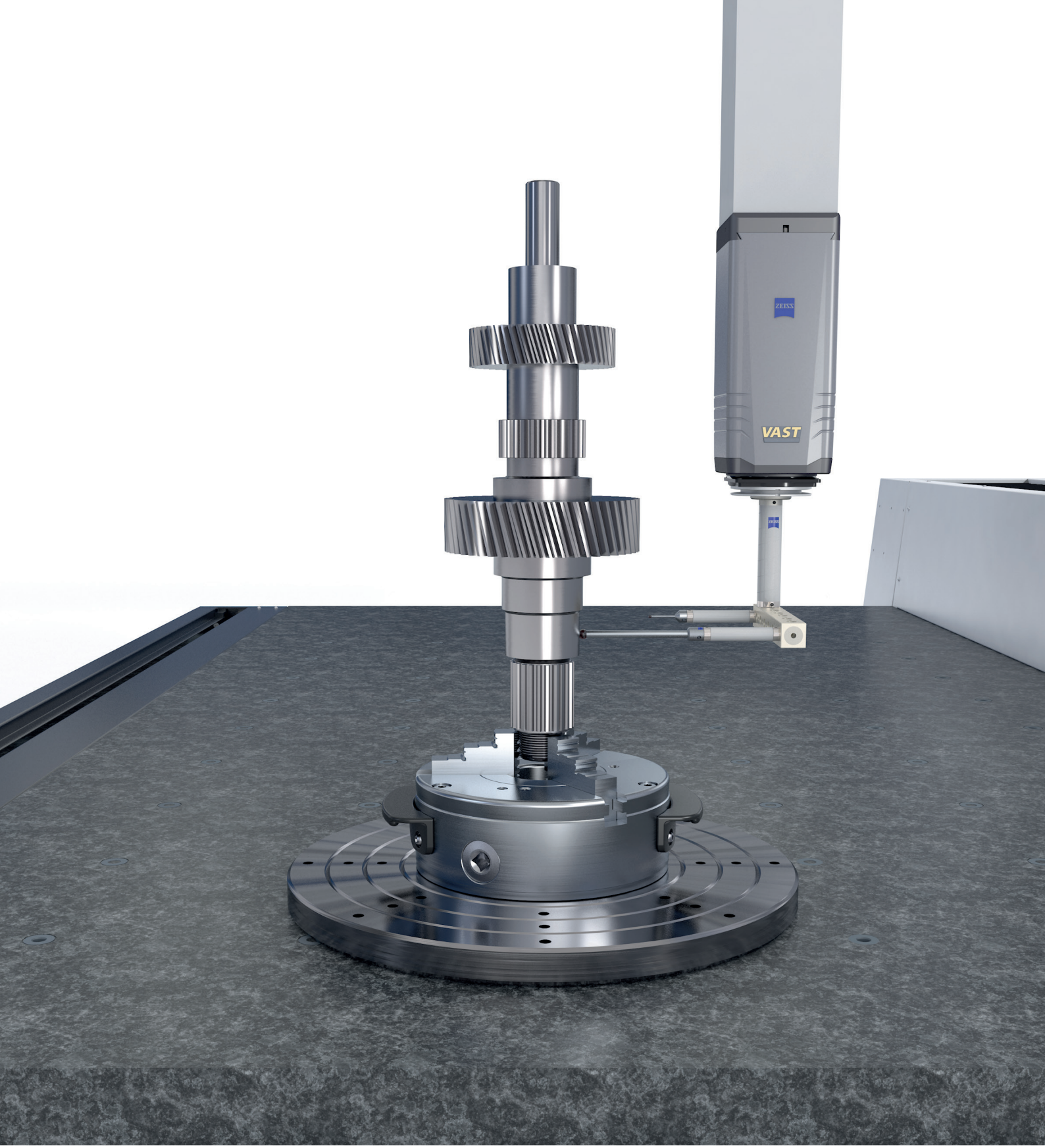


ZEISS Rotary tables

Specifications

Seeing beyond

Version: 2026-11

Specifications

Usage

	ZEISS RT-RB-10 [1]	ZEISS RT-RB-100 [2]	ZEISS RT-AB-600 [3]	ZEISS RT-RB-800 [4]	ZEISS RT-RB-3000 [5]
ZEISS O-INSPECT family	■	-	-	-	-
ZEISS DuraMax	■	-	-	-	-
ZEISS CONTURA	-	■	-	-	-
ZEISS MICURA	-	■	-	-	-
ZEISS PRISMO family	-	-	■	■	-
ZEISS XENOS	-	-	■	-	-
ZEISS MMZ family	-	-	-	-	■

