

# Direct Drive Rotary Tables

HIWIN RAS rotary and swivel tables

## 4. HIWIN RAS rotary and swivel tables

### 4.1 Properties of RAS rotary and swivel tables

RAS rotary and swivel tables are directly driven, maintenance-free precision axes. They use water-cooled torque motors from the TMRW series, guaranteeing high levels of acceleration and torque. Equipped with various high-resolution encoders, the rotary and swivel tables achieve accuracies of just a few arc seconds and can be integrated into all standard control concepts. Featuring crossed roller and axial/radial bearings, the tilt-resistant mechanical design is able to accommodate maximum loads.



#### Key features:

- Plug-and-play rotary and swivel table ready for installation
- Maintenance-free direct drives in all axes
- High acceleration, torque and accuracy
- Tilt-resistant mechanical design with large diameter
- Swivel axis with precision crossed roller bearings
- Rotary axis with extremely rigid axial/radial bearing
- Integrated clamp

#### Typical applications:

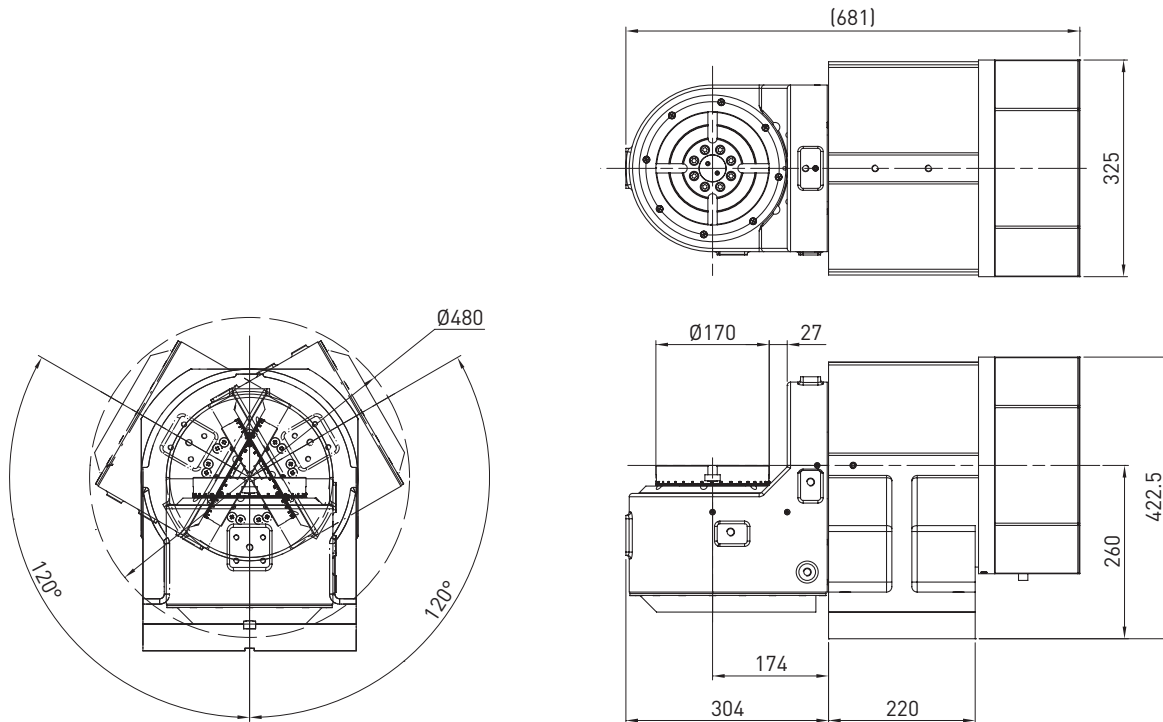
- 5-axis milling machines
- Laser processing machines

### 4.2 Specifications of RAS rotary and swivel tables

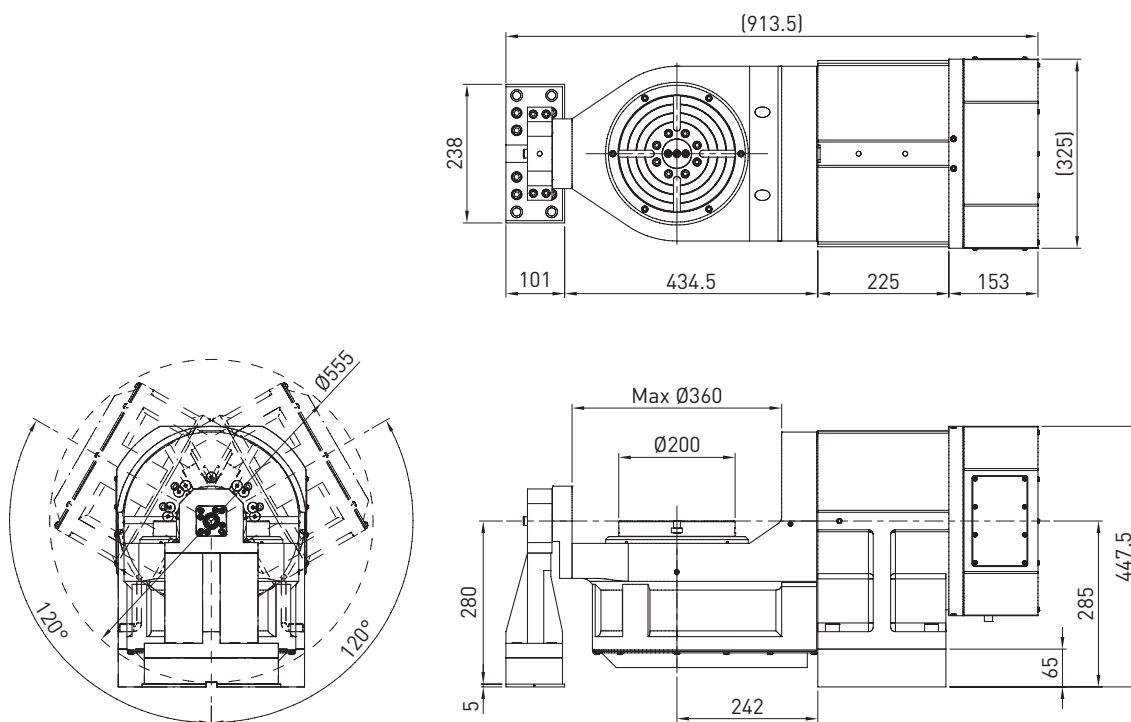
Table 4.1 RAS technical data													
	Unit	RAS-170		RAS-200		RAS-200-SP		RAS-250		RAS-320		RAS-650	
													
