

Grinding Rotary Table  
Grinding table

Type / Designation		GRT 400			GRT 500			GRT 650			GRT 800		
Table sizes	mm	600	700	800	700	800	1,000	1,000	1,200	1,400	1,250	1,400	1,600
Max. centric load capacity up to	kg	3,000			4,000			5,000			6,000		
Hydrostatic mounting													
Bearing diameter	mm	400			500			650			800		
Safe max. tilting moment up to	Nm	5,000			10,000			15,000			25,000		
Torque motor drive <sup>1</sup>													
Nominal speed up to	RPM	250			200			175			150		
Nominal torque up to	Nm	1,000			1,500			2,000			2,500		
Max. speed up to	RPM	500			400			350			300		
Locking system													
Tangential moment up to	Nm	5,500			12,000			20,000			25,000		
Accuracy													
Dividing accuracy <sup>2</sup>	arcsec	+/- 2			+/- 2			+/- 2			+/- 2		
Lateral runout <sup>3</sup>	mm	0,001			0,001			0,001			0,001		
Truth of running	mm	0,001			0,001			0,001			0,001		

Type / Designation		GRT 1000			GRT 1400			GRT 2000			GRT 2800		
Table sizes	mm	1,400	1,600	1,800	1,800	2,000	2,200	2,200	2,600	3,000	3,000	3,500	4,000
Max. centric load capacity up to	kg	8,000			10,000			15,000			25,000		
Hydrostatic mounting													
Bearing diameter	mm	1,000			1,400			2,000			2,800		
Safe max. tilting moment up to	Nm	40,000			70,000			150,000			220,000		
Torque motor drive <sup>1</sup>													
Nominal speed up to	RPM	125			100			75			50		
Nominal torque up to	Nm	3,500			7,000			10,000			14,000		
Max. speed up to	RPM	250			200			150			100		
Locking system													
Tangential moment up to	Nm	30,000			40,000			60,000			100,000		
Accuracy													
Dividing accuracy <sup>2</sup>	arcsec	+/- 2			+/- 2			+/- 2			+/- 2		
Lateral runout <sup>3</sup>	mm	0,001			0,001			0,001			0,002		
Truth of running	mm	0,001			0,002			0,002			0,003		

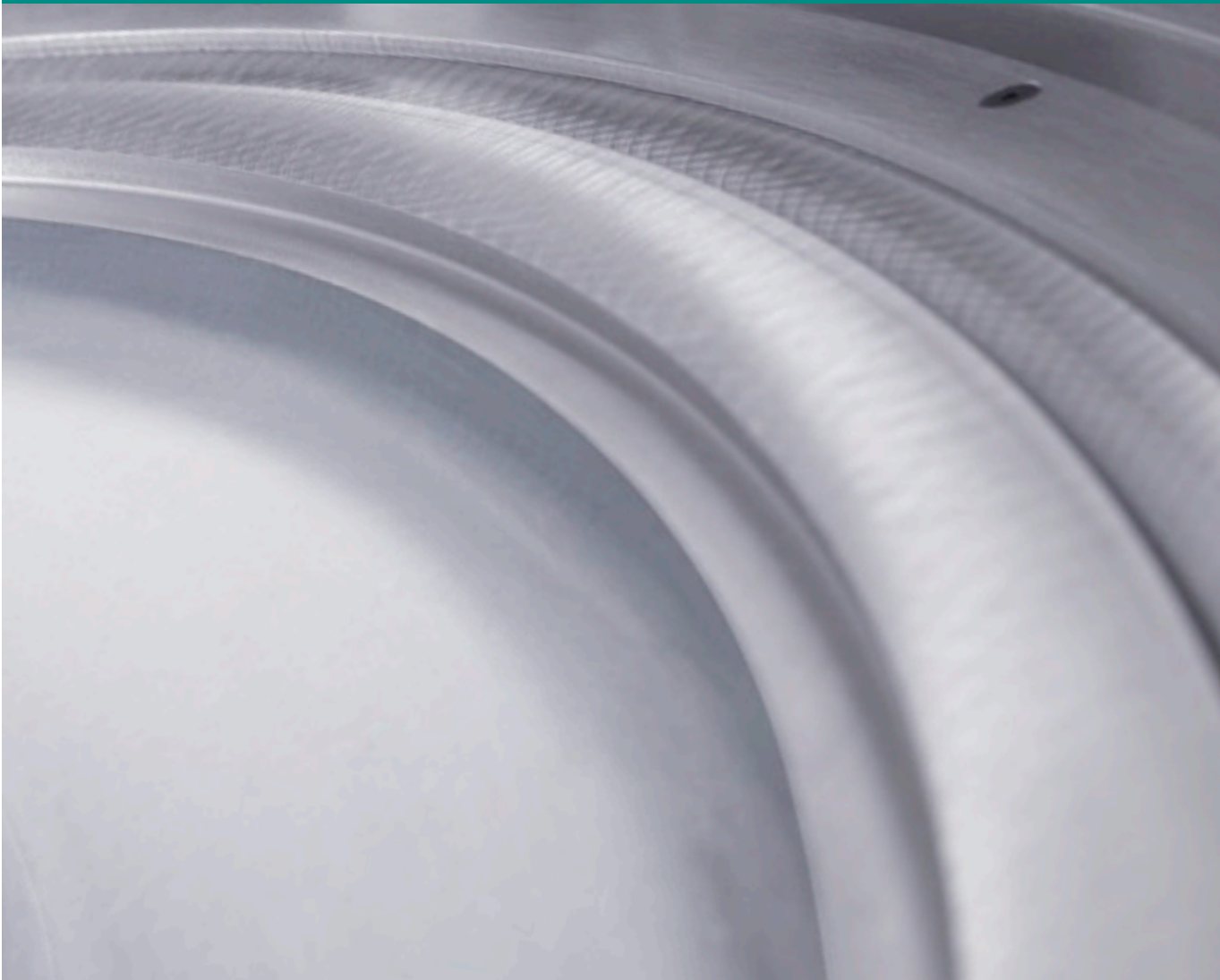
1 Drive data are not associated one with another; they will be customized according to the application.  
2 Depending on the measuring system  
3 Referred to the bearing diameter  
Further information and customized modifications on request.

