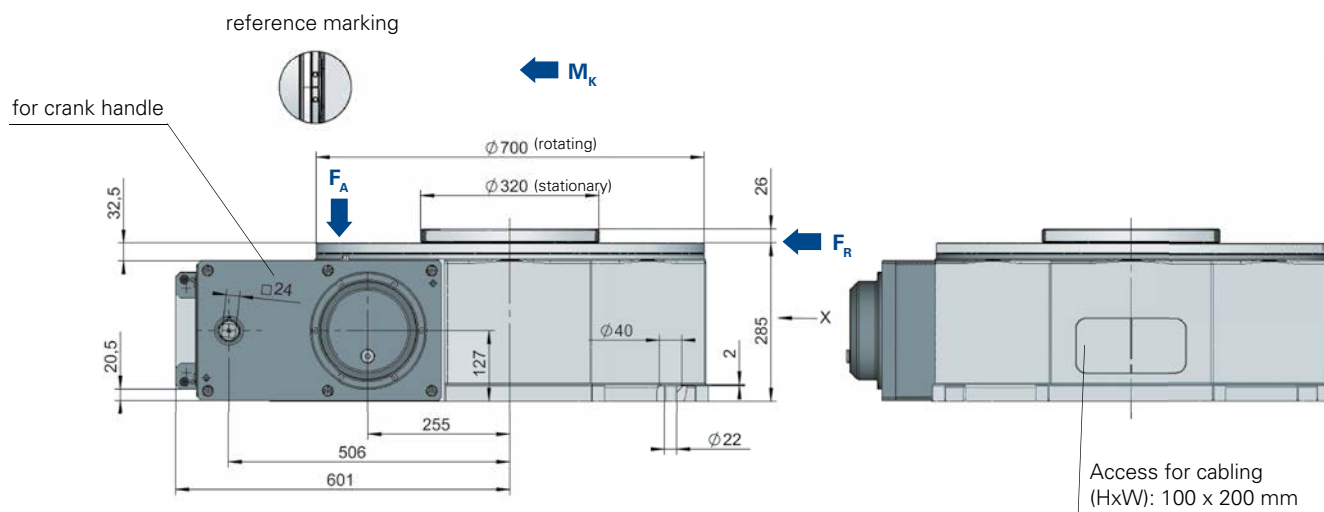
Combined loads only after inspection by WEISS.

* max. driving torque at output flange (depends on drive)

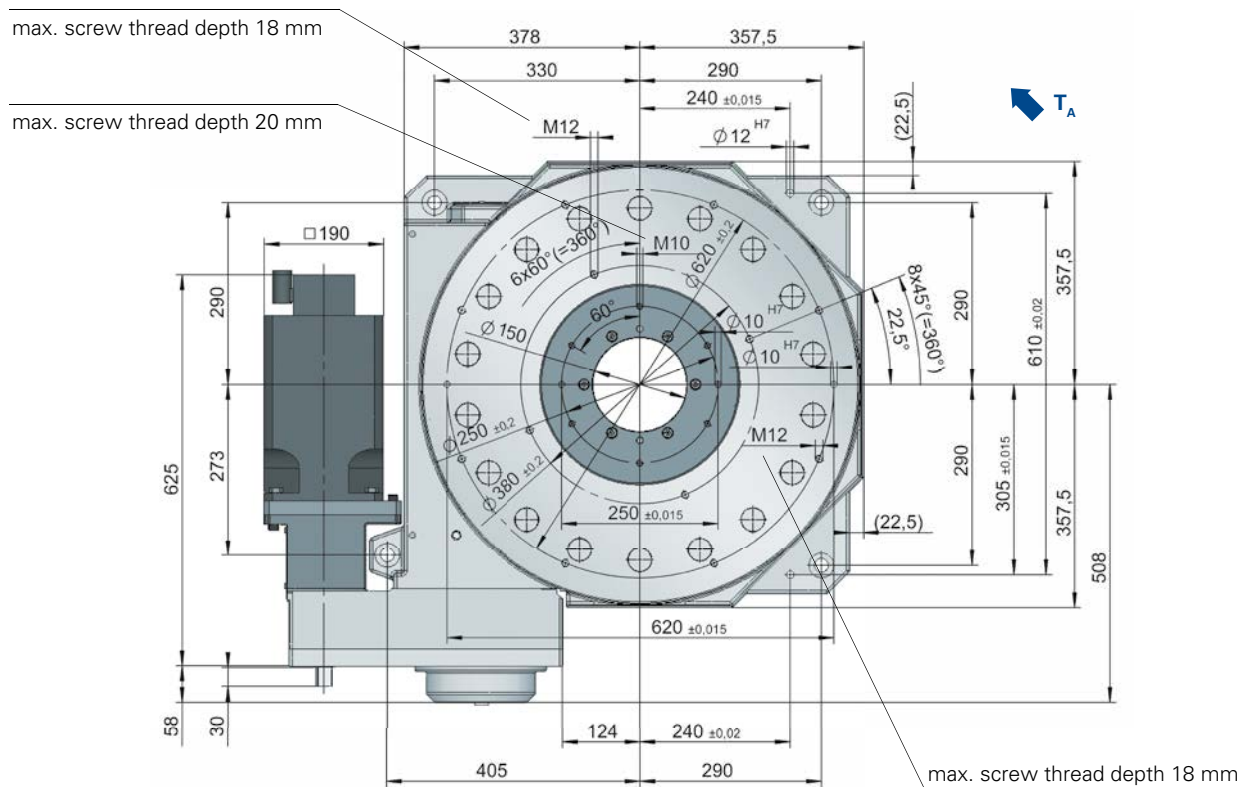
Drive time CR 700C (please contact us for other requests)