Overview

		ZEISS RT-RB-10	ZEISS RT-RB-100
Bearing type		Roller bearing	Roller bearing
Drive system		DC Brush	Direct drive
Installation on	Integrated	-	-
coordinate measuring machine	Surface-mounted	Standard	Standard
Max. drive torque	in Nm	3	3.6
Resolution: interpolated	in “	0.07	0.0012

Dynamics

		ZEISS RT-RB-10	ZEISS RT-RB-100
Max. angular velocity	in °/s	50	30
Max. rotation speed	in 1/min	8.3	5
Max. angular acceleration	in °/s²	50	100 [6]

Loading/permissible moments [7]

		ZEISS RT-RB-10	ZEISS RT-RB-100
Max. tilting moment	in Nm	2	20
Max. loading (axial)	in kg	10	100 [8]
Max. mass moment of inertia	in kgm²	0.1	2 [9]

Accuracy [10]

		ZEISS RT-RB-10	ZEISS RT-RB-100
Deviation of angular position	in “	± 2	± 1
Axial run-out	in µm	≤ 2	≤ 1
Radial run-out [11]	in µm	≤ 5	≤ 1
Wobble	in “	≤ 4	≤ 1.4

1) ZEISS RT-RB-10-3 for ZEISS O-INSPECT family, ZEISS RT-RB-10-4 for ZEISS DuraMax
2) Only for ZEISS CONTURA manufacturing date > March 2020 / Only for ZEISS MICURA manufacturing date > November 2023
3) ZEISS RT-AB-600-2 for ZEISS PRISMO, ZEISS PRISMO fortis, ZEISS PRISMO verity / ZEISS RT-AB-600-4 select for ZEISS PRISMO ultra, ZEISS PRISMO verity, ZEISS XENOS
4) Only for ZEISS PRISMO, ZEISS PRISMO fortis, ZEISS PRISMO verity
5) Only for ZEISS MMZ T / M / G
6) Depending on the current mass moment of inertia
7) Specification includes faceplate, clamping devices, jaw chuck and workpiece
8) Applies to vertical installation position. For horizontal installation position max. loading 20 kg
9) Applies to vertical installation position. For horizontal installation position max. mass moment of inertia 0,5 kgm²
10) Applies to centric loading
11) Measurement 50 mm above rotary table

Usage

	ZEISS RT-RB-10 [1]	ZEISS RT-RB-100 [2]	ZEISS RT-AB-600 [3]	ZEISS RT-RB-800 [4]	ZEISS RT-RB-3000 [5]
ZEISS O-INSPECT family	■	-	-	-	-
ZEISS DuraMax	■	-	-	-	-
ZEISS CONTURA	-	■	-	-	-
ZEISS MICURA	-	■	-	-	-
ZEISS PRISMO family	-	-	■	■	-
ZEISS XENOS	-	-	■	-	-
ZEISS MMZ family	-	-	-	-	■

Overview

		ZEISS RT-AB-600	ZEISS RT-RB-800	ZEISS RT-RB-3000
Bearing type		Air bearing [6]	Roller bearing	Roller bearing
Drive system		Direct drive	Direct drive	DC Brush
Installation on	Integrated	Standard	Standard	Option
coordinate measuring machine	Surface-mounted	Option	Option	Standard
Max. drive torque	in Nm	20	20	100
Resolution: interpolated	in “	0.0044	0.0044	0.18

Dynamics

		ZEISS RT-AB-600	ZEISS RT-RB-800	ZEISS RT-RB-3000
Max. angular velocity	in °/s	30 [7]	17 [7]	5 [9]
		50 [8]	34 [8]	12 [10] [11]
Max. rotation speed	in 1/min	5 [7]	2.8 [7]	0.8 [9]
		8.3 [8]	5.6 [8]	2 [10] [11]
Max. angular acceleration	in °/s²	100 [12]	100 [12]	2.8 [9]
				6.9 [10] [11]