Axis		Rotary axis	Swivel axis $\pm 120^\circ$	Rotary axis	Swivel axis $\pm 120^\circ$	Rotary axis	Swivel axis $\pm 120^\circ$	Rotary axis	Swivel axis $\pm 120^\circ$	Rotary axis	Swivel axis $\pm 120^\circ$	Rotary axis	Swivel axis $\pm 120^\circ$
Drive motor		TMRW23	TMRW4A	TMRW43	TMRW4A	TMRW43-SB	TMRW4A	TMRW73	TMRW77	TMRW4A	TMRWAL	TMRWA7	TMRWDF
Max. speed	rpm	200	100	200	60	2,000	100	200	80	150	60	100	60
Continuous torque	Nm	35	205	63.5	205	27.9	205	145	335	205	1,900	600	2,000
Peak torque	Nm	66.5	390	120	390	52.7	390	275	640	390	3,360	1,100	3,600
Clamp		Pneumatic (6 bar)											
Clamp holding torque	Nm	250	840	300	840	300	840	600	1,500	840	2,400	2,400	4,200
Accuracy	arc sec	2.5/5.0/15.0											
Table diameter	mm	170		200		200		250		320		650	
Centre of swivel axis	mm	260		280		280		185		235		300	
Table height	mm	280		280		280		185		205		250	
T-groove width	mm	14 H8		12 H8		12 H8		12 H8		14 H8		14 H8	
Weight	kg	250		260		260		300		600		1,300	
Max. load	kg	30		50		50		85		200		300	

## 4.3 Dimensions of RAS rotary and swivel tables

### RAS-170 dimensions



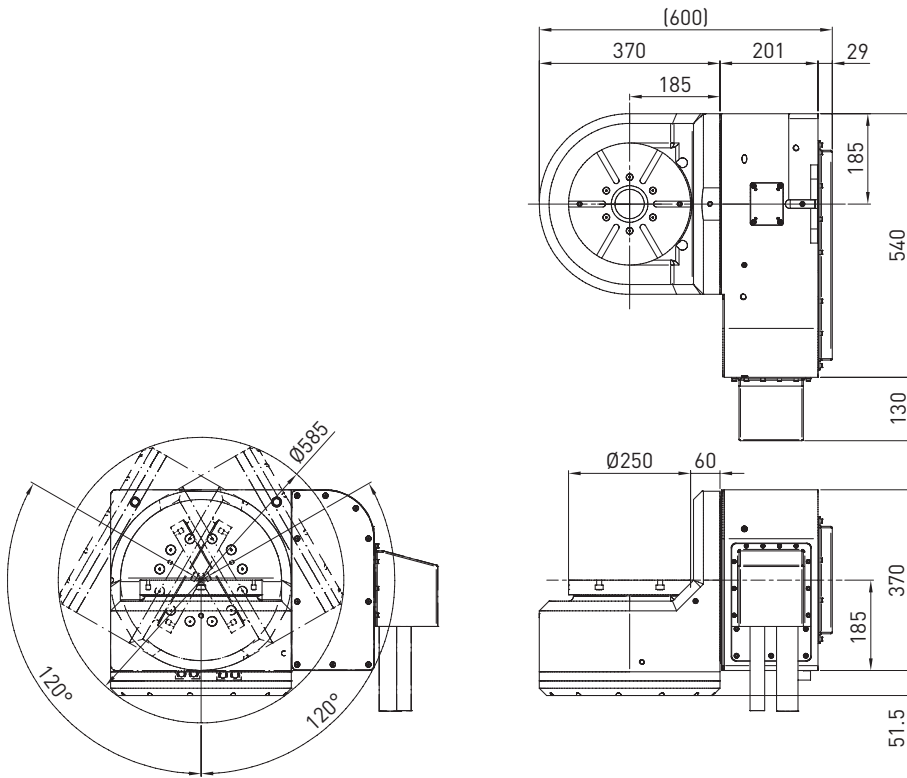
### RAS-200/RAS-200-SP dimensions



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## RAS-250 dimensions



## RAS-320 dimensions