CR 700C Dimensions



The illustrated rotating plate position corresponds to the basic position of the rotary indexing table (position when delivered)



producer	motor description
B&R (WEISS standard)	8LSA75.E1022D200-0
recommended third party motors	
SEW	DRL 13254-2100
Siemens	1FK7105-5AC71-1EH0
Rockwell	MPM-B2153E-MJ74AA

producer	motor description
Mitsubishi	HF-SP702B

Some motors may need an additional ancillary transmission. Please contact us for further information.

CR 1000C

Technical data

Direction of rotation:	freely programmable
Mounting position:	rotation axis vertical (cam shaft horizontal)
Positioning accuracy:	± 15"
Repeatability:	± 10"
Max. axial run-out of output flange:	0.02 mm
Max. circular run-out of output flange:	0.02 mm
Weight:	approx. 1450 kg. (without motor)
Handwheel:	freely accessible square shaft

Driving data

i_{Total}	200
$n_{Max. motor}$	2000 rpm
$M_{Max. motor}$	120 Nm
$M_{Max. brake}$	100 Nm

Load data (for the stationary centre section)

M_K: perm. tilting moment	6000 Nm	F_A: perm. axial force	45000 N	T: perm. torque	2000 Nm
F_R: perm. radial force	19000 N				

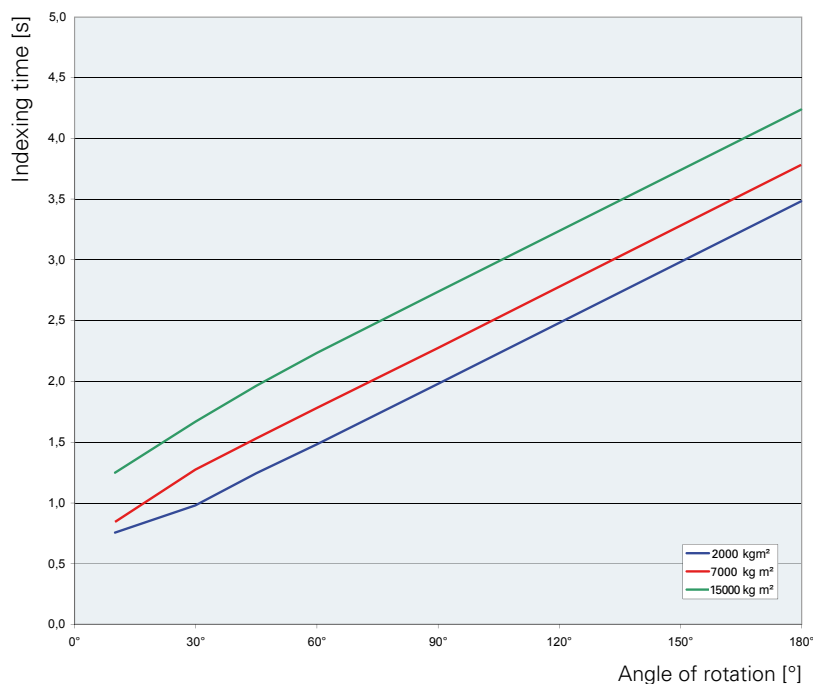
Load Data (for the output flange)

F_A: permissible axial force dynamic: 120 kN static: 250 kN	M_K: permissible tilting moment dynamic: 25 kNm static: 50 kNm
F_R: permissible radial force dynamic: 100 kN static: 220 kN	M_T: permissible torque moment dynamic:* 24 kNm static: 32 kNm

