

Datasheet

by drive ■ the same value for both drive systems

■ worm gear

■ torque motor

Type / Designation		MRT 160	MRT 200	MRT 250	MRT 320	MRT 400
Table sizes	mm	320 380	380 460	460 550	520 630	630 800
Load capacity, vertical rotation axis	kg	600	800	1,000	3,500	4,500
Load capacity, horizontal rotation axis ¹	kg	300	400	500	1,750	2,250

Anti-friction mounting

Bearing diameter	mm	200	250	320	400	460
Safe max. tilting moment up to	Nm	1,500	4,000	6,000	12,000	18,000

Drive ²

Max. speed S6 up to	RPM	30	20	20	15	15
Max. torque S6 up to	Nm	580	900	1,800	2,700	3,500
Nominal speed up to	RPM	400	200	100	100	75
Nominal torque up to	Nm	120	320	720	1,300	2,000
Max. speed up to	RPM	800	400	200	200	150

Locking system

Tangential moment up to	Nm	1,000	1,700	2,800	3,500	5,500
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Accuracy

Dividing accuracy ³	arcsec	+/- 2	+/- 2	+/- 2	+/- 2	+/- 2
Lateral runout	mm	0.01	0.01	0.01	0.01	0.015
Circular runout ⁴	mm	0.01	0.01	0.01	0.01	0.01

Type / Designation		MRT 500	MRT 650	MRT 800	MRT 1000	MRT 1250
Table sizes	mm	650 800 1,000	1,000 1,200 1,400	1,200 1,400 1,600	1,400 1,600 1,800	1,600 2,000 2,500
Load capacity, vertical rotation axis	kg	6,000	10,000	15,000	25,000	35,000 —
Load capacity, horizontal rotation axis ¹	kg	3,000	5,000	7,500	12,500	17,500 —

Anti-friction mounting

Bearing diameter	mm	540	670	760	980	1,250
Safe max. tilting moment up to	Nm	28,000	40,000	60,000	90,000	120,000 —

Drive ²

Max. speed S6 up to	RPM	15	10	8	7	6
Max. torque S6 up to	Nm	4,000	8,000	10,500	13,500	15,500
Nominal speed up to	RPM	40	40	20	10	—
Nominal torque up to	Nm	3,000	3,000	6,500	10,000	—
Max. speed up to	RPM	75	75	40	20	—

Locking system

Tangential moment up to	Nm	12,000	20,000	25,000	30,000	35,000 —
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Accuracy

Dividing accuracy ³	arcsec	+/- 2	+/- 2	+/- 2	+/- 2	+/- 2 —
Lateral runout	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 —

Milling Rotary Table

Milling table up to size 1250

- ¹ Load capacity without counter-bearing
- ² Drive data are not associated one with another; they will be customized according to the application.
- ³ Depending on the measuring system
- ⁴ Hub centering

