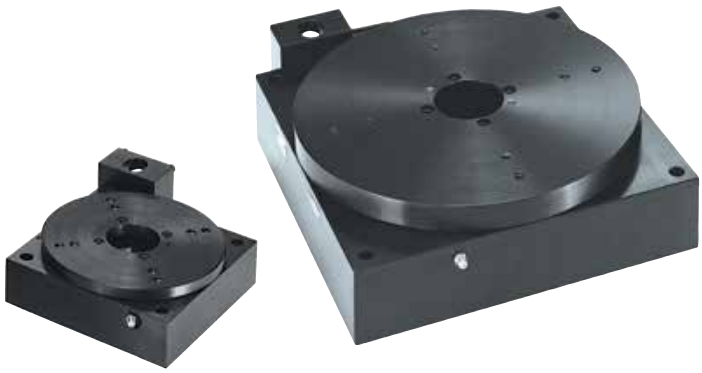
200RT Series Rotary Tables

Precise Rotary Positioning and Indexing

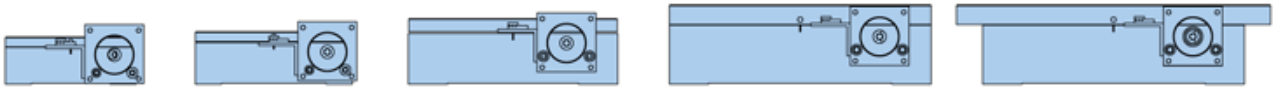
- Highly repeatable indexing (12 arc-sec)
- Load capacities to 200 lbs
- 360 degrees continuous travel
- Performance tested worm gear drive
- Selectable table sizes and drive ratio
- Dual race angular contact support bearing
- Quality design and construction



	200RT
Maximum Diameter (mm)	304
Maximum Payload (N)	889
Maximum Input Velocity (rpm)	900

Options

- Motor couplings in a wide range of coupling styles and bores
- Motor mounts
- Home sensor for fixed reference point
- High resolution, high accuracy rotary encoders
- Custom designed sealed units
- Motors, drives & controls available for complete system solutions



205RT 206RT 208RT 210RT 212RT

Bracket shown is only available with home switch option.

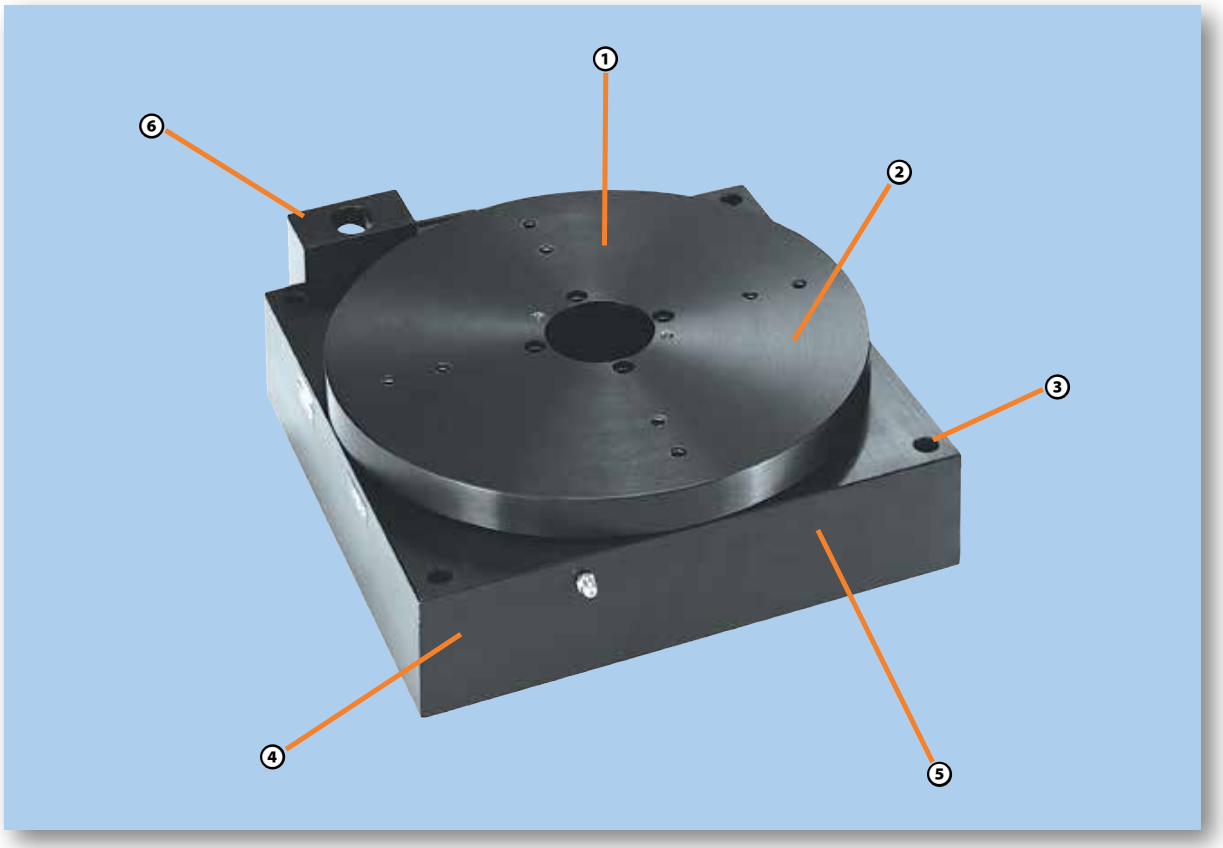
The 200RT Series Rotary Tables are designed for precise motor-driven rotary positioning and indexing. These tables are designed to function independently or in conjunction with linear tables used in the high-precision and precision automation applications.