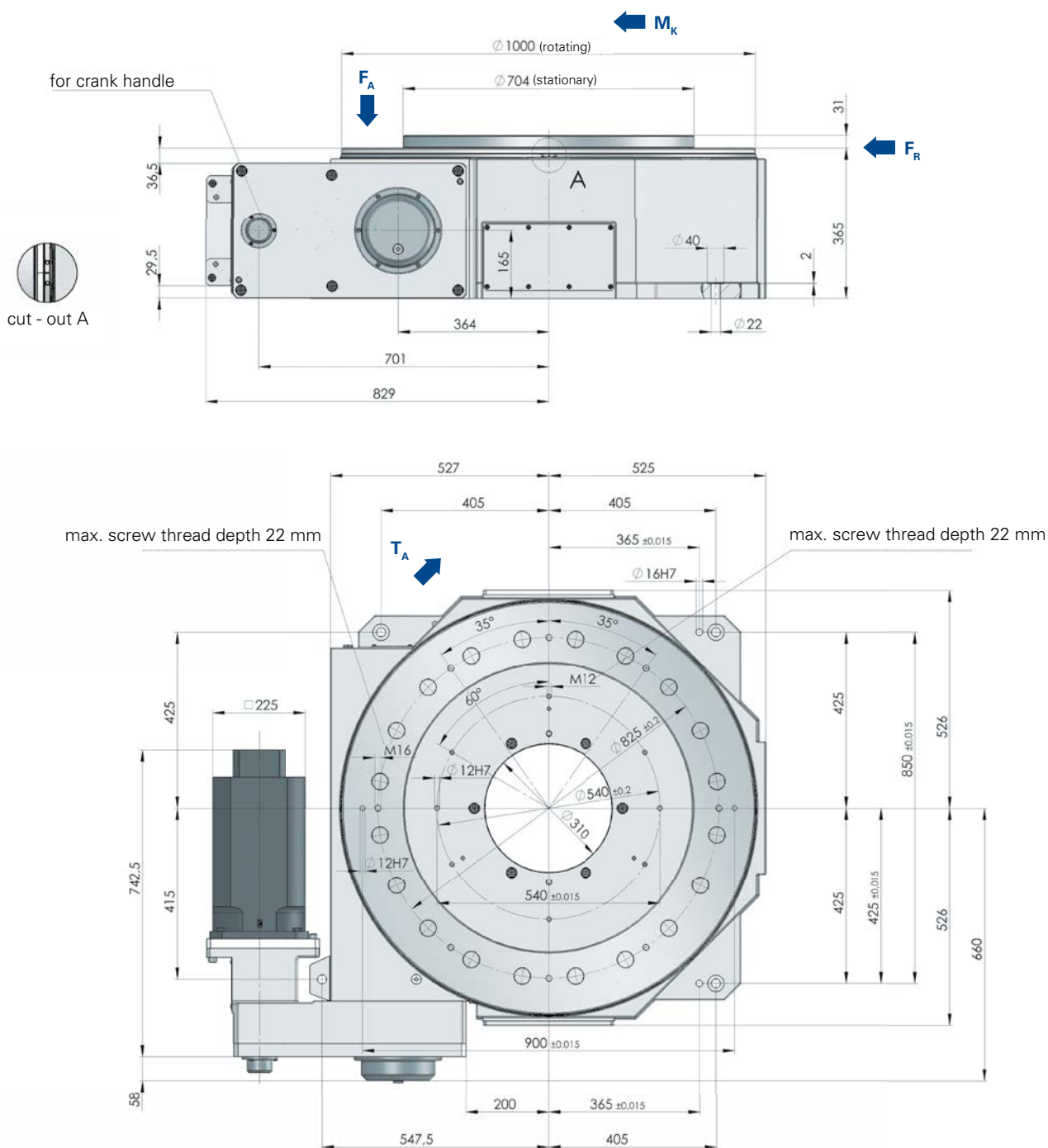
Combined loads only after inspection by WEISS.

* max. driving torque at output flange (depends on drive)

Drive time CR 1000C (please contact us for other requests)



CR 1000C Dimensions



producer	motor description
B&R (WEISS standard)	8LSA84.E1022D200-0
recommended third party motors	
SEW	DRL 13254-2100
Siemens	1FT608-8AC7X
Rockwell	MPM-B215E-MJ74AA

producer	motor description
Mitsubishi	HA-LP15K2

Some motors may need an additional ancillary transmission. Please contact us for further information.

