Screw Driven Tables

Rotary Series Worm Drive Precision Stages

The Rotary Stage Series offers an unparalleled combination of high accuracy and high load capacity. These rotary stages utilize a precision worm gear with the worm "flexed" against the gear to ensure a proper mesh. This feature provides high repeatability with very smooth operation. Additionally, the rotary stages incorporate an oversized preloaded cross roller bearing, offering exceptional stiffness and load capacity.

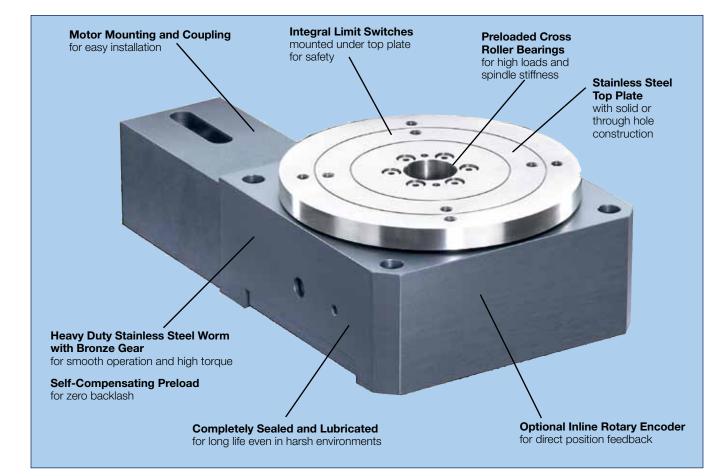
- Unique self-compensating preload to limit backlash
- Solid or thru bore construction
- Robust bearing design for high-load capacity
- Built-in limit switches
- Aluminum construction with stainless steel top plate

When to Use

- High accuracy
- High loads
- Compact
- High stiffness

Applications

- Electronic assembly
- Fiber optics
- Medical
- Packaging
 - Pharmaceutical
- Robotics
- Semiconductor







Rotary Series Specifications

Performance Specifications

	Ах	ial	Perpendicular Capacity							
	Capa	acity	@ 25	mm	@150 mm					
Model No.	(kg)	(lb)	(kgf)	(lb)	(kgf)	(lb)				
R100M	100	220	22	48	7	15				
R150M	400	880	88	194	33	73				
R200M	600	1320	200	440	85	187				
R300M	1000	2220	325	715	160	352				



	Worm	Unidirectional Repeatability ⁽¹⁾		put Torque PM Input	Peak Output Speed	Wei	ight	Iner	rtia
Model No.	Gear Ratio	(arc-min)	(Nm)	(in-lb)	(RPM)	(kgf)	(lbf)	gm-cm sec ²	oz-in sec ²
R100M	60:1	0.2	8	70.8	30	2.3	5.0	0.0057	0.0000784
R150M	72:1	0.2	25	221	30	6.0	13.0	0.055	0.00076
R200M	72:1	0.2	55	487	30	15.0	33.0	0.148	0.00210
R300M	90:1	0.2	75	664	30	35.0	77.0	0.368	0.00516

Accuracy Specifications⁽¹⁾

	Main Bearing Runout	Wobble	Positional Accuracy ⁽¹⁾	Bidirectional Repeatability ⁽¹⁾		inning Torque d at 2 rps)
	(microns)	(arc-min)	(arc-min)	(arc-min)	(Nm)	(oz-in)
R100M	±15	±0.5	5	0.5	0.141	20
R150M	±20	±0.5	3	0.5	0.177	25
R200M	±25	±0.5	3	0.5	0.212	30
R300M	±30	±0.5	3	0.5	0.247	35

(1) Accuracy and repeatability are based on stage mounted to a flat granite surface and measured at 25 mm above the center of the stage.

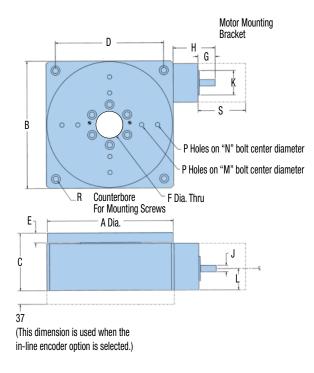






Rotary Series Dimensions

Dimensions (mm)



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Model No.	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
R100M	98.5	3.88	100	3.94	55	2.16	85	3.35	8	0.32
R150M	147.6	5.81	150	5.90	75	2.95	125	4.92	11	0.43
R200M	197.7	7.78	200	7.87	90	3.54	170	6.70	15	0.59
R300M	297.7	11.72	300	11.81	108	4.25	270	10.63	16	0.63

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Model No.	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
R100M	12	0.47	15	0.59	45	1.77	5	0.197	18	0.709
R150M	25.5	1.00	27	1.06	66	2.60	10	0.394	38.1	1.50
R200M	38	1.50	27	1.06	66	2.60	10	0.394	38.1	1.50
R300M	51	2.00	39	1.53	113	4.45	12	0.472	73	2.875