Loading/permissible moments [13]

		ZEISS RT-AB-600	ZEISS RT-RB-800	ZEISS RT-RB-3000
Max. tilting moment	in Nm	40 [14]	100	1000
Max. loading (axial)	in kg	600	800	3000
Max. mass moment of inertia	in kgm²	20	40	2000

Accuracy [15]

		ZEISS RT-AB-600	ZEISS RT-RB-800	ZEISS RT-RB-3000
Deviation of angular position	in “	± 0.4	± 1	± 1
Axial run-out	in µm	≤ 0.1	≤ 0.7	≤ 0.7
Radial run-out [16]	in µm	≤ 0.2 ZEISS RT-AB-600-2	≤ 1	≤ 1
		≤ 0.1 ZEISS RT-AB-600-4 select		
Wobble	in “	≤ 0.4	≤ 1	≤ 1

1) ZEISS RT-RB-10-3 for ZEISS O-INSPECT family, ZEISS RT-RB-10-4 for ZEISS DuraMax
2) Only for ZEISS CONTURA date of manufacture > March 2020 / Only for ZEISS MICURA date of manufacture > November 2023
3) ZEISS RT-AB-600-2 for ZEISS PRISMO, ZEISS PRISMO fortis, ZEISS PRISMO verity / ZEISS RT-AB-600-4 select for ZEISS PRISMO ultra, ZEISS PRISMO verity, ZEISS XENOS
4) Only for ZEISS PRISMO, ZEISS PRISMO fortis, ZEISS PRISMO verity
5) Only for ZEISS MMZ T / M / G
6) Supply pressure 5 bar, air consumption approx. 10 Nl/min, air quality DIN ISO 8573-1, class 1.4.2
7) With mass moment of inertia of > 8 kgm²
8) With mass moment of inertia of ≤ 8 kgm²
9) With mass moment of inertia of > 825 kgm²
10) With mass moment of inertia of ≤ 825 kgm²
11) On request via NSP
12) Depending on the current mass moment of inertia
13) Specification includes faceplate, clamping devices, jaw chuck and workpiece
14) The maximum permissible tilting moment can be affected by fluctuations or reductions in the pressure of the air supply
15) Applies to centric loading
16) Measurement 50 mm above rotary table

Requirements for operational readiness

	ZEISS RT-RB-10	ZEISS RT-RB-100
Operating temperature	18 °C to 22 °C	18 °C to 30 °C
Installation position (direction of rotary table axis)	vertical / horizontal [1]	vertical / horizontal
Relative humidity	40 % to 70 %	40 % to 70 %

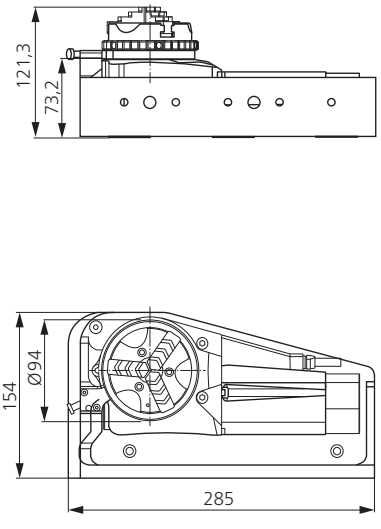
Dimensions, weight rotary tables

			ZEISS RT-RB-10	ZEISS RT-RB-100
Installation on coordinate measuring machine	Integrated	in kg	-	-
	Surface-mounted [2]	in kg	7	36

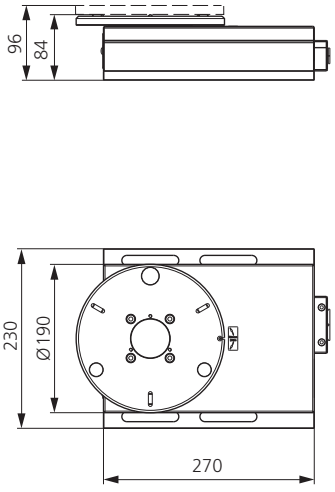
Dimensions, weight faceplates

Diameter		in mm	Ø 190	Ø 300	Ø 315	Ø 400 [3]
Weight		in kg	0.9	9	13	22
Mass moment of inertia		in kgm²	0.005	0.1	0.2	0.5
Height	h	in mm	11.5	19	26	26
Usage	ZEISS RT-RB-10-3		-	-	-	-
	ZEISS RT-RB-10-4		■	-	-	-
	ZEISS RT-RB-100		-	■	-	-
	ZEISS RT-AB-600		-	-	■	■
	ZEISS RT-RB-800		-	-	-	■

