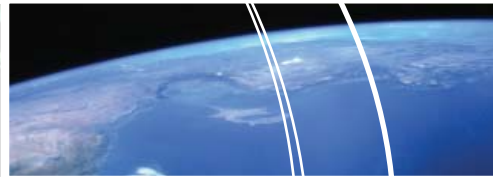
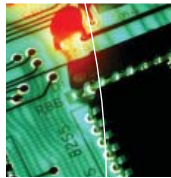
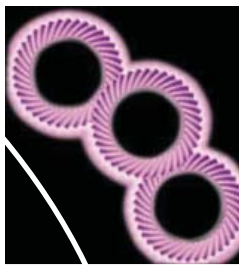
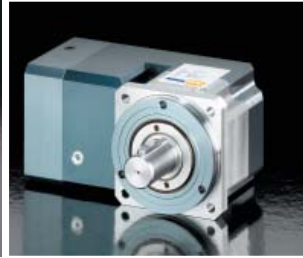
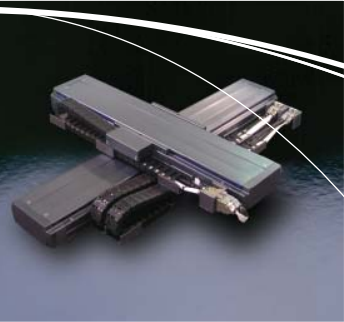


Parker
BAYSIDE[®]



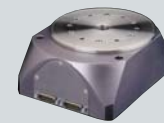
PRECISION PRODUCTS for the Motion Control Industry



Rotary Series: Direct Drive Precision Stages



Parker Bayside's Direct Drive Rotary Stages feature a robust construction and high performance in a compact package, providing smooth, near-frictionless motion with zero backlash.



Performance Specifications

Model No.	Axial Capacity		Perpendicular Capacity @ Radius	Continuous Output Torque		Peak Output Torque		Maximum Output Speed ⁽¹⁾ (RPM)
	(kgf)	(lb)		(Nm)	(in lb)	(Nm)	(in lb)	
R100D	75	165.3	20kgf @ 50mm	0.65	5.75	1.96	17.34	700
R150D	150	330.6	75kgf @ 75mm	4.00	35.4	12.00	106.2	500
R200D	250	551.1	150kgf @ 100mm	6.2	54.80	18.60	164.40	300

Model No. @ øH	Radial Runout @ øk	Axial Runout of Rotation	Wobble @ Axis	Inertia		Stage Weight	
	(microns)	(microns)	(arc sec)	(gm cm sec ²)	(oz in sec ²)	(kg)	(lb)
R100D	20	18	60	14.2	0.197	2.24	4.85
R150D	26	23	45	86.4	1.200	5.8	12.79
R200D	36	30	30	338.0	4.695	10.5	23.15

Encoder Data

Model No.	R100D	R150D	R200D
Total Number of counts/rev ⁽²⁾	473,600	629,760	944,000
Frequency at Max Speed ⁽²⁾ (MHz)	5.5	5.2	4.7
Resolution after x4 (arc sec)	2.73	2.05	1.3728
Repeatability after x4 (arc sec) ⁽³⁾	± 8.4	± 6.15	± 4.1

(1) Maximum speed may be limited by input frequency response of controller or drive.

(2) Post quadrature (includes 10x interpolation and 4x of control).

(3) Typical system repeatability that can be achieved by a closed loop control system.

Motor Specifications

Model No.	Voltage Constant $K_{E(L-L)}$ (V/kRPM)	Torque Constant $K_{T(L-L)}$		Resistance R_{L-L} (ohms @ 25°C)	Inductance L_{L-L} (mH)	Thermal Resistance (°C/W)
		(Nm/amp)	(in lb/amp)			
R100D	75	0.72	6.37	59.9	50	2.0
R150D	210	2	17.7	11.4	14	2.0
R200D	325	3.1	27.4	10.4	21	2.0

Model No.	Rated Voltage (V)	I _{cont} (amps)	I _{peak} (amps)	Logic Voltage (V/amp)	Pole Count
R100D	300	0.9	2.72	5 V @ 170 ma	12
R150D	300	2.0	6.0	5 V @ 170 ma	20
R200D	300	2.0	6.0	5 V @ 170 ma	32

Direct Drive Precision Stages

High Performance in a Compact Package

Parker Bayside's Direct Drive Rotary Stage, featuring an integral brushless DC servomotor, has several distinct advantages over traditional worm gear-driven stages. The elimination of the worm gearing offers the ability to reduce wear with zero backlash while exhibiting near frictionless motion.