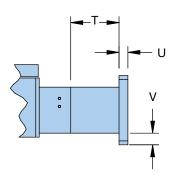
	l	L	Ν	Л	1	N	Р	R	5	\$	Stage	Weight
Model No.	(mm)	(in)	(mm)	(in)	(mm)	(in)	Тар	CBore	(mm)	(in)	(kg)	(lb)
R100M	21	0.83	45	1.772	75	2.953	M5 x 0.8	M5	38.1	1.50	1.8	3.97
R150M	30.1	1.18	100	3.937	125	4.921	M6 x 1	M6	60.2	2.37	5	11
R200M	33.5	1.32	100	3.937	150	5.905	M8 x 1.25	M8	60.2	2.37	13	28.66
R300M	44.2	1.74	150	5.905	250	9.843	M8 x 1.25	M8	73.1	2.88	29	63.93





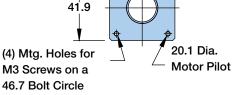
Dimensions (mm)

Rotary Table Motor Block Dimensions

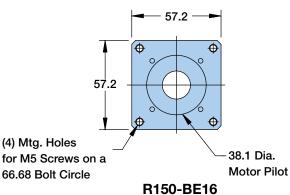


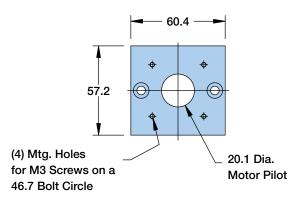
Rotary		-	Г	ļ	J	۷		
Stage Size	Motor Size	mm	in	mm	in	mm	in	
	BE16 M16	47	1.85	_	_	_	_	
R100M	LV/HV23 M22 BE23 M23	47	1.85	6	0.24	7.6	0.3	
	BE16 M16	55	2.17	_	_	_	-	
R150M	LV/HV23 M22	51	2.01	_	—	—	—	
	BE23 M23	62	2.44	_	_	_	_	
	LV/HV23 M22	51	2.01	—	_	_	_	
R200M	BE23 M23	62	2.44	_	_	_	_	
	BE34 M34	60	2.36	11	0.43	9.5	0.37	
	LV/HV23 M22	75	2.95	_	_	_	_	
R300M	BE23 M23	75	2.95	_	_	_	_	
	BE34 M34	73	2.87	_	_	_	_	

R100-BE16

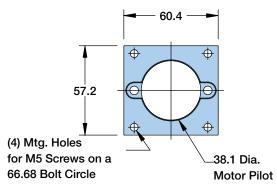


R100-LV/HV23 & BE23





R150-LV/HV23 & BE23





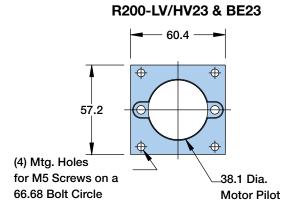
www.parkermotion.com

140A Addendum Parker Hannifin Corporation Electromechanical Automation Division Irwin, Pennsylvania

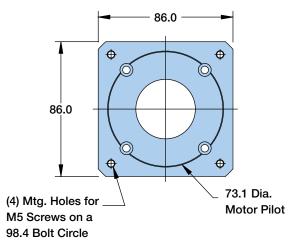


Dimensions (mm)

Rotary Table Motor Block Dimensions

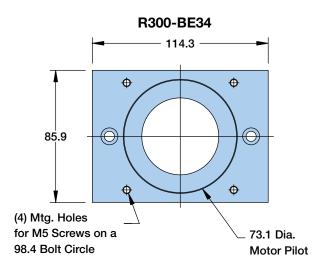


R200-BE34



(4) Mtg. Holes for M5 Screws on a 66.68 Bolt Circle

R300-LV/HV23 & BE23





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140B Addendum



Fill in an order code from each of the numbered fields to create a complete model order code.

	1	2	3	4	5	6	0	8	
Order Example:	R	150M	7	MP2	C04	L1H1	E 0	R1	

() Series R

Worm Gear Rotary Series

2 Metric Square Width

100M	100 mm
150M	150 mm
200M	200 mm
300M	300 mm

3 Gear Ratio

- 6 60:1 (R100)
- 7 72:1 (R150 and R200)
- 9 90:1 (R300)

Motor Mounting

- M00 No motor block included
- M16 Motor block for Parker BE16(1,2,3 stack)
- M22 Motor block for Parker LV/HV23, SM23(1,2,3)
- M23 Motor block for Parker BE23(1,2,3 stack)
- M34 Motor block for Parker BE34 motors
- MP1 Including motor and mount with BE163CJ-NPSN
- MP2 Including motor and mount with BE233FJ-NSPN
- MP3 Including motor and mount with HV233-02-10

5 Coupling Code

- C00 No coupling included
- C01 0.1875 inch coupling included
- **C02** 5 mm coupling included
- **C03** 0.250 inch coupling included (for BE16,LV/HV23)
- C04 0.375 inch coupling included (for BE23/SM23(1,2,3)
- **C05** 8 mm coupling included
- **C06** 9 mm coupling included
- **C07** 11 mm coupling included
- **C08** 0.500 inch coupling included (for BE34 motors)
- **C09** 14 mm coupling included
- C10 16 mm coupling included

6 Limits Switches

- **L0H0** No Home or Limit Sensors included
- LOH1 1 normally open NPN home sensor included
- L1H0 2 normally closed NPN limit sensors included
- L1H1 1 home and 2 limit sensors included

O Encoder in Line with Top Plate

- **E0** No encoder included
- E1 2000 line in-line rotary encoder included

8 Environment

- **R1** Standard environmental protection
- R2 Cleanroom preparation included to class XX(TBD)

