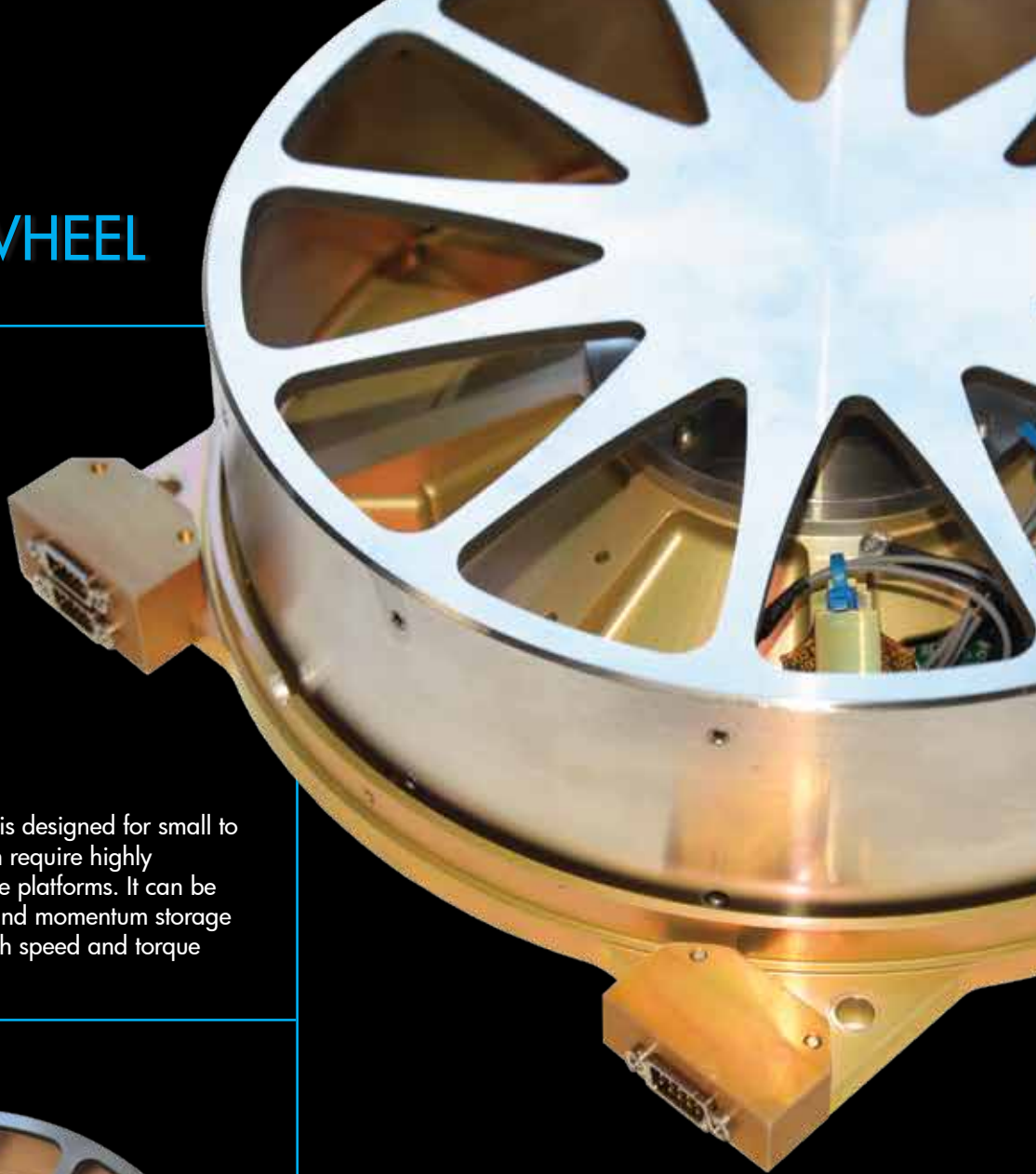
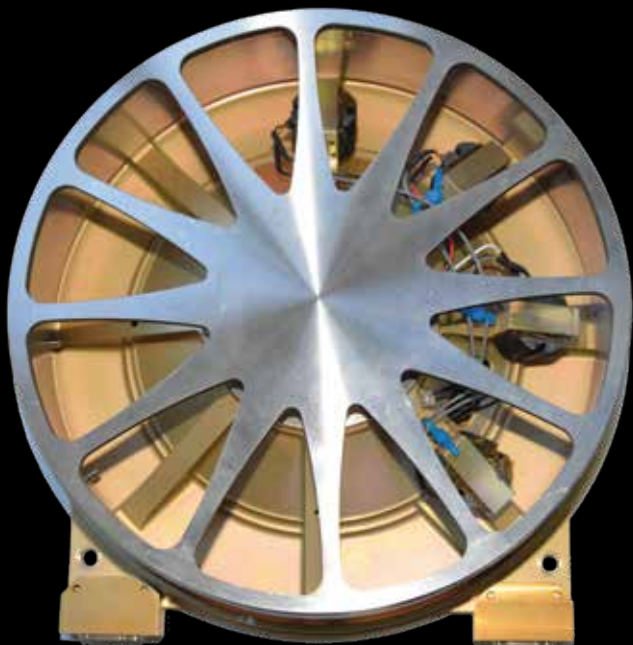


REACTION WHEEL RW-10NMS

The RW-10NMS reaction wheel is designed for small to medium size LEO satellites which require highly stabilised, 3-axis controlled, agile platforms. It can be used as both a torque actuator and momentum storage device and can be controlled with speed and torque commands.



Features/Benefits

- Integrated wheel drive electronics
- Speed and torque control modes
- High torque and momentum to mass/volume ratio
- High speed accuracy and stability
- Internal monitoring and protection:
 - Latch-up protection on electronics
 - Over temperature protection
 - Speed measurement verification
- Very low vibration levels



SPECIFICATIONS

RW-10NMS

Performance

Max Torque	190mNm*
Angular momentum	10 Nms (@ 4100 rpm and 60 mNm torque) 7.2 Nms (@ 3000 rpm and 190 mNm torque)
Speed range	-4300 to +4300 rpm
Speed Control Accuracy	0.12 rpm
Design Life	7 years

Mechanical

Dimensions	235 x 235 x 73 mm
Weight	< 5 kg
Wheel Moment of Inertia	0.023 kg.m ²
Static Unbalance	< 5 g.mm
Coupled Unbalance	< 200 g.mm ²
Interface	4 off M6

Electrical and Control

Electronics	Internal
Power Supply	22V to 34V
Power (Idle)	< 1.5 W
Power (1000 rpm)	< 3 W
Max Power	110 W
Control Mode (up to 10 Hz)	Speed / Current command
Communication	RS422

Environmental

Operating Temperature	-20°C to +60°C
Random Vibration (Qualification)	14g RMS
Radiation (component level)	> 15 kRad

* can be increased up to 280mNm if required