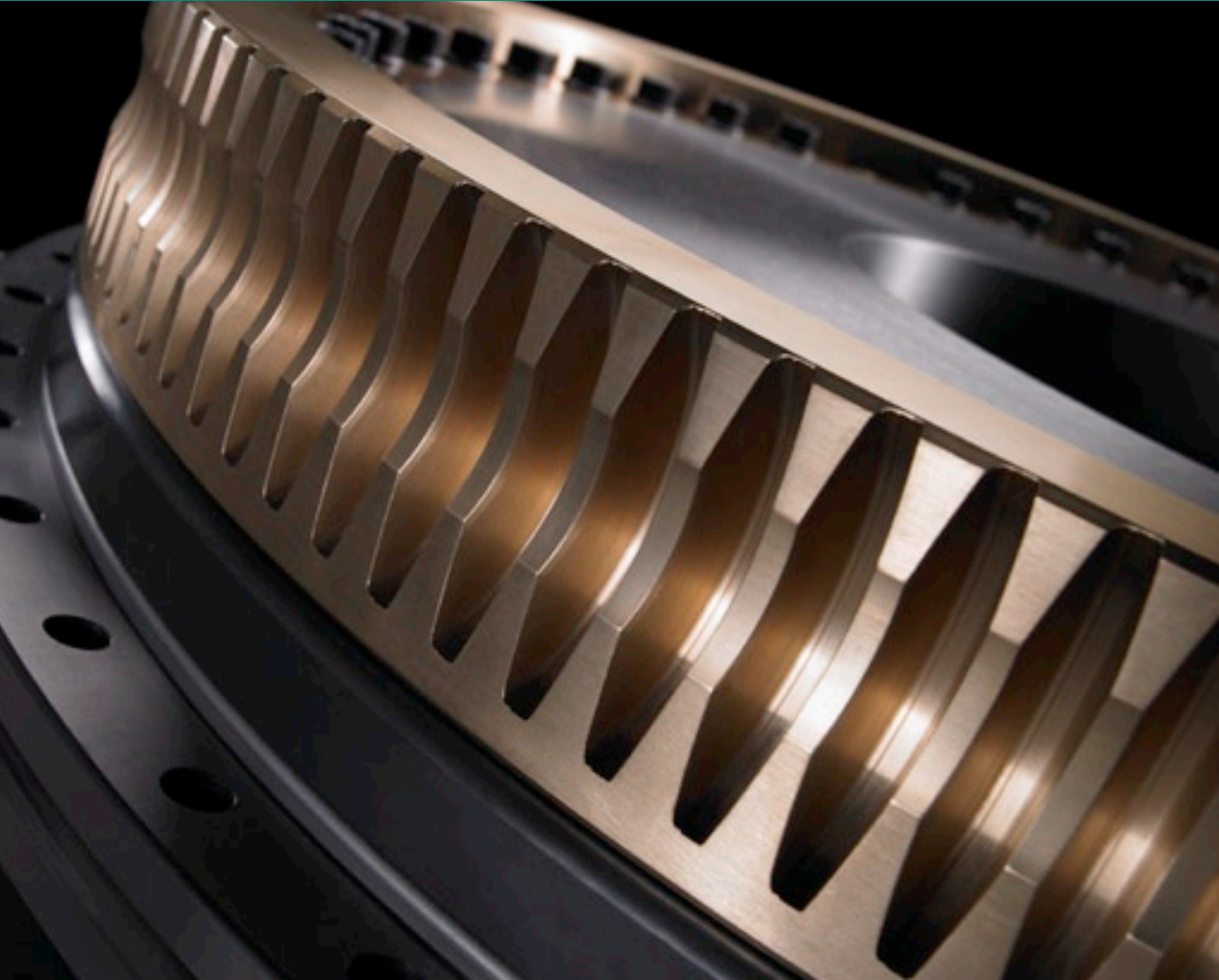
Further information and customized modifications on request.

Technical data are subject to change.