CR 1300C

Technical data

Direction of rotation:	freely programmable
Mounting position:	vertical rotation axis
Positioning accuracy:	± 12"
Repeatability:	± 5"
Max. axial run-out of rotating plate:	0.03 mm
Max. circular run-out of output flange:	0.03 mm
Weight:	approx. 2000 kg. (without motor)
Handwheel:	freely accessible square shaft

Load data (for the output flange)

F_A: permissible axial force dynamic: 150 kN static: 280 kN	M_K: permissible tilting moment dynamic: 35 kNm static: 70 kNm
F_R: permissible radial force dynamic: 100 kN static: 230 kN	T_A: permissible torque dynamic:* 27 kNm static: 40 kNm

Combined loads only after inspection by WEISS.

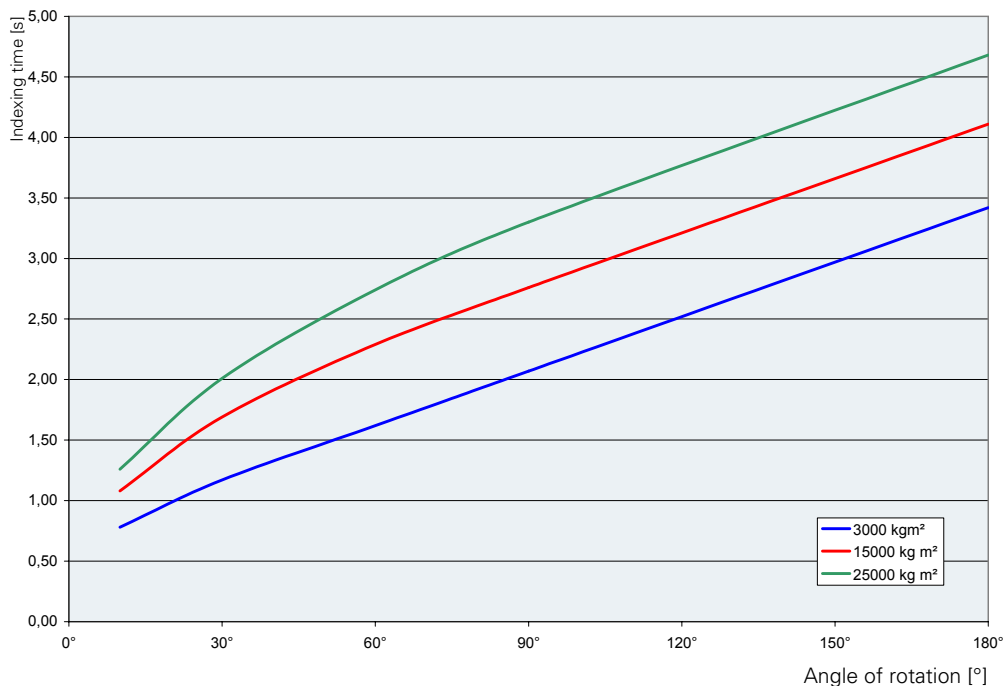
*max. driving torque at output flange (depends on drive)

