

Turning Rotary Table
Turning table

Type / Designation		TRT 400			TRT 500			TRT 650			TRT 800			TRT 1000		
Table sizes	mm	600	700	800	700	800	1,000	1,000	1,250	1,500	1,250	1,500	1,800	1,500	1,800	2,000
Max. centric load capacity up to	kg	2,000			3,000			6,000			10,000			15,000		
Anti-friction mounting																
Bearing diameter	mm	400			460			650			850			1,050		
Safe max. tilting moment up to	Nm	19,000			27,000			45,000			70,000			100,000		
Torque motor drive ¹																
Nominal speed up to	RPM	265			250			200			150			75		
Nominal torque up to	Nm	1,650			2,800			3,800			6,500			10,000		
Max. speed up to	RPM	650			500			400			300			200		
Locking system																
Tangential moment up to	Nm	5,500			12,000			20,000			25,000			30,000		
Accuracy																
Dividing accuracy ²	arcsec	+/- 2			+/- 2			+/- 2			+/- 2			+/- 2		
Lateral runout ³	mm	0.01			0.01			0.015			0.02			0.02		
Circular runout ⁴	mm	0.01			0.01			0.01			0.01			0.01		

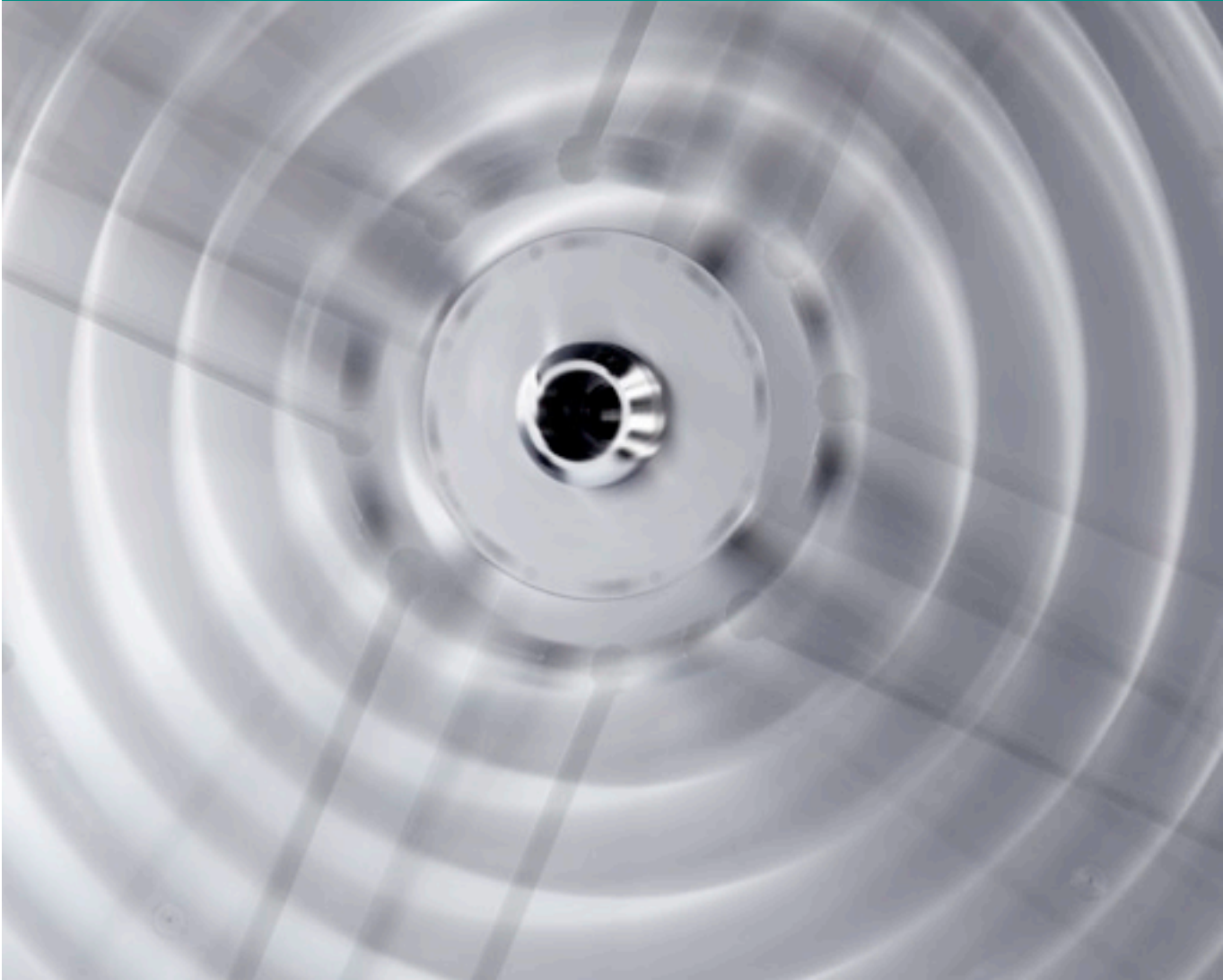
Type / Designation		TRT 1000			TRT 1400			TRT 2000			TRT 2800			TRT 4000		
Table sizes	mm	1,500	1,800	2,000	2,000	2,500	3,000	2,500	3,000	4,000	3,500	4,000	5,000	4,500	5,500	6,500
Max. centric load capacity up to	kg	15,000			30,000			60,000			125,000			250,000		
Hydrostatic mounting																
Bearing diameter	mm	1,000			1,400			2,000			2,800			3,900		
Safe max. tilting moment up to	Nm	100,000			180,000			280,000			400,000			520,000		
Drive gear ¹																
Engine output up to	KW	2 × 71			2 × 100			2 × 100			2 × 100			2 × 120		
Max. speed up to	RPM	250			200			150			100			75		
Max. torque available up to	Nm	45,000			85,000			125,000			165,000			330,000		
Locking system																
Tangential moment up to	Nm	30,000			40,000			60,000			100,000			150,000		
Accuracy																
Dividing accuracy ²	arcsec	+/- 2			+/- 2			+/- 2			+/- 2			+/- 2		
Lateral runout ³	mm	0.02			0.02			0.02			0.025			0.03		
Circular runout ⁴	mm	0.01			0.01			0.01			0.01			0.01		