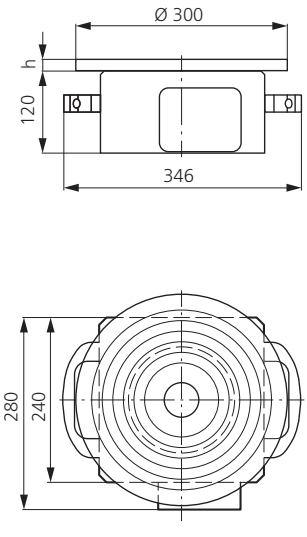
ZEISS RT-RB-10-3 [4]



ZEISS RT-RB-10-4 [4]



ZEISS RT-RB-100 [4]



1) ZEISS RT-RB-10-4 for ZEISS DuraMax only vertical installation position permitted
2) without faceplate
3) Faceplates have different material numbers and cannot be exchanged between the different rotary tables
4) The specified dimensions are approximate. Changes are reserved

Requirements for operational readiness

	ZEISS RT-AB-600	ZEISS RT-RB-800	ZEISS RT-RB-3000
Operating temperature	5 °C to 45 °C	5 °C bis 45 °C	5 °C to 35 °C
Installation position (direction of rotary table axis)	vertical	vertical	vertical
Relative humidity	10 % to 80 %	10 % bis 80 %	40 % to 70 %

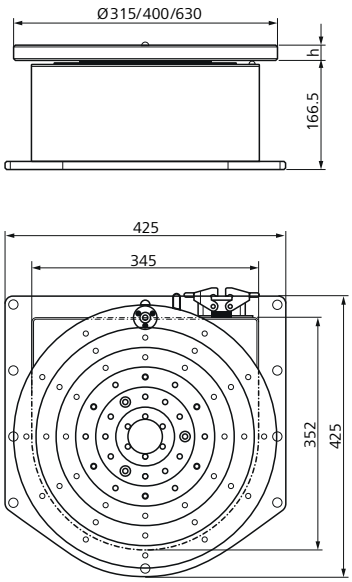
Dimensions, weight rotary tables

			ZEISS RT-AB-600	ZEISS RT-RB-800	ZEISS RT-RB-3000
Installation on coordinate measuring machine	Integrated [1]	in kg	56	60	170
	Surface-mounted [1]	in kg	73	79	175

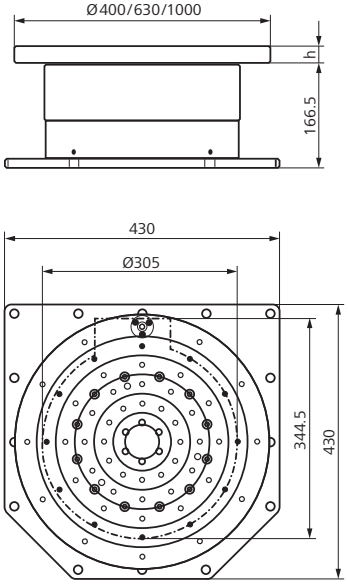
Dimensions, weight faceplates

Diameter		in mm	Ø 630 [2]	Ø 1000 [2]	Ø 1300	Ø 1500
Weight		in kg	56	125 370	625	840
Mass moment of inertia		in kgm²	2.3	14 46	132	235
Height	h	in mm	36	66 60	60	60
Usage	ZEISS RT-AB-600		■	- -	-	-
	ZEISS RT-RB-800		■	■ -	-	-
	ZEISS RT-RB-3000		-	- ■	■	■