Driving data

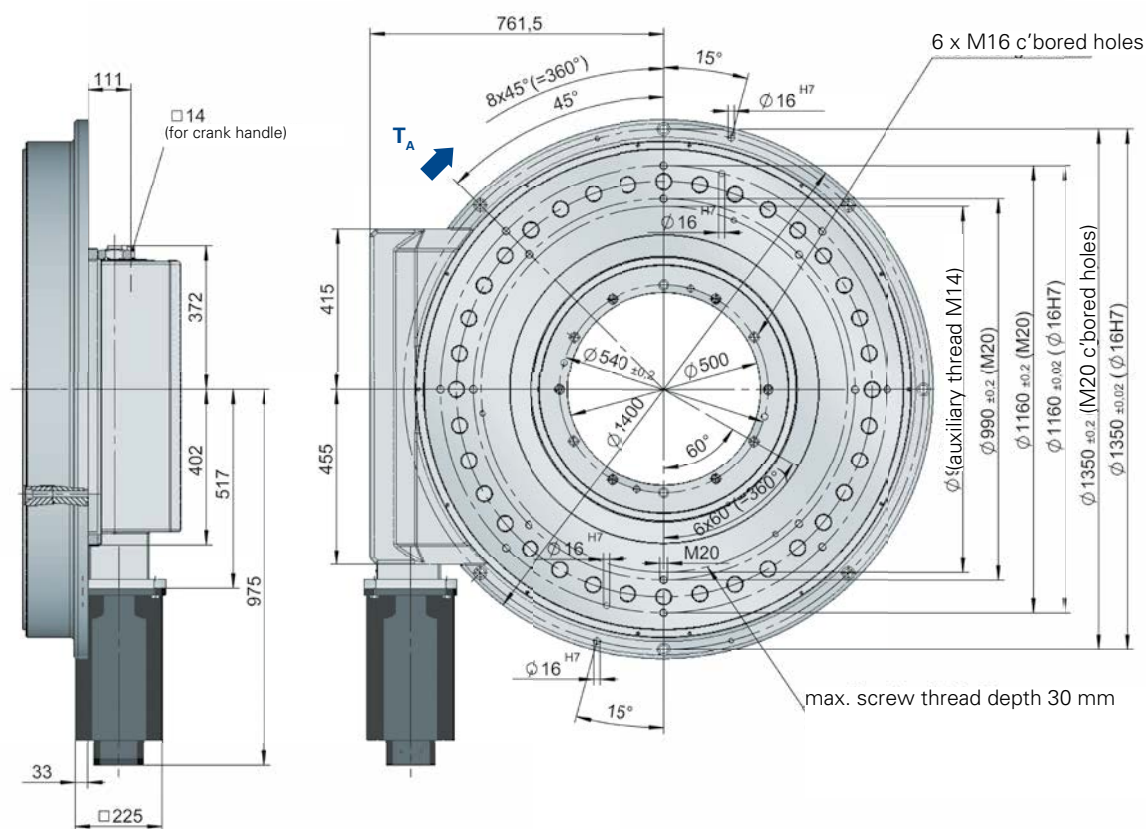
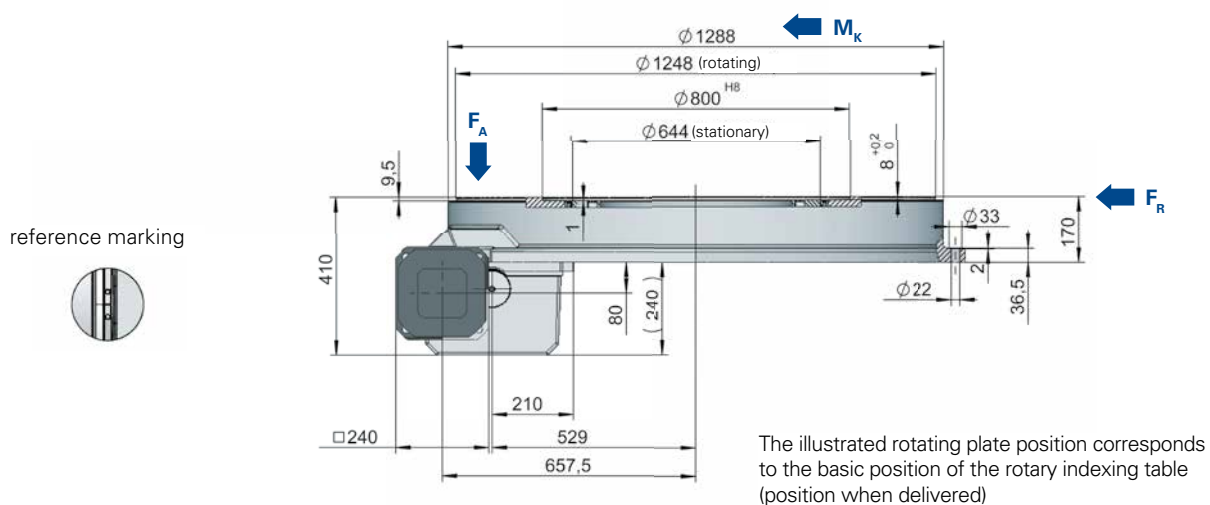
i_{Total}	180
n_{Max. motor}	2000 rpm
M_{Max. motor}	150 Nm
M_{Max. brake}	80 Nm

The specified concentricity and run-out tolerances can only be achieved with accurate supporting surfaces. With unsymmetrical loads (e.g. single-sided load) please contact us concerning the connecting surface (flatness of base plate must be 0.1 mm or less).

Drive time CR 1300C (please contact us for other requests)



CR 1300C Dimensions



producer	motor description
B&R (WEISS standard)	8LSA84.E1022D200-0
recommended third party motors	
SEW	DRL 132MC4-2100
Siemens	1FT6132-6AC71
Rockwell	MPM-B2154E-MJ74AA

producer	motor description
Mitsubishi	HA-LP15K2

Some motors may need an additional ancillary transmission. Please contact us for further information.