Technical data are subject to change.

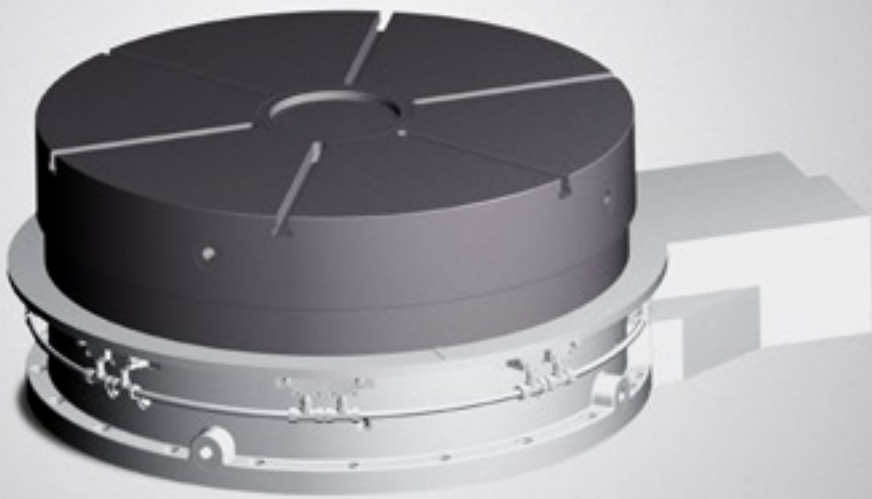
Grinding

Rotary tables for grinding machines  
in gantry & column design

GRT



# GRT grinding



GRT 1000 (CAD model)  
ø 1,600 mm, 3,000 Nm, 8 t, 200 RPM, lateral and circular runout < 2 µm

## Engineering solutions

Only if any single element provides optimal performance parameters can a rotary table system be tailored to customer's requirements. Within one GRT construction size, the use of an intermediate table plate allows for several table top sizes and chucking systems. The measuring system is fitted directly onto the table axis for all table sizes.

A torque motor which comes in two different performance classes can be built into any construction size and provides direct drive. Besides high speeds and acceleration, this motor features excellent accuracy and control performance. A locking system which is offered as an option helps compensate tangential moments arising from special machining conditions. The labyrinth sealing between table top and housing reliably ensure that no grinding dust or emulsion coolant may enter the table. The table housing will be customized to the design of your machine.

When magnetic chucking systems are used, the measuring systems may have a big center bore to allow the assembly of slip rings.

## Grinding Rotary Table Grinding table

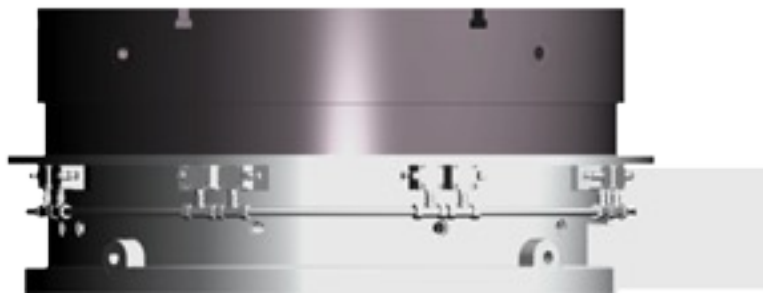
The GRT series is ideally suited for use in vertical circular grinding machines in single column or gantry design. The table is fully integrated in the machine. The specific running features of the direct drive allow uniform rotary motion. Any construction size may have customized parameters.

Basically, a hydrostatic mounting designed as separate bearings in each direction is used for both, axial and radial directions, thus providing excellent damping features, pinpoint accuracy and long life.

## Requirements

Customer requirements essentially determine the characteristic features of a product – this is the motto on which the Rückle group acts. For GRT series, we concentrate on satisfying our customer's demand for different table tops and magnetic chucking systems within one construction size, and a rigid mounting to bear component weights as high as 15 t with excellent damping features. Besides this a reliable, backlash-free drive is required to obtain an excellent control performance in positioning and continuous operation. The drive's running features must be so good as to allow uniform rotatary motion with speeds as high as 200 RPM.

The optional locking system shall withstand machining moments as high as 40 kNm at a positioning accuracy less than +/- 5 arcsec. The use of magnetic chucking systems furthermore implies the need of a center bore for slip rings to ensure signal transmission. A lateral runout of 1 µm through ø 1,600 mm and a circular runout of 1 µm through ø 200 mm are further high-quality accuracy criteria.



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