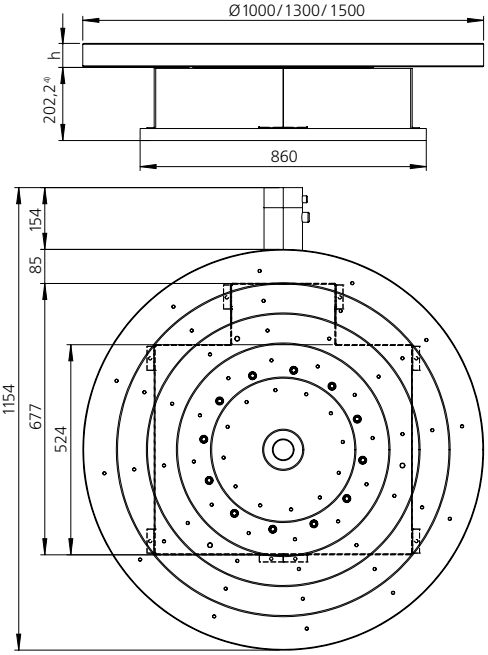
ZEISS RT-AB-600 [3]



ZEISS RT-RB-800 [3]



ZEISS RT-RB-3000 [3]



1) without faceplate
2) Faceplates have different material numbers and cannot be exchanged between the different rotary tables
3) The specified dimensions are approximate. Changes are reserved
4) Depending on the type of installation, a mounting plate made of steel or a casting plate for mounting on concrete is used. With a casting plate, the height is reduced by 15 mm

Rotary tables extend the range of applications and simplify the measuring procedure

ZEISS rotary tables provide an additional axis, thus simplifying the measurement of rotationally symmetric or prismatic workpieces, and allowing the use of simple stylus systems and extending the available measuring range.

Rotary tables are primarily used for the measurement of rotary parts featuring periodically recurring geometries such as gears, gear hobs, rotors and impellers. They simplify and accelerate the measurement and can simultaneously increase the accuracy. Another field of application is form measurement, e.g. roundness measurement at camshafts and crankshafts by 4-axis-scanning. They are also highly beneficial when it comes to measuring prismatic workpieces:

More efficient work with rotary tables

Shorter set-up times, more flexibility and productivity:

- the effective measuring volume increases
- complex stylus systems get simplified
- parts programming is simplified
- fewer stylus systems are needed
- fewer stylus systems are required, this reduces the qualification time
- travel paths are shorter leading to a reduction of temperature influences

Complete integration into measurement software

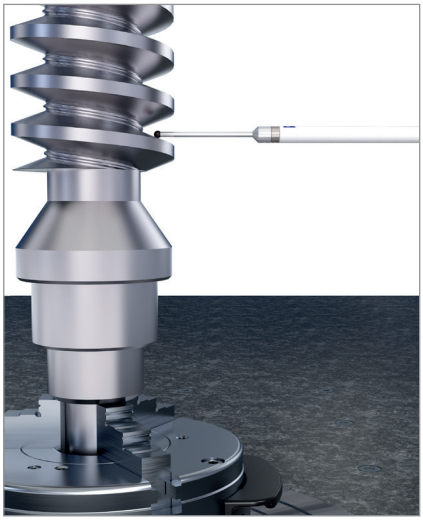
The rotary table functionality is fully integrated into ZEISS basic software:

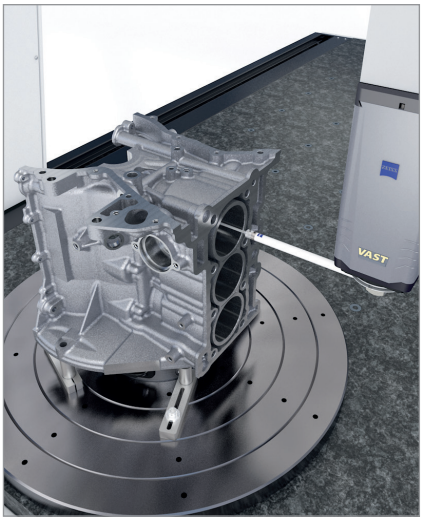
- set to angular positions or rotation with constant speed
- mathematical correction of all alignment errors
- scanning with rotary table