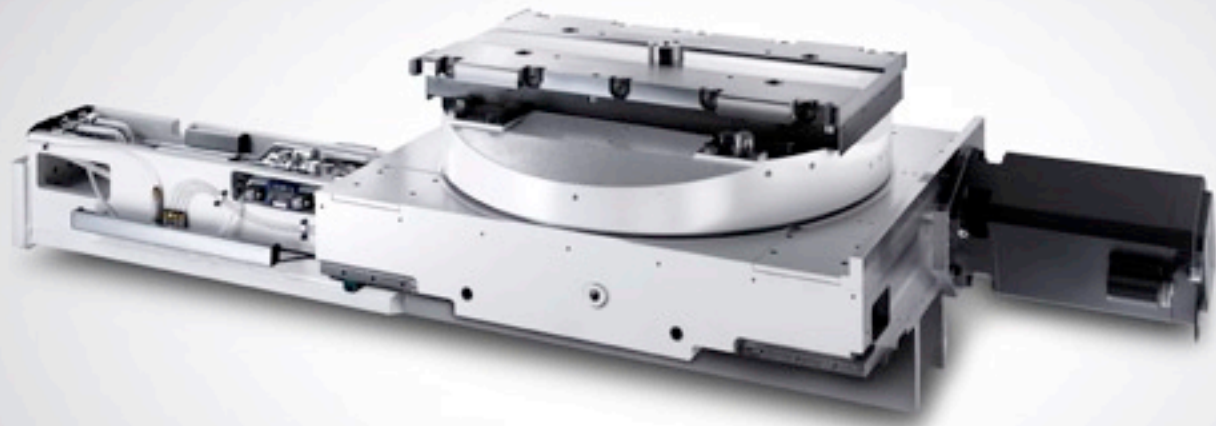
Milling

Rotary tables for horizontal and vertical machining centers

MRT ≤ 1250



MRT milling



MRT 650 with pallet chucking system
to DIN 55201 for pallets sized 800 × 800 mm

Milling Rotary Table Milling table up to size 1250

Designed for horizontal and vertical machining centers, the MRT series up to size 1250 is used for milling, boring and drilling in positioning and continuous operation.

Each table will be customized to the actual machine concept. Variable mounting configurations within one and the same construction size allow for different load capacities. We also offer customized pallet changer systems and swiveling tables which perfectly suit your current application.

Requirements

Customer requirements essentially determine the characteristic features of a product – this is the motto on which the Rückle group acts. For MRT series up to size 1250, this includes the need of having several table tops and pallet chucking systems within one construction size, a rigid mounting to bear component weights as high as 35 t and tilting moments up to 160 kNm. The drive is required to be reliable and backlash-free to obtain an excellent control performance in positioning and continuous operation. The same applies to high accelerations, even during changes of direction, to enhance machining quality on heavy components.

The locking system shall withstand machining moments as high as 65 kNm; positioning accuracy must be less than +/- 2 arcsec and repeatability less than +/- 1 arcsec.



MRT 250 with chucking cones (for pallets sized 500 × 500 mm)

Engineering solutions

Only if any single element provides optimal performance parameters can a rotary table system be tailored to customer's requirements. The MRT series allows to be equipped with pallet changer systems (to DIN 55201 and customized). Customers can freely choose among servodrive manufacturers, and the housings will be tailored to their current machine concept. Upon request, our tables are supplied together with the hydraulic and cooling systems ready for connection to the relevant machine ports.

In the standard design the mounting comes as an antifriction bearing. But Rückle also offers hydrostatic mounting for this series. Worm gears, bevel gears, spur gears and torque motors can be used as drive system. The measuring systems are fitted directly onto the table axis for all sizes. As an optional feature, the tables can also be equipped with a Hirth serration which helps compensate extremely high machining forces. Most of the tables can, of course, also be designed as horizontal axis.

MRT 1250 (2,000 × 2,500 mm, 40 t)



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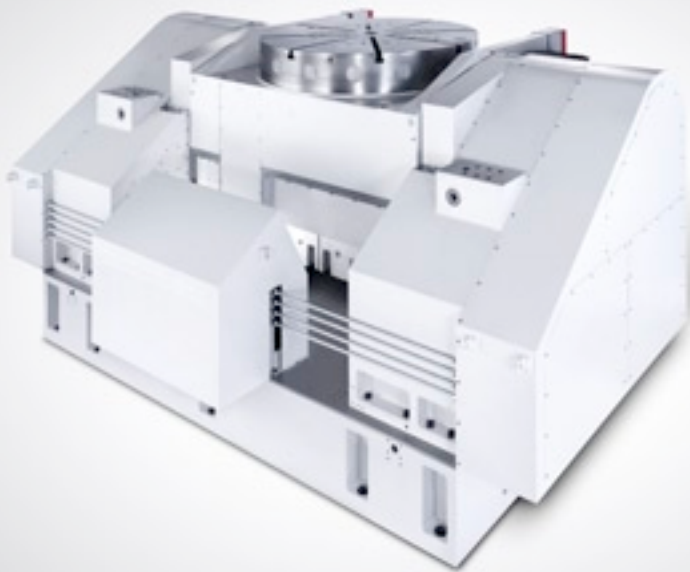
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MRT milling