Their low profile design minimizes stack height in multi-axis configurations and enables them to fit in many places where other motorized rotary devices cannot.

Models are available in 5, 6, 8, 10, or 12 inch diameters and are offered with four gear ratios making it convenient to match size, speed, and load requirements. They can be selected in either English or metric mounting.

They are found in virtually all industries where intermittent part indexing, part scanning, skew adjustment, or precise angular alignment is required.

At the heart of these tables is a rugged main support bearing which is comprised of two preloaded angular contact bearing races. It is designed for high load capacity and smooth, flat rotary motion. The drive is a precision worm gear assembly which is preloaded to remove backlash. The top and base are constructed of high quality aluminum with an attractive black anodized finish. The top and bottom mounting surfaces are precision ground to assure flatness.



① **Multiple sizes**
Models are available in five diameter sizes and are offered with four gear ratios

② **Load capacities**
to 200 pounds

③ **Available with English or Metric Mounting**

④ **Low profile design**
minimizes stack height in multi-axis configurations

⑤ **High resolution, high accuracy rotary encoders**
can be added for direct positional feedback of the table top position.

⑥ **Custom designed sealed units**
are offered to prevent excessive wear or internal damage resulting from dust and contaminants

SPECIFICATIONS

The various table sizes of the 200RT Series makes it convenient to match size, speed, and load requirements for any application.

200RT Common Characteristics

	Units	Precision	Standard
Positional Repeatability (unidirectional)	arc-min	0.2	0.5
Duty Cycle	%	50	50
Table Runout (maximum) *	in (µm)	±0.001 (±25)	±0.003 (±75)
Concentricity **	in (µm)	±0.001 (±25)	±0.005 (±127)
Wobble	arc-sec	30	60
Input Velocity (maximum) ***	revs/sec	15	15

* Runout refers to the vertical deviation of the table top while rotating.