- 1 Drive data are not associated one with another; they will be customized according to the application.
- 2 Depending on the measuring system
- 3 O.D. turning on customer's machine and referred to bearing diameter
- 4 Hub centering
- Further information and customized modifications on request.
- Technical data are subject to change.

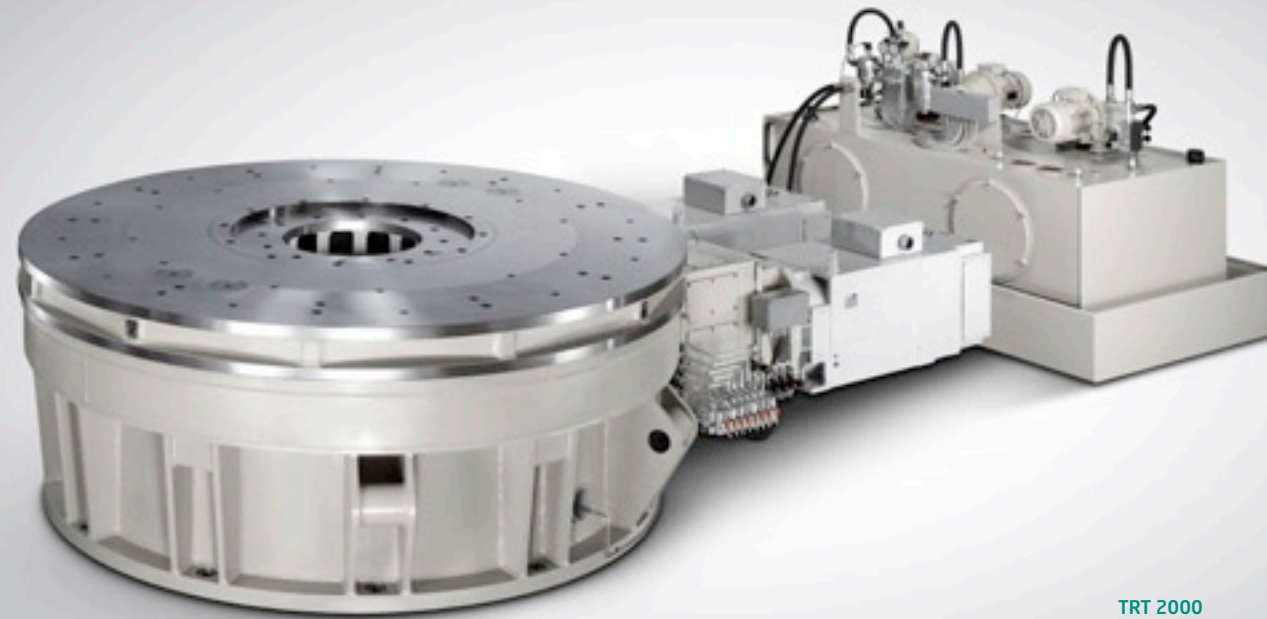
Turning

Rotary Tables for Vertical Lathes,
Bore, Drill & Mill Machines
& Machining Centers