Milling Rotary Table Pallet changer systems

Datasheet

Type/Designation	Pallet size (mm)		Carrying capacity up to (kg)
PW 500	500 × 500	500 × 630	1,500
PW 630	630 × 630	630 × 800	3,000
PW 800	800 × 800	800 × 1,000	6,000
PW 1000	1,000 × 1,000	1,000 × 1,250	10,000
PW 1250	1,250 × 1,250	1,250 × 1,600	15,000
PW 1600	1,600 × 1,600	1,600 × 2,000	20,000



MRT 1000 2xs (ø 1,600 mm, 15 t)

Swiveling tables

Swiveling tables consist of a combined turn and swivel unit. Elements from MRT series matching with customer's requirements are put together to build the turning and swivel axes. The units may be integrated into machines or come as linear motion slides which perfectly match the customer's machine bed.

Splendidly harmonized with the actual machine configuration the turn and swivel units feature optimal work-piece chucking systems and machining zones. These axes can, of course, also be combined with pallet changer systems and linear axes.

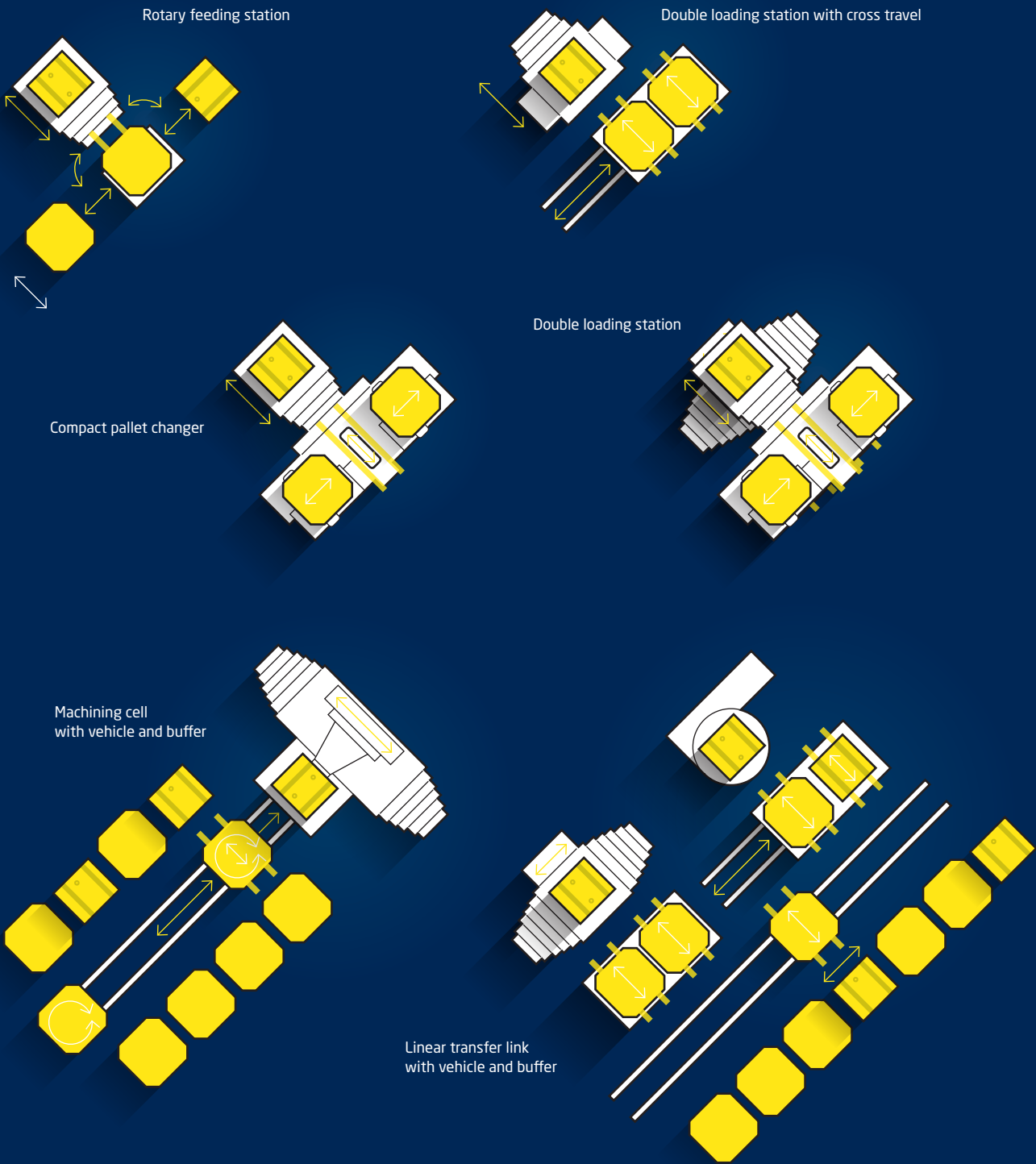
Pallet changer systems

Rückle's pallet changer systems have all a modular design which allows a huge variety of configurations. Customers may chose among several pallet chucking systems to be installed on the individual components (storing stations, clamping stations, feeding stations etc.) which are available for pallet sizes up to 2,500 x 2,500 mm (or larger upon request).



PW 1250 with MRT 1000

The ruggedized pallet changer systems are dimensioned for high pallet load capacities. We focused our attention on a minimized pallet change time anyway.



Datasheet

Milling Rotary Table Swiveling tables

by axis ■ the same value for both axes

- swiveling axis
- turning axis

Type / Designation		MRT 200 2xs		MRT 250 2xs		MRT 320 2xs		MRT 400 2xs	
Table sizes	mm	320	460	460	500	520	630	630	800