CR 2000C

Technical data

Direction of rotation:	freely programmable
Mounting position:	vertical rotation axis
Positioning accuracy:	± 10"
Repeatability:	± 5"
Max. axial run-out of rotating plate:	0.03 mm
Max. circular run-out of output flange:	0.03 mm
Weight:	approx. 3600 kg. (without motor)
Handwheel:	freely accessible square shaft

Load data

F_A : permissible axial force dynamic: 250 kN static: 450 kN	M_K : permissible tilting moment dynamic: 55 kNm static: 110 kNm
F_R : permissible radial force dynamic: 125 kN static: 290 kN	M_T : permissible torque dynamic:* 46.5 kNm static: 61 kNm

Combined loads only after inspection by WEISS.

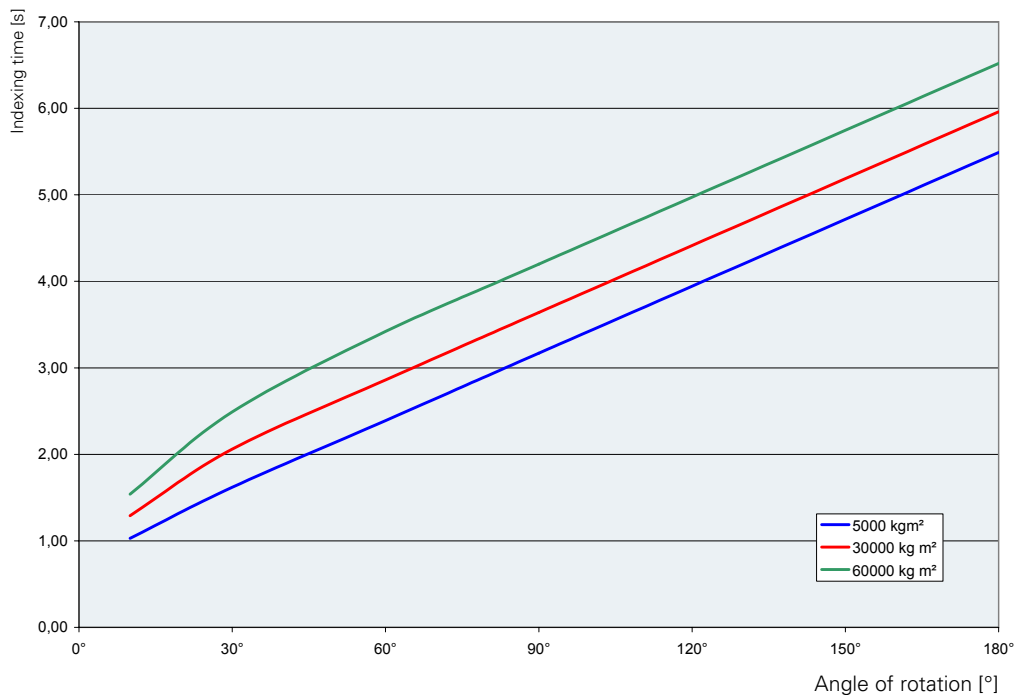
* max. driving torque at output flange (depends on drive)

Driving data

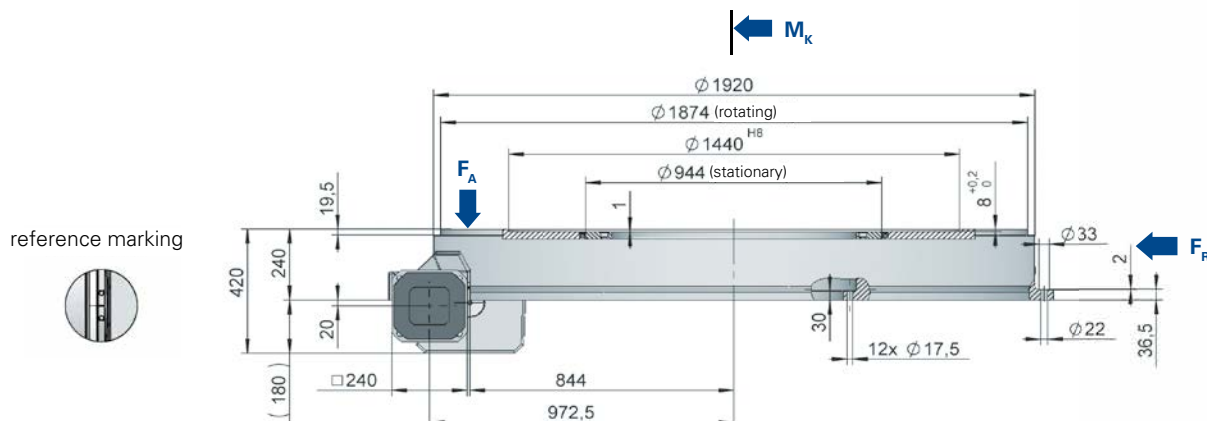
i_{Total}	310
n^{Max. motor}	2000 rpm
M^{Max. motor}	150 Nm
M^{Max. brake}	80 Nm

