



*Spacecraft Buses,
Systems & Solutions*

REACTION WHEELS



Our Reaction Wheels are currently operating on-orbit, supporting numerous successful customer missions.

The Blue Canyon Technologies range of reaction wheels are built to provide your spacecraft with the precise combination of torque and momentum storage necessary to navigate a successful mission. Brushless DC motors, ultra-smooth bearings, and the BCT Reaction Wheel advanced lubrication system ensures low-jitter performance, and long life for your mission.

DRIVE ELECTRONICS

Flexible interface options include direct analog torque command as well as a digital command and telemetry option. Standalone control electronics can drive up to four reaction wheels. RWp500, or larger can be driven by its own integrated drive electronics.

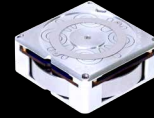
REACTION WHEELS



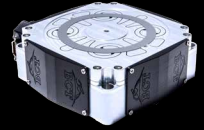
RWP015



RWP050

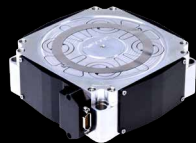


RWP100



RWP500

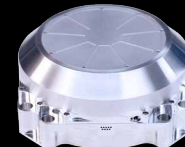
MOMENTUM	0.015 Nms	0.050 Nms	0.10 Nms	0.50 Nms
MAX TORQUE*	0.004 Nm	0.007 Nm	0.007 Nm	0.025 Nm
MASS	0.130 kg	0.24 kg	0.35 Kg	0.75 kg
VOLUME	42 x 42 x 19 mm	58 x 58 x 25 mm	70 x 70 x 25 mm	11 x 11 x 3.8 cm
VOLTAGE	12 VDC	12 VDC	12 VDC	28 VDC
POWER @ 1/2 MOMENTUM	< 0.6 W	< 0.5 W	< 0.5 W	< 3.0 W
POWER @ FULL MOMENTUM	< 1.0 W	< 1.0 W	< 1.0 W	< 6.0 W
DESIGN LIFE	> 5 years	> 5 years	> 5 years	> 10 years
STATIC UNBALANCE* (fine)	< 1.2 g-mm (0.25 g-mm)	< 1.2 g-mm (0.35 g-mm)	< 1.5 g-mm (0.5 g-mm)	< 3 g-mm (1 g-mm)
DYNAMIC UNBALANCE* (fine)	< 20 g-mm ² (2.5 g-mm ²)	< 20 g-mm ² (2.5 g-mm ²)	< 20 g-mm ² (5 g-mm ²)	< 25 g-mm ² (10 g-mm ²)



RW1



RW4



RW8

MOMENTUM	1.0 Nms	4.0 Nms	8.0 Nms
MAX TORQUE*	0.1 Nm	0.25 Nm	0.25 Nm
MASS	0.75 kg	3.0 kg	4.1 kg
VOLUME	11 x 11 x 3.8 cm	17 x 17 x 7 cm	19 x 19 x 9 cm
VOLTAGE	28 VDC	28 VDC	28 VDC
POWER @ 1/2 MOMENTUM	< 4.5 W	< 5 W	< 5 W
POWER @ FULL MOMENTUM	< 9 W	< 10 W	< 10 W
DESIGN LIFE	> 10 years	> 10 years	> 10 years
STATIC UNBALANCE* (fine)	< 3 g-mm (1 g-mm)	< 6 g-mm (2 g-mm)	< 8 g-mm (2.8 g-mm)
DYNAMIC UNBALANCE* (fine)	< 25 g-mm ² (10 g-mm ²)	< 150 g-mm ² (75 g-mm ²)	< 200 g-mm ² (100 g-mm ²)

* Custom options
are available