Its high positioning accuracy, solely based on the stage's encoder, provides repeatability within + 2 encoder counts, with resolutions ranging to 1.4 arc seconds. The RD Direct Drive features speeds up to 700 RPM with significant torque capability.

When to Use:

- ▶ Precision rotary motion
- ▶ ZERO backlash
- ▶ Compact
- ▶ Rugged

Applications:

- ▶ Electronic assembly
- ▶ Fiber Optics
- ▶ Medical
- ▶ Packaging
- ▶ Pharmaceutical
- ▶ Robotics
- ▶ Semiconductor

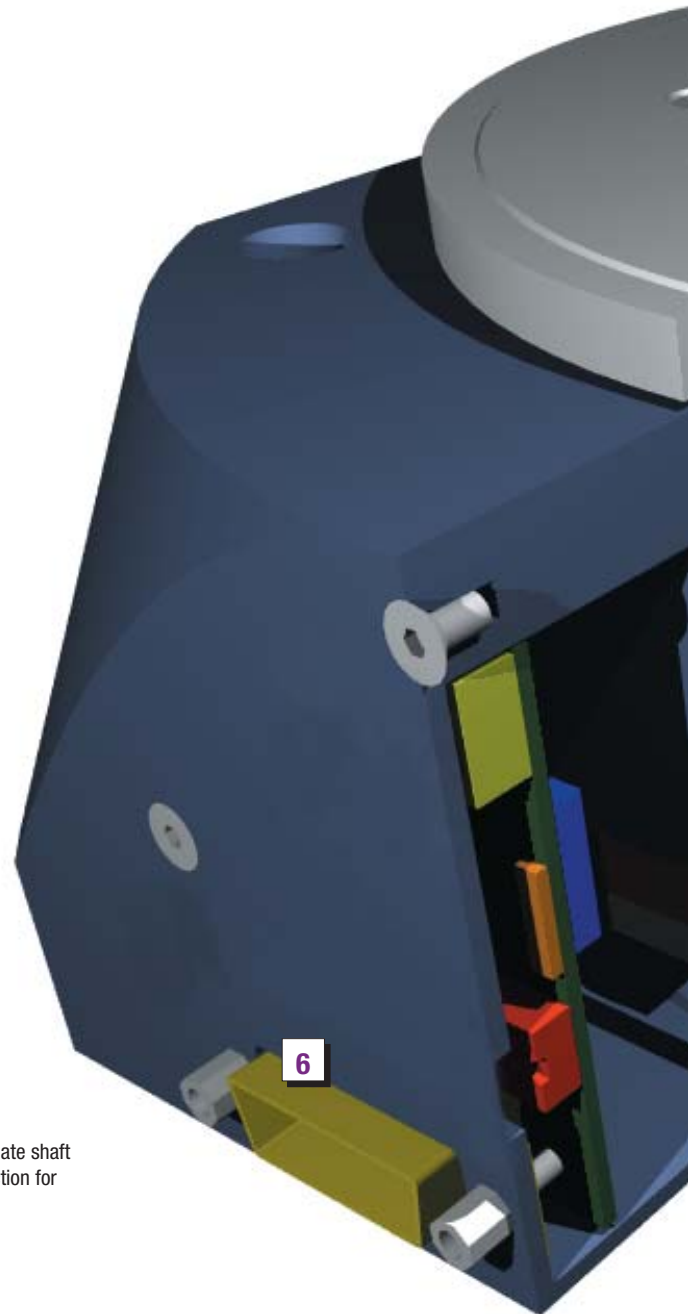
1

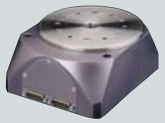
Robust bearing design
for high load capacity