The specified concentricity and run-out tolerances can only be achieved with accurate supporting surfaces. With unsymmetrical loads (e.g. single-sided load) please contact us concerning the connecting surface (flatness of base plate must be 0.1 mm or less)

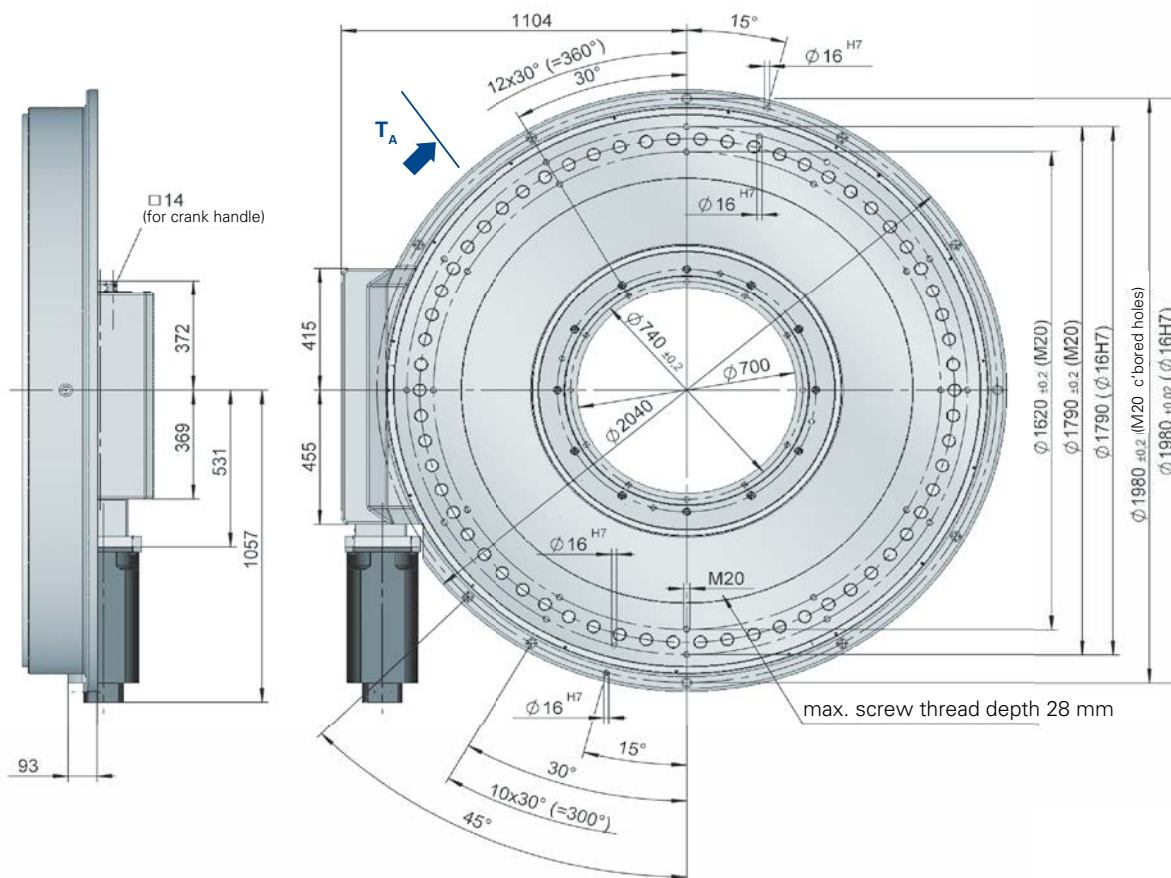
Drive time CR 2000C (please contact us for other requests)



CR 2000C Dimensions



The illustrated rotating plate position corresponds to the basic position of the rotary indexing table (position when delivered)



max. screw thread depth 28 mm

producer	motor description
B&R (WEISS standard)	8LSA86.E1020D200-0
recommended third party motors	
SEW	DRL 160M4-2100
Siemens	1FT6136-6AC71-1EH0
Rockwell	HPL-B980D-MXX4AA