Max. centric load capacity up to	kg	400		600		1,000		1,400	
Anti-friction mounting									
Bearing diameter	mm	200	250	250	320	320	400	400	460
Safe max. tilting moment up to	Nm	—	2,000	—	5,000	—	8,000	—	10,000
Drive system (gear) ¹									
Max. speed S6 up to	RPM	15	20	15	20	15	15	10	15
Max. torque S6 up to	Nm	800	600	3,000	2,000	4,500	2,700	5,500	3,500
Locking system									
Tangential moment up to	Nm	5,000	1,900	6,000	3,000	8,000	4,000	10,000	5,000
Accuracy									
Dividing accuracy ²	arcsec	+/- 2		+/- 2		+/- 2		+/- 2	
Lateral runout	mm	—	0.01	—	0.01	—	0.01	—	0.015
Circular runout ³	mm	—	0.01	—	0.01	—	0.01	—	0.01

Type / Designation		MRT 500 2xs			MRT 650 2xs			MRT 800 2xs			MRT 1000 2xs		
Table sizes	mm	800	900	1,000	800	1,000	1,200	1,200	1,400	1,600	1,600	1,800	2,000
Max. centric load capacity up to	kg	2,000			3,000			4,000			8,000		
Anti-friction mounting													
Bearing diameter	mm	460	540		540	670		670	760		760	980	
Safe max. tilting moment up to	Nm	—	13,000		—	16,000		—	20,000		—	30,000	
Drive system (gear) ¹													
Max. speed S6 up to	RPM	10	15		5	10		5	5		5	5	
Max. torque S6 up to	Nm	6,200	4,000		12,000	8,000		20,000	10,500		30,000	13,500	
Locking system													
Tangential moment up to	Nm	13,000	8,000		20,000	15,000		30,000	20,000		35,000	25,000	
Accuracy													
Dividing accuracy ²	arcsec	+/- 2			+/- 2			+/- 2			+/- 2		
Lateral runout	mm	—	0.02		—	0.02		—	0.02		—	0.03	
Circular runout ³	mm	—	0.01		—	0.01		—	0.01		—	0.01	



MRT 400 2xs (ø 800 mm, 1.4 t)

- 1 Drive data are not associated one with another; they will be customized according to the application.
- 2 Depending on the measuring system
- 3 Hub centering

Further information and customized modifications on request.

Technical data are subject to change.