** Concentricity refers to the horizontal deviation of the table top while rotating.

*** Maximum output velocity is dependent on the drive ratio selected.

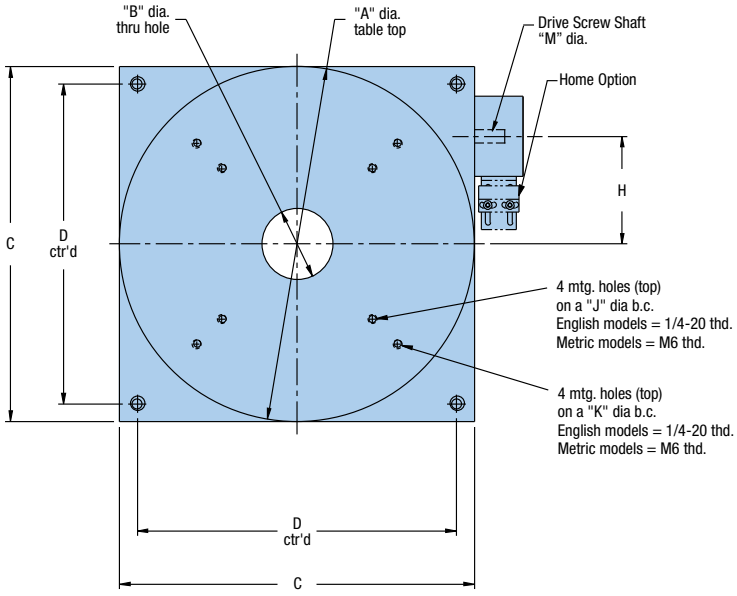
Travel Dependent Characteristics

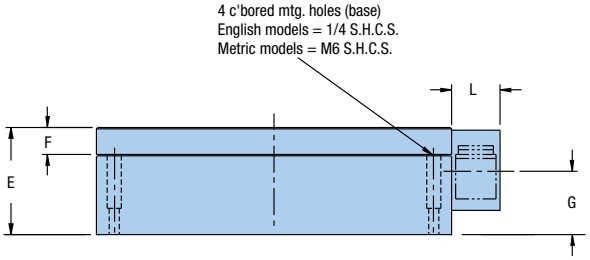
			Accuracy arc-min						Weight lb (kgf)	
Table Diameter inches	**Drive Ratio**	**Load Capacity lbs (kgf)***	**Precision**	**Standard**	**Output Torque in-lb (N-m)**	**Inertia 10^{-3}-oz.-in-sec^2 (10^{-6} kg-m-sec^2)**	**Input Breakaway Torque (max.) oz.-in (N-m)**	**Running Torque (max) oz-in (N-m)**	**Standard Top**	**Total**
5.0	180:1	25 (11)	3	10	25 (2.8)	0.14 (0.102)	22 (0.16)	20 (0.13)	0.67 (0.3)	6.0 (2.7)
5.0	90:1	25 (11)	3	10	25 (2.8)	0.15 (0.112)	22 (0.16)	20 (0.13)	0.67 (0.3)	6.0 (2.7)
5.0	36:1	25 (11)	5	12	25 (2.8)	0.24 (0.173)	22 (0.16)	20 (0.13)	0.67 (0.3)	6.0 (3.6)
6.0	180:1	150 (68)	3	10	120 (13.6)	0.16 (0.112)	22 (0.16)	20 (0.13)	0.91 (0.42)	8.0 (2.7))
6.0	90:1	150 (68)	3	10	120 (13.6)	0.20 (0.132)	22 (0.16)	20 (0.13)	0.91 (0.42)	8.0 (3.6)
6.0	45:1	150 (68)	5	12	120 (13.6)	0.29 (0.204)	22 (0.16)	20 (0.13)	0.91 (0.42)	8.0 (3.6)
8.0	180:1	150 (68)	3	10	120 (13.6)	0.24 (0.163)	28 (0.19)	25 (0.18)	2.23 (1.01)	15.0 (6.8)
8.0	90:1	150 (68)	3	10	120 (13.6)	0.66 (0.459)	28 (0.19)	25 (0.18)	2.23 (1.01)	15.0 (6.8)
8.0	36:1	150 (68)	5	12	120 (13.6)	0.90 (0.642)	28 (0.19)	25 (0.18)	2.30 (1.05)	15.0 (6.8)
10.0	180:1	200 (90)	3	10	190 (21.5)	0.74 (0.530)	33 (0.22)	30 (0.21)	5.26 (2.30)	29.0 (13.1)
10.0	90:1	200 (90)	3	10	190 (21.5)	1.02 (0.734)	33 (0.22)	30 (0.21)	5.26 (2.30)	29.0 (13.1)
10.0	45:1	200 (90)	5	12	190 (21.5)	2.13 (1.53)	33 (0.22)	30 (0.21)	5.26 (2.30)	29.0 (13.1)
12.0	180:1	200 (90)	3	10	190 (21.5)	0.99 (0.713)	33 (0.22)	30 (0.21)	7.67 (3.49)	32.0 (14.5)
12.0	90:1	200 (90)	3	10	190 (21.5)	1.59 (1.12)	33 (0.22)	30 (0.21)	7.67 (3.49)	32.0 (14.5)
12.0	45:1	200 (90)	5	12	190 (21.5)	3.83 (2.75)	33 (0.22)	30 (0.21)	7.67 (3.49)	32 (14.5)

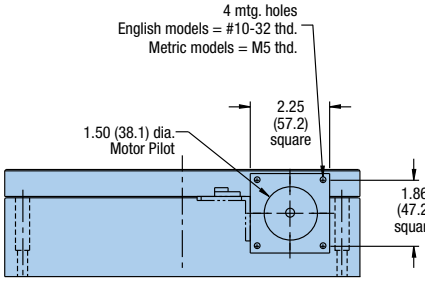
* Load centered on table. If offset, see charts for moment capacity.

