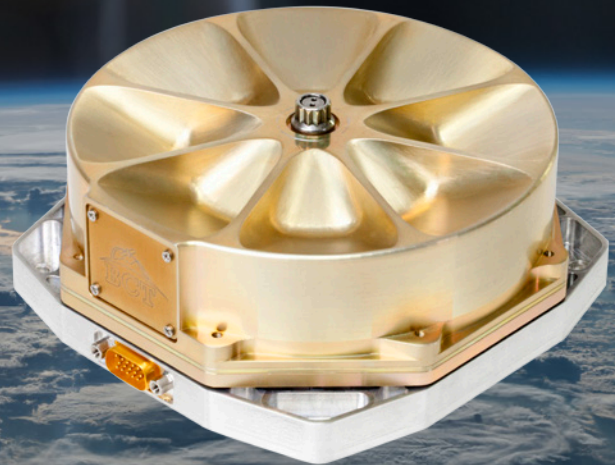




Spacecraft Buses, Systems & Solutions

REACTION WHEELS



High Performance Attitude Control

BCT Reaction Wheels provide an efficient, high-performance solution for spacecraft attitude control. These wheels are available in a range of sizes, providing the combination of torque and momentum storage to suit your spacecraft and mission requirements. Control electronics are available in each reaction wheel, simplifying your system integration and operations.

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 Reactions Wheels, or each Reaction Wheel can be driven by its own integrated drive electronics. Brushless DC motors, ultra-smooth bearings, and the BCT Reaction Wheel lubrication system ensure low jitter performance, and long life for your mission.

Reaction Wheels



(MicroWheel)
RWP015



RWP050

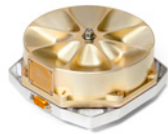


RWP100



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	43 x 43 x 18 mm	58 x 58 x 25 mm	70 x 70 x 25 mm	10.8 x 10.8 x 3.8 cm
Voltage	12 VDC	12 VDC	12 VDC	28 VDC
Peak Power	5.5W	9W	9W	23W
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	1.5 Nms	4 Nms	8.0 Nms
Max Torque *	0.04 Nm	0.1 Nm (0.2 Nm)	0.1 Nm (0.2 Nm)
Mass	1.6 kg	2.5 kg	3.6 kg
Volume	15 x 15 x 6.5 cm	17 x 17 x 7 cm	19 x 19 x 9 cm
Voltage	28 VDC	28 VDC (50 VDC)	28 VDC (50 VDC)
Peak Power	48W	75W (150)	75W (150)
Power @ 1/2 Momentum	< 3.0 W	< 4.0 W	< 5.0 W
Power @ Full Momentum	< 7.0 W	< 8.0 W	< 10.0 W
Design Life	> 10 years	> 10 years	> 10 years
Static Unbalance * (Fine)	< 4 g-mm (1.8 g-mm)	< 6 g-mm (2 g-mm)	< 8 g-mm (2.8 g-mm)
Dynamic Unbalance * (Fine)	< 100 g-mm ² (50 g-mm ²)	< 150 g-mm ² (75 g-mm ²)	< 200 g-mm ² (100 g-mm ²)

** Custom options are available*



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