TRT



TRT turning



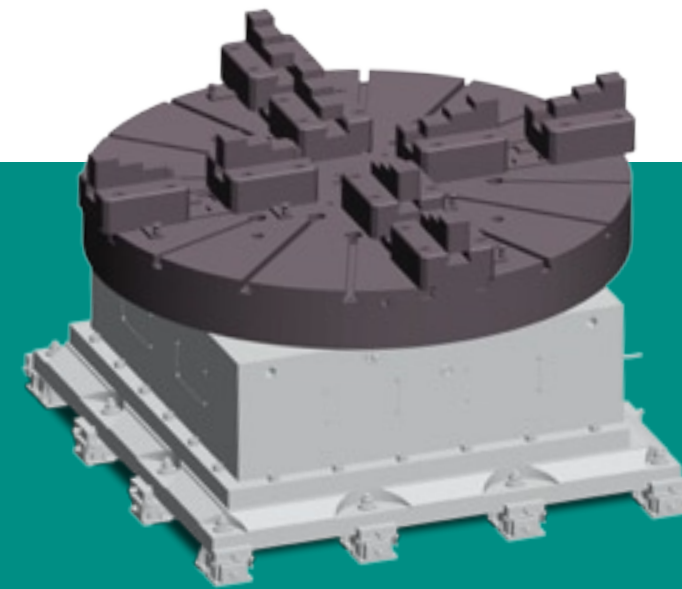
TRT 2000
ø 3,000 mm, 2×71 kW, 60,000 Nm, 60 t, 100 RPM

Turning Rotary Table Turning table

The TRT series is ideally suited for use in both, vertical lathes and milling machines of different design. It can be designed as an integrated axis, stand-alone variant or traversing unit, according to the customer's application.

Carefully selected torque motors in TRT 400 to TRT 1000 and the drive's master-slave configuration in TRT 1000 to TRT 4000 provide an excellent control performance in positioning and milling operations.

We also offer customized linear axes which perfectly suit your current application.



TRT 800 (CAD model)
ø 1,600 mm, torque motor, 6,500 Nm, 10 t, 300 RPM

Engineering solutions

Only if any single element provides optimal performance parameters can a rotary table system be tailored to customer's requirements. The different sub-assemblies of the TRT series are all designed on the basis of the same engineering principles. Within one construction size, the use of an intermediate table plate allows for several table top sizes and clamping chucks. Variable mounting configurations facilitate different load capacities, and the power train provides a broad range of speeds and torques.

The mounting system with axial pre-load ensures a high stiffness. Antifriction bearings or hydrostatic bearings are used, depending on the current application and the construction size. One big center bore accommodates the oil manifold for the hydraulic clamping chuck. The measuring system can be fitted directly on the table axis or indirectly, via a gear mechanism. The labyrinth labyrinth sealing between table top and housing reliably ensures that no chips or emulsion coolant may enter the table.

Requirements

Customer requirements essentially determine the characteristic design features of a product – this is the motto on which the Rückle group is acting. For TRT series, this includes the need of having different table tops and clamping chucks within one and the same construction size, drives configured as flexible as possible for speeds from 10 RPM to 500 RPM and torques as high as 180 kNm, a high stiffness to bear components as high as 5 m, and a payload capacity up to 200 tons.

The optional locking system must allow machining moments as high as 80 kNm at a positioning accuracy higher than +/- 5° arcsec. Besides this a thru-hole for power-operated clamping chucks and a sealing against chips and emulsion coolant are needed to ensure accuracy like a lateral runout of 20 µm through ø 2,500 mm and a circular runout of 5 µm through ø 500 mm.

Linear axes

Rückle's linear axes suit for all rotary tables of the MRT and TRT series. The LM guides are available in different travels. Always tailored to the table's actual bearing diameter, the distance between the guides grant high stiffness of the complete system. The axes also feature generously dimensioned drive systems.

TRT 1000 (ø 2,000 mm, 2×51 kW, 12,000 Nm, 15 t, 250 RPM)



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