Download 2D & 3D files from www.parker.com/emn/RTSeries

Dimensions - inches (mm)







English Units

A	B	C	D	E Standard (T2)	E Option (T3)	F Standard (T2)	F Option (T3)	G	H	J	K	L	M
5.0	1.0	5.0	4.0	1.8	2.42	0.38	1.00	1.11	1.66	3.0	4.0	1.38	0.188
6.0	1.75	6.0	5.0	2.0	2.62	0.38	1.00	1.23	2.04	4.0	5.0	1.38	0.25
8.0	1.75*	8.0	6.0	2.5	3.12	0.50	1.00	1.57	2.04	4.0	6.0	1.38	0.25
10.0	2.0	10.0	9.0	3.0	3.62	0.75	1.00	1.81	3.03	6.0	8.0	1.38	0.25
12.0	2.0	10.0	9.0	3.0	3.62	0.75	1.00	1.81	3.03	8.0	10.0	2.38	0.25

*On the 8.0" (203,2) diameter table with 36:1 ratio, this dimension is 1.0" (25,4).

Metric Units

A	B	C	D	E Standard (T2)	E Option (T3)	F Standard (T2)	F Option (T3)	G	H	J	K	L	M
127.0	25.4	127.0	100	46.0	61.5	9.6	25.0	28.1	42.1	75	100	35	4.76
152.4	44.5	152.4	125	50.8	66.5	9.6	25.0	31.4	51.8	100	125	35	6.35
203.2	44.5*	203.2	175	63.5	79.2	12.7	25.0	39.8	51.8	100	150	35	6.35
254.0	50.8	254.0	225	76.2	91.9	19.0	25.0	45.9	76.9	150	200	35	6.35
304.8	50.8	254.0	225	76.2	91.9	19.0	25.0	45.9	76.9	200	250	60.4	6.35

*On the 8.0" (203,2) diameter table with 36:1 ratio, this dimension is 1.0" (25,4).

OPTIONS & ACCESSORIES

Motor Couplings

A wide range of coupling styles and bores are available to match motor requirements. Bellows-style couplings, offering the lowest windup are required for all precision grade tables, while the aluminum and stainless steel helix couplers offer good windup characteristics and high durability at a lower cost.

Motor Mounts

The motor mount is designed for an industry standard NEMA 23 motor flange and a maximum shaft length of 0.85".

Home Sensor

The Home sensor provides a fixed reference point to which the table can always return. This is a mechanical reed switch which is mounted the body of the rotary table and is activated by a magnet embedded on the table top.

Rotary Encoders

High resolution, high accuracy rotary encoders can be added for direct positional feedback of the table top position.

Rotary encoders can be mounted directly to the base of the rotary table. The encoder input shaft is then coupled directly to the rotary table top, supplying positional feedback of the table top, with no drive train errors. They can be supplied with or without a base housing which encloses and protects the encoder.

Seals

Custom designed sealed units are offered to prevent excessive wear or internal damage resulting from dust and contaminants.

Motors, Drives & Controls

Micro-step motors with drives are available for direct mounting to the rotary tables. Motion controllers can also be added to provide systems with seamless connectivity.

Rotary inspection stand

ORDERING INFORMATION

200RT Rotary Tables

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

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
Order Example:	2	08	01	RT	M	S	H1	C1	M1	E0	T1

① Series

2

② Table Diameter

05	5 in, 125 mm
06	6 in, 150 mm
08	8 in, 200 mm
10	10 in, 250 mm
12	12 in, 300 mm

③ Gear Ratio

01	180:1, Available on all dia.
02	90:1, Available on all dia.
04	45:1, Available on 6”, 10” and 12” dia. only
05	36:1, Available on 5” and 8” dia. only

④ Table Style

RT

⑤ Mounting

E	English
M	Metric (800CT only)

⑥ Grade

S	Standard
P	Precision

⑦ Home

H1	No home switches
H2	Magnetic home switches

⑧ Motor Coupling

C1	No coupling
C2	0.25 in bore, helix, aluminum
C3	0.25 in bore, helix, stainless steel (not available on 205 model)
C4	0.25 in bore, bellows, required for precision grade
C6	0.375 in bore, helix, stainless steel (not available on 205 model)
C7	0.375 in bore, bellows, required for precision grade

⑨ Motor Mount

M1	23 frame size

⑩ Encoder

E0	No encoder
E8	Ring encoder – 314,880 post quad. counts/rev

⑪ Table Top

T1	No top
T2	Standard top
T3	Oversized top (raises height to clear NEMA 23 motor)

Free sizing and selection support from Virtual Engineer at parker.com/VirtualEngineer

Virtual Engineer