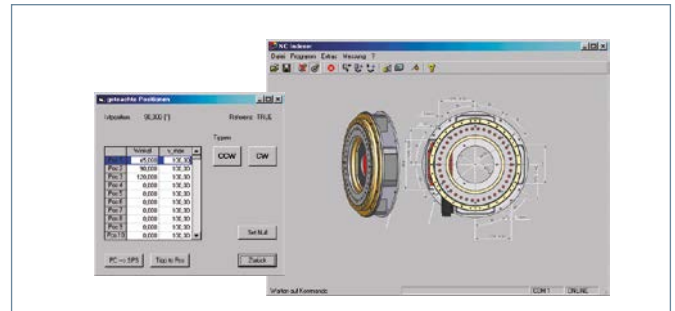
producer	motor description
Mitsubishi	HA-LP22K2

Some motors may need an additional ancillary transmission. Please contact us for further information.

WAS – WEISS Application Software

WAS – WEISS Application Software gives you easy access to the various options offered by the table drive.

- All ramps, angles and speeds are freely programmable
- Up to 127 teaching positions
- Up to 10 programs can be stored
- Free selection of language
- Simple access to the axis parameters
- Diagnostic options, remote maintenance
- Option PCM monitoring damaged bearing
- Ability to force inputs and outputs (e.g. for initial operation)
- Software cam-functions can be defined
- Fault history



Uniform operator concept for all servomechanical WEISS products.

Perfect hardware

Construction and connection

- All components are integrated into one unit complete with front mounted plug connection socket
- Cables are oil-proof and suitable for cable chains
- Cables are available in different lengths

Safety and service

- Absolute measurement system
- Safe Torque off (SIL 2, PL “d”)
- Worldwide service / complete UL approval
- Extensive safety and monitoring functions

Communication

The following interfaces are available:

- Digitale I/O (24V inputs and outputs)
- Profibus-DP
- DeviceNet-CAN (tested at Rockwell control)
- EtherNet/IP (tested at Rockwell control)
- Modbus TCP (tested at Telemecanique control)
- Ethernet
- CAN Bus
- Free ASCII protocol



Technical data	TH 400F	CR 700C TH 700F	CR 1000C / CR 1300C TH 1000	CR 2000C
Main power voltage	3 x 400 VAC up to 480 VAC +/- 10%; 48 to 62 Hz	3 x 400 VAC up to 480 VAC +/- 10%; 48 to 62 Hz	3 x 400 VAC up to 480 VAC +/- 10%; 48 to 62 Hz	3 x 400 VAC up to 480 VAC +/- 10%; 48 to 62 Hz
Power voltage 24V	24 VDC +/- 5%; 5 A	24 VDC +/- 5%; 5 A	24 VDC +/- 5%; 5 A	24 VDC +/- 5%; 5 A
Connection power:	3 KVA	17 KVA	30 KVA	54 KVA
Installations dimensions WxHxD:	70 x 375 x 236 mm	200 x 375 x 234 mm	200 x 375 x 234 mm	276 x 480 x 295 mm

Machine construction CR/TH

Enquiry Enclosure with order

Dear customer,

Thank you for your interest in our Indexing units. To enable us to supply you with the correct unit for your application, we kindly ask you to answer the following questions:

- TH 400F
 TH 700F CR 1000C
 TH 1000F CR 1300C
 CR 700C CR 2000C

Switching time

Based on the calculated mass inertia, do you require:

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

Additional baseframe

- for all CR / TH models

Additional indexing plate

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

Colour of the circular indexing table

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

Required to specify your CR / TH table

The following specification regarding your configuration is fundamental for your calculation of the mass moment of inertia.

Additional Indexing Plate

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

Please forward a sketch detailing the load distribution on the table.

Total mass inertia: _____ kg m²
 (additional indexing plate and add-ons)

Electrical data

WEISS control package

Servo motor, amplifier, WAS Software
 Cables length: 5 m 10 m 15 m 20 m 25 m
 Hand-held terminal (optional)

Interface to the customer SPS

- Ethernet Profibus-DP
 digitale I/O CAN Bus
 Free ASCII protocol DeviceNet-CAN (Rockwell)
 EtherNet/IP (Rockwell) Modbus TCP (Telemecanique)

Interface to WAS – WEISS Application Software

RS232 and Ethernet are included in the scope of delivery
 Converter USB to RS232

Supply of customers motor and controller***

- Customer to fit motor***
 *** Please forward a drawing of motor flange

Manufacturer: _____
 Type: _____

(Motor specification following consulting WEISS)

For technical enquiries

Company: _____
 Name: _____
 Country: _____

Desired delivery date: _____
 Phone: _____ Fax: _____
 eMail: _____

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