2

Rotor / Shaft
motor rotor and top plate shaft
as one piece construction for
high stiffness

6





3

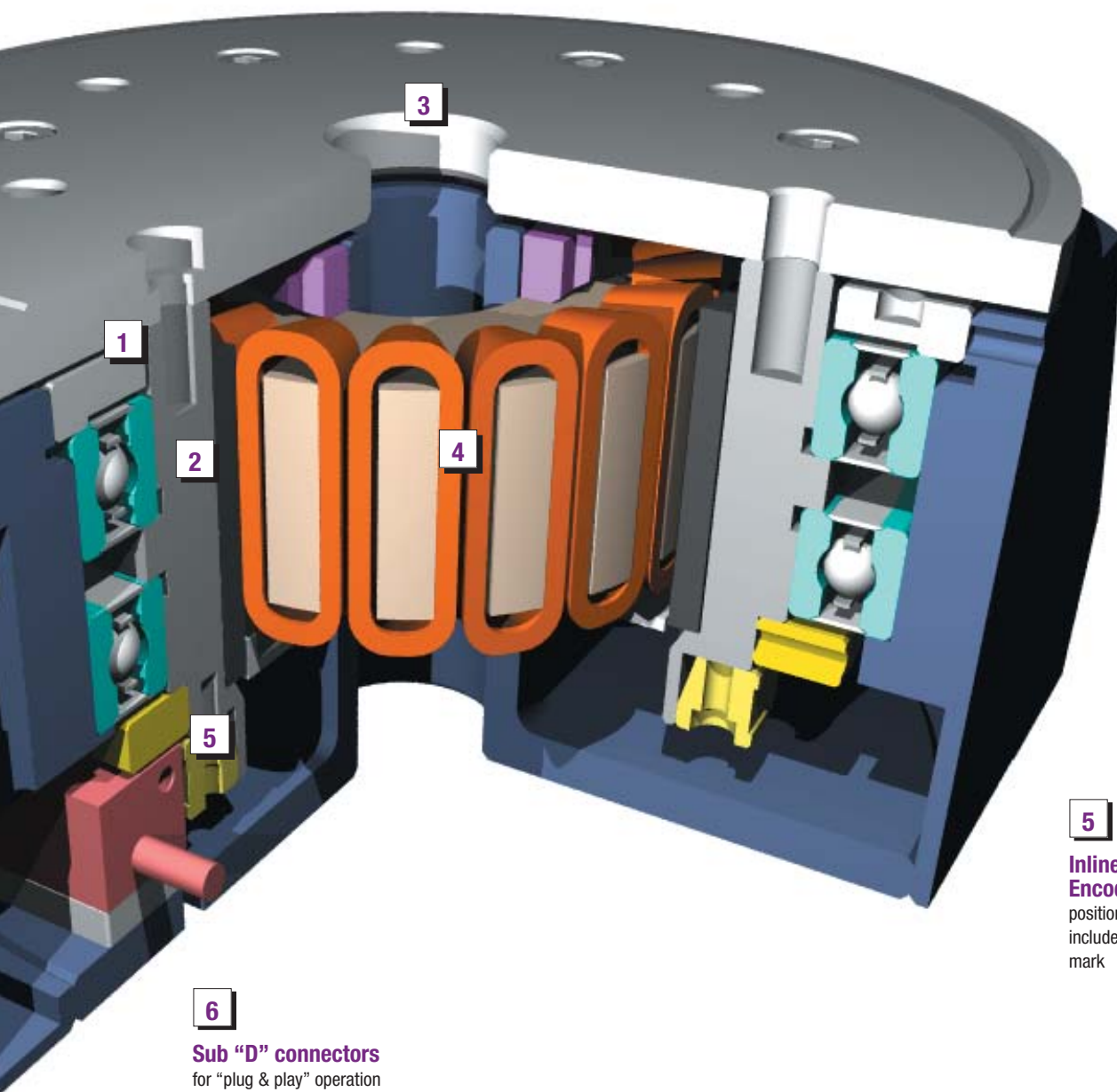
Stainless Steel Top Plate

precision ground for accurate mounting

4

Integrated Brushless Motor

unique design with high copper slot and rare earth magnet for maximum torque efficiency