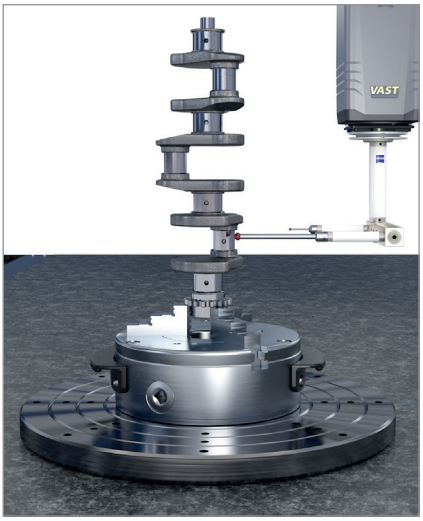
Measuring convenience through computer-guided functionality

Computer guidance is provided for a large range of functions:

- positioning to the rotary table zero point
- positioning and zeroing of the angle measuring system to any angle
- adjustment to any angular increment, positive or negative, absolute or relative
- division of one table revolution into any number of parts
- with measuring probes: continuous rotation with probing contact and vectorial probing force generation, 4-axis-scanning
- integration into CNC measuring runs, including all necessary rotary table functions

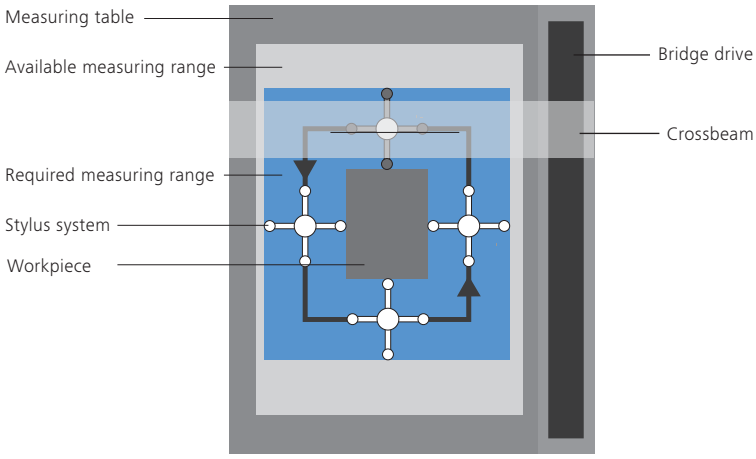






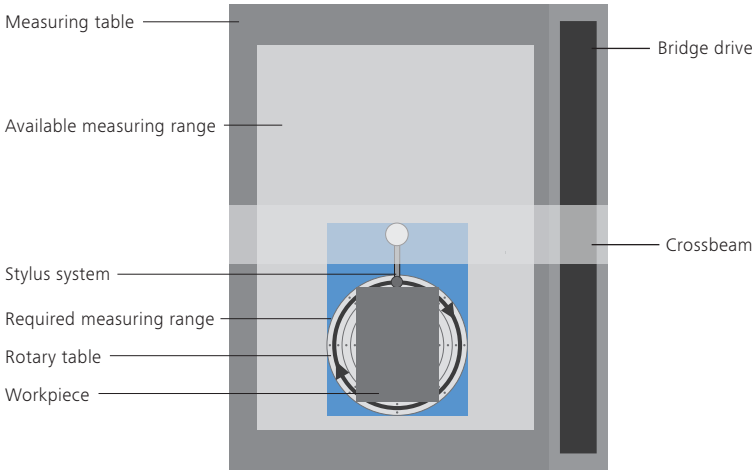
Rotary tables increase the usable measuring range and versatility of your coordinate measuring machine

Rotary tables enable better utilization of the available measuring range.



Measuring a workpiece without a rotary table requires a large measuring range.

Voluminous stylus systems are usually required to measure a workpiece from all sides without a rotary table. This requires either a coordinate measuring machine with a relatively large measuring range, or only relatively small workpieces can be measured with the existing measuring range. A large portion of the measuring range is required to ensure collision-free movement around the workpiece.



Using a rotary table drastically reduces the required measuring range.

The use of a rotary table delivers the following advantages:

- Larger workpieces can be measured in relation to the available measuring range
- A significantly smaller measuring range is required
- Less complex stylus systems are sufficient
- The stylus system no longer needs to move around the workpiece

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