1

2

3

4

5

5

Inline Rotary Encoder

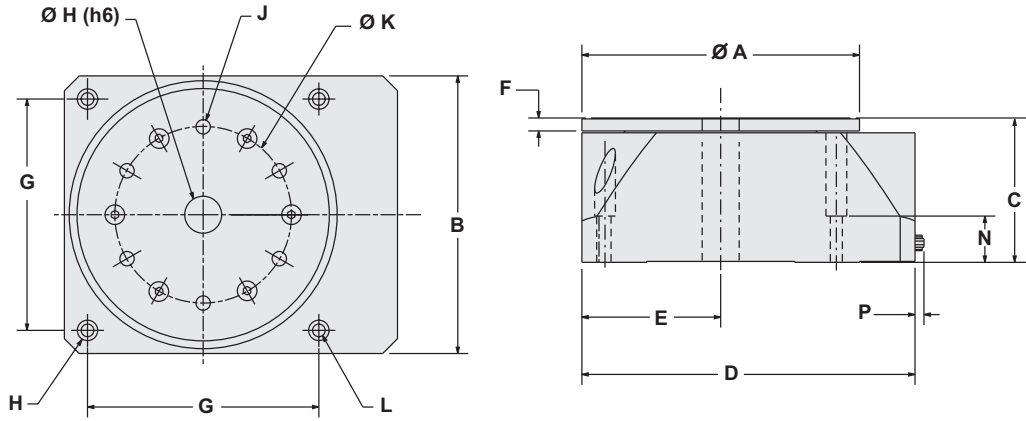
for direct position feedback. Also includes once per rev index mark

6

Sub "D" connectors

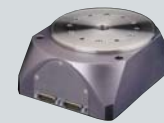
for "plug & play" operation and easy hook-up.

Dimensions

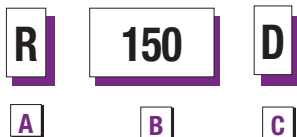


Model No.	A		B		C		D		E		F		G	
	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
R100D	100	3.94	100	3.94	75	2.95	130	5.12	50	1.96	5	0.196	85	3.34
R150D	150	5.9	150	5.9	78	3.07	180	7.08	75	2.95	7	0.275	125	4.92
R200D	200	7.87	200	7.87	100	3.94	230	9.05	100	3.94	10	0.393	160	6.29

Model No.	H		J	K		L		M		N		P	
	(mm)	(in)	Tap	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
R100D	20	0.787	M5	60	2.36	5.5	0.216	9.5	0.374	25	0.984	5	0.196
R150D	20	0.787	M6	95	3.74	6.5	0.255	11.2	0.440	25	0.984	5	0.196
R200D	30	1.18	M8	125	4.92	8.5	0.334	14.0	0.551	25	0.984	5	0.196



Order Numbering
Example:



A	STAGE SERIES
R	Direct Drive Rotary

B	MODEL
100	100 mm
150	150 mm
200	200 mm

C	DRIVE
D	Direct Drive

Cable Options:

Mating Power Cable

Part Number	Length	Used With
10963018-3000	3 meters	Flying Leads
10963018-8000	8 meters	Flying Leads

Mating Sensor Cable

Part Number	Length	Used With
10963241-3000	3 meters	Flying Leads

“Only for use with stage versions without LC display and programmable limits/outputs 5v requirement and Y-cable limits branch of previous cable type”

How to Order

Direct Drive Rotary Stages are supported by a worldwide network of offices and local distributors. Call **1-800-305-4555** for application engineering assistance or for the name of your local distributor. Information can also be obtained at www.baysidemotion.com or www.parkermotion.com.

Specifications are subject to change without notice.